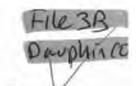


1600 6/28/10



OMB# 2050-0024; Expires 11/30/2011

SEND COMPLETED FORM TO: The Appropriate State or Regional Office.	United States Environmental Protection Agency RCRA SUBTITLE C SITE IDENTIFICATION FORM				2.8	
Reason for Submittel	Reason for Submittal: To provide an Initial Notification for this location)	on (first time :	submitting site identification in	nformation / to	obtain an EPA	A ID number
MARK ALL BOX(ES) THAT APPLY	☐ To provide a Subsequent Not☐ As a component of a First RC☐ As a component of a Revised☐ As a component of the Hazar	RA Hazardoi RCRA Haza	us Waste Part A Permit Applic rdous Waste Part A Permit A	cation pplication (Am		
	Site was a TSD facility and >100 kg of acute hazardou LQG regulations)	l/or generator is waste spill	r of ≥1,000 kg of hazardous w cleanup <u>in one or more mont</u> l	aste, >1 kg of hs of the repo	f acute hazardont year (or State	ous waste, or e equivalent
2. Site EPA ID Number	EPA ID Number PADO	0 0 4	3 0 6 8 6		Folo	ere
3. Site Name	Name: Harrisburg Resource Reco	wery Facility			HACCUS	burs 1 nersy Lecov
4. Site Location	Street Address: 1670 South 19th	J. CV	orcu			
Information	City, Town, or Village: Harrisburg			County:	2	0 71
	State: PA	Country:		Zip Code:	de	Lecov
5. Site Land Type	☐ Private ☐ County ☐ Dis		ederal Tribal	Municipal	State	Other
8. NAICS Code(s)		1 3	c.	1 1 1	11	
for the Site (at least 5-digit codes)	В.		D	111		
7. Site Mailing	Street or P.O. Box: 1670 South 19	h Street				
Address	City, Town, or Village: Harrisburg					
	State: PA	Country:		Zip Code:	17104	
. Site Contact	First Name: Robert	MI: G	Last: Stockholm			
Person	Title: Environmental Compliance S	Specialist				
	Street or P.O. Box: 1670 South 19th Street					
	City, Town or Village: Harrisburg					
	State: PA	Country:		Zip Code:	17104	
	Email: rstockholm@covantaenergy.com					
	Phone: 717-236-0958	E	ext.: 205	Fax: 717-	234-3698	
. Legal Owner	A. Name of Site's Legal Owner: The	Harrisburg	Authority	Date Becar Owner:	me 12/23/93	
and Operator of the Site	Owner Type: Private Count	Distric	t ☐ Federal ☐ Tribal	Municipa	al DState	Other
	Street or P.O. Box: 212 Locust Street, Suite 302					
	City, Town, or Village: Harrisburg	To and			17-525-7677	
	State: PA	Country:		Zip Code:	17101	
	B. Name of Site's Operator: Covan	ta Harrisbur	g, Inc.	Operator:	me 01/02/07	
	Operator Type: Private County	☐ Distric	t DFederal DTribal	Municipa	al State	Other

Page 1 of 4

EPA Form 8700-12, 8700-13 A/B, 8700-23 (Revised 11/2009) Site 450856

PF 512833

Client 43333

10. Type of Mark "Y	Regul es" o	ated Wast r "No" for	e Activity (at your site) all <u>current</u> activities (as of th	ne date submitting the	form); comp	plete any additional boxes as instructed.
A. Hazardo	us Wa	aste Activi	ties; Complete all parts 1-7.			
Y⊠N□			of Hazardous Waste ark only one of the following	g – a, b, or c.	Y 🗆 N 🗵	2. Transporter of Hazardous Waste If "Yes", mark all that apply.
		i. LQG:	Generates, in any calendar (2,200 lbs./mo.) or more of Generates, in any calendar accumulates at any time, m lbs./mo) of acute hazardous Generates, in any calendar accumulates at any time, m (220 lbs./mo) of acute haza material.	hazardous waste; or month, or ore than 1 kg/mo (2.2 s waste; or month, or ore than 100 kg/mo		 a. Transporter b. Transfer Facility (at your site) 3. Treater, Storer, or Disposer of Hazardous Waste Note: A hazardous waste permit is required for these activities. 4. Recycler of Hazardous Waste
	□ 6	, SQG:	100 to 1,000 kg/mo (220 – 2 acute hazardous waste.	2,200 lbs./mo) of non-		•
	_	c. CESQG:	Less than 100 kg/mo (220 l hazardous waste.	·	YDN⊠	5. Exempt Boiler and/or Industrial Furnace If "Yes", mark all that apply. a. Small Quantity On-site Burner Exemption
Y 🗆 N 🗵		J. Short-Te	'Yes" above, indicate other generator activities. Short-Term Generator (generate from a short-term or one-time event and not from on-going processes). If "Yes", provide an explanation in the Comments section.			b. Smelting, Melting, and Refining Furnace Exemption
Y \square N \boxtimes	e	•	States Importer of Hazardous V		y □ n 🗵	6. Underground Injection Control
YDN⊠	f	. Mixed W	/aste (hazardous and radioact	ive) Generator	Y 🗖 N 🗵	7. Receives Hazardous Waste from Off-site
B. Universa	al Was	ste Activiti	es; Complete ali parts 1-2.		C. Used O	il Activities; Complete all parts 1-4.
YDNI	Y N E 1. Large Quantity Handler of Universal Waste (you accumulate 5,000 kg or more) [refer to your State regulations to determine what is regulated]. Indicate types of universal waste managed at your site. If "Yes" mark all that apply.		to your State gulated]. Indicate	YINX	 Used Oil Transporter If "Yes", mark all that apply. a. Transporter b. Transfer Facility (at your site) 	
Y 🗆 N I	X 2	d. Lamp e. Other f. Other g. Other 2. Destina	cides ury containing equipment		Y 🗆 N 🗵	 2. Used Oil Processor and/or Re-refiner if "Yes", mark all that apply. a. Processor b. Re-refiner 3. Off-Specification Used Oil Burner 4. Used Oil Fuel Marketer If "Yes", mark all that apply. a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner b. Marketer Who First Claims the Used
						Oil Meets the Specifications

D. Eligible Aca wastes purs	demic Entities with I want to 40 CFR Part	Laboratories—Notifi 262 Subpart K	ication for opting ir	nto or withdrawing fr	om managing labo	ratory hazardous
❖ You m 262 St	<u>ust</u> check with your S Jbpart K	tate to determine if yo	ou are eligible to mar	nage laboratory hazan	dous wastes pursua	nt to 40 CFR Part
See the i	tem-by-item instruct	ng under 40 CFR Par tions for definitions	t 262 Subpart K for t of types of eligible	he management of ha academic entities. I	ızardous wastes in la Mark all that apply:	aboratories
	lege or University aching Hospital that is	owned by or has a fo	ormal written affiliatio	n agreement with a co	ollege or university	
				on agreement with a c		
2. Withdraw	ing from 40 CFR Part	262 Subpart K for the	e management of ha	zardous wastes in lab	oratories	
11. Description	of Hazardous Waste)			·	
	st them in the order th			e waste codes of the f D001, D003, F007, U		
D001	D002	D003	D004	D005	D006	D007
D008	D009	D010	D011	F003	F005	
					 	
			<u>. </u>			
	astes handled at you			Please list the waste		
					<u> </u>	
					· · · · · · · · · · · · · · · · · · ·	
					······	
	<u> </u>	L		<u> </u>		<u> </u>

EPA ID Number P | A | D | 0 | 0 | 0 | 4 | 3 | 0 | 6 | 8 | 6 |

12.	Notif	icat	ion of Hazardous Secondary Mat	erial (HSM) Activity	
Y	□N	X	Are you notifying under 40 CFR 26 secondary material under 40 CFR	60.42 that you will begin managing, are managi 261.2(a)(2)(ii), 40 CFR 261.4(a)(23), (24), or (2	ng, or will stop managing hazardous 5)?
			If "Yes", you <u>must</u> fill out the Adder Material.	ndum to the Site Identification Form: Notification	n for Managing Hazardous Secondary
13.	Com	mer	ts		
		-			
14.	on m inforr pena	rdan y ind natid Ities	ce with a system designed to assur guiry of the person or persons who on submitted is, to the best of my kr for submitting false information, inc	that this document and all attachments were pre- re that qualified personnel properly gather and e- manage the system, or those persons directly nowledge and belief, true, accurate, and comple cluding the possibility of fines and imprisonment , all owner(s) and operator(s) must sign (see 40	evaluate the information submitted. Based esponsible for gathering the information, the etc. I am aware that there are significant for knowing violations. For the RCRA
Si	gnatur ithorize	e of ed r	legal owner, operator, or an epresentative	Name and Official Title (type or print)	Date Signed (mm/dd/yyyy)
7	Min	he	le J. V. Janes	MICHELE T.Y. TORRES. J. D. EXECUTIVE DIRECTOR	06/17/10

OMB#: 2050-0024; Expires 11/30/2011



The Harrisburg Authority

Lette	r of Transi	mittal	Locust Court Building 212 Locust Street Suite 302 Harrisburg, PA 17101 Phone: 717-525-7677 Fax:: 717-525-7688	
M F 9	Mr. Robert Fig P.O. Box 8550 109 Elmerton			
Re: T	Iarrisburg R	org Authority Sesource Recovery Facility ber: PAD000430686		
We are so	ending the fol	llowing items:		
Copies	Date	Description		
1	6/17/10	US EPA RCRA Subtitle C Site Identification For Notification Form	m – Hazardous Waste	
Ap Ap Re	proved proved and N vise and Resu t Approved		For Your Information For Review For Repairs For Signature and Return	l

NED: Pamelo

Executive Assistant

	U.S. Postal S CERTIFIED (Domestic Mail O	N	All	_ RE		IPT overage Provided)
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Pennsylvania Department of Environmental Protection

909 Elmerton Avenue Harrisburg, PA 17110-8200 June 28, 2002

Southcentral Regional Office

717-705-4706 FAX - 717-705-4930

CERTIFIED MAIL NO. 7000 1670 0007 5148 7722

Trent Hargrove, Esq.
The Harrisburg Authority
One Keystone Plaza, Suite 104
Front and Market Streets
Harrisburg, PA 17104

Re: Permit Renewal

Harrisburg Waterials, Energy, Recycling and

Permit No. 100758 APS No. 357022

-Harrisburg City, Dauphin County

Dear Mr. Hargrove:

Enclosed is a modification to Solid Waste Permit No. 100758 for the renewal of the Harrisburg Materials, Energy, Recycling, and Recovery Facility, issued in accordance with Article V of the Solid Waste Management Act, 35 P.S. Sections 6018.101, et seq.

This modification approves a permit renewal for the Harrisburg Materials, Energy, Recycling, and Recovery Facility for an additional five-month term until November 30, 2002. The Department has renewed the permit based upon the Authority's steps taken both to correct outstanding violations and to remain in compliance. This renewal term will allow the facility to continue to operate while a public hearing is conducted and the Department prepares a comment/response document to address concerns raised at the public hearing.

It will not be necessary for the Authority to file another application for permit renewal prior to November 30, 2002. The Department will render a decision on the permit renewal and term of permit prior to that date. The decision will be based upon the current application for permit renewal, compliance status, and an evaluation of the steps taken by the Authority to remain in compliance.

Compliance with the terms and conditions set forth in the permit is mandatory. You have the right to file an appeal as to these terms and conditions.



Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa. C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, PO Box 8457, Harrisburg, PA 17105-8457, 717-787-3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800-654-5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on audiotape from the Secretary to the Board at 717-787-3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.

IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717-787-3483) FOR MORE INFORMATION.

If you have any questions about the enclosed permit or requirements of the Solid Waste Management Act, please call Mr. Don Korzeniewski at 717-705-4706.

Sincerely,

John Krueger Program Manager

Waste Management Program

Enclosure

cc: Harrisburg City (w/enclosure)

Dauphin County Commissioners (w/enclosure)

bcc: Central - M&R Waste Division (w/enclosure)
Joe Kozlosky (w/enclosure)
File (w/enclosure)
T (w/enclosure)

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION WASTE MANAGEMENT PROGRAM SOUTHCENTRAL REGION

FORM NO. 13-A

MODIFICATION TO SOLID WASTE DISPOSAL AND/OR PROCESSING PERMIT

Under the provisions of Act 97, the Solid Waste Management Act of July 7, 1980, as amended, Solid Waste Permit Number 100758, issued on June 30, 1992 (Permit Renewal) to:

City of Harrisburg
Department of Incineration and Steam Generation
1670 South 19th Street
Harrisburg, PA 17104

Harrisburg City Dauphin County

is hereby modified as follows:

This modification renews the permit for the Harrisburg, Materials, Energy, Recycling, and Recovery Facility. This permit renewal is issued based on the following submissions:

- 1. Permit Renewal application, prepared by Evergreen Environmental, Inc., received October 18, 2001, consisting of the following:
 - Introduction
 - General Information Form
 - Form A, Application for Municipal Waste Permit
 - Proof of Public Notice
 - Form B, Professional Certification
 - Form B1, Application Form Certification
 - Form HW-C, Compliance History
 - Bond Worksheets
 - Sheet 9001C-1600, Site Plan Topographic Layout
 - Sheet 9001C-1601, Permitted Site Plan Key Plan
 - Supporting information

This modification shall be attached to the existing Solid Waste Permit described above and shall become a part thereof effective on <u>July 1, 2002</u>.

FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

City of Harrisburg Department of Incineration and Steam Generation Harrisburg City, Dauphin County Permit No. 100758 Page 2

- 2. June 19, 2002 letter from Mr. Daniel R. Lispi to Mr. Michael Steiner regarding corrective action to address outstanding violations at Landfill Area B-3.
- 3. June 26, 2002 letter from Mr. Daniel R. Lispi to Mr. Robert Benvin regarding the Harrisburg Materials, Energy, Recycling, and Recovery Facility.
- 4. June 27, 2002 letter from Mr. Daniel R. Lispi to Mr. Michael Steiner regarding negotiations of a consent agreement with the Department.

PERMIT CONDITIONS:

- 1. The permit for the Harrisburg Materials, Energy, Recycling, and Recovery Facility (Permit No. 100758) will expire on November 30, 2002. Waste may not be accepted for incineration or transfer after November 30, 2002 unless the Department issues a permit renewal for an additional period of time.
- 2. All previous permit conditions for Permit No. 100758 remain in effect.
- 3. Nothing herein shall be construed to supersede, amend or authorize violation of the provisions of any valid and applicable local law ordinance, or regulation, provided that said local law, ordinance or regulation is not preempted by the Pennsylvania Solid Waste Management Act, the Act of July 7, 1980, Act 97, 35 P.S. § 6018.101, et seq.

NEWS RELEASE

COMMONWEALTH OF PENNSYLVANIA
Dept. of Environmental Protection
Commonwealth News Bureau
Room 308, Capitol
Harrisburg, PA 17120

FOR IMMEDIATE RELEASE

CONTACT: Ron Ruman

Information Specialist

(717) 787-1323

DEP SETS PUBLIC HEARING ON WASTE HANDLING PERMIT FOR HARRISBURG TRANSFER STATION AND RESOURCE RECOVERY FACILITY

Waste Permits Temporarily Extended to Allow for Public Comment

HARRISBURG (June 28) - The Department of Environmental
Protection (DEP) today announced an August 13 public hearing will
be held on the waste handling permit associated with the
Harrisburg transfer station and resource recovery facility.

DEP also announced a temporary 150-day renewal of the waste permits to allow time for public review and comment on permanently extending the permit. The current waste permit would have expired Sunday.

"We want to give the public ample opportunity to comment on the proposed 10-year renewal of the waste permit for these facilities," said John Krueger, Waste Management Program Manager for DEP's Southcentral Regional Office. "At the same time, the City needs to be assured these facilities will continue to operate before a permanent decision is made."

"The City of Harrisburg has also agreed to pay a penalty of \$50,000 to settle all outstanding waste violations at the

facility and to make other changes that will improve the operation of the facility in the interim," Mr. Krueger added.

The changes agreed to by the City of Harrisburg include:

- Reducing the height of ash residue piles in the landfill adjacent to the incinerator to permitted elevations
- Placing intermediate cover (twelve inches of soil) on areas of the landfill that are not expected to be disturbed for the next six months; regarding the slopes on the north side of the landfill to reduce the grade to less than 50%; and placing daily cover of six inches of soil on other areas of the landfill except for a 50 x 50 foot working area of the landfill
- Initiating final closure of a portion of the landfill
- Making operational changes at the incinerator to keep waste stored on site awaiting processing confined to the storage pit
- Implementing daily check sheets regarding conditions inside the building, such as ash on the basement floor, clogged floor drains, and litter
- Beginning power washing of the tipping floors at the facility on a bi-weekly basis to improve cleanliness

"At the public hearing on August 13th, we will gather public input on the continued operation of the incinerator, and will weigh this public comment as well as Harrisburg's progress on

bringing the incinerator into compliance with all DEP air and waste regulations as we consider the permit renewal for a 10-year period prior to the expiration of the 150-day permit on November 30th of this year," Mr. Krueger said.

He said DEP will give extensive public notice prior to the public hearing, in order to insure that all interested persons have the opportunity to state any concerns they may have regarding the continued operation of the Harrisburg incinerator.

#

2002

For more information, visit the PA PowerPort at www.state.pa.us, or DEP directly at www.dep.state.pa.us (directLINK "???"). To see and hear how individuals and businesses are doing more to ???, visit www.GreenWorks.tv .

#

2002

AM shels

EVALUATION - VIOLAT	HON EIN ONCE	04/95 VERSION
PAD000430686	ED EGENREIDER	RESERVED FOR EPA USE
Handler Name Page 3 HARRISBURG Fram		
Street Page 3 1670 S. 192 ST.	GEN. FAC. City Page 3	
UNIVERSE CHANGE REQUIRED Page 4 YES	NO M	
L indicate the facility's current universe(s):	III. Indicate the new transporter status (Mir requires a transporter status change):	ark here only if the facility
II. Indicate the new RCRIS Generator Universe (mark only one): LQG [] CEG [] NON-HANDLER [] SQG [] Page 4 CLOSED []	Transporter [] If the transporter box is checked, you must check at least one of the boxes	Non-Transporter [] seck this box if the facility is rrently listed in RCRIS as a insporter and no longer
NOTE: All TSD activity changes must be handled by the state data coordinator and cannot be made using this form	Mark Mode of Transportation tra [] Air	nsports hazardous waste.
	elete Page 5	
Date Number Agency D 8 2 9 7	CEI	ench Person PADM.H.
GGR GSC TWD DGW GLB GSQ DCH DLB GMR G GEX DCL DLF GOR TGR DCP DLT GPT TMR DFR DMC	DOR DWP B	PS CS
GRR FI TOR DGS DMR DMR Comments Pege 10 ROUTING INSPE	CTION	AS III — III
OUTSTANDING VIOLATIONS COVERED BY ABOVE agency Number Area Date Determine the control of the con		a Date Determined
Agency Number Area Class Page 14 Page 14 Page 15 Date Determined Priority Branch Page 16 Page 17 Page 16 Page 16 Page 17	Regulation Type Regulation Citation S.R. Page 15 262:	-11/-1/11

PADO 0 0 4 3 0 6 8 6 HAC STema CEN FAC VIOLATION Add Change Delete	04/95 VERSIO
Agency Number Area Class Regulation Type Regu	lation Citation (65,171/2623 (a)(3)
0.8 Z Z 9.7 PA.DM.H. 0.9	Returned to Compliance cheduled Actual O: 19:7 EXTERIOR
VIOLATION Add Change Delete	ink to Above Evaluation? (Y/N)
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	IN ON FLOOR + GROUND
	ink to Above Evaluation? (Y/N)
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ENFORCEMENT Add Change Delete Page 19	
Date Number Agency Type Branch Page 19 Page 19 Page 19 Page 20-21 Page 22 Docket Number	Person Attorney Initials Page 22 Page 22
Penalty Type Penalty Amount Multimedia	Enforcement Codes next to all that apply)
\$ AIR EPCRA	UST UIC WATER
Page 23 Page 24 NOTE: To record activities for Supplemental Environmental Projects (SEPs) or to add penalty payment Information, use the Supplemental Enforcement Form.	WETLANDS
CommentsPage 24	
/IOLATIONS COVERED BY ABOVE ENFORCEMENT ACTION Page 25	
gency Number Area Date Determined Agency Number	Area Date Determined

ER-WM-300: Rev. 11/93 Part A

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

HAZARDOUS WASTE INSPECTION REPORT GENERATORS - PART A

Date of Inspection $3-2$	&-97 AND 8-25-97 Ti	me start <u>1300 /</u>	0945 Time finish	1330/1045
Name of Inspector I	David M. HRObuch	hak		
Company, installation r	name_HARRISEVRG-	Steam Gen	ERATING FACIL	ith
Location HARRIS	BURG CITY			·····
County Dauphin		Municipality	HBG. City	
Identification number_	PAD000431	0686		
Name of responsible of	ficial EDWARD	C. EGENR	eioer / John	A. LUKENS
Title WATER	QUALITY Tech.	/ Dire	CTOR	<u></u>
	70 S. 1973 S			
Area code and telephor	ne number 7/7- 8	<u> 136- 5361</u>	/ 238-9176	
Name of person interview	ewed MR. EGG	ENREIDER		
	W.Q.T.	_		
Mailing address (if diffe	erent from above)	Same	*	
Area code and telephor	ne number	AME		
1. Current waste han	dling method:			
a. 🔲 On-site	☐ treatment,	□ storage,	☐ disposal	□ PBR
b. 🔲 On-site	☐ use,	reuse,	☐ recycle,	☐ reclaim
c. 🛛 Off-site	treatment,	storage,	disposal	
d. □ Off-site	use,	☐ reuse,	☐ recycle,	□ reclaim
2. Amount of hazard	lous waste produced:			
a/	000	kg./mo.		
b		kg./yr.		
3. Types of hazardo location and type)	ous waste produced by	Hazardous Waste	Number and destinati	on facility (include
Waste Number	Destination	Facility	Location ar	nd Type
D006 AND 0008	ENVIRIATE OF	PA, ING.	YORK, PA	
Dool, Doob, Doo8,	SAFETY-KLEEN	CORP.	New KINGSTON	W, XA
DOIR, DO27 AND	11		11	<u> </u>
D039 D040	11		11	
				
				

Source Reduction: 🔲 accomplished, 🔲 proposed, 🕱 not proposed

ER-WM-300: Rev. 11/93 Part B

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WASTE MANAGEMENT

HAZARDOUS WASTE INSPECTION REPORT GENERATORS - PART B

Site Name HBG. STEAM GEN. FACIL, ID Number PAD 00043 0686 Date 8/22/97 8/25/97

Hazardous Waste Inspection Report Generators - Part B

1-No Violation Observed 2-Not-Applicable 3-Not-Determined 4-Non-Compliance

	STATUS				CHAPTER	LINE
1	2	3	4	REQUIREMENT	CITATION	ITEM
X				Hazardous waste determination, performed on all waste streams	262.11	H001
X				Identification number	262.12	H002
X				Hazardous waste shipments offered only to licensed transporters	262.12(d)	H003
X				Authorization received from TSD facility for wastes shipped off-site within PA	262.13	H004
X				PA manifest used for intrastate shipments	262.20(b)	H005
	X	•		TSD state manifest or PA manifest used for out-of-state shipments	262.20(c)	H006
X				Manifests filled out properly and completely	262.20(g)	H007
X				Manifests routed properly and within time limits (7 days)	262.23(e)(f)	H008
X				Proper U.S. DOT shipping containers or packages being used	262.30(1)	н009
		X		Shipping containers marked and labeled according according to U.S. DOT	262.30(2)	H010
		X		Containers of 110 gal. or less permanently marked with required hazardous waste label	262.30(3)	H011
		X		Placards offered to transporter	262.33	H012
X				Waste in containers or tanks accumulated on-site for less than 90 days	262.34(a)(1)	H013
			X	Wastes placed in containers properly marked and labeled or in tanks meeting requirements of Chapter 265, Subchapter J	262.34(a)(2)	H014
			X	Containers managed in accordance with Chapter 265, Subchapter I (any non-compliance for Subchapter I requirements is a violation of 262.34(a)(3))	262.34(a)(3)	H015
			X	a). All containers of haz. waste in good condition	265.171	H016
X				b). Containers compatible with hazardous waste being stored within	265.172	H017
V				c). Containers of hazardous waste kept closed	265.173(a)	H018
X				d). Containers of hazardous waste are managed to prevent leaks	265.173(b)	H019
X				e). Containers of hazardous waste labelled to accurately identify contents	265.173(c)	H020
		X		f). Haz. waste accumulation areas inspected at least weekly	265.174	H021
		X		g). Special requirements for ignitable, reactive and incompatible waste being met	265.176177	H022
X				h). Proper containment and collection system(s)	265.178	H023
			X	Containers clearly marked with accumulation date and visible for inspection	262.34(a)(4)	H024
Γ			X	On the job or classroom personnel training program as per 265.16	262.34(a)(5)	H025

PADOOO 43 06 86 Hazardous Waste Inspection Report **Generators - Part B**

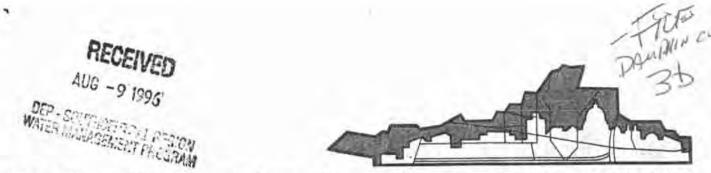
1-No Violation Observed 2-Not-Applicable 3-Not-Determined 4-Non-Compliance

ST		STATUS		TUS			CHAPTER	LINE
1	2	3	4	REQUIREMENT	CITATION	ITEM		
	X			Records retained at designated location for 20 years	262.40(a)	H026		
		X		Quarterly reports submitted to the Department	262.41(a)	H027		
	X			Exception reporting procedures followed	262.42	H028		
7				Hazardous waste disposal plan, if required	262.45	H029		
	X			Spill reporting procedures followed	262.46(a)	H030		
_ (Preparedness, Prevention and Contingency Plan developed and implemented in accordance with Chapters 264 and 265	262.46(e)	H031		
	X			Special requirements followed for international shipments	262.50,.53, .55, .60	H032		
			X	Source reduction strategy prepared and available	262.80	H033		

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

INSPECTION REPORT COMMENTS

Date of Inspection 8-22-97 8-25-97 Identification Number <u>PAD 000 430686</u>
Company/Facility/Site Name HBG STERM GEN. FACIL.
AT This UNANNOUNCED INSPECTION The FOLLOWING WERE OBSERVED
AND/OR DISCUSSED:
1. ON 8-22-97, FILTER CAKE WAS OBSERVED SCATTERED AROUND
The FLOOR Beside The ROU-OFF CONTAINER, PLUGGED IN A
FLOOR DRAIN AND LYING IN A SMALL PILE OUTSIDE THE
OVERHEAD DOOR ENTRANCE. This is A VIOLATION OF 262,46(C).
RECOMMEND BETTER CONTAINMENT OF The WASTE FILTER CAKE.
2. ON 8-22-97 THE ROLL-OFF CONTAINER INSIDE THE PLANT AND
PARTIALLY FILLED WITH FILTER CAKE LAD A HW DECAL, BUT
NO ACCUMULATION DATE WAS LISTED. This is A VIOLATION DE
262 34(a)(2) AND(4). RECOMMEND LABELLING AND PLACING
ACCUMULATION DATE UPON ACCUMULATION OF HIW IN CONTAINER.
3. The ROLL-OFF CONTAINER INSIDE THE PLANT LAN TWO PERFORATIONS
ON THE END THAT IS UTILIZED FOR PICK-UP, This is A VIOLATION OF
265. 171. ROCOMMEND USING CONTAINEDS WITHOUT PERFORATIONS, ETC.
4. ACCORDING TO MR. EGENREIDER, THE OBLY PERSONNEL WITH
The REQUIRED TRAINING ARE HIMSELF AND ONE OTHER EMPLOYE. This is
A VIOLATION OF 262.34(a)(5). RECOMMEND TRAINING FOR ALL OTHER EMPLOYES
AT THE TREATMENT PLANT.
5. ACCORDING TO MR. EGENREIDER, This FACILITY DOES NOT POSSESS A
FORMAL WRITTEN SOURCE REDUCTION STATEGY ON FILE, BUT CONST.
ANT REDUCTIONS IN THE AMOUNT OF HIW GENERATED have BEEN REALIZED.
This is A VIOLATION OF 262.80. RECOMMEND DEVISING A WRITTEN
PLAN
6. A Reinspection will be scheoned to ensure Compliance with The
A FORE MENTIONED VIOLATIONS. This inspection report is notice of the findings of an inspection conducted by a representative of the Department. This report is
formal notification of any violations observed during the inspection. Additional notification of violations may be issued concerning either violations noted herein, or other violations identified as a result of review of laboratory analyses or Department records.
This report does not constitute an order or other appealable action of the Department. Nothing contained herein shall be
deemed to grant or imply immunity from legal action for any violation noted herein. Signature by the person interviewed does not necessarily imply concurrence with the findings on this report, but does
acknowledge that the person was shown the report or that a copy was left with the person.
Person interviewed (signature) Date
Inspector (signature) Date 8-26-97



The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

August 7, 1996

Ms. Lori Mitzel
Water Quality Specialist
Commonwealth of Pennsylvania
Department of Environmental Protection
Water Management Program
One Ararat Boulevard
Harrisburg, PA 17110

Re: Spill Incident Report - July 23, 1996

Dear Ms. Mitzel:

This letter is the follow-up to the verbal notification given to the Department of Environmental Protection on July 24, 1996 by Mr. Ed Egenrieder of the Harrisburg Steam Generating Facility (HSGF) regarding a spill incident that occurred at the facility on the preceding afternoon.

At approximately 1500 hours, the pretreatment audible alarm was received in the control room. Upon responding to the alarm the shift supervisor found both the incoming and sand filter equalization tanks in a high alarm condition and the clarifier overflowing into the building sump. Realizing there was an apparent problem with the sand filter, the shift supervisor by-passed the filter sending the clarified water to the final neutralization tank for discharge to the sanitary sewer. Levels began to drop and system appeared to have stabilized. Therefore, at approximately 1540 hours, the shift supervisor return to the main control room of the HSGF.

At approximately 1610 hours, the shift supervisor returned to the pretreatment facility to check on the system and found a spill in progress. The incoming equalization tank was overflowing into the holding sump and into the floor drains. In addition, both equalization pumps appeared to be plugged. The shift supervisor immediately secured the wastewater transfer pumps, stopping the flow of wastewater from the HSGF to the pretreatment system. The shift supervisor cleared the strainer to the lead equalization pump, but had difficulty replacing the strainer cover because the suction valve was not seated properly which caused the strainer housing to pressurize. As the shift supervisor attempted to remedy the situation, the overflow overpowered the floor drains and caused water to run out the building into the adjacent yard area.

Ms. Lori Mitzel August 7, 1196 Page Two

At approximately 1615 hours, the water technician responded to the spill and at 1619 hours the spill was secured. Sporadic problems with low equalization pump flow were encountered while remediation was in progress. Once the system was stabilized the suction header was opened for inspection. The water technician found that large pieces of debris had worked their way into the transfer pump sump and were pumped to the pretreatment facility where they became lodged in the equalization tank isolation valve and pump suction valves. The build up of material around these valves reduced the flow through the pumps. After the header was cleared, the pumps were put back into service in normal operation and have operated since without incident.

The water technician took samples of spill water at 1620 hours. A copy of the analytical data is enclosed. Based on the flow rate after the system was returned to normal operation and daily totalizer reading we estimate that approximately 600 gallons of water spilled out of the building and into the yard area. Upon inspection of the yard drains, it appeared that all of the release was absorbed into the soil, since the soil around both the yard drains was still dry.

Upon investigating this incident, we have determined that the control room did not receive alarms from the second incident. The original alarms were acknowledged in the main control room of the HSGF, which silenced the audible alarms in the control room. However, an acknowledgement of the alarms in the control room does not reset the alarm panel at the pretreatment facility. The shift supervisor failed to reset the alarms on the control panel at the pretreatment facility, before returning to the control room after the first incident. Therefore, when the second incident occurred, no alarms sounded in the control room.

While we did find blockage in the equalization tank isolation valve and pump suction valves, we believe that the cause of this unplanned release was due to operator error, because the spill (which occurred as a result of the second incident) could have been avoided had the shift supervisor reset the alarm panel. To abate a recurrence, I have distributed the enclosed memorandum to the appropriate HSGF operations, reminding them to make certain that the alarm panel at the pretreatment facility is reset after an upset is corrected and before they return to the HSGF.

Should you have any questions or require further information regarding this incident, please do not hesitate to contact me at 236-5361.

1111

John A. Lukens

Director

JAL/jal/enclosures

cc: Hendrik van Eeden, John Reinard, Ed Egenrieder, File

Sample: 01A 96-061	Col	lected: 07/23/96	Category:	L	
Test Description PHOSPHORUS, TOTAL	Result 0.56	Limit 0.01	<u>Units</u> MG/L	<u>Analyzed</u> 07/29/96	
Sample: 02A 96-062	Col	lected: 07/23/96	Category:	Ĺ	
Test Description	Result	Limit	Units	Analyzed	ВУ
OIL AND GREASE	1.8	0.2	MG/L	07/26/96	TMP
Sample: 03A 96-063	Col	lected: 07/23/96	Category:	L	
Test Description	Result	Limit	Units	Analyzed	Ву
CYANIDE, TOTAL	ND.	0.01	MG/L	07/31/96	TMP
Sample: 04A 96-064	Col	lected: 07/23/96	Category:	L	
Test Description	Result	Limit	Units	Analyzed	<u>By</u>
ARSENIC, TOTAL	0.022	0.1	MG/L	08/01/96	WWS
CADMIUM, TOTAL	0.03	0.01	MG/L	08/01/96	WWS
CHROMIUM, TOTAL	0.03	0.01		08/01/96	WWS
COPPER, TOTAL	0.14	0.01	-	08/01/96	wws
LEAD, TOTAL	1.4	0.001		08/01/96	WWS
MERCURY, TOTAL	ND	• • •	•	08/01/96	
NICKEL, TOTAL	ND	0.01	•	08/01/96	WWS
ZINC, TOTAL	2.5	0.01	MG/L	08/01/96	WWS
Sample: 05A 96-065	Col	lected: 07/23/96	Category:	L	
Test Description	Result	Limit		Analyzed	BY
BIOCHEMICAL OXYGEN DEMAND	12.3	1.0	MG/L	07/29/96	KMW
SUSPENDED SOLIDS	60	. 1.0	MG/L		
pH, laboratory	11.25	-	PH UNITS	07/26/96	KMW

HBG file - Tracking

Horribus Star Great Foults Correspondence

Evergreen Environmental, Inc.

June 9, 1993

Mr. Leif Ericson Regional Air Pollution Control Engineer Southcentral Region Office Pennsylvania DER One Ararat Boulevard Harrisburg, PA 17110

JUN 1 0 1993
DEFINED REGION
AIR QUALITY CONTROL

Dear Leif:

As I discussed with you during our phone conversation, the City of Harrisburg is encountering difficulties finding sufficient quantities of waste to enable them to repay the bonds they were planning to issue to upgrade the Harrisburg Resource Recovery Facility. Ironically, the shortage of waste available to Harrisburg is in part related to DER's Municipal Waste Planning, Recycling, and Waste Reduction Program implemented under the provisions of Act 101. The planning provisions of DER under this Act, and the local county plans developed under this Act, have essentially removed large market shares for a 10 year period and prevented the City from attracting these wastes. The City currently has an appeal of the approval of the Dauphin County Plan in Commonwealth Court to determine whether the Plan's prevention of these wastes was legal. In addition, the Governor's Executive Order, the proposed Pennsylvania Waste Shed Legislation, and similar proposals in Congress have all made the City's efforts to secure contracts for wastes more difficult The stark reality is that if waste streams are not found, revenues are not guaranteed, bonds cannot be issued, and money for upgrade of the facility will not be available.

In spite of the current difficulties, Harrisburg remains fully committed to proceeding with the upgrade and the City is working diligently trying to find other waste streams which they can capture. For example, I have been working with the City and their engineer to gain approval to take certain residual wastes which could be safely handled by the facility. It now appears unlikely that the schedule which the City presented to you can be maintained and I was asked by Dan Lispi and John Lukens for advice in attempting to secure an extension of the time by which they must be in compliance.

In my initial discussions with the City and DER on this issue, I was of the understanding that there was a deadline under the CAA for municipal waste combusters to be in compliance in Pennsylvania by February 11, 1995, and that there were SIP implications for failure to meet this deadline. However, in discussing this situation with Central Office, I was told that Pennsylvania had never submitted a Plan for designated facilities and that there were no SIP implications of extending a compliance deadline for the incinerator. Furthermore, the federal regulations which address the adoption and submittal of state plans for designated facilities, Part 60, Subpart B, specifically allow States to provide for less stringent emission standards or longer compliance schedules, provided that the State demonstrates:

- 1. Unreasonable cost of control resulting from plant age, location, or basic process design;
- 2. Physical impossibility of installing necessary control equipment; or
- 3. Other factors specific to the facility that make application of a less stringent standard or final compliance time significantly more reasonable.

These specific exemptions are found at §60.24 (f).

My purpose in writing to you is to ask if DER would consider a convincing demonstration by the City of one or more of these above factors relative to an extension of the compliance time for the Harrisburg Resource Recovery Facility beyond the February 1995 deadline. I have enclosed copies of what I believe are the relevant federal requirements for your review. We would be happy to meet with you to discuss these issues.

Sincerely,

Fred P. Osman

cc: Mr. Salvaggio

Mr. Steiner



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES

BUREAU OF WASTE MANAGEMENT One Ararat Boulevard Harrisburg, Pennsylvania 17110 (717) 657-4588 May 20, 1987

PRELIMINARY ASSESSMENT

SITE NAME:

Harrisburg Steam Generating Facility

SITE NUMBER:

PA-0435

SITE LOCATION:

1670 South 19th Street Harrisburg, PA 17104

The Harrisburg Steam Generating Facility is a refuse incinerator which burns the following wastes; municipal waste, sewage sludge, and other various permitted waste streams. The total area of the site is around sixty acres. The residual (fly ash and bottom ash) has been disposed on approximately twelve acres of the site. The possibility exists of soil and/or groundwater contamination due to the disposal of the residue. The facility has been in operation since 1972. The present daily volume burned is around six hundred tons. The residue has been disposed onto the ground in Residue Area A, while in Residue Area B1 it is disposed on a PVC liner.

CEPA POTEN	TIAL HAZARDOUS WASTE S	TE IDENTIFICATION	REGION	SITE NUMBER
\/ LI / \			<u> </u>	7A-0435
JIE: The initial identifical activity or confirmation	ition of a potential site or inci ion that an actual health or en	ident should not be interprete vironmental threat exists. A	ec as a fi 11 identif	inging of Hiegal
be assessed under th	e EPA's Hazardous Waste Sit	e Enforcement and Response	System	to determine if
a hazurdous waste pr	oblem actually exists.			
Marrisbure Steam Gen	evatir - In-1/1	1670 South 19th St.	سدووح	
Marrisburg Steam Gen	conting ruchily	D. STATE E. ZIP CODE		ITY HAME
Harrisburg	<u>, </u>	PA 17104	Da	ruphin .
I NAME _				TPHONE NUMBER
City of Harris	burs		1(-717)	236-536/
1. TYPE OF OWNERSHIP (II known)		ICIPAL S. FRIVATE	6. UNKNO	
The Harrisburg St	team Generating Faciliti	y is a retuse incinera	tor wh	nieh is
located on sixty	acres of land. the	ire are two areas	wher	e
rocidue/fla ash an	team Generating Facilities acres of land. The	es been disposed >	t, cou	iering: an
and A	imately twelve acres			
area or approx	I Welle -Cores			
J. HOW IDENTIFIED (i.e., citizen's c	complaints, OSHA citations, atc.)			K. DATE IDENTIFIED
Cercla				(mo., doy, & vr.) 8/1/80
SUMMARY OF POTENTIAL OR KN				
Potential for so	il and/or groundwate	er contamination di	ne to	disposel
f voc due / M all	and bottom ash) a	t two areas on s	नेंं .	
01 issions (+14 42,	- write V-11-		-	
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M. PREPARER INFORMATION	·			3. DATE (mo., doy, & yr.)
1. NAME	Ω.	(17)657-45	\$0	5/19/07
Anthony L. Rath	nton	1111657-98	06	-110/3/
EPA Form 2070-8 (5J80)				

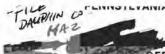
Ç.	EPA
7	

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT ART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENT	IFICATION
01 STATE	02 SITE NUMBER
PA	0435

PART 1 - SITE INFORMA	TION AND ASSESSMENT
II. SITE NAME AND LOCATION	·
O1 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Harvisture Steam Generating Incility	1670 South 19th street
Harvisburg Steam Generating Facility	1670 South 19th Street 04 STATE 05 ZIP CODE 108 COUNTY 107 COUNTY 108 CONG
Harrisburg	PA 17104 Dauphin 22 16
Harrisburg 09 COORDINATES LATITUDE LONGITUDE	
40° 17' 43". N 76_ 51' 19". W	
10 DIRECTIONS TO SITE issuring from nearest public roads I-83 South to 17th St. Exit. Left to Paxton Street. Turn right auto 19th Street and	Street left on Parton Street to 19th
Chreat Turn with anto 19th Street and	an approximately 10 mile, facility is on
the right	
III. RESPONSIBLE PARTIES	
01 OWNER (# Anown)	02 STREET (Business, mailing, residentia)
	1670 South 19th Street
City of Marrisburg	104 STATE OF ZIP CODE OF TELEPHONE NUMBER
Harrisburg	PA 17104 171236-5361
07 OPERATOR (Il known and different from owner)	OS STREET (Business, mailing, residential)
Same	1170 S. H. 19th Street
09 CITY	10 South 19th Street
Harrisburg	74 17104 17171236-5361
13 TYPE OF OWNERSHIP (Check one)	
☐ A. PRIVATE ☐ B. FEDERAL:	□ C. STATE □D.COUNTY ■ E. MUNICIPAL
□ F. OTHER:(Specify)	🗆 G. UNKNOWN
14 OWNER/OPERATOR NOTIFICATION ON FILE (Check at that apply)	
LI A. RCRA 3001 DATE RECEIVED:	LED WASTE SITE (CERCLA 103 c) DATE RECEIVED: 8 / / 180 C. NONE
IV. CHARACTERIZATION OF POTENTIAL HAZARD	Mentil Aut 1944
O I ON SITE INSPECTION BY (Chock all their apply)	
E I CO UNE THOSE	A CONTRACTOR C. STATE D. D. OTHER CONTRACTOR
OONTRACTOR NAME(S):	(Specify)
02 SITE STATUS (Check one) 03 YEARS OF OPER	
A. ACTIVE D. B. INACTIVE D.C. UNKNOWN	1972 PRESENT UNKNOWN
04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED	
Toxic residue from incineration of +	rash.
100 offer 110	
05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION	
Potential exists for contamination of:	soil and/or groundwater.
	/ V .
V. PRIORITY ASSESSMENT	
O I PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part ? · Waste infor	mation and Part 3 - Description of Hazardous Conditions and Incidents)
☐ A. HIGH ☐ B. MEDIUM ☐ C. LOW (Inspection required) (Inspect on time	D. NONE available basis) (No further action needed, complete current disposition form)
VI. INFORMATION AVAILABLE FROM	
01 CONTACT 02 OF (Agency-Organiz	O3 TELEPHONE NUMBER
William S. Strauss Don't of To	scineration & Steam Generation 1717/236-5361
William 5 Strauss Dest of TV	Rev. of Waste Mant 1717 K57-4588 MONTH DAY YEAR
Anthony L. Rathfon PA DER	By of What Mat 1717 K57. 4588 MONTH DAY YEAR

In case of an emergency or spill immediately call the National Response Center (800) 424-8802 and the PA DER (717) 787-4343



AND CHEMOTHERAPEUTIC WASTE Bureau of Waste Management
P. O. Box 8550
Harrisburg, PA 17105-8550
OFFICIAL PENNSYLVANIA MANIFEST FORM

Form approved. OMB No. 2050-0039 Expires 9-30-91

WASTE MANIFEST P A D 0 0 0 4 3 0 6 8 6 10 0	0 0 0 2	of]		equired by F equired by S	ederal law tate law.
Generator's Name and Mailing Address City of Harrisburg		-	AC 486	ment Numb	
Waste Energy Facility 1670 S. 19th Street			Gen. ID	4120)
Harrisburg, Pa. 17104		D. State			
Generator's Phone (717) 236-5361 Attn: John Licks Transporter 1 Company Name 6. US EPA ID Numb		0 01-1-	SAME Trans. ID		
71 - 7 - 11 - 11 - 11 - 11 - 11 - 11 -	27	V 2 1 2 10 10			
eystone Block Transportation Co. P A D 9 8 0 6 9	2 0 0 8	PA-	AH	0 2	3 6
Transporter 2 Company Name 8. US EPA ID Numb	er		sporter's Phone	e (215)	926-6915
		100000000000000000000000000000000000000	Trans. ID		-
Designated Facility Name and Site Address 10. US EPA ID Numl Envirite Corporation	ber	PA-			1
1600 Pennsylvania Ave.		_	sporter's Phone	e ()	
York, Pa. 17404		and the second second second	e Facility's ID		GOLD
P A D O 1 O 1 5	4 0 4 5	H. Faci	lity's Phone (-	717) 84	6-1900
1. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Conta	Type	13. Total Quantity	14. Unit	I. Wasta No.
RQ, HAZARDOUS WASTE SOLID, N.O.S. (DOOO6, DOOO8)	No.	Туре	Quantity	WUVI	
ORM-E NA9189			0-10	201	D006
(incinerator ash contaminated with Cadmium and Lead	001	CM	3018	OP	008
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Additional Descriptions for Materials Listed Above	1	K Hen	dling Codes for	Westes I is	lad Abous
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5. Special Handling Instructions and Additional Information 11a. Appr #YS 0639 DOT ERG #31 EMERG		ACT:	717-236-	RIEDER -5361	ping name and are nment regulations.
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11a. Appr #YS 0639 DOT ERG #31 EMERG 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment classified, packed, marked, and labeled and are in all respects in proper condition for transport by higher than a large quantity generator, I certify that I have a program in place to reduce the volume and practicable and that I have selected the practicable method of treatment, storage, or disposal currently and the environment, OR, if I am a small quantity generator. I have made a good faith effort to minura variable to me and that I can afterd. Printed/Typed Name Signature John A. Lukens 17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Signature Signature	nt are fully and ac way according to a	CACT:	717-236-	PRIEDER -5361 y proper ship ational government of the ship ation at the	to be economically eat to human health nent method that is a DAY YEAR 1791
11a. Appr #YS 0639 DOT ERG #31 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment classified, packed, marked, and labeled and are in all respects in proper condition for transport by higher than a large quantity generator, I certify that I have a program in place to reduce the volume and practicable and that I have selected the practicable method of treatment, storage, or disposal currently and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minus available to me and that I can afford. Printed/Typed Name John A. Lukens 17. Transporter 1 Acknowledgement of Receipt of Materials. Printed/Typed Name Signature Signature Signature	nt are fully and ac way according to a	CACT:	717-236-	PRIEDER -5361 y proper ship ational government of the ship ation at the	to be economically eat to human health nent method that is a DAY YEAR 1791
5. Special Handling Instructions and Additional Information 11a. Appr #YS 0639 DOT ERG #31 EMERG 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment classified, packed, marked, and labeled and are in all respects in proper condition for transport by highly lift I am a large quantity generator, I certify that I have a program in place to reduce the volume and practicable and that I have selected the practicable method of treatment, storage, or disposal currently and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minute available to me and that I can afford. Printed/Typed Name Signature John A. Lukens 17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Signature 19. Discrepancy Indication Space	nt are fully and ac way according to a	CACT:	717-236-	PRIEDER -5361 y proper ship ational government of the ship ation at the	to be economically eat to human health nent method that is a DAY YEAR 1791
5. Special Handling Instructions and Additional Information 11a. Appr #YS 0639 DOT ERG #31 EMERG 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment classified, packed, marked, and labeled and are in all respects in proper condition for transport by highly lift I am a large quantity generator, I certify that I have a program in place to reduce the volume and practicable and that I have selected the practicable method of treatment, storage, or disposal currently and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minute available to me and that I can afford Printed/Typed Name Signature John A. Lukens 17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Signature 18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name Signature 19. Discrepancy Indication Space	nt are fully and ac way according to a	CACT:	717-236-	PRIEDER -5361 y proper ship ational government of the ship ation at the	to be economically eat to human health nent method that is a DAY YEAR 1791
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11a. Appr #YS 0639 DOT ERG #31 EMERG 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment classified, packed, marked, and labeled and are in all respects in proper condition for transport by high if I am a large quantity generator, I certify that I have a program in place to reduce the volume and practicable and that I have selected the practicable method of treatment, storage, or disposal currently and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minuravailable to me and that I can afford. Printed/Typed Name John A. Lukens 17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Signature 19. Discrepancy Indication Space 29, 680 # /E Novirty O (A) Q 20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by the second of the content of the certification of receipt of hazardous materials covered by the certification of receipt of hazardous materials covered by the certification of receipt of hazardous materials covered by the certification of receipt of hazardous materials covered by the certification of receipt of hazardous materials covered by the certification of receipt of hazardous materials covered by the certification of the certification of receipt of hazardous materials covered by the certification of th	nt are fully and ac way according to a toxicity of waste go y available to me w nize my waste gen	CACT:	717-236- escribed above by ternational and not the degree I have its be present a select the best w	PRIEDER -5361 y proper ship ational government of the strength of the strengt	to be economically eat to human health nent method that is a DAY YEAR 1 7 9 1 H DAY YEAR 1 7 19 1
11a. Appr #YS 0639 DOT ERG #31 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment classified, packed, marked, and labeled and are in all respects in proper condition for transport by high if I am a large quantity generator, I certify that I have a program in place to reduce the volume and practicable and that I have selected the practicable method of treatment, storage, or disposal currently and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minure available to me and that I can afford. Printed/Typed Name John A. Lukens 17. Transporter 1 Acknowledgement of Receipt of Materials. Printed/Typed Name Signature Signature 19. Discrepancy Indication Space 29, 680 # / Environment	nt are fully and ac way according to a toxicity of waste go y available to me w nize my waste gen	CACT:	717-236- escribed above by ternational and not the degree I have its be present a select the best w	PRIEDER -5361 y proper ship ational government of the ship ation at the	to be economically eat to human health nent method that is a DAY YEAR 1 7 9 1 H DAY YEAR 1 7 19 1

In case of an emergency or spill immediately call the National Response Center (800) 424-8802 and the PA DER (717) 787-4343

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES Bureau of Waste Management

Form approved. OMB No. 2050-0039 Expires 9-30-91

FOR SHIPMENT OF HAZARDOUS, INFECTIOUS AND CHEMOTHERAPEUTIC WASTE.

P. O. Box 8550

Harrisburg, PA 17105-8550

OFFICIAL PENNSYLVANIA MANIFEST FORM

WASTE MANIF	RDOUS Fest D A	D 0 0 0	0 4 3	0.6	8610	Manifest ocument No.	2. Pag	is not re	quired by Fe quired by St	
3. Generator's Name and					O O I O O	<u>, , , , , , , , , , , , , , , , , , , </u>	A. Stat	e Manifest Docu	ment Numb	
Waste Energy	_	City of 1670 S.	Harrisb 19th St	urg reet			P	AC 486	4145)
	, , ,	Harrisbu			4		B. State	e Gen. ID		
4. Generator's Phone (236-5361	l Attn	:_Joh	n Luken	3		SAME		
5. Transporter 1 Comp	oany Name			6. US EI	PA ID Numbe	r	C. Stat	e Trans. ID		
Keystone Block	k Transporta	ation Co	PAD	98	069	2.00.8	R PA	- A H	0 2 3	6
7. Transporter 2 Comp	pany Name		<u> </u>	8. US EI	PA ID Numbe	r · · · · · · · · · · · · · · · · · · ·	D. Trar	nsporter's Phone	(215)	925-6915
		I					E. State	e Trans. ID		<u> </u>
9. Designated Facility Na		s		10. US E	PA ID Numb	er	PA		1	1
Envirite Corpo	oration						t .	nsporter's Phone	* ()	
1600 Pennsylva	ania Ave.							le Facility's ID		
York, Pa. 1740	04	4	D 4 D				<u> </u>	ility's Phone (7	171046	1000
 _			PAD	<u>0 I</u>	015	12. Con		13.	14.	-1900
11. US DOT Description ((Including Proper Sh	hipping Name,	Hazard Class,	, and ID I	Number)	No.	Туре	Total Quantity	Unit	Waste No
RQ, HAZARDOUS ORM-E NA9189	WASTE SOLII (INCINERATO	D, N.O.S OR ASH CO	. (DOOO6 ONTAMONA	DOOC TED W	8) ITH Cd,I	Pt 0 0	CM CM	3242	P	D0006 D0008
b.										
C							<u> </u>			
									ı	
d.										
						<u> </u>		<u> </u>		
J. Additional Descriptions Lab Pack Physic	s for Materials Listed cal State		Lab Pack	Physica	el State		K. Han	dling Codes for	Wastes List	ed Above
1 1 1	sl.	c	1 1				a 75		c	
a		'					1			
a		d	. [I			b. <		d.	
b	tructions and Addition	onal Informatio	<u> </u>				b. «.		d.	
b	tructions and Addition	onal Informatio	<u> </u>	E	mergenc	y Contac	et: Ed	Egenriedo 5-5361		
b	tructions and Addition 0639 DOT ET	onal Informatio RG #31	re that the comin proper condit	tents of training for training for training for training for the training	nis consignment report by highw e volume and to posal currently	are fully and ay according to exicity of waste available to me	accurately do applicable i	lescribed above to nternational and no the degree I have nizes the present a	or proper shipp ational government of the future three	to be economicall at to human healt
b	tructions and Addition 0639 DOT Electric CERTIFICATION: rked, and labeled and arrow selected the praction OR, if I am a small quality can afford.	onal Informatio RG #31	re that the comin proper condit	tents of training training to the training train	nis consignment report by highw e volume and to posal currently effort to minimi	are fully and ay according to exicity of waste available to me ze my waste ge	accurately do applicable i	described above by international and not the degree I have nizes the present at select the best w	or proper shipp ational government of the future three	to be economicall at to human healt lent method that i
b	CERTIFICATION: rked, and labeled and ar ly generator. I certify the have selected the praction, if I am a small quality and a recognition of the company of	onal Information RG #31	re that the comin proper condit	reduce that go of daith	e volume and to posal currently effort to minimi	are fully and ay according to exicity of waste available to me ze my waste ge	accurately do applicable i	described above by international and not the degree I have nizes the present at select the best w	or proper shipp attonal governing e determined the and future three aste managem	to be economicall at to human healt lent method that i
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b	CERTIFICATION: rked, and labeled and ar ty generator, I certify the have selected the praction of the practical of th	onal Information RG #31	re that the comin proper condit	reduce that speed of distribution for training reduce that speed of distribution for the speed of the speed o	ais consignment hisport by highway the volume and to posal currently effort to minimi	are fully and ay according to exicity of waste available to me ze my waste ge	accurately do applicable i	described above by international and not the degree I have nizes the present at select the best w	proper shipp attonal governing the determined the d	to be economically at to human health tent method that is DAY YEAL
b	CERTIFICATION: rked, and labeled and ar ty generator, I certify the have selected the praction of the practical of the praction of the practical of th	onal Information RG #31	re that the comin proper condit	reduce that go of daith	ais consignment hisport by highway the volume and to posal currently effort to minimi	are fully and ay according to exicity of waste available to me ze my waste ge	accurately do applicable i	described above by international and not the degree I have nizes the present at select the best w	proper shipp ational governing e determined the and future three astermanagem	to be economicall at to human health tent method that in the second seco
b	CERTIFICATION: 10639 DOT EN CERTIFICATION: 109 penerator, I certify the have selected the praction of the practical of the practi	onal Information RG #31	re that the comin proper condit	reduce that speed of distribution for training reduce that speed of distribution for the speed of the speed o	ais consignment hisport by highway the volume and to posal currently effort to minimi	are fully and ay according to exicity of waste available to me ze my waste ge	accurately do applicable i	described above by international and not the degree I have nizes the present at select the best w	proper shipp attonal governing the determined the d	to be economicall at to human health at the human health ent method that is a second of the human health at the human health a
b	CERTIFICATION: O639 DOT EI CERTIFICATION: rked, and labeled and ar ty generator, I certify the have selected the praction of a small quality can afford. Regement of Receipt of Mail to the selected the praction of the selected the practical of the selected the selected the practical of the selected the selected the practical of the selected the select	onal Information RG #31 I hereby declare in all respects in all respects in all respects in an in the property of the propert	re that the comin proper condition in place to treatment, store I have made a company to the com	tents of the control	e volume and to post of the po	are fully and ay according to exicity of waste available to me are my waste ge	accurately do applicable in generated to which minimiseneration and	lescribed above benternational and no the degree I have nizes the present a diselect the best w	proper shipp attonal governing the determined the d	to be economicall at to human health tent method that in the tent method that method the tent method the tent method that method the tent method that method the tent method the tent method the tent method that method the tent method the tent method that method the tent method the tent method that method the tent method the tent method that method the tent method the tent method the tent method the t
b. La. APPR. #YS 16. GENERATOR'S Classified, packed, mar If I am a large quantity practicable and that I hand the environment, available to me and the Printed/Typed Name 17. Transporter 2 Acknowled Printed/Typed Name 18. Transporter 2 Acknowled Printed/Typed Name 19. Discrepancy Indica	CERTIFICATION: O639 DOT EN CERTIFICATION: rked, and labeled and ar ty generator, I certify the have selected the praction, if I am a small quality can afford. Regement of Receipt of Mailer dependent of Receipt of Mailer	onal Information RG #31 I hereby declare in all respects in all respects in all respects in an in the property of the propert	re that the comin proper condition in place to treatment, store I have made a company to the com	reduce the age, or disposed faith Signa Signa Signa	e volume and to possible the control of the control	are fully and ay according to exicity of waste available to me are my waste ge	accurately do applicable in generated to which minimiseneration and	lescribed above benternational and no the degree I have nizes the present a diselect the best w	proper shipp attonal governing the determined the d	to be economicall at to human health tent method that in the tent method that method the tent method the tent method that method the tent method that method the tent method the tent method the tent method that method the tent method the tent method that method the tent method the tent method that method the tent method the tent method that method the tent method the tent method the tent method the t
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POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT PART 2 - WASTE INFORMATION

I. IDENTIFICATION				
01 STATE	02 SITE NUMBER			
Pa- !	2435			

	TATES, QUANTITIES, AN				·		
01 PHYSICAL S	TATES (Chuck all that apply)	02 WASTE QUANT	ITY AT SITE of waste quantities	03 WASTE CHARAC	TERISTICS (Check all their a	upiy)	
N A. SOLID	I I E. SLURRY	must be	indapondunt)	in A. TOXIC			
I I B. POWDE	R, FINES 1 F. LIQUID	TONS	UNKLOUN	I J B. CORRO		MABLE LIK. REACTI	VE
		CUBIC YARDS		I I O. PERSI	STENT H. IGNIT	ABLE L INCOMI	
170.0111	(Specify)	NO. OF DRUMS		<u> </u>			
III. WASTE T	YPE						
CATEGORY	SUBSTANCE N	AME	01 GROSS AMOUNT	02 UNIT OF MEASUR	E 03 COMMENTS		
SLU	SLUDGE		<u> </u>			 	
OLW	OILY WASTE			l			
SOL	SOLVENTS						
PSD	PESTICIDES						
occ	OTHER ORGANIC CH	HEMICALS			1		
IOC	INORGANIC CHEMIC	ALS		 			
ACD	ACIDS				· · · · · · · · · · · · · · · · · · ·		
BAS	BASES						
MES	HEAVY METALS		UNKHOWN		METALS IN B	OTTOM AND FLY	ASW.
IV. HAZARD	OUS SUBSTANCES (See A)	opendut for most frequen		<u> </u>	1.4/1/22/1/2	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
01 CATEGORY	02 SUBSTANCE N		03 CAS NUMBER	04 STORAGE/DIS	SPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
							VOINGENTATION
				-		 	
							
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V. FEEDSTO	CKS (See Appendix for CAS Numbe	ws)		<u> </u>		<u>.L.,,,</u>	<u> </u>
CATEGORY	UI FEEDSTOCK	KNAMÉ	02 CAS NUMBER	CATEGORY	O1 FEEDST	OCK NAME	02 CAS NUMBER
FDS				FDS			
FDS				FDS			
FDS		······································		FDS			
FDS		· · · · · · · · · · · · · · · · · · ·		FDS	· · · · · · · · · · · · · · · · · · ·	•	
VI. SOURCES	S OF INFORMATION (CHO	specific references, e.g.,	siale liles, sample analysis,	reports)			
4	State Files Sample Analyses Reports)					
	Karts			•			

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION OI STATE 02 SITE NUMBER PA 0435

II. HAZARDOUS CONDITIONS AND INCIDENTS			
01 A. GROUNDWATER CONTAMINATION 03 POPULATION POTENTIALLY AFFECTED:	02 LI OBSERVED (DATE:) 04 NARRATIVE DESCRIPTION	FOTENTIAL	1'I ALLEGED
Possible groundwater contamination w	.AL heavy metals.		* u-
•			•
01 M B. SURFACE WATER CONTAMINATION U. パットリー 03 POPULATION POTENTIALLY AFFECTED:	02 () OBSERVED (DATE:) 04 NARRATIVE DESCRIPTION	(P) POTENTIAL	(*) ALLEGED
Possible contamination of surface	water due to rung-off.		
01 BI C. CONTAMINATION OF AIR 03 POPULATION POTENTIALLY AFFECTED: (Interpress)	02 (I) OBSERVED (DATE:) 04 NARRATIVE DESCRIPTION	BI POTENTIAL	L] ALLEGED
01 M D. FIRE/EXPLOSIVE CONDITIONS 03 POPULATION POTENTIALLY AFFECTED:	02 (1) OBSERVED (DATE:) 04 NARRATIVE DESCRIPTION	☐ POTENTIAL	(L) ALLEGED , i
	· :		
01 SE DIRECT CONTACT 03 POPULATION POTENTIALLY AFFECTED: UNCLOSED		M POTENTIAL	L) ALLEGED
Possible for persons to make dire	et contact with the ash	~	
01 2 F. CONTAMINATION OF SOIL 03 AREA POTENTIALLY AFFECTED: (Acres)	02 OBSERVED (DATE:) 04 NARRATIVE DESCRIPTION	B POTENTIAL	LI ALLEGED
Botton ash and fly ash has been and possible failure of 7xc liner	deposited onto the ground	at Residue	Area A
and possible families to the time	ander Kesime Her P.T.		
01 M G. DRINKING WATER CONTAMINATION UNKNOWN	02 □ OBSERVED (DATE:) 04 NARRATIVE DESCRIPTION	POTENTIAL	[] ALLEGED
Potential is small due to the -	fact that surface water	(public water	2: (-2
used by resident's and busine-	is surrounding the site	•	
01 M H. WORKER EXPOSURE/INJURY 03 WORKERS POTENTIALLY AFFECTED: Unknown	02 LI OBSERVED (DATE:) 04 NARRATIVE DESCRIPTION	M POTENTIAL	() ALLEGED
Possible long term health effects	due to exposure to a	He ash.	
01 M. I. POPULATION EXPOSURE/INJURY 03 POPULATION POTENTIALLY AFFECTED: עקלאסטיי	02 □ OBSERVED (DATE:) 04 NARRATIVE DESCRIPTION	POTENTIAL	□ ALLEGED
Possible long term health effects d		•	
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POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

R TEAN COME IN TO	ZARDOUS CONDITIONS AND INCIDEN'	rs PA C	435
IIL HAZARDOUS CONDITIONS AND INCIDENTS (Continued)		·	
GAT M J. DAMAGE TO FLORA GA NARRATIVE DESCRIPTION	02 LI OBSERVED (DATE:)	POTENTIAL	[] ALLEGED
None noted			
Movie .	·		
OTI ME K. DAMAGE TO FAUNA ON MARRATIVE DESCRIPTION (Include name(s) of species)	02 🗀 OBSERVED (DATE:)	POTENTIAL	C) ALLEGED
None noted			•
, , , , , , , , , , , , , , , , , , , ,			
ONE SEL. CONTAMINATION OF FOOD CHAIN CIA MARRATIVE DESCRIPTION	02 🗆 OBSERVED (DATE:)	POTENTIAL	[] ALLEGED
Potential for contamination of	gardens.		
GTI BM M. UNSTABLE CONTAINMENT OF WASTES (Spills/unoli/standing liquids/leaking drums) GB POPULATION POTENTIALLY AFFECTED: Unknown	02 LJ OBSERVED (DATE:)	POTENTIAL	LI ALLEGED
CO POPULATION POTENTIALLY AFFECTED: UNKNOWN	04 NARRATIVE DESCRIPTION	iner under 18	es. due
Runoft and/or erosion, also potent	ial for tailure of 100 1		
OT IN DAMAGE TO OFFSITE PROPERTY ON NARRATIVE DESCRIPTION	02 🗆 OBSERVED (DATE:)	POTENTIAL	☐ ALLEGED
Potential due to run-off and/or	erosion of ask.		
		.•	•
→ ● O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs	02 C OBSERVED (DATE:)	POTENTIAL	□ ALLEGED
Possible for contimination of	Sewer.	•	-
OT P. ILLEGAL/UNAUTHORIZED DUMPING C4 NARRATIVE DESCRIPTION	02 🖸 OBSERVED (DATE:)	POTENTIAL	□ ALLEGED
None noted			
·			
Q5 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEC	GED HAZARDS		
US TOTAL BOOK! ATION BOTTNIALLY ASSESSED.	(a. p. (. 2).	<u> </u>	
INL TOTAL POPULATION POTENTIALLY AFFECTED: 山山木	WG ~ ~ ~		· -
4		•	
V. SOURCES OF INFORMATION (Cue specific references, e. g., state tites,	ianyke unalysis, ropor(s)		
State Files Sample Analysis	•		
Sample Analysis			
EP& FORM 2070-12 (7-81)			

FIELD TRIP SUMMARY REPORT

This summary should be prepared in conjunction with the Preliminary Assessment, EPA Form 2070-12.

EPA Case Number <u>PA - 6435</u>	Site Name Harrisburg Steam Generating Facility				
Site Description The Harrisburg Steam Generating Facility located on 60 acres of land. Ther (fly ash and bottom ash) has been d	is a refuse incinerator which is a are two areas where residue ispased, covering approximately 12 acres.				
Area of site (acres)	Hazardous portion, if not entire site				
40	12 acres				
Description of processes/operations which took place at the site the Harrisburg Steam Generating racility burns refuse (municipal and industrial waste) and generates steam for electricity. The flyash and bottom ash has been is being disposed of on site at two spots located on the HSGF property. Waste handling/disposal practices The bottom ash and fly ash has been disposed of onto the ground at Residue Area Ar and onto a PVC liner at Residue Area B-1. Site topography and runoff drainage pathways					
Refer to site sketch.					
Surface or subsurface drainage areas (leach	1 1				
Hone noted	None Stressed vegetation noted? None				
Location and description of streams or receiving waters adjacent to site. Include flow direction and observations. Note location on attached map. Refer to map					
Monitoring wells on site or in vicinity. Note location on attached map.					

Population within ¼ mile of site: □ 0-10 □ 10-100 ☑ greater than 100	Population within 1 mile of site: □ 0-10 □ 10-100 □ 100-1000 □ greater than 1000		
Surrounding land use (woodlot, agricultural	, recreation, industrial, etc.)		
NORTH Woodlot	EAST Industrial		
SOUTH Industrial	WEST Woodlot		
Municipal water supply within 3-mile radius Riverton Consolidated Water Co Sur Steelton Reservoir - wells Harrisburg Reservoir - wells Reference: Topo map	s (note use of surface water and/or wells) face whiter		
Domestic wells. Approximate number within List nearest wells below and show locations	¼ mile: <u>None</u> s on attached map.		
Owner/Resident Add	ess Phone		
Groundwater flow direction, if known Toward the Susguehahna Pher	·		
Description of odor/taste problems			
None			
State inspection activity (including permit Waste Management Permits *100758, #/007	i de la companya de		
Air Quality Permit # 22-310-007 Exp # 22-301-052 Exp Ren	pired June 30,1986 Dired Nov. 30,1986 enal issued Dec. 1,1986		
State/Federal/Private remedial activities			

												
Addi	itional co	omments	Furt	her d	escrip	ption	of site	liver	while	Res. Inc	Ares	
•	Residue A 15	Area unlined.	, 8-T	/2 //	nec .		~ / (-			,		i
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SITE CONTACTS		
Name and Title	Affiliation	Phone
Bill Strauss	Superintendent	(717) 236-5361
John Lukens	Superintendent Maintenance Supervisor	(11) 236-5361
	}	
 	· · · · · · · · · · · · · · · · · · ·	

INSPECTION INFORMATION	
Name and title of inspector(s) Anthony L	Rathfon
Agency DER	Phone number (717)657-4588
Date	Time on site 3.5 Hrs.
Weather conditions: 5-nny, cold, light wind low 30's.	

ATTACHMENTS

- o Topographic map identifying site location. Include name of quadrangle map.
- o Site sketch map showing location of monitoring wells, domestic wells, municipal water supplies, and areas of concern (lagoons, leachate seeps, drums, etc.)
- o Any available sampling results or state monitoring data with map showing sample locations.

Harrisburg Steam Generating Facility SITE I.D. NO. PA-0435 ACTIVITY: JOINT PA JOINT SI Other (specify) NAME DATE HOURS 6.0 1/26/87 Anthony L. Rathfon 2.0 1/27/87 1128/87 11 7.5 11 1/30/87 3.0 2/4/87 11 4.5 2/3/87. 11 4.5 2/6/87 11 2/12/87 4.0 2/24/87 4.5 11 3.0 5/18/87. 2,8 Francis P. Fair 5/19/87 46.0 HRS

INSTRUCTIONS:

- 1. Complete & attach this form to each PA, SI, etc.
- Submit this form separately for joint activities in cases where EPA/FIT will prepare the report.
- 3. Use a separate form for each site or project.
- 4. Report time to the nearest hundredth hour (e.g., 4.75)
- 5. Include supervisory time (quality review/assurance, etc.) and time spent preparing final report (typing duplicating, etc.)

CABRAGISBURGO UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY 2 MILES TO CENTER FACILITY 76°52'30" THE RESERVOIR D 341 (30) CF 14 5 40*15 83 FFX 8 K. HANGE Sheesly Island Reduds HARRISAURG tessisio. 4455000m N. PAUPHIN 1s/and SUS OUE HAN 454 BM 340 CAPITAL CITY AIRBORT Yellon INTERCHANGE 18% 12'30" NEWDIMBERY GENERATOEP

UNUFILLIANT FURNICULOUATED

A DIVISION OF SKELLY AND LOY

~ 2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: CITY OF HARRISBURG

PROJECT NO:

4668

ADDRESS: HARRISBURG STEAM GENERATING FA

CLIENT NO:

160

1670 SOUTH 19TH STREET

SAMPLE NO:

23181

HARRISBURG, PA 17104

DATE RECVD: 9/26/85

ATTENTION: REF. NO: PO # 23896-85

CHUCK KING

THU, OCT 24 1985

SAMPLE IDENTIFICATION: WELL AT 19TH STREET FIELD

DATE: 9/30/85

-TEST-	DETERMINATION	RESULTS	UNITS
	ANNUAL SAMPLE ANALYSIS		
AL	ALUMINUM, TOTAL ALBUMINOID NITROGEN	<. 1	MG/L
ALB	ALBUMINDID NITROGEN	<. 1	MG/L
ALKT	ALKALINITY, TOTAL (as CaCO3)	145	MG/L
	ARSENIC, TOTAL	<. 005	MG/L
BOD	BIOCHEMICAL OXYGEN DEMAND 5 DY	2	MG/L
CD	CADMIUM, TOTAL	<. 01	MG/L
CL	CHLORIDE	3	MG/L
COD	CHLORIDE CHEMICAL OXYGEN DEMAND CHROMIUM, TOTAL ELUCRIDE	2. 7	MG/L
CR	CHROMIUM, TOTAL	<. 01	MG/L
F	FLUCRIDE	<. 1	MG/L
FE	IRON, TOTAL	. 01	MG/L
MN	MANGANESE, TOTAL	. 20	MG/L
SHN SHN	AMMONIA NITROGEN	<. 1	MG/L
	NITRITE NITROGEN	<. 005	MG/L
N03	NITRATE NITROGEN	. 56	MG/L
PB	LEAD, TOTAL	<. 03	
PH	PH, LAB	7. 84	
	PHOSPHORUS, ORTHO	<. 003	
		318	UMHOS/CM
	SULFATE	38	MG/L
	SUSPENDED SOLIDS	<1	MG/L
		0. 3	
	TOTAL ORGANIC CARBON	<1	MG/L
TS	TOTAL SOLIDS (TOTAL RESIDUE)	261	MG/L

DAVÍD W. LANE

ANALYTICAL LABURATURIES

A DIVISION OF SKELLY AND LOY

2601 North Front Street

Harrisburg, PA 17110

(717) 232-0593

LABORATORY ANALYSIS REPORT

NAME:

CITY OF HARRISBURG

PROJECT NO:

4668

ADDRESS:

HARRISBURG STEAM GENERATING FA

CLIENT NO:

160

1670 SOUTH 19TH STREET HARRISBURG, PA 17104

SAMPLE NO:

23139

ATTENTION:

CHUCK KING

DATE RECVD:

9/26/85

REF. NO: PO # 23896-85

THU, OCT 24 1985

SAMPLE IDENTIFICATION: WELL-EXIT SIDE OF BLDG

DATE: 9/26/85

-TEST-	DETERMINATION	RESULTS	UNITS
	ANNUAL SAMPLE ANALYSIS		
AL	ANNUAL SAMPLE ANALYSIS ALUMINUM, TOTAL ALBUMINOID NITROGEN	<. 1	MG/L
ALB	ALBUMINOID NITROGEN	<. 1	MG/L
ALKT	ALKALINITY, TOTAL (as CaCO3)	295	MG/L
	ARSENIC, TOTAL	<. 005	MG/L
BOD	BIOCHEMICAL OXYGEN DEMAND 5 DY	<1	MG/L
CD	CADMIUM, TOTAL	<. 01	MG/L
CL	CHLORIDE	453	MG/L
COD	CHEMICAL OXYGEN DEMAND CHROMIUM, TOTAL SLUGRIDE	10. 4	MG/L
CR	CHROMIUM, TOTAL	. 02	MG/L
F	FLUORIDE	<. 1	MG/L
FE	IRON, TOTAL	. 03	MG/L
MN	MANGANESE, TOTAL	. 01	MG/L
EHM	AMMONIA NITROGEN	<. 1	MG/L
	NITRITE NITROGEN	<. 005	MG/L
	NITRATE NITROGEN	4. 6	
PB	LEAD, TOTAL	<. 03	
PH	PH, LAB	7. 58	
	PHOSPHORUS, ORTHO	. 003	MG/L
	SPECIFIC CONDUCTANCE AT 25C	1,484	UMHOS/CM
504	SULFATE	212	MG/L
SS	: =	<1	MG/L
STS		<. 1	ML/L
	TOTAL ORGANIC CARBON	3. 3	
TS	TOTAL SOLIDS (TOTAL RESIDUE)	1,418	MG/L

LANE

ANALTITUAL LABURATURIED

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: CITY OF HARRISBURG

PROJECT NO:

4668

ADDRESS:

HARRISBURG STEAM GENERATING FA

CLIENT NO:

160

HARRISBURG, PA 17104

1670 SOUTH 19TH STREET

SAMPLE NO:

23138

ATTENTION:

CHUCK KING

DATE RECVD: 9/26/85

REF. NO: PO # 23896-85

THU, OCT 24 1985

SAMPLE IDENTIFICATION: WELL B1

DATE: 9/26/85

-TEST-	DETERMINATION	RESULTS	UNITS
	ANNUAL SAMPLE ANALYSIS		
AL	ALUMINUM, TOTAL ALBUMINOID NITROGEN	<. 1	MG/L
ALB	ALBUMINDID NITROGEN	. 3	MG/L
ALKT	ALKALINITY, TOTAL (as CaCO3)	430	MG/L
AS	ARSENIC, TOTAL	<. 005	MG/L
BOD	BIOCHEMICAL OXYGEN DEMAND 5 DY	2. 9	MG/L
CD	CADMIUM, TOTAL	<. 01	MG/L
CL	CHLORIDE	28	MG/L
COD	CHEMICAL OXYGEN DEMAND	29. 5	MG/L
CR	CHROMIUM, TOTAL	. 03	MG/L
F	FLUGRIDE	<. 1	MG/L
FE	IRON, TOTAL	. 83	MG/L
MN	MANGANESE, TOTAL	. 31	MG/L
NHG	AMMONIA NITROGEN	<. 1	MG/L
N05		<. 005	MG/L
NO3	NITRATE NITROGEN	5 . 3	MG/L
PB	LEAD, TOTAL	<. 03	
PH	PH, LAB	7. 31	PH UNITS
P040		. 003	MG/L
SC		1,908	UMHOS/CM
S04	SULFATE	42	MG/L
SS	SUSPENDED SOLIDS	<1	MG/L
STS	SETTLEABLE SOLIDS	<. 1	ML/L
	TOTAL ORGANIC CARBON	11	MG/L
TS	TOTAL SOLIDS (TOTAL RESIDUE)	1,389	MG/L

DAVÍD W. LANE

ANALYTICAL LABORATURIES

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: CITY OF HARRISBURG

PROJECT NO:

4668

ADDRESS: HARRISBURG STEAM GENERATING FA

CLIENT NO:

160

1670 SOUTH 19TH STREET

SAMPLE NO:

23141

HARRISBURG, PA 17104 ATTENTION: CHUCK KING

DATE RECVD: 9/26/85

REF. NO: PO # 23896-85

THU, OCT 24 1985

SAMPLE IDENTIFICATION: DOWNSTREAM AT CAMERON

DATE: 9/26/85

-TEST-	DETERMINATION	RESULTS	UNITS
	ANNUAL SAMPLE ANALYSIS		
AL	ALUMINUM, TOTAL	<. 1	MG/L
ALB	ALBUMINDID NITROCEN	. 2	MG/L
ALKT	ALKALINITY, TOTAL (as CaCO3)	172	MG/L
AS	ARSENIC, TOTAL	<. 005	MG/L
BOD	BIOCHEMICAL DXYGEN DEMAND 5 DY	<1	MG/L
CD	CADMIUM, TOTAL	<. 01	MG/L
	CHLORIDE .	31	MG/L
COD	CHEMICAL DXYGEN DEMAND CHROMIUM, TOTAL	4. 1	MG/L
CR	CHROMIUM, TOTAL	<. 01	MG/L
	FLUORIDE	<. 1	MG/L
	IRON, TOTAL	. 10	MG/L
MN	MANGANESE, TOTAL	. 02	MG/L
EHM	AMMONIA NITROGEN	<. 1	MG/L
N02	NITRITE NITROGEN	. 008	MG/L
NO3	NITRATE NITROGEN:	3. 7	MG/L
PB	LEAD, TOTAL	<. 03	MG/L
PH	PH, LAB		PH UNITS
	PHOSPHORUS, ORTHO	. 047	MG/L
SC	SPECIFIC CONDUCTANCE AT 25C	435	UMHOS/CM
	SULFATE	42	MG/L
SS	SUSPENDED SOLIDS	<1	
STS	SETTLEABLE SOLIDS	<. 1	ML/L
	TOTAL ORGANIC CARBON	<1	MG/L
TS	TOTAL SOLIDS (TOTAL RESIDUE)	328	MG/L

DAVID W. LANE

ANALYTICAL LABUKATURIES

A DIVISION OF SKELLY AND LOY

2601 North Front Street

Harrisburg, PA 17110

(717) 232-0593

LABORATORY ANALYSIS REPORT

NAME:

CITY OF HARRISBURG

PROJECT NO:

4668

ADDRESS:

HARRISBURG STEAM GENERATING FA

CLIENT NO:

160

1670 SOUTH 19TH STREET HARRISBURG, PA 17104

SAMPLE NO:

23140

ATTENTION:

CHUCK KING

DATE RECVD:

9/26/85

REF. NO:

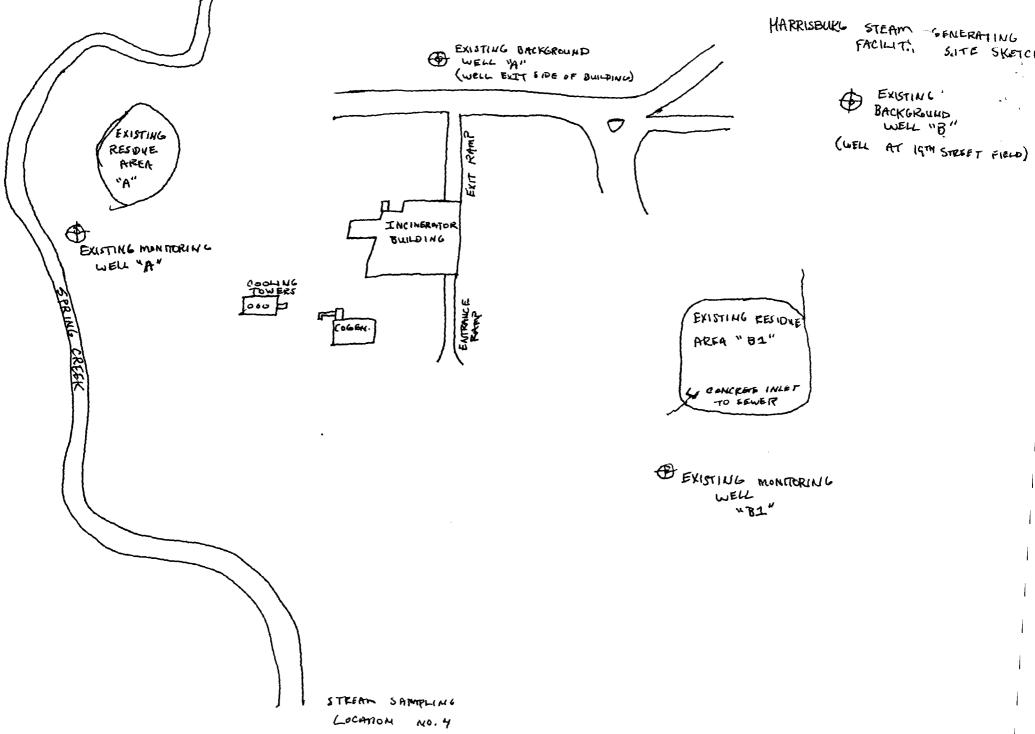
PO # 23896-85

THU, DCT 24 1985

SAMPLE IDENTIFICATION: UPSTREAM AT 19TH STREET

DATE: 9/26/85

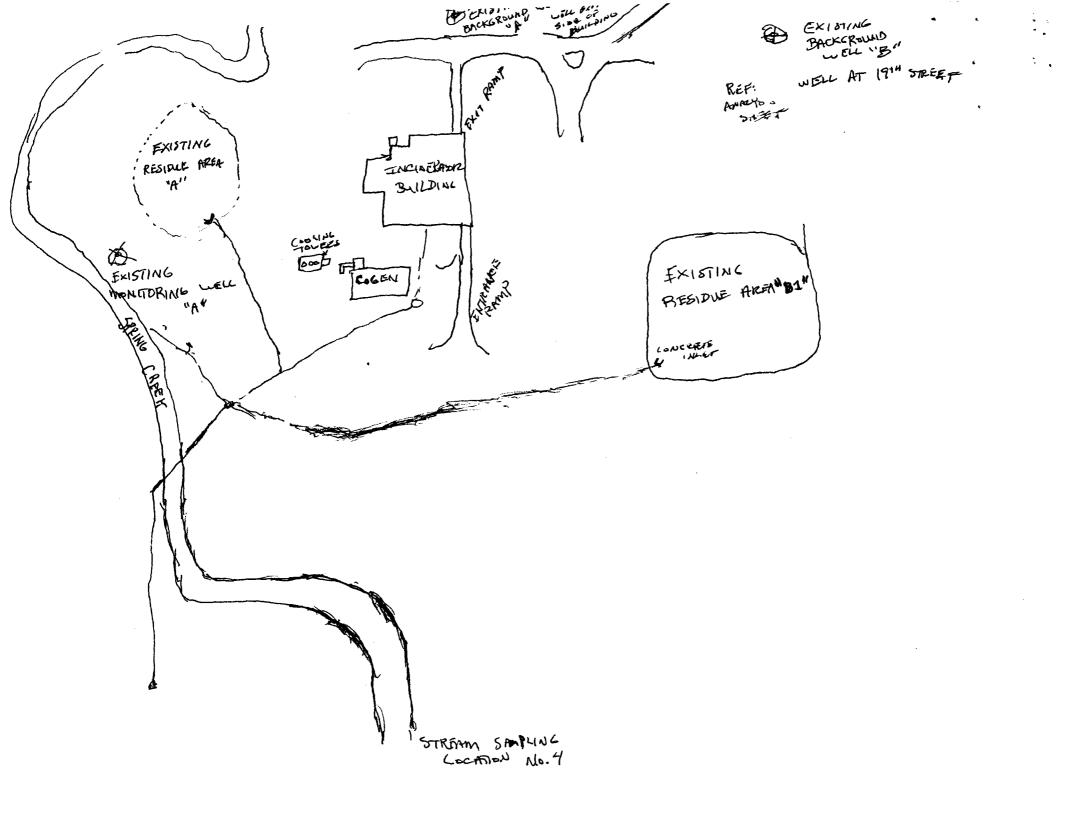
-TEST-	DETERMINATION	RESULTS	UNITS
	ANNUAL SAMPLE ANALYSIS		
AL	ALUMINUM, TOTAL	<. 1	MG/L
ALB	ALBUMINOID NITROGEN	. 2	MG/L
ALKT	ALKALINITY, TOTAL (as CaCO3)	167	MG/L
AS	ARSENIC, TOTAL	<. 005	MG/L
BOD	BIOCHEMICAL OXYGEN DEMAND 5 DY	<1	MG/L
CD	CADMIUM, TOTAL	<. 01	MG/L
CL	CHLORIDE	29	MG/L
COD	CHEMICAL DXYGEN DEMAND	14. 1	MG/L
CR	CHRGMIUM, TOTAL	. 01	MG/L
F	FLUGRIDE	<. 1	MG/L
FE	IRON, TOTAL	. 12	MG/L
MN	MANGANESE, TOTAL	. 02	MG/L
EHM	AMMONIA NITROGEN	. 2	MG/L
NOS	NITRITE NITROGEN	. 023	MG/L
иоз	NITRATE NITROGEN	3. 9	MG/L
PB	LEAD, TOTAL	<. 03	
PH	PH, LAB	7. 89	PH UNITS
PO40	PHOSPHORUS, ORTHO	. 095	MG/L
SC	SPECIFIC CONDUCTANCE AT 25C	413	UMHOS/CM
S04	SULFATE	44	MG/L
SS	SUSPENDED SOLIDS	<1	MG/L
STS	SETTLEABLE SOLIDS	<. 1	ML/L
TOC	TOTAL ORGANIC CARBON	4. 7	MG/L
TS	TOTAL SOLIDS (TOTAL RESIDUE)	317	MG/L



(DOWNSTREAM OF CAMERON)

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United States Environmental Prot Washington, DC 2046 PEPA Notification of Hazardous	Please refer to the Instructions for Filing Notification before completing this form. The information requested here is required by law (Section 3010 of the Resource Conservation)	
For Official Use Only		and Recovery Act).
	ments	
C		
c		
Installation's EPA ID Number	I .	eceived no. day) 22 043
EPAB/5074/6/9T/AC	1 pro	401 Dayphin
I. Name of Installation	and the second of the second o	the contraction of the second contraction is the contraction of the co
HARRISGURG STEA	MUKS	270 11
II. Installation Mailing Address	galant it mang mengahan sakara	
	P.O. Box	CITY of HBG 001
3/0/B/WWT.	5/	7
City or Town		State ZIP Code
4 1/7 4 K /C /		Way 1/1 6/15
	oute Number	and the second of the second o
5/0/6 4 WA/1/47	57	
City or Town		State ZIP Code
6 HARRIS 6 URG		Pa17/05
IV. Installation Contact	de side de la companya della company	The state of the s
Name and Title (last, first, and job title)		Phone Number (area code and number)
2 DONTE JAMES E	N9.45 87	1723/3887
V. Ownership A. Name of Installation's Legal Owner		B. Type of Ownership (enter code)
CHARRISÓURG STE	ANWKSLT	B. Type of Ownership (emer cade)
VI. Type of Regulated Waste Activity (Mark 'X' in the ap)	propriate boxes. Refer to	instructions.)
A. Hazardous Waste Activity	T	ed Oil Fuel Activities
1a. Generator 1b. Less than 1,000 kg/mo.	6. Off-Specification Use (enter 'X' and mark a	POPULATE POP
3. Treater/Storer/Disposer	a. Generator Ma	arketing to Burner
4. Underground Injection	☐ b. Other Market	MAR J I do
☐ 5. Market or Burn Hazardous Waste Fuel (enter 'X' and mark appropriate boxes below)	C. Burner	200
a. Generator Marketing to Burner	7. Specification Used O	il Fu et M arketer (or On site Burner) Oil Meetsthe Toe fification
☐ b. Other Marketer☐ c. Burner		The state of the s
VII. Waste Fuel Burning: Type of Combustion Device (ent	er 'X' in all appropriate boxes t	o indicate type of combustion device(s) in
which hazardous waste fuel or off-specification used oil fuel is burned. S A. Utility Boiler B. Industrie	See instructions for definition	of combustion devices
VIII. Mode of Transportation (transporters only — enter	X' in the appropriate bo	XI est
	her (specify)	APR 5 1988
IX. First or Subsequent Notification	The state of the s	16/711.00
Mark 'X' in the appropriate box to indicate whether this is your install notification. If this is not your first notification, enter your installation's E	ation's first notification of he EPA ID Number in the space p	zardous waste estivity of a subsequent rovided below:
A. First Notification B. Subsequent Notification (complete ite		C. Installation's EPA ID Number

																	<u> ID –</u>	- For	Offici	al Us	e Only	<u>, </u>		!
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X.	Desc	riptio	ı of	Haz	ardo	us V	astes	(co	ntini	ued f	rom	fron	t)											1. Jan.
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B.	Hazard	ous Wa	stes	from	Spec	ific S	DUTCES	Fote	r the	four-	digit i	aumbi	ar fr	om 4	O CER	Part 2	61 32	for e	ach li	sted t	azard	ous w	aste from	
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XI	. Cer	tificat	ion			1	9			1.45	1,5	$m_{i}^{ch} \beta$	16	· /	, (Y		ι.	Y 1 7	1. 4	4, 4	15 %	ar, mil	en e e e e e e e	
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EPA Form 8700-12 (Rev. 11-85) Reverse





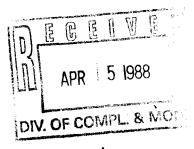
ACKNOWLEDGEMENT OF NOTIFICATION OF HAZARDOUS WASTE ACTIVITY

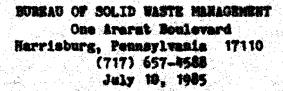
(VERIFICATION)

This is to acknowledge that you have filed a Notification of Hazardous Waste Activity for the installation located at the address shown in the box below to comply with Section 3010 of the Resource Conservation and Recovery Act(RCRA). Your EPA Identification Number for that installation appears in the box below. The EPA Identification Number must be included on all shipping manifests for transporting hazardous wastes; on all Annual Reports that generators of hazardous waste, and owners and operators of hazardous waste treatment, storage and disposal facilities must file with EPA; on all applications for a Federal Hazardous Waste Permit; and other hazardous waste management reports and documents required under Subtitle C of RCRA.

CONTE, JAMES ENG ASST
HARRISBURG STEAM WORKS LTD
10TH & WALNUT ST
HARRISBURG PA 17105

EPA Form 8700-12B (4-80)





Mr. Charles King Jr., Director
Department of Incineration and Steam Generation
1670 South 19th Street
Harrisburg, PA 17104

Dear Mr. Kings

This letter is a confirmation of our meeting held on July 3, 1985 at the Harrisburg Regional Office of the Department of Environmental Resources.

Our discussion focused on the historical and present non-compliant status of the Harrisburg Incinerator facility with respect to the permit conditions and design oritoria of the residue disposal sites. The existing condition of Residue Disposal Sites A and B-1 causes concern for their potential impact on human health and the environment. As a result of our discussion, it was agreed that the City of Barrisburg would take the following steps toward achieving compliance with State Law:

- 1. Remove the unincinerated refuse from Site 9-1 by September 1, 1985.
- 2. Grade Site B-1 to must design specifications by September 9, 1985.
- Remove excess residue, ensure proper collection instruments are in service, and grade Site 4 to meet approved design specifications by October 31, 1985.
- 4. Perform a baserdous waste determination for residues disposed in Site A and B-1 (see attachment for strategy). Results of sample analysis should be forwarded to the Department by August 9, 1985. If the determination classifies the residue from Site A or Site B as baserdous, notify both the Department and the Environmental Protection Agency immediately.
- 5. Reinstitute groundenter monitoring for the facility by no later than July 31, 1985.

Methods used for final closure of Residue Sites A and B-1 are contingent upon the results of the hazardous waste determination. If the residue in either Site A or B-1 is hazardous, the disposal sites containing the hazardous residue will be required to meet RCRA requirements for closure of a hazardous waste disposal facility. If the residue is determined to be non-hazardous, the sites will follow closure according to original design specifications. Following the submittal of all analytical results for the hazardous waste determination, a meeting will be scheduled to discuss pertinent findings, plan for final closure of the residue sites, and to further define future residue disposal needs for the Harrisburg Incinerator.

Your cooperation in this matter is imperative. If you have any further questions, please call.

Sincerely.

Michael R. Steiner Regional Solid Waste Manager Harrisburg Regional Office

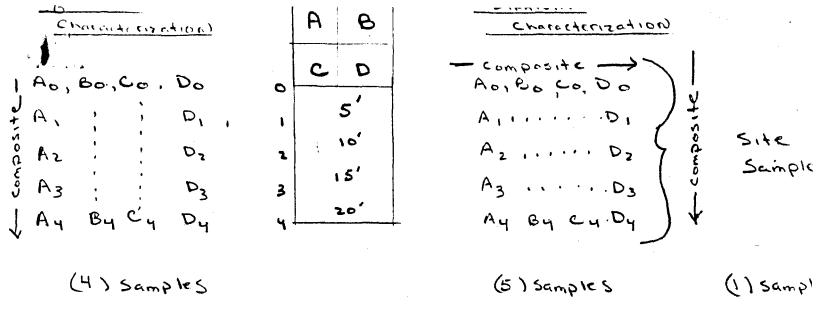
MRS:flw

cc: John B. Moyer
Francis P. Fair
Timothy A. Alexander
File

HAZARDOUS Waste Determination For Residue Sites A and B-1 / Sampling Method

Statistical mean for all parameters subject to analysis. The proposed method attempts to take into account stratification or the creation of zones of increased contamination, the effect of downward migration of leached constituents.

Proposed method A total OF 10 samples will be analyzed to characterize each residue site. Each site will be divided into 4 guadrants and 5 horizontal layers. Each guadrant will be characterized by compositing samples From each horizontal layer to a depth of 20 Feet. Each horizontal layer will be composited over 4 guadrants and further composited to yield a site sample. In the event the site sample yields borderline results, the guadrant results may be averaged to provide support data.



- 1. Divide each site into 4 equal quadrants
- 2. Designate point A,B,GD ineach quadrant. Elevation A = B = C =

 This can be done in the field and points chosen jointly

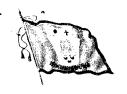
 by DER/Hbg INC representatives
- 3a. Five samples will be procured, one each, at depths of 0,5,10,15 and 20 Feet and composited to yield a sample for the characterization of the quadranit. Perform for each quadrant
 - b. Four samples at each horizontal designation le.,
 Ao, eo, co, Do, will be composited to yield a sample
 for each of the respective stratum. All stratum will be
 composited to yield a site sample.
- M. Anxive for all metal E.P. Toxic constituents

 (a) vertical composites (b) horizontal composites (c) site sample

 5. hog physical characteristics for each sampling point
 - The specific method of sample procurement

 (backhoc Auger/spirt spoon) will be determined by

 negotiation and availability of apparetus.



City of Harrisburg Pennsylvania 17101

Department of Public Works

January 13, 1983

Telephone (717) 255-3075

Dly. of Hazardous Waste

Pennsylvania Department of Environmental Resources Fulton Building P.O. Box 2063 Harrisburg, Pennsylvania 17120

Gentlemen:

Re: Harrisburg Steam Generating Facility Form ER-SWM-53

The attached form is transmitted to you in order to clarify the status of the Harrisburg Steam Generating Facility. The City does not wish to have the facility classified for handling hazardous waste. It has been determined that the facility is incapable of handling the type of waste designated as hazardous, and will continue with incinerating only municipal and residual waste for which the facility has existing solid waste permits.

If you have any questions regarding this form, please contact Mr. Leroy T. Lippi, Jr., whose phone number is provided on the form.

truly yours

ycting Director

Department of Public Works

OFG:kme Attachments ER-SWM-53: Rev. 3/82

ennsylvania Department of Environmental Resource

BUREAU OF SOLID WASTE MANAGEMENT
NOTIFICATION OF HAZARDOUS WASTE ACTIVITY

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						4.	d.		8

I INSTALLATION'S EPA I.D. NUMBER	
P A D 0 0 0 4 3 0 6 8 6	Dwollershawwa
II NAME OF INSTALLATION	
Harrisburg Steam Generating Facility III INSTALLATION MAILING ADDRESS	
STREET OR P. O. BOX	
1670 South 19th Street	
CITY OR TOWN	ST. ZIP CODE
Harrisburg	PA 17104
IV LOCATION OF INSTALLATION STREET OR ROUTE NUMBER	SUBJECT OF THE PROPERTY OF T
1670 South 19th Street	Harrisburg ST. ZIP CODE COUNTY
	P A 17104 Dauphin
V INSTALLATION CONTACT	FA 17104 Batchin
MAME AND TITLE (lest, first, & job title)	PHONE NO fares code &
Lippi, Leroy T., Jr Acting Superintendent	717 236 53
VI OWNERSHIP	
A, NAME OF INSTALLA	TION'S LEGAL OWNER
City of Harrisburg	
B. TYPE OF OWNERSHIP (enter the appropriate letter into box)	
F = FEDERAL M = NON-FEDERAL M	
VII SIC CODES (4-digit in order of priority)	
A. FIRST	C, THÍAD
4 9 5 3 (specify) Refuse Systems	(specify)
B. SECOND	D. FOURTH
VIIL TYPE OF HAZARDOUS WASTE ACTIVITY	
	ANSPORTATION G. REUSE, RECYCLE, RECLAIM
	MPLETE ITEM 1X) MIT BY RULE
IX MODE OF TRANSPORTATION (transporters only)	MIT BY ROLL
A. AIR B. RAIL C. HIGHWAY D. WAT	TER E. OTHER (specify):
X EXISTING ENVIRONMENTAL PROGRAM PERMITS	
A. NPDES (Discharges to Surface Water) . D. PSD (Air Emissions from Pro	roposed Sources
B. UIC (Underground Injection of Fluids) E. SOLID WAS	STE (State
100758	PA DER Solid Waste Permit
C. RCRA (Hazardous Wastes) F. OTHER	(specify)
XI, TYPE OF NOTIFICATION,	
Mark "X" in appropriate box to indicate whether this is your installation's	
general information, hazardous waste handled, or hazardous waste activity. If y TIONS),	first notification of hazardous waste activity, or notification of a chang ou check B, C, D, E, or F, attach a letter of explanation. (SEE INSTR

XII DESCRIPTION OF HA	AZARDOUS WASTES (Con	tinued from frant)				
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from non—specific sour	ces your installation handle	s. Use additional sheets if r	ecessary.			
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	S FROM SPECIFIC SOURCE Installation handles. Use add	교육에 발생하다 하다 내내 그는 사람들이 살아 있다면 되었다.	umber from 875.2	to I (n) (3) each listed	nezardous waste tro	am specific
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C. COMMERCIAL CHEMI	ICAL PRODUCT HAZARD	OUS WASTES, Enter the fo	our-digit number f	rom \$75.261(h)(4)	for each chemical su	ibstance
your installation handle	s which may be a hazardous	: waste. Use additional shee	is if necessary.			
31	32	33	34	35	36	
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hezardous wastes your i	nstallation handles. (See 57	5.261(g)(2) through (5))				
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XIII CERTIFICATION						
I certify under penalt	v of law that I have o	ersonally examined and	d am familiar w	ith the informati	on submitted in	this and all
I certify under penalt attached documents, a I believe that the sub submitting false inform	nd that based on mŷ ir mitted information is i	nquiry of those individ	uals immediatel molete. I am	y responsible fo	r obtaining the are significant o	information, enalties for
submitting false inform	mation, including the p	ossibilility of fine and	l'imprisonment.			
SIGNATURE /		NAME and OF	FICIAL TITLE (Ty	vpe or Print)	DATES	IGNED
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P. O. BOX 1963 HARRISBURG, PA 17105 (717) 763-7211

CABLE ADDRESS GANFLEC . TELEX 84-2375

December 15, 1982

Mr. O. Frank DeGarcia, Director Department of Public Works City of Harrisburg City Government Center 10 North Market Square Harrisburg, Pennsylvania 17101

Dear Mr. DeGarcia:

Re: Harrisburg Steam Generating Plant Hazardous Wastes

Recently you requested that we determine the permit status of the Harrisburg incinerators to receive and process hazardous wastes. You also requested that we review all available information on non-municipal wastes received at the incinerator which may have been hazardous or toxic. We have determined the following:

1. Incinerators Hazardous Waste Compliance Status

The incinerators were never permitted to receive and process hazardous wastes.

In the absence of information from City files, we contacted the State Department of Environmental Resources and Region III of the Environmental Protection Agency (EPA). We were advised that the City in 1980 filed the Notification and Part A documents to qualify the incinerator as a hazardous waste facility. However, both documents were submitted after expiration of the respective filing dates. As a result, Region III EPA did nothing more than hold the documents in file. The Part A application was not processed; therefore, the incinerator never achieved interim status as a hazardous waste facility. Early in 1982, EPA returned the Part A application to the City after being verbally advised that the City did not wish to pursue designating the incinerator as a hazardous waste facility.

Toxic or Hazardous Waste Received at the Incinerator in 1981

We reviewed the Special Handling Log (Advance Notification), Certifications from Continental Vanguard, Inc., and various invoices rendered by the City to disposers. This information does indicate that certain toxic wastes may have been handled at the incinerator site. In a few instances, wastes were identified as containing hazardous constituents (such as cadmium); in other instances, wastes were identified as having originated from specific sources (such as paint sludge) generally considered to generate hazardous wastes. However, there is no indication of quantities received, handling procedures, incinerator operating conditions, or even if the wastes were actually incinerated.

The information we reviewed indicates that there is a strong probability that hazardous wastes were incinerated, but the data is insufficient to be certain. There is no indication that the incinerators were ever permitted to dispose of hazardous wastes.

As we have indicated in separate correspondence, we do not recommend nor was the facility designed to process hazardous wastes.

Very truly yours,

GANNETT FLEMING CORDDRY AND CARPENTER, INC.

Genle P. Voo

GPV:rp



THE HARTFORD STEAM BOILER INSPECTION and INSURANCE COMPANY HARTFORD • CONNECTICUT 06102

PHILADELPHIA OUTICE - P.O. BOX 504, WAYNE, PENNSYLVANIA 19087 (215) 293-0550

12-3-82

The City of Harrisburg, et al Walnut & Aberdeen Streets Harrisburg, PA 17101

The following equipment located at Cameron Park, Swatara Township, PA was inspected by Inspector Barnett on 11/18-12/1/82 and we offer the following comments.

Water Tube Boiler, No. 2/STB 109538/PA SPL 3929

In addition to a visual inspection of the firesides of the boiler, past records, foreman's logs, were reviewed to determine what previous welded repairs had been performed on the boiler by your employees.

The records indicate that 34 superheater tubes had 1° to 2° long sections replaced and three screen tubes had been repaired by applying a lap patch, this work being done by your employees. From information gathered, the employees involved who performed the actual welding were not qualfied according to the ASME Code and Pennsylvania State Regulations; therefore, the welded repairs to the superheater tubes will have to be redone in accordance with such. In regards to the screen tubes, which were patched, they have eroded to such an extent that we feel their replacement is warranted. The areas in question were visually examined to verify the repairs indicated by their records were actually performed.

The visual inspection also revealed 18 tubes in the generating section have flat spots, from erosion, approximately 8" long. It is felt the erosion have progressed to the point where these tubes should be replaced before returning the boiler to service.

Also, one generating tube, No. 5, was removed approximately one year ago as a temporary repair. A replacement tube should be installed to make this a permanent type repair.

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THE HARTFORD STEAM BOILER INSPECTION and INSURANCE COMPANY HARTFORD • CONNECTICUT 06102

100 APROACH PROACH PRO BOX 504, WAYNE, PENNSYLVANIA 19087 (215) 293 0550

The City of Harrisburg, et al Page Two 12-3-82

The required State Operating Certificate legalizing the use of this boiler cannot be authorized until the above conditions have received your attention.

A question was asked as to what would be the requirements necessary for one or more of your employees to be considered qualified, in accordance with State regulations, to make welded repairs to your boilers. Welded repairs to a boiler or unfired vessel in the State of Pennsylvania must be done by a welder qualified in accordance with Section IX of the ASME Code and the repairs must conform to National Board Inspection Code Requirements.

You should contact Mr. Julius Claar, Chief Inspector, Telephone No. (717) 787-2923, Department of Labor & Industry, Division of Boiler Safety, for specific information and approval of your documents. All requirements of the ASME Code Section IX must be met and all documentation must be made available to the Inspector upon his request.

The conditions outlined were discussed with Mr. James Wilt, Plant Superintendent, at the time of inspection.

Yours very truly,

M.L. Sipes
Supervising Inspector
MLS:ce/A/F7-8

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Operations Review of

SUBJECT: Application #

FOR A EPA PART A APPLICATIONS

MIKE NAMOSKI

FROM:

Robert G. Benvin Regional Facilities Supervisor Harrisburg Regional Office

Please review the operational plan for the above referenced application and submit your comments within fifteen (15) days.

Comments may be written in the space below. Attach additional sheet(s) if necessary.

REVIEWED BY: Michael F. Romesh; DATE: 12-1-81

COMMENTS: Page 2 of General Information Item X Existing Environmental Permits expane listed. Solld Waste permit numbers - 100758 for incinerator, 100759 for residue disposal site A and 100992 for residue disposal site B-1. Possibly other permits for Water Quality and Air Quality.

Page 4 sections IX Owner Certification and X Operator Certification, not signed or dated Site drawing does not show residue disposal site B-I ecurrently in use. Also does not show future residue disposal sites B-Z and B-3 as shown on plansvubmitted to DER. No scale on any of the maps or drawings. Leachate collection system to sowage treatment plant should be included on drawings. No photographs of site. More detall of disposal processes should be included. Thowing how wastes are brought into incinerator, burned and disposed of in residue pits. No monitoring wells shown. Some of these comments are not asked for in instructions, but I believe they are necessary. Latitute and Longitude markings not shown on map. Source of map not indicated. Dimensions of buildings, residue disposal sites not indicated. Area and size of drum storage area not indicated on drowings.

NOTICE OF PUBLICATION FOR PENHSYLVANIA STLLETIN

Identification Number VADCCO43C68	/ O		
j			
APPLICANT (block 1 of ER-SWM-4) AATTO	slung Steam it	verating Daci	Plity
ADDRESS /670 S. 19th St		U	<u> </u>
street-road	d & number/P. 0. Bo	$\mathcal{O}X$	
Harrishing	PA		7/04
city ()	state		ZIP Code
NAME OF FACILITY OR SITE (block 5 of EF	R-SWM-4) Alg. Ste	an Generation	g Dacility
		<u> </u>	J J
Operation of a hazardous waste *see below	disposal Lac	ility	in
ð *see below	w J		
Hbg.		Dauphin	
township-borough-city	,	Hounty	
Application received on	2/1/8/		
(date recv'd)	in regional office.)	
Permit issued on		•	
(date issued :	in regional office,)	

* MUNICIPAL WASTE PROCESSING OR DISPOSAL SITES - 100000 SERIES

* INDUSTRIAL WASTE PROCESSING OR DISPOSAL SITES - 300000 SERIES

* INCINERATORS - 400000 SERIES

* SEWAGE SLUDGE SITES - 600000 SERIES

NOTICE OF PUBLICATION FOR PENNSYLVANIA BULLETIN

township-botogh-city Cauphin Gounty

Application received on "/2//8/
(date recv'd in regional office)

Permit issued on (date issued in regional office)

* MUNICIPAL WASTE PROCESSING OR DISPOSAL SITES - 100000 SERIES

* INDUSTRIAL WASTE PROCESSING OR DISPOSAL SITES - 300000 SERIES

* INCINERATORS - 400000 SERIES

* SEWAGE SLUDGE SITES - 600000 SERIES

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF SOLID WASTE MANAGEMENT HAZARDOUS WASTE REPORT

	cont. or type with ELSTE type (12 characteristics)	
	1. TYPE OF HAZARDOUS WASTE REPORT	
	PART A: GENERATOR GUARTERLY REPORT	
	THIS REPORT IS FOR THE 1 9	
	PLEASE PLACE LAREL IN THIS SPACE 1 PART B: FACILITY QUARTERLY REPORT	
	THIS REPORT IS FOR THE 09-30-19 8	
	NSTALLATION'S ID. NUMBER	
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	INSTALLATION MAILING ADDRESS	
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	CITY OR TOWN - ST. ZIP CODE COUNTY	
	ARRISBURG	
	INSTALLATION CONTACT:	
	NAME (last and first) PHONE NO. (erea code & co.)	
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	TRANSPORTATION SERVICES USEO (for Pert A reports ently) the identification numbers for those transporters whose services were used during the reporting quarter represented by this report.	
	ANNUAL COST ESTIMATES FOR FACILITIES (for Part 8 reports only)	
ļ,,	B. COST ESTIMATE FOR FACILITY CLOSUSE TED FACILITY CHANGE AND FACILITY CHANGE AND THE MONITORING AND	
	ENERATION PROCESS INCINERASTION PROCESS	
	ERTIFICATION	
	I certify under penalty of law that I have personally examined and am familiar with the information submitted in	
	this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining	
	the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.	
	Kim S. Robison Kim S. Robison October 30, 1981	
	A Printer Type Name	

<u>)</u>	FACILITY QL FOR OFFICIAL USE ONLY (Items 1 & 2) VII. GENERATOR'S I.D. NO.	XIX, GENE	-1		Ŀ	1	9			F	A	D	0	O	1.D 0 4	3	00	***********	6	I
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×	FOR OFFICIAL USE ONLY (Items 1 & 2) VII. GENERATOR'S I.D. NO.	XIX. GENE	HATOR AD	1 9 DRESS (St	PI		043	0686
V	PADOTOGO4178 VIII. GENERATOR NAME (specify) OKSWAGEN OF AMERICA X. WASTE IDENTIFICATION	Valley Mun. Va	S. Tro Forge	oper , Peni	Koad neylva	nia)	1948	2
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9	MDN-			Date	-			
10				Date				
	MDN— XXI, COMMENTS (enter information by line number—see in	structions.)						

HAZARDOUS WASTE INSPECTION REPORT TSD Facilities - Part A

Date of inspection 9-11-81 Time start 10:00AM Time finish 1:00fM
Name of inspector DONALD L. KILLIAN MICHAEL A. NAMOSKI
Company, installation name HARRISBURG STEAM GENERATING FACILITY
Location 1670 SOUTH 19TH STREET HARRISBURG, PA. 17104
County DAUPHIN Municipality CITY OF HARRISBURG
Identification number PAD 000430686
Name of responsible official JACK KARPER
Title SUPERINTENDENT
Mailing address AS ABOVE
Area code and phone no. 717-255-6495
Name of person interviewed AS ABOVE
Title
Mailing address (if different from above)
Area code and phone no.
1. Site characterization:
a. Treatment - surface impoundments, chemical, physical, biological
b. Storage - containers, tanks, surface impoundments, waste piles
c. 🗶 Disposal - 🖊 land treatment, 🗀 landfill, 💥 incineration, 🗀 thermal treat-
d. W Use, T reuse, T recycle, T reclaim (STEAM GENERATION)
2. Does the facility generate hazardous wastes? Yes No TSEE COMMENTS
3. Types of hazardous waste produced by Hazardous Waste Number:
4. Are hazardous wastes transported off-site by the facility? / Yes X No
4. Are hazardous wastes transported off-site by the facility? Yes X No

				1- NON-COMPLIANCE, Z-COMPLIANCE, 3-NOT APPLICABLE, 4-NOT DETERMINED	1-81
Co	MPI STA	HAN TUS		REQUIREMENT	CHAPTER CITATION 75.265
X	1			Part A permit application submitted SEE COMMENTS	(a) (2),(z)
	X			Identification number •	(b)
X				Wastes accepted at facility transported by haulers licensed to transport hazardous waste by the Department	(b) (1)
X			-	Waste streams not covered by permit approved by the Department before accept	ance (c)(
	X			Chemical and physical analyses repeated as required	(c)(1)
	X			All waste shipments inspected and sampled	(c)(2)
X				Waste analysis plan on-site	(c)(3)
	X			24 hr. surveillance at active portion	(d)(2)(i
	X			Artificial barrier at active portion	(d)(2)(i
		X		Proper signs posted and legible at a distance of at least 25 ft.	(d) (3)
	X			Inspection schedule on-site	(e) (2)
	X			Maintenance schedule on-site for equipment or structures which reveal deterioration or malfunction	(e)(4)
		X		Immediate remedial action taken where a hazard is imminent or has already occurred	(e) (4)
	X			On the job or classroom personnel training program	(f)
	X			Records retained for each employee at facility of training, job title, and job description	(f)(6),(
		X		Ignitable or reactive wastes separated from source of ignition or reaction	(g)(1)
		X		No smoking signs displayed where there are hazards from ignitable or reactive wastes	e (g)(1)
		X		Treatment, storage, disposal of ignitable or reactive wastes or mixing of incompatible wastes or materials conducted according to requirements	(g) (2)
	X			Facility equipped with internal alarm system capable of providing immediate emergency instruction to personnel	(h)(2)(i
-	X			Facility equipped with a device for summoning outside emergency assistance	(h)(2)(i
	X			Facility equipped with fire control, spill control, and decontamination equipment	(h) (2.) (i
	X			Facility equipped with water at adequate volume and pressure to supply fire control equipment	(h) (2) (i
	X			Facility communications or alarm systems, fire control, spill control, and decontamination equipment tested and maintained.	(h) (3)
-	X		П	Adequate aisle space maintained to allow unobstructed movement of personnel and equipment during emergencies	(h) (6)
X				Contingency plan on-site and implemented	(i)(l)
X				Contingency plan describes action taken by personnel in the event of an emergency	(i)(3)
X				Contingency plan describes arrangements agreed to for outside emergency	(1)(5)

PAD000430686 9-11-81

		·		1 NOW COMPLIANCE 3 - NOT ADDITABLE HANT DETERMINED	[-11-8]
<u>~</u>	MPL	14.	ICE	1- NON-COMPLIANCE, Z-COMPLIANCE, 3-NOT APPLICABLE, 4-NOT DETERMINED	CHAPTER
	STAT	rus	4	REQUIREMENT	75.265
1		Ĭ	Ė	Contingency plan contains an up-to-date list of names, addresses and phone numbers of all persons qualified to act as emergency coordinator.	(i)(6)
K				Contingency plan contains list of emergency equipment including location, physical description and capabilities of each item	(i)(7)
(Contingency plan contains an evacuation plan if there is a possibility that evacuation could be necessary	(i)(8)
X				One employee designated as the primary emergency coordinator either on the premises or on call.	(i)(11)
	X			Facility accepting only PA manifests	(j)
	X			Manifests properly completed and routed within time limits (24 hrs.)	(j)(2 <u>)</u> (3
	X			Manifest discrepancies resolved or reported within time limits	(j)(10)(
	X			Written operating record maintained on the premises	(k)
	X			Written operating record contains description and quantity of wastes and method of treatment, storage or disposal	(k)(2)(i
	X			Written operating record contains location and quantity of each hazardous waste	(k)(2)(i
	X			Written operating record contains results of waste analyses and treatability tests	(k)(2)(i
		X		Written operating record contains reports and details of all incidents	(k)(2)(i
	X			Written operating record contains records and results of all inspections	(k) (2) (v
			X	Written operating record contains required monitoring, testing, and analytical data	(k) (2) (v
X				Written operating record contains closure and post-closure cost estimates	(k) (2) (v
	X			All records retained on premises and available for inspection	(1)
<				Quarterly reports submitted to the Department	(m)
		X		Emissions, discharges, fires, explosions, and groundwater contamination reported as required	(m) (2)
			X	Groundwater monitoring wells located at approved sites	(n) (2)
			X	Adequate protection of groundwater monitoring wells	(n) (7)
			X	Groundwater sampling and analysis plan on the premises	(n) (8)
			X	Groundwater quality assessment and abatement outline on the premises	(n) (14)
K				Closure plan on the premises and up-to-date	(0) (2)-(
			X	Post-closure plan on the premises and up-to-date	(0)(10)-
X				Annual closure cost estimate on the premises and up-to-date	(p) (2) - (
			X	Annual post-closure cost estimate on the premises and up-to-date	(p)(5)-(7

75.265

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			1- NON-COMPLIANCE, 2-COMPLIANCE, 3-NOT APPLICABLE, 4-NOT DETERMINED	
OMPI STA	TUS 3		REQUIREMENT	CHAPTER
X	3		Incinerator brought to steady state (normal) operating conditions including steady state operating temperature and air flow before hazardous waste is add	(w)(2)
X			Waste analyses performed on wastes not previously burned in the incinerator	(w)(3)
X			Instruments relating to combustion and emission control monitored at 15 min. intervals and appropriate corrections are made immediately	(w) (4) (
X			Stack plume emissions observed hourly and appropriate corrections are made immediately.	(v)(4)(i
X				(w)(4)(i
X			Emergency shutdown controls and system alarms checked daily.	(v)(4)(i
	X	·	Closure requirements are complied with.	(w) (5)
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ER-SWM-55:11/80

PENNSYLVAMIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF SOLID WASTE MANAGEMENT HAZARDOUS WASTE REPORT

se print or type with ELITE type (12 characters/inch)
I. TYPE OF HAZARDOUS WASTE REPORT
PART A: GENERATOR QUARTERLY REPORT
HIS REPORT IS FOR THE UNITED THE
PLEASE PLACE LABEL IN THIS STORE PART B: FACILITY QUARTERLY REPORT
OCT 1981 THIS REPORT IS FOR THE U6-30-1981
II. INSTALLATION'S ID. NUMBER DIV. OT HE SYNOUS WORLD
PAD000430686
III. NAME OF INSTALLATION
HARRISBURG STEAM GENERATING FACILITY
IV. INSTALLATION MAILING ADDRESS STREET OR P. O. BOX
116170 SIN914N SITRELET I I I I I I I I
CITY OR TOWN ST. ZIP CODE
14 A R R 15 B U R 6
LOCATION OF INSTALLATION STREET OR ROUTE NUMBER MUNICIPALITY
1670 S 19+h STREET - 1 HARRISBURE
CITY OR TOWN ST. ZIP CODE COUNTY
MINARIES BURG DAUPHIN
VI. INSTALLATION CONTACT NAME (lest and first) PHONE NO. (area code & no.)
MIM S ROBISOM OR LACK R MARAERTITIASS 31118
VII. TRANSPORTATION SERVICES USED (for Part A reports only)
List the identification numbers for those transporters whose services were used during the reporting quarter represented by this report.
VIII. ANNUAL COST ESTIMATES FOR FACILITIES. (for Part B reports only) B, COST ESTIMATE FOR POST CLOSURE MONITORING AND
FACILITY COST ESTIMATE FOR FACILITY CLOSURE PHTED FACILITY MAINTENANGE ASSOCIATION OF THE PHTED
INCINERATION, PROFIES INCINERATION PROFES
IX. CERTIFICATION Certify under penalty of law that I have personally examined and am familiar with the information submitted in
this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining
the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.
Kim S. Rohison A. Print or Type Name B. Signature C. Date Signed

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Please print or type with ELITE type (12 characters/inch) FACILITY QUARTERLY REPORT - PART B 1. DATE RECEIVED 1 9 FOR OFFICIAL XVI. FACILITY'S I.D. NO. USE ONLY (Items 1 & 2) 2. RECEIVED BY XVII. GENERATOR'S I.D. NO. XIX. GENERATOR ADDRESS (Street or PO box, city state & zip code.) 1400023 MOREHALL ROAD MALVERN, PENNSYLXANIA XVIII. GENERATOR NAME (specify) NATIONAL ROLLING MILLS COUNTY XX. WASTE IDENTIFICATION A. DESCRIPTION OF WASTE AND MANIFEST F, PA, Hazardou Handling DOCUMENT Hazardous E. Unit Waste Method Transporter (HW D. Amount of Mea-Waste NUMBER (MDN) and Date of Waste Number giue License No. 10 HAZARDOUS WASTE N.U.S. 8 0 Date MDN-PAA 0253993 HazARDOUS Solid Waste N.O.S. 10 10009 WHICH CONTAINS MERCURY Date 0 3 Date MDN-Date MDN-5 Date MDNof Hazardous Wasto 6 Date MDN-7 Date MDN-8 Date MON--Date MDN-10 Date MDN-XXI. COMMENTS (enter information by line number-see instructions.)

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PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES

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BUREAU OF SOLID WASTE MANAGEMENT HAZARDOUS WASTE REPORT

se print or type with ELITE type (12 characters/inch)	Control of the second s
	I. TYPE OF HAZARDOUS WASTE REPORT
	PART A: GENERAYOR QUARTERLY REPORT
	THIS REPORT IS FOR THE 1 9
PLEASE PLACE LABEL IN THIS SPACE	PART B: FACILITY QUARTERLY REPURT
	THIS REPORT IS FOR THE QUARTER ENDING 0 6 - 3 0 - 1 3 8 1
II. INSTALLATIONS ID. NUMBER	
PAD072849789	
III. NAME OF INSTALLATION JAMES VITAL	
IV. INSTALLATION MAILING ADDRESS	
STHEET OF P. O. BOX	
4 2 3 WALNUT STREET ROOM	403
CITY OR TOWN	ST. ZIF CODE
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VI. INSTALLATION CONTACT	
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Waste Conversion - PAD085690592	
VIII. ANNUAL COST ESTIMATES FOR FACILITIES (154.25 à B es bre on	
A. COST FÉTIMATE FOR FACILITY & LOSURS	5. COST ESTIMATE FOR POST CLOSURE MONITORING AMD MAINTENANCE (disposal facilities enly)
IX. CERTIFICATION	
I certify under penalty of law that I have personally exam-	nined and am familiar with the information submitted in
this and all attached documents, and that based on my inmer- the information, I believe that the submitted information is	
significant penalties for submitting false information includ	
HALL GARDEN Paul	C. Davido

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Pitase print or type with ELITE type (12 characters/inch) FACILITY QUARTERLY REPORT - PART B FOR DEFICIAL 1. DATE RECEIVED 9 XVI. FACILITY'S I.D. NO. USE ONLY (Items 1 & 2) 2. RECEIVED BY P 8 XVII. GENERATOR'S I.D. NO. XIX. GENERATOR ADDRESS (Street or PD box, city math & thy cose.) 00 3 0 1 Cumberland Street XVIII. GENERATOR NAME (specify) Lebanon, PA 146 5 1981 Bethlehem Steel MUN. L<u>ebanon</u> COUNTY Lebanon XX. WASTE IDENTIFICATION A. DESCRIPTION OF WASTE AND MANIFEST F. PA. Hazardous R Handling E. Unit Worte DOCUMENT Hazardous Method and Date Transporter (HMT) D. Amount Waste Nurslage of Mas-NUMBER (MON) of Waste turg License No. K 0 6 2 Waste Sulfuric Acid, Spent T | 6 | 71 Contains Ferrous Sulfate Date 0 5 6 1 8 1 MDN- PAA2050145 K 0 6 2 6 2 Same Deta MDN- PAA2050134 0 K = 0.6 = 25 7 0 $T \mid 6$ 4 0 0 3 Same Date MON- PA2050156 0 6 2 6 0 Same Date MDN- PAA 20 50 160 0 8 6 5 0 5 Same Date MDN- PAA2050171 K 0 6 2 T5 0 10 0 6 6 Same Date MDN- PAA2050193 8 K 0 6 2 4 5 0 0 0 $T \mid 6$ Same Date O MDN- PAA 2050 204 3 0 8 6 7 K 0 6 2 4 5 0 10 6 0 8 Same Date MDN- PAA2050215 0 6 0 8 9 Date MDN-10 Date MON-XXI. COMMENTS (enter information by line number see instructions.)

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XXI, COMMENTS (enter information by line number-see instructions.)

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Please print or type with ELITE type (12 characters/inch)

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PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF SOLID WASTE MANAGEMENT HAZARDOUS WASTE REPORT

MAY 13 1981 Navisburg

Please print or type with ELITE type (12 characters/inch)	
	I, TYPE OF HAZARDOUS WASTE REPORT
	THIS REPORT IS FOR THE
PLEASE PLACE LABEL IN THIS SPACE 1	QUARTER ENDING
PLEASE PLACE LABEL IN THIS SPACE 1	PART B: FACILITY QUARTERLY REPORT
	THIS REPORT IS FOR THE 0 3 - 3 1 - 1 9 8
P A D 0 7 2 8 4 9 7 8 9	
F A D U 7 2 8 4 9 7 8 9	
III. NAME OF INSTALLATION	
ADVANCED WASTEWATER TR	E A T M E N T P L A N T
IV. INSTALLATION MAILING ADDRESS STREET OR P. O. BOX	
423 WALNUT STREET ROOM	1410131111
CITY OR TOWN	ST. ZIP CODE
RRISBURG	PA17057
V. LOCATION OF INSTALLATION	
STREET OR ROUTE NUMBER	MUNICIPALITY
CAMERON & ELLIOTT -	HARRISBURG
CITY OR TOWN	ST. ZIP CODE COUNTY
HARRIS BURG	PA17104 DAUPHIN
VI. INSTALLATION CONTACT	
NAME (last and first)	PHONE NO. (eres code & no.)
CIY G A N P A U L I I I I I I I	1 1 1 1 7 1 7 2 5 5 6 5 2 4
VII. TRANSPORTATION SERVICES USED (for Part A reports only) List the identification numbers for those transporters whose services were	used during the reporting quarter represented by this report.
CHEMICAL LEAMAN - PADO84770023	
AMERICAN TANK LINES - MODO53995432	
SMITTY'S SPETIC SERVICE - PAD000737114	
VIII. ANNUAL COST ESTIMATES FOR FACILITIES (for Part B reports o	nly)
A. COST ESTIMATE FOR FACILITY CLOSURE	B. COST ESTIMATE FOR POST CLOSURE MONITORING AND MAINTENANCE (disposal facilities only)
IX. CERTIFICATION	
I certify under penalty of law that I have personally exa	mined and am familiar with the information submitted in
this and all attached documents, and that based on my inqui	ry of those individuals immediately responsible for obtaining
the information, I believe that the submitted information significant penalties for submitting false information inclu	ding the possibility of fine and imprisonment.
PAUL CYGAN Paul	Cygan 5/4/81
A. Print or Type Name	(B. Signature C. Date Signed

ER-SWM-55B:11/80

PA, MANIEST

MAY 13 1981

FOR OFFICIAL > 1. DATE RECEIVED	QUARTERLY	REP	OF	T -		AR 9	TE	T	χį	/1.	FAC		TY	'S	· [.]	D. N	О.		S	
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O A. DESCRIPTION OF WASTE AND MANIFEST DOCUMENT NUMBER (MDN)		B. C. Handling Method Waste and Number Date				D. Amount of Waste					LA .	E. Unit of Mea- surp			F. PA. Hazardous Waste Transporter (HW License No.					
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MAY 13 1981 EH-54VM-658/11/80 Please print or type with ELITE type (12 characters/inch) FACILITY QUARTERLY REPORT - PART B 1 9 FOR OFFICIAL 1. DATE RECEIVED XVI. FACILITY'S I.D. NO. USE ONLY (Items 1 & 2) 2. RECEIVED BY XVII. GENERATOR'S I.D. NO. XIX. GENERATOR ADDRESS (Street or PO box, city state & zip code.) D 1 Cumberland Street Lebanon, PA XVIII. GENERATOR NAME (specify) Bethlehem Steel Corporation Lebanon COUNTY Lebanon XX, WASTE IDENTIFICATION B. C. Handling Method A. DESCRIPTION OF WASTE AND MANIFEST F. PA. Hazardous E. Unit Waste DOCUMENT: NUMBER (MDN) D. Amount Transporter (HWT) Waste of Meaand of Waste License No. สบทัว Number Date K 0 6 8 0 0 0 1 Sulfuric Acid, Spent Date 0 9 8 1 MDN PAA0308980 K 0 6 2 5 0 0 0 0 P 2 Same Date 2 8 1 1 MDN- PAA0309002 K 0 6 2 7 6 0 0 P 3 Same Date 2 3 MDN- PAA0307506 K 0 6 2 5 8 4 Same 2 MDN- PAA0307521 8 K 0 6 2 0 4 5 0 5 Same Date MDN- PAA0307576 2 Kl 0l 6l 6 o Date MDN- PAA0307580 2 8 K 0 6 7 Same Date MON- PAA0307591 K 0 6 8 Same Date d MDN- PAA0307602 Q 0 0 9 Same Date MDN- PAA0307845 K D 10 Same Date MON- PAA0307856 XXI. COMMENTS (enter information by line number-see instructions.)

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Waste Number	C. Handling Method and Date	D. Amount of Waste	E. Unit of Mea- surp	F. PA. Hazardous Waste Transporter (HW License No.				
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- 13	NOTIFICATION OF HAZARDOUS WASTE ACTIVITY INSTRUCTIONS: If you received a preprint label, affix it in the space at left. If any of
	INSTALLA- TION'S EPA I.D. NO. RECEIVED RECEIVED Information on the label is incorrect, draw a through it and supply the correct information on the appropriate section, below. If the label in the appropriate section, below, if the label
	I. STALLATION EPA RECUIT Complete and correct, leave Items I, II, and below blank. If you did not receive a preprint below blank.
	INSTALLA- TION II. MAILING PEEASE PEACE LABEL IN THIS SPACE TO COMPLETE THE PROPERTY OF BUSINESS. Please r
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	INSTALLATION'S EPA I.D. NUMBER APPROVED DATE RECEIVED (yr., mo., & day) FPADO7284978931 PADO818
e de Caralle	I. NAME OF INSTALLATION
	HARRISBURG WASTEWATER TREATMENT PLANT
• •	II. INSTALLATION MAILING ADDRESS STREET OR P.O. BOX
į	SOUTH CAMERON & FRANKLIN STS.
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	STREET OR ROUTE NUMBER
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	IV. INSTALLATION CONTACT NAME AND TITLE (last, first, & job title) PHONE NO. (area code & no.)
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e e e e e	V. OWNERSHIP
	A NAME OF INSTALL ATION: LEGAL OWNER BTHE HARRISBURG SEWERAGE AUTHORITY 15 16
i C	(enter the appropriate letter into box) VI. TYPE OF HAZARDOUS WASTE ACTIVITY (enter "X" in the appropriate box(es))
	F = FEDERAL M = NON-FEDERAL M = NON-FEDERAL ST
	VII. MODE OF TRANSPORTATION (transporters only - enter "X" in the appropriate box(es))
	A. AIR B. RAIL C. HIGHWAY D. WATER E. OTHER (specify):
	VIII. FIRST OR SUBSEQUENT NOTIFICATION Mark "X" in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notificat
	If this is not your first notification, enter your Installation's EPA I.D. Number in the space provided below. C. INSTALLATION'S EPA I.D. N
	■ A. FIRST NOTIFICATION
	IX. DESCRIPTION OF HAZARDOUS WASTES
	Please go to the reverse of this form and provide the requested information. EPA Form 8700-12 (6-80) CONTINUE ON REVE

III. PROCESSES

We intend to use waste pickle liquor for phosphate removal in our advanced treatment system. This waste liquor was tested for three weeks in June of 1980 and has proven to be more efficient in the removal of phosphates, suspended solids and 5 day B.O.D. than that resulting from alum usage. The waste pickle liquor was rendered harmless and non-hazardous by this process since the iron is removed as an iron-phosphate sludge and the acidity was neutralized.

We do not intend to accept hazardous wastes for treatment, however, we cannot quarantee the type of wastes we may receive and process in the future. Since the City incinerator and steam generating plant might be a hazardous wastes processor and all liquid wastes from these facilities are discharged into the city sewer system, our status as a non-hazardous treatment facility may change in the future. This facility has previously been coded out of the Hazardous Treatment Program.

HARRISBURG

CONTINUED FROM THE FRONT VII. SIC CODES (4-digit, in order of priority)				
74953 (specify) REFUSE SY	STEMS	5 1 1 (spe	NA	
C. THIRD		6 1 1 1 (spe	P. FOURTH	
VIII. OPERATOR INFORMATION	A. NAME		,' 	B. In the name listed in Itania (III)
8 CITY OF HARRI	S BURG		9/5 7 0.000	NE (area socie à no.)
F = FEDERAL M = PUBLIC (other S = STATE 0 = OTHER (speci P = PRIVATE	than federal or state)	(specify)		255 6495
1670 300TH 197	STREET			
BHARRISBURG	TOWN	PA I	7104 Is the facility in	ND cated on trutian lands?
X EXISTING ENVIRONMENTAL PERMITS A. NPDES (Discharges to Surface Water	And the same of th	ns from Proposed Source		
9 N N A	9 7 14	En (specify)	50	
9 U NA	NA !		(specify)	
9 R PADOO0430 68	T.I CITTI I I I	ten (specify)	(specify)	
Attach to this application a topograph the outline of the facility, the location	of each of its existing and	proposed intake and	discharge structures, each	of its hezardous waste
treatment, storage, or disposal facilities water bodies in the map area. See instru XII. NATURE OF BUSINESS (provide a brief	ictions for precise requireme		ind, include all springs, r	Mars and other surface
DISPOSAL OF SOL	ID WASTE BY	MASS BU	ening in wi	ater whic
STOKERS				
XIII. CERTIFICATION (see instructions) I certify under penalty of law that I h	ave personally exemined inc	lam femiller with the	alsomethy subspiced in	(alis epilesilos serilos
attachments and that, based on my application, I believe that the information false information, including the possible	inquiry of those persons im tion is true, accurate and co ility of fine and imprisonmen	mediately responsible emplete. I am aware : it.	for obtaining the Inform	netion contained in the
SUPERINTENDENT	LSGF.	A. R. Key	<u> </u>	11 - 19 - 80
COMMENTS FOR OFFICIAL USE ONLY				
EPA Form 3510-1 (6-80) REVERSE				

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U.S. ENVIRONMENTAL PROTECTION AGENCY HAZARDOUS WASTE PERMIT APPLICATION Consolidated Permits Program Consolidated Permits Permit

I. EI												
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FOR OFFICIAL USE OF	EIVED	To the second second	COMMENTS		
APPROVED (yr., mo.,	(day)				
23 24	29				
II. FIRST OR REVISED	The second of th				Now for your facility or
Place an "X" in the appropri revised application. If this is EPA I.D. Number in Item I a	your first application and bove.	you already know your	facility's EPA I.D. Number,	or if this is a revised applicat	ion, enter your facility's
A. FIRST APPLICATION	N (place an "X" below and LITY (See instructions for Complete item below			2.NEW FACILITY (C	Complete item below.) FOR NEW FACILITIES,
8 73 03 01	(use the boxes to the le	LITIES, PROVIDE THE OR THE DATE CONSTR (1)	DATE (yr., ma., & day)	78 74 78 76 77 78	PROVIDE THE DATE (yr., mo., & day) OPERA- TION BEGAN OR IS EXPECTED TO BEGIN
B. REVISED APPLICAT		and complete Item I ab	ove)	2. FACILITY HAS A	RCRA PERMIT
III. PROCESSES - COD	ES AND DESIGN CAP	ACITIES	A Sife Contract		The same of
B. PROCESS DESIGN CAP. 1. AMOUNT — Enter th 2. UNIT OF MEASURE	ines are needed, enter the uding its design capacity) ACITY — For each code ele amount, — For each amount enter the units of measure that a	code(s) in the space prov in the space provided on intered in column A enter ad in column B(1), enter	ided. If a process will be us the form (Item III-C). the capacity of the process the code from the list of un	ed that is not included in the	list of codes below, then
PROCESS		RE FOR PROCESS GN CAPACITY	PROCESS	The state of the s	SURE FOR PROCESS
Storage: CONTAINER (barrel, drun TANK WASTE PILE SURFACE IMPOUNDMEN Disposal: INJECTION WELL LANDFILL	S03 CUBIC Y/ CUBIC MI S04 GALLON D79 GALLON D80 ACRE-FE would cou depth of co	S OR LITERS S OR LITERS ET (the volume that er one acre to a me foot) OR	Treatment: TANK SURFACE IMPOUNDMI INCINERATOR OTHER (Use for physical thermal or biological treatment of the processes not occurring in	ENT TO2 GALLO LITER: T03 TONS: METRI GALLO LITER: L chemical, T04 GALLO liment t tanha,	ONS PER DAY OR S PER DAY ONS PER DAY OR S PER DAY PER HOUR OR C TONS PER HOUR: ONS PER HOUR S PER HOUR ONS PER HOUR S PER HOUR ONS PER DAY OR S PER DAY OR
LAND APPLICATION OCEAN DISPOSAL SURFACE IMPOUNDMEN	D82 GALLON LITERS P T D83 GALLON	R HECTARES S PER DAY OR ER DAY	surface impoundments of ators. Describe the proce the space provided; Hem	sees in	
UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONSLITERSCUBIC YARDSCUBIC YARDSCUBIC METERSCUBIC METERSGALLONS PER DAY	G L Y C C C C U U U U U U U U U U U U U U U	LITERS PER DAY. TONS PER HOUR. METRIC TONS PER GALLONS PER HOL LITERS PER HOUR ne numbers X-1 and X-2	HOUR. W JR E	ACRE-FEET	.
C DUP	13 14 15	11111	11111	11111	(1111)
A. PROCESS CODE (from list above)	1. AMOUNT	2. UNIT OF MEA- SURE (enter code)	L A. PRO-	1. AMOUNT	2. UNIT OF MEA- SURE (enter (enter code)
X-1 S 0 2	600	G 3	5		
X-2 T 0 3	20	E	6		
1 To 3	30	D	7		
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3			9		
4			1,0		三种产生的

III	PR	OCESS	FS	(continued)
ALL.				Communear

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

IV. DESCRIPTION OF HAZARDOUS WASTES

- EPA HAZARDOUS WASTE NUMBER Enter the four-digit number from 40 CFR, Subpert D for each listed hazardous weste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.
- B. ESTIMATED ANNUAL QUANTITY For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis, For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.
- C. UNIT OF MEASURE For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate

ENGLISH UNIT OF MEASURE CODE	METRIC UNIT OF MEASURE CODE
POUNDS	KILOGRAMSK
TONS	METRIC TONS

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code/s/ from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hezardous westes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

- Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B.C. and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
 In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter
- "included with above" and make no other entries on that line.
- 3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

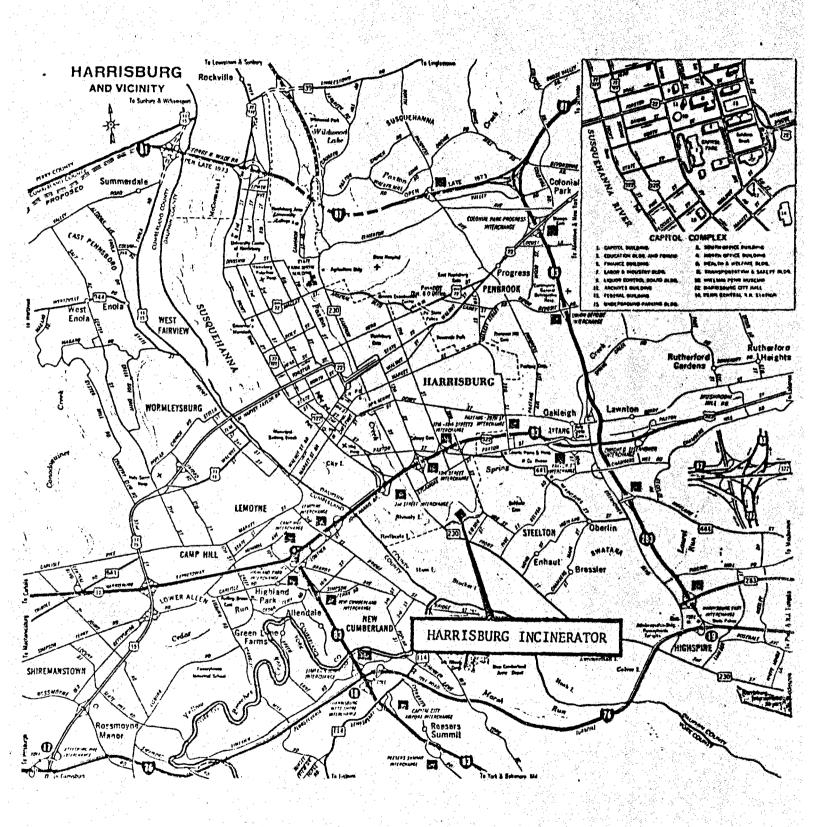
EXAMPLE FOR COMPLETING ITEM IV (shown in line numbers X-1, X-2, X-3, and X-4 below) — A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non—listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

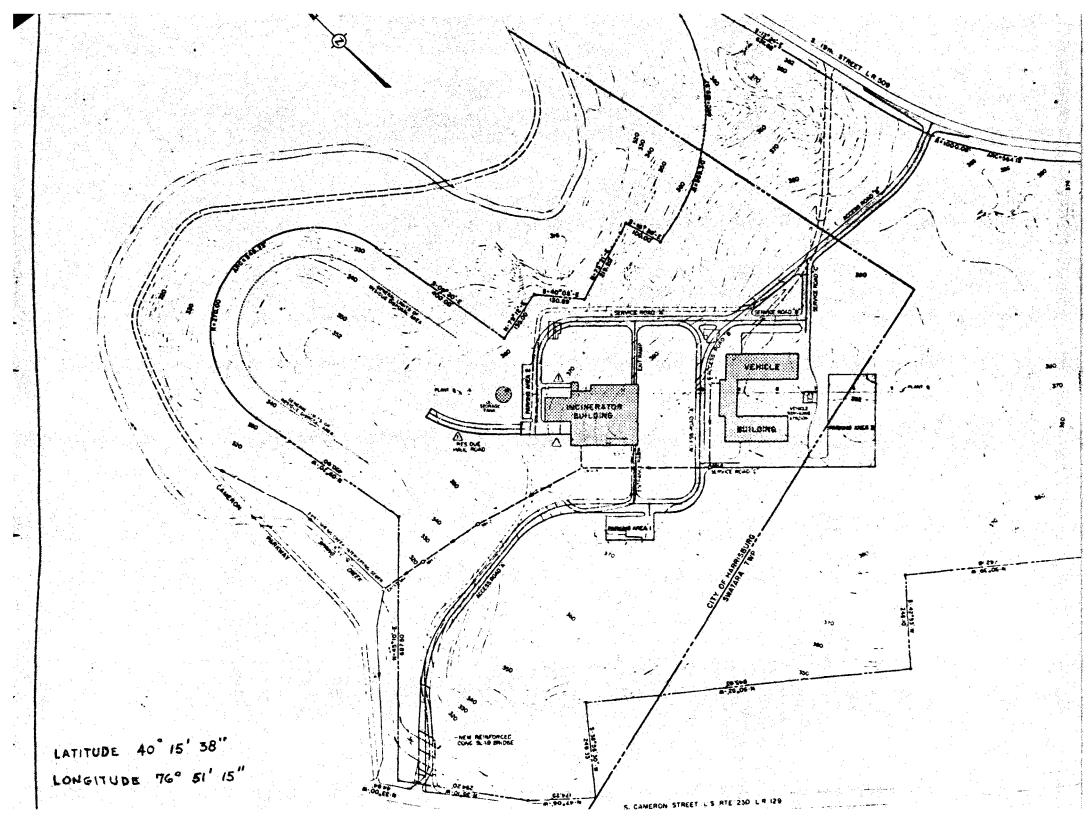
	A. EPA		C. UNIT	D. I	PROCESSES
	HAZARD. WASTENO (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	SURE (enter code)	1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T'0'3 D'8'0	
X-4	D 0 0 2				included with above

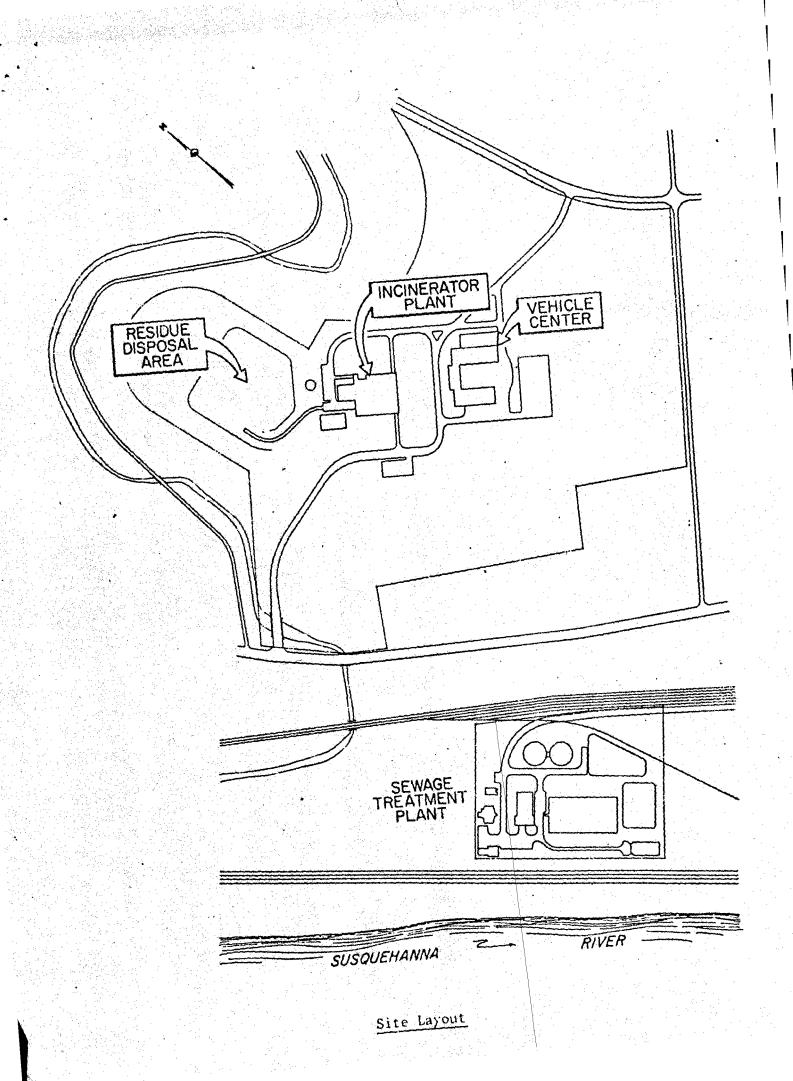
PAGE 2 OF 5

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PARTIES AND THE PARTIES	A CONTRACTOR OF THE PARTY OF TH	ON OF HAZARDOUS WASTE	N. BALLACTERSON STREET, STREET	nued) >			
LINE NO.		B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEA- SURE (enter code)	1. PR	ocess copes		2. PROCESS DESCRIPTION (if a code is not entered in D(1))
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2	Po 30	2.0	P	тоз			
3	U043	800	P	T03			
4	0051	300	P	T03		•	
5	0052	400	T	T03	1 1		
6	0188	150	T	To 3			
7	0151	10	P	703			
8	0205	30	P	το 3			
9	0210	10	P	T03	12:11		
10	K028	300	P	To3			Here The Later to the Control of the
11	K031	5	P	T63			
12	K046	20	P	τ03			
13	K050	15	P	To 3			
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EPA	Form 3510-3 (6		trans delivers.	Carlo Marketon Carlo	, with province to		CONTINUE ON REVERSE

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IV. DESCRIPTION OF HAZARDOUS WASTES (and the first		5	Viet	
E. USE THIS SPACE TO LIST ADDITIONAL PR	ROCESS CODES	FROM ITEM D(1) ON PA	GE 3.			
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						177
EPA I.D. NO. (enter from page 1)				REAL PROPERTY.		
FYA DOOOH 30686 6		1 2 7/1	Est in		F 12	
V. FACILITY DRAWING		# #Y	100	1		THE PERSON NAMED IN
All existing facilities must include in the space provided	on page 5 a scale dra	awing of the facility (see instr	uctions for more	detail).		
VI. PHOTOGRAPHS						
All existing facilities must include photographs (a	erial or ground—I	evel) that clearly delineat	e all existing st	uctures; ex	isting storag	je,
treatment and disposal areas; and sites of future s	torage, treatment	or disposal areas (see inst	ructions for m	ore detail).		
LATITUDE (degrees, minutes, & seco			SITUDE (degrees	minutes &	econds)	
401451030			7/16			
40 13 U38			16	75 77	3	
VIII. FACILITY OWNER	Ser 1			16	15	The sales
A. If the facility owner is also the facility operator	as listed in Section	VIII on Form 1, "General Inf	ormation", place	an "X" in th	e box to the	left and
skip to Section IX below.						
B. If the facility owner is not the facility operator	as listed in Section \	/III on Form 1, complete the	following items			
1. NAME OF FA	CILITY'S LEGAL C	OWNER		2. PHO1	NE NO. (area	code & no.)
				o Roi El Za		
E 15.16			Market State of State	3 50 - 36	59 - 41	62 . 4
3. STREET OR P.O. BOX		4. CITY OR TOWN		5. ST.	6. ZIP CC	DE
F	Ğ					
0) 16	45 15 16		40	1 42	47	1
IX. OWNER CERTIFICATION		Mary Man Salar			ad all attac	Andrew .
I certify under penalty of law that I have persona documents, and that based on my inquiry of thos						
submitted information is true, accurate, and comp	plete. I am aware					
including the possibility of fine and imprisonmen	t.					
A. NAME (print or type)	B. SIGNATUR	SIGNATURE		C. DATE SIGNED		
Control of the contro						
					THE REAL PROPERTY.	Name of Street, or other Designation of the last of th
X, OPERATOR CERTIFICATION						
I certify under penalty of law that I have personal						
I certify under penalty of law that I have personal documents, and that based on my inquiry of thos	e individuals imm	ediately responsible for o	btaining the in	formation,	believe tha	t the
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ALLH	NOTIFICATE	OF HAZARDO	US WASTE ACTIV	VITY INSTRUCTI	ONS: If you received a preprinted to the space at left, If any of the spac
INSTALLA- TION'S EPA	1	,		information	on the label is incorrect, discorrect
I.D. NO.	! PA D 0004306	58 6			nd supply the correct information priate section below, If the label is
NAME OF IN-	1			complete an	d correct, leave Items I, II, and III If you did not receive a preprinted
TALLA-		ROF INCIM		lebal, compl	ete all items, "Installation" means a
II. MAILING ADDRESS	CITY HALL HARRISRUE	S, FA 17101			where hazardous waste is generated, ed and/or disposed of, or a trans-
ADDRESS	1	· · · · · · · · · · · · · · · · · · ·			cipal place of business, Please refer RUCTIONS-FOR_EILING_NOTIFI-
	CITY HALL			CATION b	efore completing this form. The
LOCATION IL OF INSTAL- LATION		5, PA 17101		4	requested herein is required by law 00 of the Resource Conservation and 00 miles
				Recovery Ad	t).
OR OFFICIAL	LISE ONLY			D.S.	
OR OFFICIAL	OSE ONET	COM	MENTS	FPA P	
#					
5 10			DATE RECEIVED	SEP 980	11111199 1
INSTALLATI	ION'S EPA I.D. NUM	BER APPROVED	(yr., mo., & day)	,	
FIPIAIDIOIO	043068		300909		
I. NAME OF INS	TALLATION				
HARRI	SBURG	STEAM SE	NERATIN	GFACIL	177
ii. Installati	ON MAILING AD	DRESS		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	67 C
		STREET OR P.O. BOX			
31670	SIATH	STRBET			
15 16	CITY	OR TOWN	s	T. ZIP CODE	
4 HARRI	SBURG			0 171104	
15			40 41		
III CATION	OF INSTALLATION			State of the state	
51670	\$ 19 71	STREET			
5 16 70	191 11 11 161	1311/JEELT		45	
<u> </u>		OR TOWN		T. ZIP CODE	
6 HARRI	SBURG		P	A17104	
IV. INSTALLAT	ION CONTACT				
	NAME AI	ND TITLE (last, first, & job	titie)	PHON	E NO. (area code & no.)
ZJACKI	KARPER	SUPERIN	TENDENT		2556495
V. OWNERSHIP	从 我们,			45 46 - 41	
		A. NAME OF INSTALL	ATION'S LEGAL OWN	ER	
8C1 TY	OFHAR	RISBURG			
B. TYPE OF	OWNERSHIP iate letter into box)	VI. TYPE OF HAZAR	DOUS WASTE ACT	IVITY (enter "X" in	the appropriate box(es))
		A. GENERAT			ATION (complete item VII)
F = FEDERA M = NON-FE		Ø c. 188045/0 1	CORE/DISPOSE	D. UNDERGRO	UND INJECTION
VII MODE OF 1	TP ANSPORTATIO	N (transporters only -		60	
A. AIR	B. RAIL	C. HIGHWAY	D. WATER	E. OTHER (specify):	
		OTIFICATION		tion of hazardous was	pertivity of a subsequent notification
Mark "A" in the ap If this is not your f	propriate box to indi first notification, ente	cate whether this is your in: r your Installation's EPA I.I	Stallation's first notifical D. Number in the space	provided below.	activity or a subsequent notification.
				٢	C. INSTALLATION'S EPA I.D. NO.
XI A. PIRS	T NOTIFICÁTION	B. SUBSEQUEN	IT NOTIFICATION (col	mplete Item C)	DOGGA 3 CLUCK
					MACALLACE
	ON OF HAZARDO	PUS WASTES provide the requested infor	rmation		
LIRESO AD IO IUS LOA	reise of this form and	Provide rus radrasted tutol	1118(1011.		

B. HAZA specifi	TO C 4 23 - 26 7 RDOUS WASTES c industrial source	2 23 - 26 8 8 23 - 24 S FROM SPECIFIC SO 25 your installation has	DURCES. Enter the four-d	igit number from 40 CFR	23 - 26 11 23 - 36 Part 261.32 for each	1 2 1 2 23 - 24 1 2 23 - 24 1 2 23 - 24 1 2 23 - 24 1 2 23 2 24 2 25 2 24 2 25 2 25 2 25 2 25	e from
			23 - 26 21 23 - 26 27 23 - 26 2ARDOUS WASTES. Enter			23 - 26 24 23 - 26 30 23 - 26 30	sub-
D. LIST	21 22 - 24 37 23 - 26 43 23 - 26 ED INFECTIOUS	32 21 · 26 38 22 - 26 44 44 WASTES. Enter the	33 39 33 - 26 39 45 45 23 - 26 45 45 45 45 45 45 40 40 40 40 40 40 40 40 40 40	34 23 - 26 40 23 - 26 46 23 - 26 CFR Part 261.34 for each	23 - 26 41 23 - 26 47 47 23 - 26	26 23 - 26 42 23 - 26 48 48 25 - 28	erinary
E. CHAF	A9 RACTERISTICS Colous wastes your	DF NON-LISTED HA	ZARDOUS WASTES. Maris See 40 CFR Parts 261.21	52 23 - 26 k "X" in the boxes corresp 261.24.)	ponding to the charact	-) (1)
I certi attach I belie	ed documents, ve that the sub	ty of law that I ha and that based on mitted information	LIZ. CORROSIVE (DOOZ) ave personally examined my inquiry of those ind is true, accurate, and cossibility of fine and im	lividuals immediately i complete. I am aware i	the information suresponsible for obto	ining the informa	tion,
	157		1		-1 - A3	15055 5151150	

HERRISBURG STRAIN GENRUIN, FEGLIS

IX. DESCRIPTION OF HAZARDOUS WASTES (continued from front)

EPA/Form 8700-12 (6-80)

Gombo P. Voeder -

Garnell Flening Godly: Corporte. Inc.

F.J. CARREIND

HEST. City Solicitor

Rick Snydor

Local 521 Union Ausident

O. FRADA De CARCIA

Actime Director of Aublin Works Executive Assi to Mayor Reed.

Michael A. Namosti

Solld Waste Specialist Hlag. Regional Office

Laray T. Lippi, Jr.

Deputy Director of Public Works/ Acting Plant Super. S.G.F.

F. FATR

DER OP Sup.

WILL STORE UNEXCONORUND REFUSE IN PET FOR
FOUR WEDES - THEN BEEN ROMINE

WALL AMSWER NOU TO THES SUBJECT.

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PA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT MODULE NO. 12

DATE SUBMITTED	
DEPARTMENT USE ONLY	

REQUEST FOR APPROVAL TO PROCESS, OR DISPOSE OF INFECTIOUS, PATHOLOGICAL OR CHEMOTHERAPEUTIC WASTE STREAM(S)

This Form shall be accompanied by FR-WM-A

GENE	RAL INFORMATION (must be completed by processing or disposal facility)
A. P	rocessing or Disposal Facility
1.	. Name of facility HARRISBURG STEAM GENERATING FACILITY
	Address 1670 S. 19th Street, Harrisburg, PA Zip: 17104
	Location of site if different from mailing address
2.	Name and address of permittee (if different from (1) above)
	Municipality County
3.	Hazardous Waste Identification number (if applicable)
4.	Solid waste permit number(s) for the processing or disposal facility to be utilized
_	
5.	Facility contact person
	Name Title
	Phone no
6.	Authorized Signature of Owner or Officer for the Facility
	Name Title
. Ge	nerator or Processor of the Waste (must be completed if different from A. (1.) above)
1.	Name of facility SMITH KLINE & FRENCH LABORATORIES
	Mailing address 709 Swedeland Road, King of Prussia, PA Zip: 19406
	Location of site if different from mailing address
	Municipality County
2.	If a subsidiary, name of parent co.
3.	Hazardous Waste Identification number of generator PAD980551964 (if applicable)

DATE PREPARED	4	MODULE 12 1	PAGE 2 DATE SUBMITTED
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4.	lf pro	cessor is not the generator of	the infectious waste, list all generators
5.	Solid	Waste permit number(s) for t	the processing facility (if applicable) #400 446
6.	Burea	of Air Quality Control Op ty contact person	the processing facility (if applicable) #400 446 perating Permit 46-301-216
0.			title Mgr. Envir. Engineerin
		Thomas J. Concannon, Jr	
	Phone	e no. <u>015-270-752</u>	27
7.	Autho	orized signature of owner or o	fficer for the facility
	Name	Thomas Com	title Mgr. Envir. Engineerin
WASTE	DESC	RIPTION (Must be completed I	Canaratas as Bracassas)
	,	•	•
	ierai Pr licable		me, toxicity data, and sterilization method(s) utilized, if
1.	Descr	iption of the waste, its origin,	and containerization.
		See Attachment A	
•			
•	,		
2.	U.S. (OOT proper shipping name UN	I/NA number, and hazard class (if applicable):
	N,	/A ·	
3.	Typica	al volume of waste to be ship	ped to processing or disposal facility:
		See Attachment A onthly	•
	b. A	nnually	_ gal., tons (circle one)
4.	Proces	ssing or disposal frequency: _	12 times per month; one time
5 .	Currer (circle	nt volume to be shipped to pro one) See Attachment A	cessing or disposal facility gals., tons

DATE PREPARED OATE REVISED		MOOULE 12 PAGE 3	DATE SUBMITT	ED	
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6.	a.	Is the waste a hazardous waste defined in 75.2517.	Yes 🔀	No	
	b.	If yes, describe the hazardous waste according to its denumber in 75.261.	escription	and hazar	dous wast
7.	Ha	s the waste been delisted as a hazardous waste by DER	? 🗆 Yes	□ No	⊠ N/A.
8.	Ch	eck the following box(es) for applicable waste type(s):		•	
	K	pathological waste			

B. Chemical and/or Bacteriological Analyses — Please attach the following:

☐ chemotherapeutic waste

☑ infectious waste

Other (specify)

1. The results of the total analysis of the waste as specified by the Department, if applicable. (A Module No. 1 may be required)

A copy of the Module | for Incinerator Ash from our Pathological Incinerators is attached or Attachment B.

- 2. A description of the sampling method and biological indicators utilized.
- III. DESCRIPTION OF PROCESSING, AND/OR DISPOSAL METHOD (must be completed by the processing and disposal facility. Use additional sheets if necessary.) For each waste type processed or disposed.
 - A. Processing Facility
 - 1. Description and schematic of processing procedures to be used for each type of waste.

A Schematic of Processing procedures is included in Module 1, a copy of which is attached or Attachment B.

2. Description of the container(s) to be used for storage of each type of waste during collection and during movement within the facility and length of storage.

.003 mils (36" x 54") Black Plastic Poly Propylene Bags

3. Description of the alternatives to be used if process equipment is inoperable; and the procedures for the storage of wastes, if they cannot be promptly processed.

There are more than one permitted Pathological Incinerators on-site.

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4. Description of special handling/safety measures for each type of waste managed. Include personal protection and safety needs and any modifications to the operational safety plan.

See Attachment A

5. Description of the quality assurance program to be utilized to ensure sterilization of the waste, if applicable.

Biohazard waste is either autoclaved at 250°F or incinerated at 1800°F or

both depending on point of origin and nature of biohazard.

6. Provide drawings to any modified structure, operation, contours or sequence of operation/waste plan. Provide operational narrative as necessary to define any modified operational procedures.

N/A

- B. Disposal Facility (must be completed by operator of landfill or incinerator, where applicable)
 - 1. Description of disposal method(s) utilized for each type of waste.
 - Description of the container to be used for storage of each type of waste during collection and during movement within the facility and length of storage.
 - 3. Description of the alternatives to be used if the incineration equipment is inoperable; and the procedures for the storage of wastes, if they cannot be promptly incinerated.
 - 4. Description of the special handling/safety measures for each type of waste managed. Include personal protection and safety needs and any modification to the operational safety plan.
 - Description of the quality assurance program to be utilized to ensure sterilization of the waste, if applicable.
 - 6. Provide drawings of any modified structure, operation, contours, or sequence of operation/waste plan. Provide operational narrative as necessary to define any modified procedures.

ATE PREPARED	MODULE 12 PAGE 6	DATE SUBMITTED
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		DEPARTMENT USE ONLY
CERTIFICATION OF G	ENERATOR OR PROCESSOR	
and that based upon my inquir	y of those individuals immediately responsible	with the information submitted in this and all attached documen e for obtaining the information, I believe that the submitted info penalties for submitting false information, including the possibil
or time and imprisonment.		
Name of Responsible Official	Thomas I Concannon, Ir.	Manager, R&D Title Environmental E
Signature	my Chip	Date
Taken, sworn and subscribed	before me, this	
MOTARY) Thilip	May A.D. 19 87 Lygun
N. 131	UPPER MERION MY COMMISS	EGGIERI, NOTARY PUBLIC I TWP., MONTGOMERY COUNTY ION EXPIRES JAM. 23, 1909 Ivania Association of Notarios
CERTIFICATION OF RE	•	SINEER FOR PROCESSING AND/OR DISPOSA
FACILITY		
This is to certify that I have pers	anelly reviewed all engineering information c	ontained in the accompanying modules, drawings, specification
and other documents which an conformance with the requirem	e part of this application and that I have fou	ind it to be good engineering quality, true and correct, and is sources, and it does not, to the best of my knowledge, with
NOTICE: It is an offense und	or Pennsylvania Crimes Code to affirm a f	alse statement in documents submitted to the Departme
lame		
Signature		
		SEAL OF PA REGISTERED
Date		SEAL OF PA REGISTERED PROFESSIONAL ENGINEER
Signature		

* A +

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DATE PREPARED	MODULE 12 PAGE 6	
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DATE REVISED		
<u></u>		
		DEPARTMENT USE ONLY
This is to certify the aware of the Depart	at I have personally examined and am familiar with ment of Environmental Resources' permit and opera	PROCESSING AND/OR DISPOSAL FACILITY the information submitted in this and any attached documents. I am ational requirements for this type of facility. I believe that the submitted a significant penalties for submitting false information.
Name		
Signature		Date

ATTACHMENT A

More detailed response to questions posed in II Waste Description and III Description of Processing on Module 12.

- II. A. 1. There are four waste types disposed of by incineration. These include:
 - Type 0 Paper, cardboard, fabric, rubber, glass contaminated cleaning devices will be autoclaved, if possible, or be placed in impermeable containers and subsequently incinerated.
 - Type 2 Wood shavings, absorbents (liners), animal bedding from any biohazard area When required, non infectious bedding may also be incinerated. Containers containing feed, feces, urine and bedding from biohazard areas will be autoclaved prior to incineration or they will be directly incinerated.
 - Type 4 Animal carcasses Unless otherwise specified by research protocols, all animal carcasses shall be incinerated. Contaminated animal carcasses will be incinerated after being transported in sealed containers to the incinerator.
 - Type 6 Contaminated plastic cleaning devices; plastic containers for sharps and plastic syringe barrels.
 - 3. We incinerate approximately 25 tons/month at our site or 300 tons/year. We operate each incinerator on site approximately 12 day per month.

We ship approximately 1.9 - 2.7 tons/month or 22.8 - 32.4 tons/year of incinerator ash to the Harrisburg Steam Plant at 1670 South 19th Street, Harrisburg, PA 17104.

III. A. 4. Below is an appropriate excerpt from our Procedure for Handling of Biohazardous materials within Animal Facilities.

IV. <u>Personnel Practices</u>

A. Animal Care Personnel

All personnel entering an area where animals are being treated with biohazardous materials will use a complete clothing change, including pants and shirts or jumpsuits, shoes or boots, head cover and gloves, or approved disposable garments. Contaminated clothing will be decontaminated or disposed of immediately after an overt exposure.

B. Showers

Personnel engaged in animal procedures where exposure to airborne particulates contaminated with biohazardous materials could occur must shower before leaving work area.

C. Eating, Drinking, and Smoking

There will be no eating, drinking, smoking, chewing of gum or tobacco, application of cosmetics, or storage of food in areas where biohazardous materials are used.

D. <u>Personal Hygiene</u>

All personnel will wash their hands immediately after completion of any procedures in which biohazardous materials have come in contact with unprotected skin.

V. Operational Practices

A. Room Identification

Entrances and exits of all animal rooms in which biohazardous materials are being used will be posted with the international biohazard sign.

B. Housekeeping

General housekeeping procedures which suppress the formation of aerosols, such as the use of a wet mop or a vacuum cleaner equipped with HEPA filter on the exhaust, will be used.

VI. Animal Housing

Animals (rodents, lagomorphs, carnivores and non-human primates) will be housed in a manner that provides for easy collection of contaminated feed, feces, urine and bedding into impermeable containers, which are closed prior to removal to non-contaminated areas.

VII. Disposal

A. Contaminated Wastes

Containers containing contaminated feed, feces, urine and bedding will be autoclaved prior to standard LAS disposal procedures or they will be directly incinerated.

B. <u>Animal Carcasses</u>

Contaminated animal carcasses will be incinerated after being transported in sealed containers to the incinerator. Carcasses may be stored in a separate, appropriately identified, freezer until incineration.

C. <u>Cleaning Devices</u>

Contaminated cleaning devices will be autoclaved, if possible, or be placed in impermeable containers and subsequently incinerated.

1867X TC/sm

Ac copy.



AMERICAN RESOURCE CONSULTANTS, INC.

450 East Street, Doylestown, PA 18901 Telephone: 215-348-0402

November 12, 1985

Harrisburg Steam Plant 1670 South 19th Street Harrisburg, PA 17104

ATTN: Chuck King, Director

Re: Smith, Kline & French Laboratories
Module 1 Submission for Empty
Raw Materials & Process Chemical
Packaging Containers, and
Incinerator Residue.
ARC Project No. 22785

Dear Chuck:

Enclosed please find an original and one (1) copy of PA DER Module 1's for two (2) wastestreams generated by the Smith, Kline and French Laboratories' Swedeland, PA facility. The wastestreams are identified as Empty Raw Materials & Process Chemical Packaging Containers and Incinerator Residue.

We request that these Modules be processed as soon as possible, since environmentally sound disposal of these wastestreams is of paramount importance to SK&F.

Please advise us if you have any questions or comments relative to this submission.

Sincerely, American Resource Consultants, Inc.

Edward H. Prout, Jr. President

EHP/wla Enclosure cc: Mr. Walsh

DATE PREPARED	_
11/12/85	
DATE REVISED	

PA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF SOLID WASTE MANAGEMENT MODULE 1

INCINERATOR RESIDUE	
DEPARTMENT USE ONLY	_

Grounds & Vehicular Service

REQUEST FOR APPROVAL TO TREAT, STORE, OR DISPOSE OF A HAZARDOUS OR RESIDUAL WASTE STREAM

SEE	INSTRUCTIONS	BEFORE	COMPLETING	THIS	FORM
	11-011100110110	BEI ORE	COMPLETING	1018	CUNH

Phone no. (215) 270-7477

SEE	INST	FRUCT	TONS BEFORE COMPLETING THIS FORM				
١.	GE	NER	AL INFORMATION (must be completed by TSD facility)				
	A.	Tn	Treatment, Storage, or Disposal Site				
		1.	Name of facility				
		•	Address				
			Municipality County				
		2.	Identification number (If applicable)				
		3.	Solid waste permit number(s) for treatment, storage or disposal facility to be utilized				
		4.	Facility contact person				
			Name Title				
			Phone no				
	В.	Ger	nerator of the Waste				
		1.	Name of company _Smith Kline & French Laboratories				
			Mailing address 709 Swedeland Road Swedeland PA 19479				
			Location of site if different from mailing addressN/A				
			Municipality Upper Merion Township County Montgomery				
		2.	If a subsidiary, name of parent coSmith Kline Beckman Corporation				
		3.	Identification number (if applicable) 990551744				
4. Company contact person							
			Name Richard F. Carinci title Manager, Buildings.				

DATE PREPARED 11/12/85
DATE REVISED .

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DEPARTMENT	IRE ONLY
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II. WASTE DESCRIPTION (Must be completed by Generator)

A.	Ge	eneral Properties
	1.	pH range 9.45 to (based on past analyses or knowledge)
	2.	Physical state:
		a. liquid (less than 20% solids by c. solid (equal to or greater than 20% by dry wt. and non-flowable)
		b. gas (ambient temperature and d. Check here if c. above was checked pressure) and waste contains free liquids.
	3.	Physical appearance:
		Color Black to Grey Odor None
		Number of solid or liquid phases of separation None.
		Describe each phase of separation
		One Solid Phase
	4.	U.S. DOT proper shipping name UN/NA number, and hazard class (if applicable):
		N/A ·
	5.	Typical volume of waste to be shipped to treatment storage or disposal facility:
	•	
		a. Monthly 1.1 - 2.7 MAX. gal., (circle one)
		b. Annually (250 - 15.0 Mx. gal., (Oh) (circle one)
	6.	Treatment or disposal frequency: 100 times per year; one time
	7.	Current volume to be shipped to treatment storage or disposal facility 50 - 15 Tens gal., tons (circle one)
	8.	a. Is the waste a hazardous waste as defined in 75.261? Yes No
		b. If yes, describe the hazardous waste according to its description and hazardous waste number in 75.261.

Has the waste been delisted as a hazardous waste by DER?

Yes

No 80 N/A

If yes or N/A, check the appropriate box(es) in Item 10. .

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B.

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		discarded commercial chemical product	0	process weste
	0	tank bottom		
		off-specification species	(2)	infectious waste Incinerator Ash
				beghouse dust
	0	manufacturing chemical intermediate still bottom	0	westewater treatment plan residue (industrial)
		spent catalyst		westewater treatment plant residue (sewage)
		flyesh		weter treatment plant residue
		bottom ash		incinerator residue
		•	. 0	acid mine drainage treatment sludge
		siag		spill residue
		foundry sand	_	
		SO ₂ scrubber sludge		other (specify)
_		Analyses — Please attach the folio	_	: te as described in the instructions.
		See Attachment		
2.	The	results of the leaching tests as de	scribe	d in the instructions and the leaching method.
		See Attachment		

A description of the sampling method.

Composite Sampling Method

4. The range of concentrations of the constituents based on knowledge or past analyses.

Not Available for this Waste

- C. Process Description and Schematic Please attach the following:
 - 1. The substantiation for a confidentiality claim as described in the instructions, if portions of the information you have submitted are confidential.
 - 2. A detailed description of the manufacturing and/or pollution control processes producing the hazardous or residual waste as specified in the instructions.

See Attachment

3. A schematic of the manufacturing and/or pollution control processes producing the hazardous or residual waste as specified in the instructions.

See Attachment

III. Liner Compatibility Evaluation (must be completed by TSD facility)

Attach the results of the liner compatibility evaluation or supporting data as specified in the instructions.

DATE PREPARED

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- IV. PROPOSED TREATMENT, STORAGE, AND/OR DISPOSAL METHOD (must be completed by TSD facility. Use additional sheets if necessary.)
 - A. Proposed Treatment Method

B. Proposed Storage Method and Length of Storage

C. Proposed Disposal Method

- V. ALTERNATIVES TO PROPOSED TREATMENT AND/OR DISPOSAL METHOD (must be completed by generator. Use additional sheets if necessary.)
 - A. What Other Treatment, Disposal, Recycle, Reuse, or Reclamation Method(s) Can be Used? Briefly describe viable alternatives to your proposal.

Landfilling is an Alternative to Incineration

B. Why was the Treatment and/or Disposal Method in Section IV Chosen?

Incineration is the Preferred Alternative

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MODULE 1, PAGE 6

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VI. CERTIFICATION OF GENERATOR

Name of Responsible

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Official Ric	HARO F. (ARIALI	Title
Signature	of Council	Date
Teken, sworn and subscribe	ed before me, this	·
	1'5 day of Mary 1/22 AO. 19	85
HOTARY		
SOAL	Contract of the second	
	LINIA P LAALAN	
	THRIP F. LECCIERI, RATARY PUBLIC UPPER MESIAH TUIP., MCATARY-ERY COUNTY	
	Member, Prinsympla Association of notation	
	•	
AND/OR DISPOSAL	F REGISTERED PROFESSIONAL ENGINE L FACILITY	
This is to certify the modules, drawings, specit to be of good engine. Department of Environment is pertinent to a content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of		this application and that I have found ince with the requirements of the my knowledge, withhold information of the Department.
This is to certify the modules, drawings, specit to be of good engine Department of Environment is pertinent to a contract to a	L FACILITY at I have personally reviewed all engineering inform cifications, and other documents which are part of eering quality, true and correct, and is in conformemental Resources, and it does not, to the best of determination of compliance with the requirements	this application and that I have found ince with the requirements of the my knowledge, withhold information of the Department.
This is to certify the modules, drawings, specit to be of good engine Department of Environment is pertinent to a control of the Department.	L FACILITY Let I have personally reviewed all engineering inform cifications, and other documents which are part of leering quality, true and correct, and is in conformal mental Resources, and it does not, to the best of determination of compliance with the requirements have under Pennsylvania Crimes Code to affirm a fail	this application and that I have found ince with the requirements of the my knowledge, withhold information of the Department.
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This is to certify the modules, drawings, specit to be of good engine Department of Environment is pertinent to a control of the Department. Notice: It is an offer to the Department.	L FACILITY Let I have personally reviewed all engineering inform cifications, and other documents which are part of leering quality, true and correct, and is in conformal mental Resources, and it does not, to the best of determination of compliance with the requirements have under Pennsylvania Crimes Code to affirm a fail	this application and that I have found ince with the requirements of the my knowledge, withhold information of the Department.
This is to certify the modules, drawings, specit to be of good engine Department of Environmental is pertinent to a content to the Department. Notice: It is an offer to the Department. Name Signature	L FACILITY Let 1 have personally reviewed all engineering inform cifications, and other documents which are part of leering quality, true and correct, and is in conformational Resources, and it does not, to the best of determination of compliance with the requirements have under Pennsylvania Crimes Code to affirm a fail	this application and that I have found ince with the requirements of the my knowledge, withhold information of the Department.
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This is to certify the modules, drawings, specit to be of good engine. Department of Environmental tractions are considered to the Department. Name Signature Date	L FACILITY Let I have personally reviewed all engineering inform cifications, and other documents which are part of leering quality, true and correct, and is in conformal mental Resources, and it does not, to the best of determination of compliance with the requirements have under Pennsylvania Crimes Code to affirm a fair	this application and that I have found ince with the requirements of the my knowledge, withhold information of the Department. se statement in documents submitted SEAL OF PA REGISTERED
This is to certify the modules, drawings, specit to be of good engine Department of Environing that is pertinent to a content of the Department. NOTICE: It is an offer to the Department. Name Signature Date Address	L FACILITY Let I have personally reviewed all engineering inform cifications, and other documents which are part of leering quality, true and correct, and is in conformal mental Resources, and it does not, to the best of determination of compliance with the requirements have under Pennsylvania Crimes Code to affirm a fair	this application and that I have found ince with the requirements of the my knowledge, withhold information of the Department. se statement in documents submitted SEAL OF PA REGISTERED



Environmental Chemistry Laboratory, Fricks Lock Rd., RD # 1, Polisiown, PA 19464 (215) 326-9662

CERTIFICATE OF ANALYSIS

LABORATORY NO:

See Below

RECEIVED: 31 May 1985

REPORTED: 18 June 1985

CLIENT:

American Resource Consultants, Inc.

450 East Street

Doylestown, PA 18901

Sample Date: 5/30/85

Sampled by: NA

BAMPLE DESCRIPTION:

#02009 SK&F INCINERATOR ASH :

		Total Analy:	sis ·	E.P.	Toxicity Leach	ate Analys
		#02009			# 02009	
Parameter	Units	RMC#1196-85	· · · · · · · · · · · · · · · · · · ·	Units	RMC#1196-85	
Ammonia, Nitrogen				mg/1	0.042	
Total Organic Carbon				mg/l	1240	
Chemical Oxygen Demand				mg/l	2700	
Cyanide	mg/kg1	0.59		mg/1	0.002	
Antimony, Total				mg/1	0.10	
Arsenic, Total	mg/kg1	6.2		mg/1	<0.001	
Barium, Total	mg/kg ¹	427		mg/l	<0.5	
Cadmium, Total	mg/kg1	16.0		mg/1	0.025	
Chromium, Total	mg/kg ¹	57		mg/l	0.002	
Chromium, Hexavalent				mg/1	<0.001	
Copper, Total	mg/kg1	516	•	mg/1	0.031	
Lead, Total	mg/kg ¹	340		mg/1	<0.001	
Mercury, Total	mg/kg1	1.2		mg/1	0.0003	
Molybdenum, Total	mg/kg ¹	4.3		mg/1	0.10	
Nickel, Total	mg/kg1	36		mg/l	0.05	
Selenium, Total	mg/kg1	14		mg/1	0.006	
Silver, Total	mg/kg1	5.0		mg/l	< 0.001	
Zinc, Total	mg/kg1	3920		mg/l	2.6	
011 and Grease	mg/kg ¹	72.5		mg/1	2.1	
Total Organic Halogens				μg/1	30	
Purgeables	*	*	•			
Phenolics				mg/1	0.28	
oH .	Standard	9.45				•
otal Solids	ma/ka	562000		mg/1	4570	
otal Dissolved Solids				mg/l	4570	
olatile Solids				mg/1	1140	
leating Value	BTU/16	< 50				
gnitability		Not Ignitable				
corrosivity		Not Corrosive	•			
eactivity		Not Reactive				•

Results are expressed as dry weight.

Approved by:

Reland & Karlyn

^{*}See Attachments

CERTIFICATE OF ANALYSIS

Summary of Organic Priority Pollutant Analysis

CLIENT	ARC	DATE RECEIVED	5/31/85
CLIENT I.D.	02009 INCINERATOR ASH	DATE ANALYZED	6/14/85
RMC I.D.	1196-85	ANALYZED BY	TED

VOLATILES

	ug/kg	L		ug/kg
chloromethane	<28	ND	bromodichloromethane	<5.7 ND
bromomethane	<28	ND	1,2-dichloropropane	<28 ND
vinyl chloride	<28	ND	1,3-dichloropropenel	<28 ND
chloroethane	<28	ND	trichloroethene.	<1.1 ND
methylene chloride	5.7		benzene	<5.7 ND
acrolein	<570	ND	dibromochloromethane	<5.7 ND
acrylonitrile	<143	ND	1,1,2-trichloroethane	<28 ND
1,1-dichloroethene	<5.7	ND	2-chloroethylvinyl ether	<28 ND
1.1-dichloroethane	<5.7	ND	bromoform	<28 ND
trans-1,2-dichloroethene	<5.7	ND	tetrachloroethene	<5.7 ND
chloroform	<5.7	ND	1,1,2,2-tetrachloroethane	<28 ND
1,2-dichloroethane	<28_	ND	toluene	<1.1 ND
1,1,1-trichloroethane	<5.7	ND	chlorobenzene	<5.7 ND
carbon tetrachloride	<5.7	ND	ethyl benzene	<5.7 ND

Approved By: Perhand & Radgas

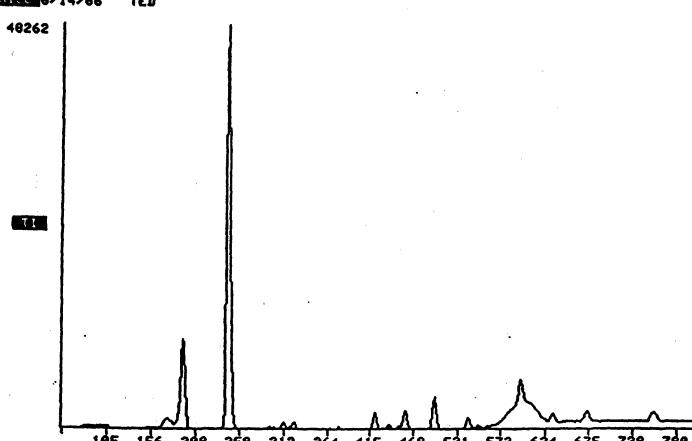
^{11.3-}cis-dichloropropene and 1.3-trans-dichloropropene could not be resolved, values reported indicate the sum of both compounds.

<x ND = Not detected, value indicates minimum quantifiable limit.</pre>

⁼ Detected but at a concentration less than the minimum quantifiable limit indicated.

HAUL VOL. ARC RMC-1196-86 8.7678G

7698



FACILITY PROCESS AND SOLID WASTE DESCRIPTION

DESCRIPTION OF ACTIVITIES ON SITE:

The primary activity engaged in at the 709 Swedeland Road site is pharmaceutical research. Approximately 91 percent of the area on site is dedicated to research, while 7 percent is pharmaceutical antibiotic manufacturing, and the remaining 2 percent is chemical antibiotic manufacturing.

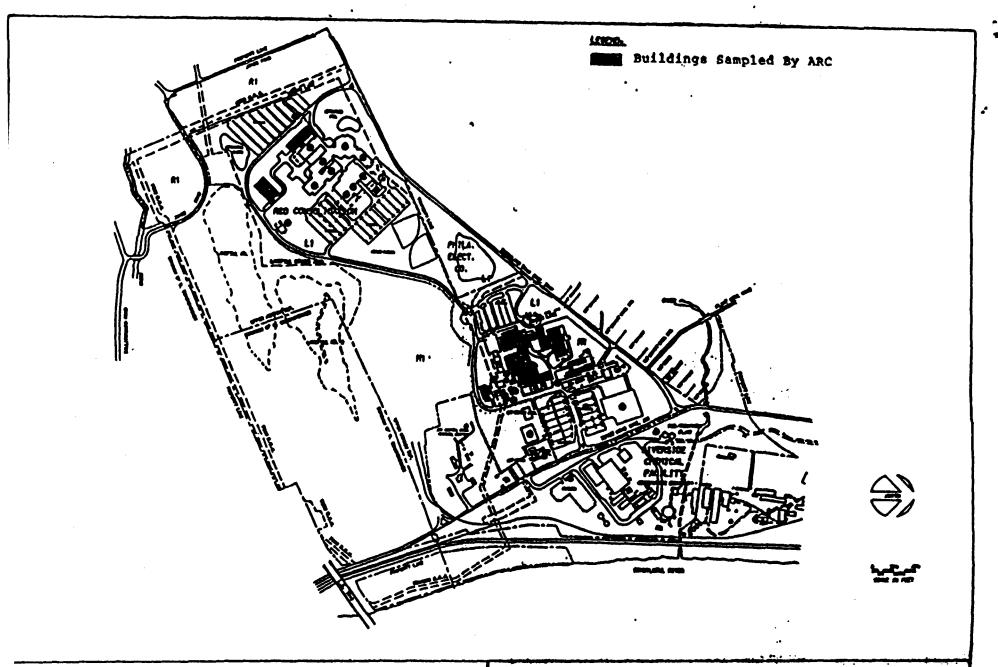


FIGURE 2

AMERICAN RESOURCE CONSULTANTS, INC. 450 EAST STREET, DOYLESTOWN, PA 18901

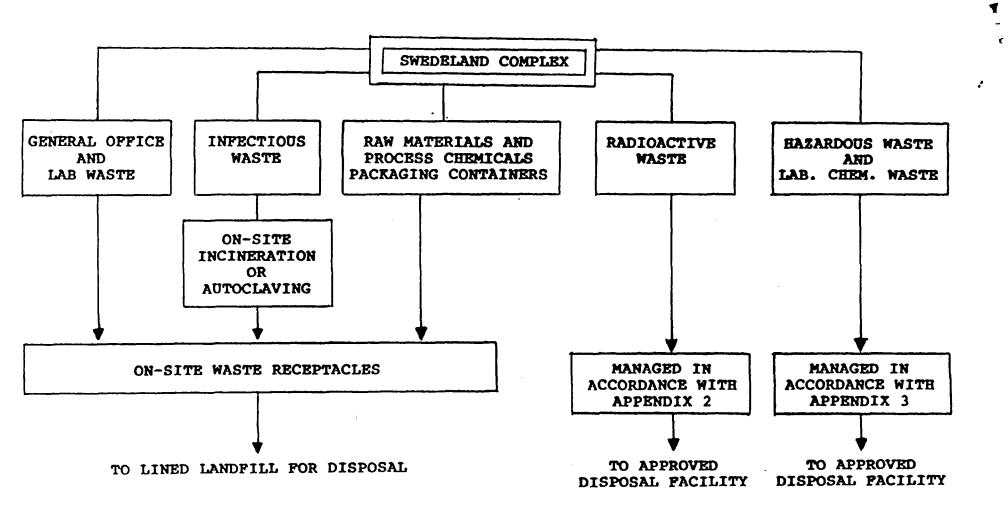
BUILDING IDENTIFICATION MAP SMITH KLINE"& PRENCH LABORATORIES SWEDELAND FACILITY, SWEDELAND, PENNSYLVANIA

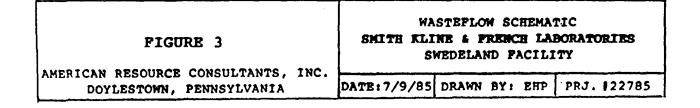
DATE: 1/9/85 DRAWN BY: TGP APP'D.EY: BHP

PRJ. #22785

The solid waste generation field evaluation performed at the SK&F Swedeland facility shows that the following classes of waste are generated:

- 1. General Office and Laboratory Waste: This wastestream is composed of waste which meets the definition of municipal waste and includes non-infectious and/or non-hazardous office and lunchroom waste, animal bedding, laboratory glassware, gowns, masks, gloves, etc., empty rinsed reagent containers, and waste resulting from autoclaving infectious waste.
- 2. Incinerator Ash: This waste is generated from the destruction of infectious animal bedding, etc., in SK&F's two (2) on-site infectious waste incinerators (See Appendix 1). This waste meets PA DER's definition of a residual waste.
- 3. Empty Raw Materials and Process Chemicals Packaging Containers: This waste is composed of empty raw material and process chemical containers with small amounts of residual chemicals. This waste also meets PA DER's definition of a residual waste.





RAW MATERIALS, ADDITIVES, AND PROCESS CHEMICALS

Smith Kline and French Laboratories has a list of raw materials on file with PA DER. This information is considered proprietary. DER has acknowledged the sensitivity of the information. As an alternative, it was agreed upon by SK&F and DER that access to the raw materials inventory be permitted during on-site inspections.

PAGE 1

(INC027)

01/16/2002 12:16

INCINERATOR DAILY TONNAGE REPORT INCOMING LOADS ONLY (EXCLUDING TRANSFER STATION) 01/15/2002

PERMIT	HAULER NAME	TONS OF MSW	TONS OF FMS	TONS OF REC	CNTY
3333	SARAKEM	0.000	4.160 4.160	0.000	NC NC
		0.000	4.100	0.000	
0039	WASTE MANAGEMENT OF	15.550	0.000	0.000	21
1024	YORK WASTE DISPOSAL	66.380	0.000	0.000	21
		81.930	0.000	0.000	21
0035	X/S WASTE TRANSPORT	11.500	0.000	0.000	22
0039	WASTE MANAGMEMENT OF	75.062	0.000	0.000	22
0983	SHEESLEY, JAMES C	4.920	0.000	0.000	22
1024	YORK WASTE DISPOSAL	35.790	0.000	0.000	22
		127.272	0.000	0.000	22
0005	CITY SANITATION	99.110	0.000	4.450	99
0029	HBG HOUSING AUTH	8.140	0.000	0.520	99
0039	WASTE MANAGMEMENT OF	27.998	0.000	0.000	99
0088	PENN DOT-ROC 4TH FLR	0.890	0.000	0.000	99
0287	HERSHEY CREAMERY CO	1.620	0.000	0.000	99
0323	PA FARM SHOW COMPLEX	0.880	0.000	0.000	99
0633	BRENNER FURNITURE	0.480	0.000	0.000	99
1024	YORK WASTE DISPOSAL	12.280	0.000	0.000	99
		151.398	0.000	4.970	99
	01/15/2002 TOTAL:	360.600	4.160	4.970	

01/16/2002 12:16 PAGE 2

(INC027)

INCINERATOR DAILY TONNAGE REPORT INCOMING LOADS ONLY (EXCLUDING TRANSFER STATION) 01/15/2002 TO 01/15/2002

TONS OF MSW TONS OF FMS TONS OF REC CNTY

BATCH TOTAL: 360.600 4.160 4.970

01/15/2002 11:47 PAGE 1

(INC027)

INCINERATOR DAILY TONNAGE REPORT INCOMING LOADS ONLY (EXCLUDING TRANSFER STATION) 01/11/2002

	· · · · · · · · · · · · · · · · · · ·	·			
PERMIT	HAULER NAME	TONS OF MSW	TONS OF FMS TO	ONS OF REC	CNTY
0039	WASTE MANAGEMENT OF	18.860	0.000	0.000	21
1024	YORK WASTE DISPOSAL	74.270	0.000	0.000	21
		93.130	0.000	0.000	21
0035	X/S WASTE TRANSPORT	8.000	0.000	0.000	22
0039	WASTE MANAGEMENT OF	66.497	0.000	0.000	22
0985	FULKROAD, CHARLES	12.960	0.000	0.000	22
1024	YORK WASTE DISPOSAL	34.610	0.000	0.000	22
		122.067	0.000	0.000	22
0999	TEMP PERMIT HAULERS	14.280	0.000	0.000	35
		14.280	0.000	0.000	35
0001	CITY SERVICES	0.410	0.000	0.000	99
0005	CITY SANITATION	87.860	0.000	5.370	99
0025	CHAMBERSBURG WASTE	8.530	0.000	0.000	99
0029	HBG HOUSING AUTH	5.160	0.000	0.200	99
0039	WASTE MANAGMEMENT OF	28.673	5.590	0.000	99
0088	PENN DOT-ROC 4TH FLR	0.810	0.000	0.000	99
0287	HERSHEY CREAMERY CO	1.640	0.000	0.000	99
0323	PA FARM SHOW COMPLEX	7.620	0.000	0.000	99
1024	YORK WASTE DISPOSAL	5.990	0.000	0.000	99
*		146.693	5.590	5.570	99
	01/12/2002 TOTAL:	376.170	5.590	5.570	

01/15/2002 11:47 PAGE 2

(INC027)

INCINERATOR DAILY TONNAGE REPORT INCOMING LOADS ONLY (EXCLUDING TRANSFER STATION) 01/12/2002

PERMIT	HAULER NAME	TONS OF MSW TONS	OF FMS TONS	OF REC CNTY
0039	WASTE MANAGEMENT OF	37.570		0.000 21
1024	YORK WASTE DISPOSAL	45.950 83.520	0.000	0.000 21 0.000 21
0039	WASTE MANAGEMENT OF	35.220	0.000	0.000 22
0985 1024	FULKROAD, CHARLES YORK WASTE DISPOSAL	11.770 9.570	0.000 0.000	0.000 22 0.000 22
		56.560	0.000	0.000 22
0005 0027	CITY SANITATION HARRIS, KEITH	16.730 0.250	0.000	0.000 99 0.000 99
0039 0375	WASTE MANAGEMENT OF HBG WASTEWATER	2.850 7.850	0.000	0.000 99 0.000 99
0373	MAIRWAICAN DOIL	27.680	0.000	0.000 99
	01/13/2002 TOTAL:	167.760	0.000	0.000

01/15/2002 11:47

INCINERATOR DAILY TONNAGE REPORT INCOMING LOADS ONLY (EXCLUDING TRANSFER STATION) 01/13/2002

PERMIT	HAULER NAME	TONS	OF MSW	TONS	OF FMS	TONS OF REC	CNTY
0039	WASTE MANAGEMENT OF		5.940		0.000	0.000	21
			5.940	,	0.000	0.000	21
0983	SHEESLEY, JAMES C		3.720		0.000	0.000	22
0999	TEMP PERMIT HAULERS		0.140	*	0.000	0.000	22
			3.860		0.000	0.000	22
0111	SUNDAY ONE TIME DUMP		9.150		0.000	0.000	99
0323	PA FARM SHOW COMPLEX		5.610		0.000	0.000	99
0375	HBG WASTEWATER		7.080		0.000	0.000	99
			21.840		0.000	0.000	99
	01/14/2002 TOTAL:	3	31.640		0.000	0.000	

01/15/2002 11:47 PA

PAGE

(INC027)

INCINERATOR DAILY TONNAGE REPORT INCOMING LOADS ONLY (EXCLUDING TRANSFER STATION) 01/14/2002

PERMIT	HAULER NAME	TONS OF MSW	TONS OF FMS	TONS OF REC	CNTY
3333	SARAKEM	0.000	9.280	0.000	NJ
		0.000	9.280	0.000	NJ
0039	WASTE MANAGEMENT OF	46.600	0.000	0.000	21
0050	SHIMMEL'S DISPOSAL	16.990	0.000	0.000	21
1024	YORK WASTE DISPOSAL	68.420	0.000	0.000	21
		132.010	0.000	0.000	21
				•	
0039	WASTE MANAGMEMENT OF	93.130	0.000	0.000	22
0985	FULKROAD, CHARLES	4.180	0.000	0.000	22
1024	YORK WASTE DISPOSAL	40.640	0.000	0.000	22
		137.950	0.000	0.000	22
0001	CITY SERVICES	0.590	0.000	0.000	99
0005	CITY SANITATION	112.040	0.000	3.510	99
0009	CITY PARKS & REC	1.200	0.000	0.000	99
0029	HBG HOUSING AUTH	9.720	0.000	0.420	99
0039	WASTE MANAGMEMENT OF	49.590	14.370	0.000	99
0033	PENN DOT-ROC 4TH FLR	0.210	0.000	0.000	99
0287	HERSHEY CREAMERY CO	2.080	0.000	0.000	99
0323	PA FARM SHOW COMPLEX	1.260	0.000	0.000	99
0708	OFF EMPLOY SECURITY	1.840	0.000	0.000	99
1024	YORK WASTE DISPOSAL	14.200	0.000	0.000	99
1024	TOTAL MADIE DISTORDE	192.730	14.370	3.930	99
		172.750	14.370	3.930	99
	01/14/2002 TOTAL:	462.690	23.650	3.930	

01/15/2002 11:47 PAGE 5

(INC027)

INCINERATOR DAILY TONNAGE REPORT INCOMING LOADS ONLY (EXCLUDING TRANSFER STATION) 01/11/2002 TO 01/14/2002

TONS OF MSW TONS OF FMS TONS OF REC CNTY

BATCH TOTAL: 1,038.260 29.240 9.500

01/11/2002 14:53 PAGE 1

(INC027)

INCINERATOR DAILY TONNAGE REPORT INCOMING LOADS ONLY (EXCLUDING TRANSFER STATION) 01/10/2002

PERMIT	HAULER NAME	TONS OF MSW	TONS OF FMS	TONS OF REC	CNTY
0039	WASTE MANAGEMENT OF	26.990	0.000	0.000	21
1024	YORK WASTE DISPOSAL	55.800 82.790	0.000 0.000	0.000 0.000	21 21
0035	X/S WASTE TRANSPORT	8.570	0.000	0.000	22
0039	WASTE MANAGMEMENT OF	43.852	0.000	0.000	22
0983	SHEESLEY, JAMES C	3.800	0.000	0.000	22
0985	FULKROAD, CHARLES	4.930	0.000	0.000	22
1024	YORK WASTE DISPOSAL	31.350	0.000	0.000	22
		92.502	0.000	0.000	22
0005	CITY SANITATION	88.630	0.000	2.580	99
0024	PC PARTS, INC.	2.530	0.000	0.000	99
0029	HBG HOUSING AUTH	5.060	0.000	0.300	99
0039	WASTE MANAGMEMENT OF	25.907	18.340	0.000	99
8800	PENN DOT-ROC 4TH FLR	0.850	0.000	0.000	99
0287	HERSHEY CREAMERY CO	1.790	0.000	0.000	99
0323	PA FARM SHOW COMPLEX	7.180	0.000	0.000	99
0999	TEMP PERMIT HAULERS	0.700	0.000	0.000	99
1024	YORK WASTE DISPOSAL	6.020	0.000	0.000	99
		138.667	18.340	2.880	99
	01/10/2002 TOTAL:	313.959	18.340	2.880	

01/11/2002 14:53 PAGE 2

(INC027)

INCINERATOR DAILY TONNAGE REPORT INCOMING LOADS ONLY (EXCLUDING TRANSFER STATION) 01/10/2002 TO 01/10/2002

> TONS OF MSW TONS OF FMS TONS OF REC CNTY

BATCH TOTAL: 313.959 18.340

2.880

Harrisbung Incinerator, File -

NEWS INFORMATIONFROM

THE OFFICE OF MAYOR STEPHEN R. REED

The City of Harrisburg King City Government Center Harrisburg, PA 17101-1678

Telephone: 255,3040

For Immediate Use 29 October, 2001

ONE STEAM PLANT UNIT SHUTTING DOWN UNTIL ADDITIONAL REPAIRS ARE MADE

Harrisburg, PA - Mayor Stephen R. Reed and State Secretary of Environmental Protection David E. Hess today reported that Unit #1 at the Harrisburg Resource Recovery Facility will shut down by Midnight tonight. This is the furnace unit that failed an emissions test for the second time based on test results received last Thursday. The other unit at the facility, which incinerates municipal solid waste and produces steam and electricity, will remain in operation since it passed the tests.

Unit #1 will now undergo further modification with the goal of reducing its emissions. Reed and Hess said the first step will be to install a water spray system to reduce what are called "back end temperatures" of the furnace. At higher temperatures, conditions exist to allow the creation of dioxins. The water spray will reduce those temperatures.

Once the spray system is installed, which will take about 2 1/2 weeks, the unit will go through a "shake down" process of up to 10 days and it then will undergo another emissions test to see if emission improvements have occurred.

Then a second refinement will be undertaken, involving the introduction of carbon through an air compression system. The carbon is inserted into the inlet of the Electro-static Precipitators, which is where most of the dioxins have formed. The intent is to have the carbon filter any dioxins, thus preventing their emission and allowing for their safe disposal. A second emissions test will then be conducted to allow comparison of what beneficial effect each and both refinements have on bringing the unit into compliance with the applicable emission limits required of the plant.

Reed said the shut-down of Unit #1 is voluntary "but it is the logical thing to do until we get a handle on reducing its emissions to within proper limits. We were surprised when it failed the second test because the same operational and mechanical changes were made to both furnaces at the same time, with one furnace doing fine since and the other unit--Unit #1--failing both tests."

The Mayor said the city is submitting the details of the two interim steps to DEP in writing, following a mid-afternoon meeting which occurred today on the matter.

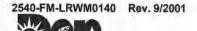
Continued...

Page Two - CITY SHUTS UNIT #1 AT RESOURCE RECOVERY FACILITY

Longer-term, the city is completing a retrofit plan which essentially replaces the plant and resolves the emission issue while adhering to even more stringent standards than what presently exist for the plant. The retrofit plan has to be submitted to DEP for their approval prior to the long-range permanent work beginning.

"Mayor Reed has taken the right step in shutting down the unit that failed the retest," said DEP Secretary Hess. "We will work actively with the City and the U.S. Environmental Protection Agency to ensure that changes to the facility will bring it into compliance with state and federal air pollution control requirements."

XXX



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF LAND RECYCLING AND WASTE MANAGEMENT

Inspection ID 1181845 Field Code 4E

INSPECTION REPORT – MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES

Sit	e I.D	. 10	0758		Telephone #: 717-236-536	31		
	e Na		Han	risburg Materials, Energy, Recycling and Recovery	Operator Name: The Harr	isburg	Authority	
			370.1	North 19 th Street	Address: 1 Keystone Plaz	o Cuit	o 104 Front and N	Anrkot
				17104	Streets, Harrisburg, Pa 17		e 104, Florit and N	larker
M	nicir	alih	· Cit	y of Harrisburg	County: Dauphin	_		_
				icial: John Lukens	Title: Director			
				ved:	Title:			
				rt Belfanti, Sheryl Martin, Tim Long	Title: Solid Waste Special	ist		
				PF <u>100758</u> SF				
		X. Y. Y. Y.		ine Inspection	And an extension			
					Results: Violations	- C	solved: / /	
Pe	rmit	Expi	ratio	n Date: 11 / 30 / 2002 Quarterly Groundwater Du			ek Operated: 7	
				Annual Groundwater Due	Date: Ma	x. Dail	y Volume:	_
				1 - No Violation Observed 2 - Not-Applicable 3	- Not-Determined 4 - Nor	-Com	pliance	
	STA	TUS			COMM	ENTS	CHAPTER	LINE
1	2	3	-4	REQUIREMENT	ATTA		CITATION	ITEM
				GENERAL PROVISIONS			074 074	
Ø				Required insurance in effect (expiration date).			271.371	1
Ø				Facility issued permit from the Department.			283.201(a)	2
			\boxtimes	Operation in accordance with approved plan and perm	it.	\boxtimes	283.201(b)	3
\boxtimes				No unapproved wastes accepted.		283.201(c), (e)	4	
×				Ban on explosive waste and mixing or storing wast explosion, or hazardous gas adhered to.	e to create a risk of fire,		283.201(d)	5
Ø				All radioactive waste prohibited unless approved by Department in writing.		283.201(k), (l)	6	
				DAILY OPERATIONS				
				Proper signs posted for Facility and for the Recycling D	Orop-off Center.		283.211(a)	7
\boxtimes				Permit area markers and site perimeter clearly marked	and maintained.		283.211(b)-(c)	8
\boxtimes				Proper barriers installed and access controlled when a	ttendant not present.		283.212(a)-(c)	9
×				Access roads maintained in accordance with Chapter negotiable by collection vehicles,.	er 105 and 283, including		283.213(a)-(h)	10
\boxtimes				Approved means of measuring waste utilized.			283.214(a),(b)	11
	\boxtimes			Incoming loads inspected for radioactive and other una	approved wastes.		283.214(c)	12
\boxtimes				Adequate equipment on-site and standby equipment a	vailable.		283.215(a)-(d)	13
\boxtimes				Approach and unloading areas of adequate size, desig	n and construction.		283.216(a), (b)	14
	\boxtimes			Wheel curb and tie downs at unloading pits.			283.216(c)	15
\boxtimes				Attendant or signs to direct vehicles.			283.216(d)	16
		Ø		Collection vehicles promptly unloaded.			283.216(e)	17
			\boxtimes	Solid waste confined to unloading and approved storage	ge areas.	\boxtimes	283.216(f)	18

Site Name ID Number Date Harrisburg M.E.R.R.F.

100758 10/31/2002

INSPECTION REPORT – MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES (Cont'd)

1 - No Violation Observed 2-Not-Applicable 3-Not-Determined 4-Non-Compliance

1	STA 2	TUS 3	4	REQUIREMENTS ATTAC		CHAPTER	LINE
	-			DAILY OPERATIONS (Continued)			
			×	Areas within building kept clean. Putrescible waste removed within 24 hours unless a longer holding time is approved in the permit.	\boxtimes	283.217(a), (b)	19
			×	Plumbing properly maintained; floors well drained. Vehicle wash water and leachate properly characterized and treated.	×	283.217(c) 283.217(d)	20
		\boxtimes		Daily inspection conducted.		283.217(f)	21
\boxtimes				No open burning(*) or other fugitive dust emissions.		283.218(a), (c)	22
		\boxtimes		Ambient air quality maintained.		283.218(b)	23
\boxtimes				Effective vector control implemented and public nuisances prevented.		283.219(a), (b)	24
\boxtimes				Litter controlled/collected and barriers/fences in place.		283.221(a)-(c)	25
\boxtimes				Daily volume of waste received does not exceed permit allowance.		283.223	26
	50			RADIATION MONITORING AND RESPONSE			
		\boxtimes		Action plan implemented according to 283.113. Waste monitored according to Department's Guidance Document (250-3100-001).		283.220(a), (b)	27
				Detectors properly installed and activated to accurately monitor incoming loads.		283.220(c)	28
				Portable dose-meters available; radiation survey conducted on suspect loads.		283.220(d)	29
				Operator notifies Department when radiation monitors detect alarm levels .		283.220(e)	30
		×		Radiation monitors accurately calibrated at least once a year.		283.220(f)	31
		×		Radioactive vehicles obtain Department approval before departure from facility.		283.220(g)	32
				SOIL AND WATER PROTECTION			
\boxtimes				No point or nonpoint discharges allowed the violation of "Clean Streams Law".		283.231(a)	33
\boxtimes				Pollution treatment facilities properly operated and maintained as required.		283.231(b)	34
×				Surface or groundwater contact with solid waste or processed material prevented or minimized.		283.231(c)	35
\boxtimes				Operator does not cause or allow water pollution on or off the site.		283.231(d)	36
\boxtimes				Soil contamination prevented.		283.231(e)	37
×				Adequate management of surface water and control of erosion and sedimentation. Operator meets requirements of chapters 102 and 105.		283.232(1)-(3)	38
\boxtimes				Soil and groundwater monitoring conducted as required.		283.233	39
\boxtimes				Water Supply Replacement, if required.		283.234	40
				SAFETY AND OPERATIONS			
\boxtimes				Operational safety plan on-site and implemented.		283.241(a)-(c)	41
		×		Facility ventilated in a manner consistent with Section 283.21 8 (relating to air resources protection).		283.241(d)	42
Ø				At least one set of up-to-date as-built construction drawings and up-to-date equipment operation and maintenance manuals on-site.		283.242(a), (b)	43

Harrisburg M.E.R.R.F.

100758 10/31/2002

INSPECTION REPORT – MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES (Cont'd)

1	STA 2	TUS 3	4	REQUIREMENTS ATTAC	CHAPTER CITATION	LINE
Щ				EMERGENCY PROCEDURES		
X				Facility operated and maintained to prevent and minimize potential for fire, explosion, or environmental release.	283.251	44
X				Internal communication or alarm system operable.	283.252(a)(1)	45
X				Communications systems capable of summoning emergency assistance from outside agencies.	283.252(a)(2)	46
X				Adequate fire and safety equipment available, maintained and accessible.	283.252(a)(3), (c), (d)	47
X				Contingency plan implemented in emergency	283.253(a)-(c)	48
				RECORDKEEPING/REPORTING		
X				Daily operation record maintained and contains the following:	283.261(a)	49
X				Operator maintains a daily operational record, containing the following:	283.261(b)	50
X				The type and weight or volume of waste received.	283.261(b)(1)	51
X				The county (in PA) of waste origin, or if from outside PA, the state.	283.261(b)(2)	52
Ø				The transporters of the waste.	283.261(b)(3)	53
X				Accurate records of marketed, recycled or bypassed wastes.	283.261(b)(4), (5)	54
		\boxtimes		Description of waste handling problems or emergency disposal activities.	283.261(b)(6)	55
				Deviations from operational plans; actions taken to correct regulatory violations.	283.261(b)(7)	56
		\boxtimes		A list of rejected waste loads with an explanation fro rejection.	283.261(b)(10)	57
J	\boxtimes			Detailed record of incidents where radioactive material is detected in waste loads.	283.261(b)(11)	58
		\boxtimes		Detailed record of all overweight vehicles.	283.261(b)(12)	59
X				Annual operation report submitted.	283.262	60
	\boxtimes			Alternate facility available during temporary shutdown.	283.271(a), (b)	61
	Ø			Removal of all solid waste and structures or other materials which contain or are contaminated with solid waste upon cessation of operations.	283.272(a)-(c)	62
	\boxtimes			Operator has implemented a salvaging program for recyclable wastes	283.281	63
X				Operator has established a recycled materials collection center for the public	283.282	64
X				Operator has implemented a plan for the removal of hazardous materials from the waste to be processed.	283.283	65
X				Incineration ash residue sampled and analyzed quarterly.	283.403(a), (b)	66
X				Ash residue disposed of properly.	283.403(c)	67
X			П	Ash residue stored according to 285.131, including prevention of dispersal.	283,403(d)	68
X				Ash residue transported according to 285.221, including wetting of ash.	283.403(e)	69

Harrisburg M.E.R.R.F.

100758 10/31/2002

INSPECTION REPORT – MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES (Cont'd)

	68		711	No violation observed 2-Not-Applicable 3-Not-Determined 4-N	1011-0	omphance	4000
1	STA 2	TUS	4	REQUIREMENTS COMM		CHAPTER	LINE
		M.		ADDITIONAL REQUIREMENTS FOR INFECTIOUS AND CHEMOTHERAPEUTIC WASTE PROCESSING FACILITIES			
	×			Infectious waste incineration/sterilization residue monitored and monitoring results submitted to the Department, on a quarterly basis.		284.321(a), (b)	70
	×			Operators who process infectious waste by means other than incineration or thermal processing, conduct microbiological analysis every 40 hours during the operational life of the facility, unless otherwise provided for in the permit.		284.321(d)	71
	×			Indicators and methods used to verify disinfection approved by the Department.		284.321(a)(2) 284.321(e)	72
	\boxtimes			Disinfection indicators placed correctly in the process, and results analyzed accurately.		284.321(f), (g)	73
	\boxtimes			Operator maintains daily record of waste processing and results of disinfection.		284.321(h)	74
				Operator disinfects infectious waste prior to grinding or compacting in order to reduce volume.		284.321(k)	75
				Operators of autoclaves do not process pathological waste.		284.321(m)(1)	76
				Operators of autoclaves maintain a process time that completely vaporizes infectious waste fluids.		284.321(m)(2)	77
		П					

INSPECTION REPORT COMMENTS

Date of Inspection: October 31, 2002 Identification Number 100758

Company/Facility/Site Name Harrisburg Materials, Energy, Recycling and Recovery Facility - The Harrisburg Authority

Today, Sheryl Martin, Tim Long and myself conducted a routine inspection at the aforementioned facility. The facility's current Waste Permit will expire on November 30, 2002.

The following observations were made:

- 1. Unit #1 was out of service for grate repairs.
- 2. The facility's tipping floor was wet and muddy.
- 3. The facility recently poured new concrete around bays 1 and 2.
- 4. The facility's transfer station contained mostly demolition waste.
- Waste was observed on the floor of the transfer station truck loading area.
- 6. Ash accumulation was observed in the basement of the facility.

The following violations were noted and documented:

- 1. The facility is not operating in accordance with its permit as listed below. This constitutes a violation of 25 Pa Code Section 283.201(b).
- 2. Areas in the building were found to be in an unclean state. This constitutes a violation of 25 Pa Code section 283.217(a).
- 3. Water and ash were observed in the facility's basement. Water was also observed leaking on the tipping floor. This constitutes a violation of 25 Pa Code section 283.217(c).
- Solid waste was found to be stored in unapproved areas. Waste was observed in the transfer station-loading pit. This constitutes a violation of 25 Pa Code section 283.216(f).

In the "Requirement" Section of this inspection report, each listed inspection item may provide only a brief version of its corresponding obligation as described in the body of the regulations. Please use the Chapter citations listed on this inspection report as a reference to obtain a detailed description of compliance requirements.

This inspection report is official notification that a representative of the Department of Environmental Protection, Waste Management Program, inspected the above installation. The findings of this inspection are shown in this report. This inspection report shall serve a formal notification of any violations which were observed during the inspection. Violations may also be discovered upon examination of the results of laboratory analyses and review of Department records. Additional notification may be forthcoming, concerning any violations indicated herein and listing any additional violations.

This report does not constitute an order or other appealable action of the Department. Nothing contained herein shall be deemed to grant or imply immunity from legal action for any violation noted herein.

Signature by the person interviewed does not necessarily imply concurrence with the findings on this report, but does acknowledge that the person was shown the report or that a copy was left with the person.

Person Interviewed (Signature)	Date	
Inspector (Signature)	Date_	

File name:10 31 02CS.doc Page 7 of 6

INSPECTION REPORT COMMENTS

Date of Inspection: October 31, 2002 Identification Number 100758

Company/Facility/Site Name Harrisburg Materials, Energy, Recycling and Recovery Facility - The Harrisburg Authority

- The disposal of the solid waste in a manner contrary to the rules and regulations of the Department, which as a consequence, adversely affects the environment and causes a public nuisance, is a violation of 6018,610 (4) of the SWMA.
- The aforementioned actions and conduct constitute unlawful conduct pursuant to Sections 6018.501(a), 6018.610 (9) of the SWMA.

The aforementioned actions and conduct subject you to civil penalty liability pursuant to Section 6018.605 of the SWMA.

In the "Requirement" Section of this inspection report, each listed inspection item may provide only a brief version of its corresponding obligation as described in the body of the regulations. Please use the Chapter citations listed on this inspection report as a reference to obtain a detailed description of compliance requirements.

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File name:10 31 02CS.doc Page /o of /o

HARRISBURG

Council considers trash fee increase

Partiot News-

3/17/03

DAUPAIN CO.

HBG. INCIN.

BY JOHN LUCIEW Of The Patriot-News

Having already raised water and sewer rates, effective in January Harrisburg is about to complete the trifecta by increasing the cost of residential and commercial trash dis-

posal.

The City Council is considering almost doubling the trash disposal

almost doubling the trash disposal fee. Residents who now pay \$4.83 a month for disposal would pay \$8.66 a month under the proposal.

The city also charges a trash collection fee of about \$12 a month for the average household. That fee, which is listed separately in the monthly utility bills of city residents, would remain unchanged.

But if the disposal fee is increased

But if the disposal fee is increased, the city's charges for all three of its utility services — water, sewer and trash — will have increased since January, when Harrisburg's no-tax-increase budget for 2003 went into effect. Around the same time, the city also increased its parking tax and is considering raising parking meter rates.

City officials said the disposal fee increase would be tied to Harrisburg's trash incinerator operation. The burner must shut down in mid-June due to federal clean air regulations, and when it does, Harrisburg will have to dispose of its trash else-

"When the incinerator closes in June, the city will be transporting and disposing of the waste at land-fills, which will be an added expense," said Dan Lispi, who oversees the incinerator operation.

He said the state's passage of an additional \$4 per ton surcharge on municipal waste disposed in landfills

will add to the cost.

Mayor Stephen R. Reed is expected soon to officially unveil his plans for overhauling the 31-year-old incinerator to meet stricter federal and state environmental regulations and make it more efficient. He said this would end the city's dependence on landfills and avoid layoffs of the incinerator work force.

But it could cost as much as \$90 million.

However, if the council rejects the so-called retrofit, Reed has predicted 50 percent property tax increases, annual trash fees of \$120 a household, mass layoffs and \$1.3 million in new costs for the city.

Separately, Reed is seeking an immediate refinancing of the incinerat-or's existing debt — about \$70 million — to take advantage of lower

Please see RATES on Page B2



VE MBA IDELPHIA.

loyers can now be iculty who teach in versity Park campus 'r World Report, The hs you will gain the tive leader.

, PA 6:00 p.m. 6:00 p.m.



Continued from Page B1

interest rates and realize a savings of about \$700,000. Last year, Harrisburg borrowed \$17 million to help keep afloat the burner opera-

Lispi said the city's solidwaste system has been operat-ing in a deficit since state and federal regulators forced the city to scale back the amount of trash it was burning for environmental reasons. That is another factor in the disposal fee increase, he said.

The \$3.83 a month increase would be coupled with previous increases in the water and sewer rates, producing mark-edly higher overall utility bills. All of the charges are combined into one monthly

Combined, the water- and sewer-rate increases are projected to cost the typical city

family about \$65 more a year.

For a user of 1,000 gallons each of water and sewer, the monthly sewer bill is \$15.88, an increase of \$2.65 a month or about 20 percent. The monthly water bill is \$26.06, an increase of \$2.79 a month or about 12 percent.

YOU'RE INVITED

Health (**Explorat** 2540-FM-LRWM0131 Rev. 10/2001



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF LAND RECYCLING AND WASTE MANAGEMENT P.O. BOX 8472, HARRISBURG, PA 17105-8472

Inspection ID <u>1302357</u>	
Field Code 5J	

INSPECTION REPORT – MUNICIPAL WASTE LANDFILL

Site I.D. <u>100992</u> Telephone # <u>717-236-5</u>				0992 Telephone # 717	<u>'-236-536</u>				
Site Name Harrisburg Incinerator, Disposal Area B Operator Name The Harr					he Harris	burg Authority			
Address 1670 South 19 th St Address 1 Keystone Plaz									
Har	ris	bu	rg,	Pa 17104 Front and Marke	t Streets,	Harrisburg, Pa 1710	1		
Mu	nici	pa	lity	City of Harrisburg County Dauphin	·				
Res	po	nsi	ible	Official John Lukens Title Director					
Per	SOI	n Ir	nter	viewed John Lukens Title Director					
Ins	ec	ctor	. <u>ქ</u>	oe Mattucci Title Solid Waste	Specialis	<u> </u>			
eF₽	C7	S	ID :	# PF <u>100992 </u>					
Cor	nm	nen	t: J	Routine Inspection, NOV issued for leachate seep, Enforcement ID 131574	4				
Ins	oec	ctio	n D	Date: 01 /20 / 2004 Type: Routine Results: Viole	ations	Resolved: / /			
				ration Date: 03 / 22 / 2004 Days/Week Operated: 7		fax. Daily Volume: 2			
				1 - No Violation Observed 2 - Not-Applicable 3 - Not-Determine		on-Compliance			
ST	Δ1	rus	S			CHAPTER	LINE		
1	5 P W	J. 7: .		REVISION	COMMENT: ATTACHE		ITEM		
				GENERAL PROVISIONS					
\boxtimes				Required insurance in effect (expiration date).		271.371	1		
			Ø	Operation in accordance with approved plans and permit.		273.201(c)(2)	2		
				Operation within permit boundaries (vertical and horizontal).	273.201(c)(2)	3			
	Disposal Timing and sequence as per Section 273.112(1).				273.201(c)(2)	4			
				No unapproved wastes or liquids.	273.201(d)-(m)	5			
				Isolation distances are adhered to.		273.202(a)	6		
\boxtimes				Facilities certification requirements followed.		273.203(a), (b)	7		
\boxtimes				Written Department approval of new construction prior to waste disposal.		273.203(c)	8		
				DAILY OPERATIONS	···				
				Proper signs posted.		273.211(a)	9		
				Site perimeter clearly marked and grid coordinate system in use.		273.311(b)-(d)	10		
\boxtimes				Proper barriers installed around site and access controlled when atten not present.	dant ∟	273.212(a)-(i)	11		
\boxtimes				Access roads maintained and negotiable by collection vehicles.		273.213(a)-(i)	12		
\boxtimes				Approved means of measuring and inspected waste utilized.	273.214(a), (b)	13			
\boxtimes				Adequate equipment on-site and stand-by equipment available.	273.215(a), (b)	14			
\boxtimes				Vehicles directed promptly to unloading area and promptly unloaded.	273.216(a), (b)	15			
\boxtimes				Solid waste spread and compacted as approved by Department as papermit.	273.216(c)	16			
				Operator implements fugitive air contaminant control/measures and prev		273.217(a)	17		
				and controls air pollution including no exceeding of ambient air que standards, not open burning, and minimizing generation of fugitive emissions from facility.					
		Ø		Operator complies with Air Quality Plan approval and Air quality Operator.	ating [273.217(b)	18		

Disposal Area B 100992 01/20/2004

INSPECTION REPORT – MUNICIPAL WASTE LANDFILL (Cont'd)

S	TΑ	TU	s			CHAPTER	LINE
1	2	3	4	GENERAL REQUIREMENTS STRAIGHTAIN		CITATION	ITEM
				DAILY OPERATIONS (Cont'd)		·	
M				Operator does not cause or allow attraction, harborage, or breeding of vector.		273.218(a)	19
\boxtimes				Operator implements nuisance minimization and control plan.		273.218(b)(1)	20
		\boxtimes		Operator performs regular, frequent, and comprehensive site inspections to reduce potential for offsite odors.		273.218(b)(2)	21
		\boxtimes		Operator promptly addresses and correct problems and deficiencies discovered during inspections.		273.218(b)(3)	22
				Operator implements nuisance minimization and control plan to minimize and control other conditions harmful to the environment or public wealth, or which create safety hazards, odors, dirt, noise, unsightliness and other public nuisances.		273.218(c)	23
\boxtimes				Operator does not receive solid waste at a landfill in excess of the maximum or average daily volume approved in the permit.		273.221(a)	24
	\boxtimes			Operator implements radiation protection action plan.		273.223(a)	25
				Operator monitors incoming waste in accordance with Department's guidance or in a manner at least as protective of the environments facility staff and public health and safety.		273.223(b)	26
	\boxtimes			Radiation detector elements shall be as close as practical to wasteload and in appropriate geometry to monitor the waste.		273.223(c)	27
	\boxtimes			Operator has portable radiation monitors capable of determining the dose rate and presence of contamination of a vehicle that has caused an alarm. Upon exceedance of alarm level, a radiological survey of the vehicle is performed.		273.223(d)	28
	\boxtimes			Operator notifies Department immediately and isolates vehicle when radiation dose rates are exceeded.		273.223(e)	29
	\boxtimes			Monitoring equipment is calibrated at frequency specified by manufacturer, but not less than ońce a year.		273.223(f)	30
	\boxtimes			If radioactive material is detected, vehicle containing material shall not leave facility without written Department approval and an authorized federal Department of Transportation exemption form.		273.223(g)	31
	\boxtimes			Uniform cover of the approved daily cover material is placed on exposed solid waste at the end of each working day or at the end of every 24 hours, whichever interval is less.		273.232(a)	32
			\boxtimes	If intermediate cover requires revegetation, it is established within 30 days.	\boxtimes	273.233(e)	33
\boxtimes				Slopes constructed during daily landfilling and intermediate cover activities may not exceed 50 percent.		273.233(f)	34
			\boxtimes	Operator does not cause or allow waste pollution within or outside the site from operation of the facility.		273.241(a)-(c)	35
	X			Operator has restored or replaced adversely affected water supply with an alternative source of like quantity and quality.		273.245(a)	36
	\boxtimes			Temporary water supply is provided within 48 hours.		273.245(b)	37
	\boxtimes			Permanent water supply is provided within 90 days.		273.245(c)	38
\boxtimes				No waste 15 feet of inside top of the lined perimeter berm.		273.252(e)	39

Disposal Area B 100992 01/20/2004

INSPECTION REPORT – MUNICIPAL WASTE LANDFILL (Cont'd)

1 - No Violation Observed 2 - Not-Applicable 4 - Non-Compliance 3 - Not-Determined

S	TA [*]	TU	S		CHAPTER	LINE	
1	2	3	4	GENERAL REQUIREMENTS COMM		CITATION	ITEM
				DAILY OPERATIONS (Continued)			
\boxtimes				Lined perimeter berm 4 ft. high constructed and maintained along edge of the lined disposal area.		273.252(f)	40
\boxtimes				Edge of liner clearly marked.		273.252(g)	41
	Ø			Alternate leachate recirculation method may be used if approved if one of the liner systems is a composite liner.		273.274(b)	42
\boxtimes				Underground pipes used to transport leachate to leachate storage impoundments or tanks equipped with secondary containment or comply with 245.445.		273.275(g)	43
	\boxtimes			Operator isolate coal seams, coal outcrops and coal refuse from waste deposits to prevent combustion of waste and damage to liner.		273.291(a)	44
	\boxtimes			Mine openings within site sealed as approved by Department.		273.291(b)	45
	\boxtimes			Operator implements plan for controlling potential damage from subsidence submitted and approved under 273.120.		273.291(c)	46
			\boxtimes	Landfill designed, constructed, maintained and operated to prevent and minimize potential for fire, explosion, or release of solid waste constituents into air, water, or soil of the Commonwealth.		273.301	47
\boxtimes				Emergency equipment including portable fire extinguishers, fire control equipment, spill control equipment, and decontamination equipment available. For fire equipment requiring water, facility has a water supply of or adequate quantity and pressure to supply the equipment.		273.302(a)	48
\boxtimes				Emergency equipment tested and maintained.		273.302(c)	49
\boxtimes				Adequate space maintained to allow unobstructed movement of emergency personnel and equipment.		273.302(d)	50
\boxtimes				Litter controlled/collected and barriers/fences in place.		273.220(a)-(c)	51
				COVER/SLOPES/REVEGETATION			
\boxtimes				Daily/intermediate cover meets performance and design requirements.		273.232(b), 273.233(b), (c)	52
\boxtimes				Minimum 5 day supply of daily and intermediate cover maintained on-site.		273.232(c) & 273.233(d)	53
\boxtimes				Intermediate cover applied within time limits.		273.233(a)	54
Ø				Intermediate slopes do not exceed 50%.		273.232(d)	55
	\boxtimes			Cap placed over entire surface of final lift meets performance standards.		273.234(a)(1)	56
	\boxtimes			Final cover meets performance and design requirements; applied within time limits.		273.234(b)-(e)	57
	\boxtimes			Final slopes stable and erosion controlled.		273.234(f)	58
	\boxtimes			Final slopes graded 3-15% or terraced to 33% as approved.		273.234(g)	59
				Minimum revegetation and successful revegetation requirements adhered to.		273.235(a)-(e) & 273.236(a), (b)	60

Disposal Area B 100992 01/20/2004

INSPECTION REPORT - MUNICIPAL WASTE LANDFILL (Cont'd)

	800	TU 3		GENERAL REQUIREMENTS COMM	CHAPTER CITATION	LINE ITEM	
				WATER QUALITY PROTECTION			
\boxtimes				Surface and groundwater treatment facilities properly operated and maintained.		273.241(b)	61
				Surface water percolation minimized/prevented.		273.242(b)(1) & 273.234(e)(4)	62
\boxtimes				Soil erosion and sedimentation controls designed and implemented as per approved plans; gullies over nine inches repaired.		273.242(a)-(c)	63
\boxtimes				Sedimentation ponds and discharge structures designed, constructed, operated, and maintained in accordance with Chapters 273, 102, and 105.		273.243(a)-(g) & 273.244	64
				LINER SYSTEM	-		
\boxtimes				Liner system designed, constructed, operated, and maintained when required.		273.251(a), (b)	65
\boxtimes				Edge of liner requirements adhered to (i.e., no waste within 25 feet if adjacent liner, 4 feet high lined berm, to prevent lateral escape of leachate, adequate spacing on inside of berm to collect stormwater and sediment).		273.252(d)	66
		\boxtimes		Leachate detection zone monitored weekly.		273.255(c)	67
\boxtimes				Protective cover protects primary liner and leachate collection system and allows free flow of leachate into the collection system.		273.257(a)	68
\boxtimes				Protective cover meets minimum requirements and at least 18 inches thick.		273.257(b)	69
\boxtimes				Leachate collection system within protective cover meets minimum requirements.		273.258(a), (b)	70
				Barrier designed, constructed and maintained as required to prevent lateral migration of leachate off-site in surface mined areas.		273.259(a)-(d)	71
				8 feet of select waste placed over protective cover.		273.260	73
				LEACHATE TREATMENT			
				Leachate collected and handled through Department approved method(s).		273.272(a)-(c)	74
				Leachate transportation requirements adhered to.		273.273(a)-(c)	75
	\boxtimes			Cessation of site operation if alternate leachate handling not available.		273.273(d)	76
	Ш [:]			Leachate treatment system permitted and fully operational at least 3 years before closure.		273.273(e)	77
	\boxtimes			Leachate recirculation in accordance with regulations.		273.274(1)-(4)	78
	\boxtimes			Leachate collection and storage systems on-site have capacity of 30 days or 250,000 gallons, whichever is greater.		273.275(a)-(f)	79
\boxtimes				Leachate flow rate measured daily; analyzed quarterly.		273.276(a)-(b)	80
				Department notified when remedial action(s) required.		273.277(1)-(4)	81
			<u>_</u>	WATER QUALITY MONITORING			
				Approved monitoring system installed and maintained.		273.281(a), (b) & 273.283	82
\boxtimes				Quarterly and annual monitoring requirements adhered to and results submitted Department within time constraints.		273.284 & 273.285	83
				Groundwater assessment plan submitted and implement as required.		273.286(a)-(g)	84
\boxtimes				Groundwater abatement plan submitted and implemented as required.		273.287(a)-(f)	85

Disposal Area B 100992 01/20/2004

INSPECTION REPORT – MUNICIPAL WASTE LANDFILL (Cont'd)

S	STATUS		s		CHAPTER	LINE	
1	2	3	4	GENERAL REQUIREMENTS COMM		CITATION	ITEM
				RECORDKEEPING AND REPORTING	SC X C. 1.1. (Y '')		
\boxtimes				Operational records maintained, available and submitted as required.		273.288 & 273.311- 273.313	86
		\boxtimes		Daily Operational Records kept in accordance with regulations for the life of the facility bond or longer if necessary.		273.311(d)	87
\boxtimes				Operator submits quarterly operation report.		273.312	88
\boxtimes				Operator submits annual operation report with fee.		273.313	89
				MINERALS AND GAS			
	\boxtimes			Gas venting and monitoring in accordance with approved plans.		273.292(a)-(d)	90
	\boxtimes			Combustible gas levels not exceeded.		273.292(e)	91
	\boxtimes			Forced gas venting if required.		273.292(f)	92
	\boxtimes			Gas recovery conducted as per approved plan and §273.293, including annual analysis.		273.293(a), (b)	93
				EMERGENCY PROCEDURES			
\boxtimes				Contingency plan implemented if there is an emergency.		273.303(a)-(c)	94
		7		SPECIAL HANDLING AND RESIDUAL WASTES			
	Ø			Special handling and residual wastes disposed with prior Department approval, and in accordance with permit and Chapter 273.		273.501	95
	\boxtimes			Infectious waste disposal restrictions adhered to.		273.511(a)-(d)	96
	\boxtimes			Chemotherapeutic waste disposal restrictions adhered to.		273.512	97
	\boxtimes			Sewage sludge co-disposal and monofill requirements followed.		273.513	98
	\boxtimes			Sewage sludge sampling requirements adhered to and sludge meets standards for control of pathogens, vectors, and odors.		273.513(c)	99
		\boxtimes		Disposal of municipal waste incineration ash in landfill or landfill cell that meets Chapter 273 requirements.		273.514(a)	100
\boxtimes				Ash residue disposal in dedicated landfill or landfill cell unless co-disposal in accordance with Chapter 273 (including leachability treatment).		273.514(b)	101
Ø				Ash residue covered immediately or as approved by the Department.		273.514(c)	102
						·.	



INSPECTION REPORT COMMENTS

Type of Inspection Routine	WM Identification Number Site #100758	Entry Time/Date 1:30 PM Jan. 20, 2004	Exit Time/Date 2:15 PM Jan. 20, 2004				
_	Facility/Incident Name and Location Harrisburg Materials, Energy, Recycling and Recovery Facility						
	Harrisburg Materials, Energy, Recycling and Recovery Facility						

Name, Address of Responsible Official	Title	
John Lukens	Director	•
1670 North 19 th Street		
Harrisburg, Pa 17104	*	200
	Interviewed	
	⊠ Yes □ No	

REMARKS:

On January 20, 2004 the Department conducted an unannounced routine inspection of this site. Present for the Department was Joe Mattucci. No representatives were present for Harrisburg MERRF (Incinerator). The Department did talk to Mr. John Lukens via telephone on January 23, 2004. The following was covered during the inspection:

Elements Reviewed

1 Odor Patrol

Areas Covered

1. Tipping Floor

- **Transfer Loading Station**
- 3. White Goods Area
- Grounds Surrounding Building
- 5. Landfill/Leachate System

Tipping Floor:

The tipping floor was covered with standing water and mud. The Department recommends the tipping floor be kept free of standing water and mud. The waste was separated into municipal waste and construction/demolition waste before being loaded into a transfer truck. Only a small amount of C&D waste was noted on the tipping floor.

Transfer Loading Station:

The transfer truck loading station had waste on the floor, the floor is cleaned nightly and the waste collected is taken back to the tipping floor.

White Goods Area:

About 35-40 appliances were located in the white goods area.

Grounds Surrounding Building:

Litter problems were noted in the grassy areas next to the entrance to the transfer truck loading floor. The Department recommends the area be kept free of litter through regular litter pick-up patrols.

Landfill:

The landfill remains inactive. No vegetation has grown in the portion of the landfill (Area B2) addressed in the inspections conducted on 9-23-03, 10-16-03, 11-19-03, and 12-18-03. Mulch has been spread over the bare areas, and grass seeds have been planted. Mr. Lukens told the Department he plans to re-seed the area if vegetation growth problems are noted.

The leachate seep addressed in Area B3 during inspections on 11-19-03 and 12-18-03 was found to have frozen leachate puddles in the same area. This leachate seep allows pollutants to be released into the environment. A Notice of Violation is being issued for the continuing problem of this seep.

Odor Patrol:

No off-site odors were noted by the Department at the time of the inspection.

VIOLATIONS:

The facility is not operating in accordance with its permit and the Department's regulations as listed below. This

constitutes a violation of 25 Pa Code Section 283.201(b)(c).

- Areas in the building were found to be in an unclean state. This constitutes a violation of 25 Pa Code section 283.217(a).
- Water was also observed pooling on the tipping floor. This constitutes a violation of 25 Pa Code section 283.217(c).
- Litter was not controlled outside of the building. This constitutes a violation of 25 Pa Code section 283.221.
- Portions of the landfill do not have the required vegetative cover. This is a violation of 25 PA Code 273.233(e), and 273.235.
- Leachate was found to be seeping from the landfill. This is a violation of 25 PA Code 273.241, 273.301, 273.218(c), and SWMA 6018.610 (2).

Sample Collected ☐ Yes ⊠ No	Sample Numbers	Analyses	
Inspector Name	Inspector Signature	Headquarters	Date: Monday, February 02, 2004
Joe Mattucci	Joseph m mothers	S.C.R.O.	Telephone 717-705-4950
Person Interviewed Name	Signature of Person Interviewed	Title	Date: Monday, February 02, 2004
John Lukens	Mailed		Telephone 717-255-7338

This document is official notification that a representative of the Department of Environmental Protection inspected the above-mentioned facility. The findings of the inspection are shown above and on any attached pages. Violations discovered as a result of this inspection are indicated. Violations may also be discovered upon examination of the results of laboratory analyses, review of pertinent documents and further investigation. Notification will be forthcoming if such violations are discovered.

Page 7 of 7



Pennsylvania Department of Environmental Protection

909 Elmerton Avenue Harrisburg, PA 17110-8200 January 23, 2004

Office: (717) 705-4950

Fax: (717) 705-4930

Southcentral Regional Office

NOTICE OF VIOLATION

CERTIFIED MAIL NO. 7002 2030 0007 9412 3604

John Lukens
Harrisburg Materials, Energy, Recycling, and Recovery Facility
The Harrisburg Authority
1670 North 19th Street
Harrisburg, PA 17104

Re:

Noncompliance Municipal Waste Activity

Disposal Area B Permit No. 100945

City of Harrisburg, Dauphin County

Dear Mr. Lukens:

As the result of a routine monthly inspection at the Harrisburg Materials, Energy, Recycling, and Recovery Facility it has been determined that the Harrisburg Materials, Energy, Recycling, and Recovery Facility is in violation of the Solid Waste Management Act of the Commonwealth of Pennsylvania (SWMA), Act of July 7, 1980, P.L. 380, No. 97, 35 P.S. Section 6018.101 et seq., and the rules and regulations of the Department of Environmental Protection (Department), as follows:

- 1. The Harrisburg Materials, Energy, Recycling, and Recovery Facility has allowed leachate to seep from Disposal Area B and be released to the air, water, or soil of the Commonwealth which could threaten public health or safety, public welfare or the environment in violation of 25 PA Code 273.301.
- 2. The Harrisburg Materials, Energy, Recycling, and Recovery Facility has allowed leachate to seep from Disposal Area B causing a nonpoint source discharge of



pollution to the surface waters of the Commonwealth in violation of 25 PA Code 273.241.

- 3. The Harrisburg Materials, Energy, Recycling, and Recovery Facility has failed to minimize and control conditions harmful to the environment or public health, or which create safety hazards, odors, dirt, noise, unsightliness and other public nuisances through the leachate seep in Disposal Area B in violation of 25 PA Code 273.218(c).
- 4. The Harrisburg Materials, Energy, Recycling, and Recovery Facility has deposited, or permitted the depositing, of solid waste onto the surface of the ground or underground or into the waters of the Commonwealth through the leachate seep in Disposal Area B in violation of the SWMA 6018.610 (1).
- 5. The aforementioned actions and conduct constitute unlawful conduct pursuant to Sections 6018.501(a), and 6018.610 (9) of the Solid Waste Management Act, and subjects the Harrisburg Materials, Energy, Recycling, and Recovery Facility to civil penalty liability pursuant to Section 605 of the SWMA.

In order to achieve compliance with the Department's Regulations and the SWMA, implementation of the following procedure(s) is recommended:

- 1. Prepare a written plan for the cessation of the leachate seep. Submit the plan to the Department within 7 days of receiving this Notice of Violation.
- 2. Within 7 days, contact this office to make arrangements for the purpose of resolving these violations and discussing appropriate penalties.

This Notice of Violation is neither an order nor any other final action of the Department. It neither imposes nor waives any enforcement action available to the Department under any of its statutes. If the Department determines that an enforcement action is appropriate, you will be notified of the action.

If you have any questions concerning this matter, please call me at 717-705-4950.

Sincerely,

Joseph M Mattucci Solid Waste Specialist Waste Management Program

oregen mmattas

INSPECTION REPORT COMMENT

	I DI LOTTOTI REI	OACA COMANA	24120	
Type of Inspection Complaint	WM Identification Number	Entry Time/Date 9:00 AM January	3, 2004	Exit Time/Date 10:30 AM January 13, 2004
Facility/Incident Name and L	ocation Locycling and Recovery Facility			Municipality City of Harrisburg
1670 North 19 th Street Harrisburg, Pa 17104				County Dauphin
Name, Address of Responsible Ken Jessick 111 South Front Street Harrisburg, PA 17101-2099	e Official	Telep	keeping Servi	Interviewed ⊠ Yes □ No
have been delivered to the Inc Incinerator at 9:00 AM Janua Incinerator was John Lukens. Evertts, Ken Jessick, and Phil OBSERVATIONS: 1. A driver tarping a transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer	and Recovery Facility (Incineral cinerator from Pinnacle Health Stry 13, 2004. Present for the Dept. Present for the Harrisburg Holip Guarneschelli. The following tuck full of waste, noticed what appresser truck and found a sharp attack appeared to have come from the Harrisburg Facility (Incineration).	services (Harrisburg partment were Joe M spital were Ray Her were noted during beared to be infectious hed to an IV bag and	Mattucci and bert, Scott Gthe inspections waste. The	The Department visited the Kim Hoover. Present for the could, Chris Markley, Ann n:
Harrisburg Hospital representat	partment and Harrisburg Hospital sives stated the sharp had come fround in the waste is referred to as a sharp and is infectious waste.	m the ICU section of	the hospital.	The hospital representatives
3. The waste in the transfer true turned up at least 4 squares of g	ck was dumped on the Incinerator gauze pads that had either dried blo	od or dried betadine	on them.	
was allowed to be disposed of a				te. The rest of the trailer-load
5. A Notice of Violation will b	e sent to Pinnacle Health Services	in a separate mailing	·	
Sample Collected Yes No Pictures Taken Yes No	Sample Numbers		Analyses	
Inspector Name Joe Mattucci	Inspector Signature	Headquar S.C.R.O.	ters	Date: 01/15/2004 Telephone 717-705-4950
Person Interviewed Name Ken Jessick	Signature of Person Interview Mailed		ing Services	Date: 01/15/2004 Telephone 717-782-5710

This document is official notification that a representative of the Department of Environmental Protection inspected the above-mentioned facility. The findings of the inspection are shown above and on any attached pages. Violations discovered as a result of this inspection are indicated. Violations may also be discovered upon examination of the results of laboratory analyses, review of pertinent documents and further investigation. Notification will be forthcoming if such violations are discovered.

Director



File 4e Dauphin County

Inspection ID 1295823

Field Code 4E

INSPECTION REPORT – MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES

		_	0758		Telephone #: 717-236-53	61		
	e Na		Han	isburg Materials, Energy, Recycling and Recovery	Operator Name: The Har	risburg	Authority	
			570 1	North 19 th Street	Address: 1 Keystone Pla	za. Suite	e 104, Front and M	larket
				17104	Streets, Harrisburg, Pa 17			
Mu	nicir	ality	100		County: Poundin i			
				cial: John Lukens	Title: Director			
				red: Same	Title:	200		
					Title: Solid Waste Specia	list		-
				PF 100758 SF SF				
				12 /18 / 2003 Type: Routine	Results: Violations	Res	solved: / /	
				n Date: 11 / 30 / 2012 Quarterly Groundwater Due			ek Operated: 7	
				Annual Groundwater Due D		ax. Dail	y Volume:	
				1 - No Violation Observed 2 - Not-Applicable 3 -	Not-Determined 4 - No	n-Com	oliance	
	et A	TUS					CHAPTER	LINE
1	2	3	4	REQUIREMENT		MENTS	CITATION	ITEM
				GENERAL PROVISIONS				
\boxtimes				Required insurance in effect (expiration date).			271.371	1
\boxtimes				Facility issued permit from the Department.			283.201(a)	2
			\boxtimes	Operation in accordance with approved plan and permit.		\boxtimes	283.201(b)	3
Ø				No unapproved wastes accepted.			283.201(c), (e)	4
\boxtimes				Ban on explosive waste and mixing or storing waste explosion, or hazardous gas adhered to.	to create a risk of fire,		283.201(d)	5
×				All radioactive waste prohibited unless approved by Department in writing.	law, or approved by the		283.201(k), (l)	6
				DAILY OPERATIONS				
Ø				Proper signs posted for Facility and for the Recycling Dr	op-off Center.		283.211(a)	7
\boxtimes				Permit area markers and site perimeter clearly marked a	nd maintained.		283.211(b)-(c)	8
Ø				Proper barriers installed and access controlled when atte	endant not present.		283.212(a)-(c)	9
×				Access roads maintained in accordance with Chapter negotiable by collection vehicles,.	105 and 283, including		283.213(a)-(h)	10
X				Approved means of measuring waste utilized.			283.214(a),(b)	11
	\boxtimes			Incoming loads inspected for radioactive and other unap	proved wastes.		283.214(c)	12
×				Adequate equipment on-site and standby equipment ava	ailable.		283.215(a)-(d)	13
\boxtimes				Approach and unloading areas of adequate size, design	and construction.		283.216(a), (b)	14
	\boxtimes			Wheel curb and tie downs at unloading pits.			283.216(c)	15
\boxtimes				Attendant or signs to direct vehicles.			283.216(d)	16
		\boxtimes		Collection vehicles promptly unloaded.			283.216(e)	17
Ø				Solid waste confined to unloading and approved storage	areas.		283.216(f)	18

Harrisburg M.E.R.R.F.

100758 12/18/2003

INSPECTION REPORT - MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES (Cont'd)

1	STA 2	TUS 3	4	REQUIREMENTS ATTAC		CHAPTER	LINE
				DAILY OPERATIONS (Continued)			
			×	Areas within building kept clean. Putrescible waste removed within 24 hours unless a longer holding time is approved in the permit.	×	283.217(a), (b)	19
			×	Plumbing properly maintained; floors well drained. Vehicle wash water and leachate properly characterized and treated.	×	283.217(c) 283.217(d)	20
		×		Daily inspection conducted.		283.217(f)	21
×				No open burning(*) or other fugitive dust emissions.		283.218(a), (c)	22
		×		Ambient air quality maintained.		283.218(b)	23
\boxtimes				Effective vector control implemented and public nuisances prevented.		283.219(a), (b)	24
			×	Litter controlled/collected and barriers/fences in place.	\boxtimes	283.221(a)-(c)	25
\boxtimes				Daily volume of waste received does not exceed permit allowance.		283.223	26
	-			RADIATION MONITORING AND RESPONSE			
	×			Action plan implemented according to 283.113. Waste monitored according to Department's Guidance Document (250-3100-001).		283.220(a), (b)	27
	\boxtimes			Detectors properly installed and activated to accurately monitor incoming loads.		283.220(c)	28
	\boxtimes			Portable dose-meters available; radiation survey conducted on suspect loads.		283.220(d)	29
	×			Operator notifies Department when radiation monitors detect alarm levels .		283.220(e)	30
	\boxtimes			Radiation monitors accurately calibrated at least once a year.		283.220(f)	31
	Ø			Radioactive vehicles obtain Department approval before departure from facility.		283.220(g)	32
	-			SOIL AND WATER PROTECTION			
\boxtimes				No point or nonpoint discharges allowed the violation of "Clean Streams Law".		283,231(a)	33
X				Pollution treatment facilities properly operated and maintained as required.		283.231(b)	34
×				Surface or groundwater contact with solid waste or processed material prevented or minimized.		283.231(c)	35
\boxtimes				Operator does not cause or allow water pollution on or off the site.		283.231(d)	36
\boxtimes				Soil contamination prevented.		283.231(e)	37
×				Adequate management of surface water and control of erosion and sedimentation. Operator meets requirements of chapters 102 and 105.		283.232(1)-(3)	38
\boxtimes				Soil and groundwater monitoring conducted as required.		283.233	39
\boxtimes				Water Supply Replacement, if required.		283.234	40
				SAFETY AND OPERATIONS			
\boxtimes				Operational safety plan on-site and implemented.		283.241(a)-(c)	41
		×		Facility ventilated in a manner consistent with Section 283.21 8 (relating to air resources protection).		283.241(d)	42
×				At least one set of up-to-date as-built construction drawings and up-to-date equipment operation and maintenance manuals on-site.		283.242(a), (b)	43

Harrisburg M.E.R.R.F. 100758

12/18/2003

INSPECTION REPORT - MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES (Cont'd)

			-	- No Violation Observed 2-Not-Applicable 3-Not-Determined 4-N	 Carrie and	
1	2	3	4	REQUIREMENTS COMM	CHAPTER	LINE
				EMERGENCY PROCEDURES	 GIIATION	71210
X				Facility operated and maintained to prevent and minimize potential for fire, explosion, or environmental release.	283.251	44
X				Internal communication or alarm system operable.	283.252(a)(1)	45
X				Communications systems capable of summoning emergency assistance from outside agencies.	283.252(a)(2)	46
X				Adequate fire and safety equipment available, maintained and accessible.	283.252(a)(3), (c), (d)	47
X				Contingency plan implemented in emergency	283.253(a)-(c)	48
				RECORDKEEPING/REPORTING		
X				Daily operation record maintained and contains the following:	283.261(a)	49
X				Operator maintains a daily operational record, containing the following:	283.261(b)	50
X				The type and weight or volume of waste received.	283.261(b)(1)	51
X				The county (in PA) of waste origin, or if from outside PA, the state.	283.261(b)(2)	52
N				The transporters of the waste.	283.261(b)(3)	53
X				Accurate records of marketed, recycled or bypassed wastes.	283.261(b)(4), (5)	54
J				Description of waste handling problems or emergency disposal activities.	283,261(b)(6)	55
		Ø		Deviations from operational plans; actions taken to correct regulatory violations.	283.261(b)(7)	56
		\boxtimes		A list of rejected waste loads with an explanation fro rejection.	283.261(b)(10)	57
	×			Detailed record of incidents where radioactive material is detected in waste loads.	283.261(b)(11)	58
		\boxtimes		Detailed record of all overweight vehicles.	283.261(b)(12)	59
X				Annual operation report submitted.	283.262	60
	\boxtimes			Alternate facility available during temporary shutdown.	283.271(a), (b)	61
	×			Removal of all solid waste and structures or other materials which contain or are contaminated with solid waste upon cessation of operations.	283.272(a)-(c)	62
	×			Operator has implemented a salvaging program for recyclable wastes	283.281	63
X				Operator has established a recycled materials collection center for the public	283.282	64
Ø				Operator has implemented a plan for the removal of hazardous materials from the waste to be processed.	283.283	65
X				Incineration ash residue sampled and analyzed quarterly.	283.403(a), (b)	66
Ø				Ash residue disposed of properly.	283.403(c)	67
X				Ash residue stored according to 285.131, including prevention of dispersal.	283.403(d)	68
X				Ash residue transported according to 285.221, including wetting of ash.	283.403(e)	69

Harrisburg M.E.R.R.F.

100758 12/18/2003

INSPECTION REPORT – MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES (Cont'd)

	STA	TUS		COMIN	MENTS	CHAPTER	LINE
1	2	3	4		CHED	CITATION	ITEM
				ADDITIONAL REQUIREMENTS FOR INFECTIOUS AND CHEMOTHERAPEUTIC WASTE PROCESSING FACILITIES			
	\boxtimes			Infectious waste incineration/sterilization residue monitored and monitoring results submitted to the Department, on a quarterly basis.		284.321(a), (b)	70
	\boxtimes			Operators who process infectious waste by means other than incineration or thermal processing, conduct microbiological analysis every 40 hours during the operational life of the facility, unless otherwise provided for in the permit.		284.321(d)	71
	\boxtimes			Indicators and methods used to verify disinfection approved by the Department.		284.321(a)(2) 284.321(e)	72
				Disinfection indicators placed correctly in the process, and results analyzed accurately.		284.321(f), (g)	73
	X			Operator maintains daily record of waste processing and results of disinfection.		284.321(h)	74
				Operator disinfects infectious waste prior to grinding or compacting in order to reduce volume.		284.321(k)	75
	\boxtimes			Operators of autoclaves do not process pathological waste.		284.321(m)(1)	76
				Operators of autoclaves maintain a process time that completely vaporizes infectious waste fluids.		284.321(m)(2)	77
Ш	Ц	П					
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INSPECTION REPORT COMMENTS

Type of Inspection Routine	WM Identification Number Site #100758	Entry Time/Date 2:00 PM Dec 18, 2003 10:30 AM Dec 22, 2003	Exit Time/Date 3:00 PM Dec 18, 2003 11:30 AM Dec 22, 2003
Facility/Incident Name an Harrisburg Materials, Energ	d Location gy, Recycling and Recovery Facility		Municipality City of Harrisburg
			County Dauphin

Name, Address of Responsible Official	Title	
John Lukens	Director	
1670 North 19th Street		
Harrisburg, Pa 17104		
contain a record	Interviewed	
	☑ Yes □ No	

REMARKS:

On December 18, 2003 the Department conducted an unannounced routine inspection of this site. Present for the Department was Joe Mattucci. Present for Harrisburg MERRF (Incinerator) was John Lukens. On December 22, 2003 the Department conducted a follow-up inspection of the radiation equipment on site. Present for that inspection were Joe Mattucci, Steve Bartos, Jim Kopenhaver, and Ajaz Udin. Present for the Incinerator was John Lukens.

Areas Covered

- 1. Tipping Floor
- 2. Transfer Loading Station
- 3. White Goods Area
- 4. Grounds Surrounding Building
- 5. Landfill/Leachate System
- 6. Radiation Detection Equipment

Elements Reviewed

1. Odor Patrol

Tipping Floor:

The tipping floor was covered with standing water and mud. The Department recommends the tipping floor be kept free of standing water and mud. The waste was separated into municipal waste and construction/demolition waste before being loaded into a transfer truck. The amount of waste on the floor was in excess of the building's capacity. The Department recommends the amount of waste allowed on the tipping floor be limited to what the building can safely handle.

Transfer Loading Station:

The transfer truck loading station had waste on the floor, the floor is cleaned nightly and the waste collected is taken back to the tipping floor.

White Goods Area:

About 35-40 appliances were located in the white goods area.

Grounds Surrounding Building:

Litter problems were again noted in the grassy areas next to the entrance to the transfer truck loading floor. The Department recommends the area be kept free of litter through regular litter pick-up patrols. Inspections of the facility in September, October, and November all noted litter problems in the area outside the transfer truck loading area.

Landfill/Leachate System:

The landfill remains inactive. No vegetation has grown in the portion of the landfill (Area B2) addressed in the inspections conducted on 9-23-03 and 10-16-03 and 11-19-03. Mulch has been purchased and delivered to the Incinerator, but it has not been spread over the bare areas yet. The Department recommended mulch be put over the bare areas before the next inspection to prevent erosion problems.

No leachate seeps were noted in Area B3 during this inspection. Mr. Lukens had the seep chemically analyzed. The analysis results show a pH of 8.2. The Incinerator is planning to survey the area to learn what may be causing the leachate to seep out of that corner of the property.

The gauges noted as giving incorrect readings during the previous inspection have been replaced and should be working properly.

Odor Patrol:

No off-site odors were noted by the Department at the time of the inspection.

Radiation Detection Equipment:

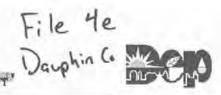
Jim Kopenhaver inspected the facility's radiation detection equipment.

VIOLATIONS:

- The facility is not operating in accordance with its permit and the Department's regulations as listed below. This
 constitutes a violation of 25 Pa Code Section 283.201(b).
- Areas in the building were found to be in an unclean state. This constitutes a violation of 25 Pa Code section 283.217(a).
- Water was also observed pooling on the tipping floor. This constitutes a violation of 25 Pa Code section 283.217(c).
- Litter was not controlled outside of the building. This constitutes a violation of 25 Pa Code section 283.221.
- Portions of the intermediate cover on the landfill were not seeded or growing vegetation. This constitutes a violation
 of 25 Pa Code section 273.233 (e) and 25 PA Code Sections 273.235 (a)-(e).

Sample Collected ☐ Yes ☑ No	Sample Numbers		Analyses	
Inspector Name	Inspector Signature	Headquar	ters	Date: Tuesday, December 23, 2003
Joe Mattucci	Joseph mmattuca	S.C.R.O.		Telephone 717-705-4950
Person Interviewed Name	Signature of Person Interviewed	Title		Date: Tuesday, December 23, 2003
John Lukens	Mailed			Telephone 717-236-5361

This document is official notification that a representative of the Department of Environmental Protection inspected the above-mentioned facility. The findings of the inspection are shown above and on any attached pages. Violations discovered as a result of this inspection are indicated. Violations may also be discovered upon examination of the results of laboratory analyses, review of pertinent documents and further investigation. Notification will be forthcoming if such violations are discovered.



INSPECTION REPORT COMMENTS

Type of Inspection Routine	WM Identification Number Site #100758	Entry Time/Date 7:45 AM November	- 2 2002	Exit Time/Date 8:00 AM November 3, 2003
Facility/Incident Name and		7:43 AM November	1 3, 2003	Municipality
	,			County Dauphin
Name, Address of Respons John Lukens 1670 North 19 th Street Harrisburg, Pa 17104	sible Official	Title Direct		Interviewed
		,,,,,	,5 ,550	⊠ Yes □ No
infectious and other medic Harrisburg Incinerator was 1. When the Department and clean-up of the waste pile. 2. Included in this bag of in	November 3, 2003 the Department cal-type waste. Present for the Department as John Lukens. Trived on site, Mr. Lukens showed the lateral fectious waste was paperwork from the trived completely removed at the end of the	Department a bag of e Milton S. Hershey	infectious w Medical Ce	steve Bartos, present for the aste Stericycle found during the nter.
Sample Collected ☐ Yes ☒ No	Sample Numbers		Analyses	
Inspector Name Joe Mattucci	Inspector Signature	Headquarters S.C.R.O.		Date: Tuesday, November 04, 2003 Telephone 717-705-4950
Person Interviewed Name John Lukens	Signature of Person Interviewed Mailed	Title Director		Date: Tuesday, November 04, 2003 Telephone 717-236-5361

This document is official notification that a representative of the Department of Environmental Protection inspected the above-mentioned facility. The findings of the inspection are shown above and on any attached pages. Violations discovered as a result of this inspection are indicated. Violations may also be discovered upon examination of the results of laboratory analyses, review of pertinent documents and further investigation. Notification will be forthcoming if such violations are discovered.



INSPECTION REPORT COMMENTS Type of Inspection Exit Time/Date WM Identification Number Entry Time/Date 10:30 AM November 1, 2003 Routine Site #100758 6:45 AM November 1, 2003 Facility/Incident Name and Location Municipality City of Harrisburg Harrisburg Materials, Energy, Recycling and Recovery Facility County Dauphin Name, Address of Responsible Official Title John Lukens Director 1670 North 19th Street Harrisburg, Pa 17104 Interviewed Telephone 717-255-7338 X Yes No REMARKS: On Saturday November 1, 2003 the Department was on site at the Incinerator to observe the clean-up of infectious and other medical-type waste. Present for the Department was Joe Mattucci, present for the Harrisburg Incinerator was John Lukens. 1. Stericycle, Inc. was contracted by the Incinerator to pack the pile of waste in biohazard cardboard boxes. Stericycle arrived on site at 7:00 AM. 2. The pile of waste was sorted as it was boxed. The large items that were obviously not contaminated by the infectious waste were removed from the pile before packaging. 3. The waste was not completely cleaned during Saturday's efforts. Mr. Lukens said Stericycle would return Monday, November 3 to continue with the clean-up Sample Collected Sample Numbers Analyses ☐ Yes 🛛 No Date: Tuesday, November 04, 2003 Inspector Name Headquarters Inspector Signature Joe Mattucci Telephone S.C.R.O. ozeph m matters 717-705-4950 Person Interviewed Name Signature of Person Interviewed Title Date: Tuesday, November 04, 2003

This document is official notification that a representative of the Department of Environmental Protection inspected the abovementioned facility. The findings of the inspection are shown above and on any attached pages. Violations discovered as a result of this inspection are indicated. Violations may also be discovered upon examination of the results of laboratory analyses, review of pertinent documents and further investigation. Notification will be forthcoming if such violations are discovered.

Director

Telephone 717-236-5361

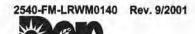
John Lukens



717-236-5361

INSPECTION REPORT COMMENTS Exit Time/Date Type of Inspection WM Identification Number Entry Time/Date Routine Site #100758 7:45 AM October 30, 2003 8:30 AM October 30, 2003 Facility/Incident Name and Location Municipality Harrisburg Materials, Energy, Recycling and Recovery Facility City of Harrisburg County Name, Address of Responsible Official Title John Lukens Director 1670 North 19th Street Harrisburg, Pa 17104 Interviewed Telephone 717-255-7338 X Yes No REMARKS: On October 30, 2003 the Department inspected a load of infectious waste at the Harrisburg Incinerator. Present for the Department were Joe Mattucci, Steve Bartos, and Todd Miller. Present for the Harrisburg Incinerator was John Lukens. The following were noted: 1. An infectious waste load was dropped at the Incinerator on Wednesday October 29, 2003 by Waste Management of Camp Hill. This load included sharps and other medical waste not packed in red bags. 2. The infectious waste was dumped on the transfer floor, and then loaded into a transfer trailer. As the transfer trailer driver was tarping the load he noticed a bag that looked suspicious. The bag was opened and was found to have infectious waste inside. The entire transfer trailer load was dumped on the inactive incinerator tipping floor. As of October 30, 2003 the Department is conducting an investigation to determine the origin of the aforementioned infectious waste. Invoices and other paperwork from the Jewish Home of Greater Harrisburg, the Milton S Hershey Medical Center, and several other physicians were found in the waste 3. Because the infectious waste was not confined to one package or container the Department views the entire load as infectious and needed to be disposed as such. 4. The Harrisburg Incinerator contracted Stericycle to package the infectious load and dispose of it. As of November 5, 2003 the entire infectious load had been packed and shipped off site. Sample Collected Sample Numbers Analyses ☐ Yes ⊠ No Pictures Taken X Yes No Date: Wednesday, November 05, Inspector Name Inspector Signature Headquarters 2003 Telephone Joe Mattucci S.C.R.O. eh m malluco 717-705-4950 Date: Wednesday, November 05, Person Interviewed Name Title 2003 John Lukens Mailed Director Telephone

This document is official notification that a representative of the Department of Environmental Protection inspected the above-mentioned facility. The findings of the inspection are shown above and on any attached pages. Violations discovered as a result of this inspection are indicated. Violations may also be discovered upon examination of the results of laboratory analyses, review of pertinent documents and further investigation. Notification will be forthcoming if such violations are discovered.



Inspection ID 1252327

Field Code 4E

INSPECTION REPORT – MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES

Site I.	D. <u>10</u>	0758	Telephone #: 717-236	-5361		
Site N Facilit		Han	risburg Materials, Energy, Recycling and Recovery Operator Name: The I	Harrisburg	Authority	
		670 1	North 19 th Street Address: 1 Keystone I	Plaza Suite	e 104 Front and N	Market
			17104 Streets, Harrisburg, Pa		o Total Total and I	idi Not
Munic	ipality	: Cit	ty of Harrisburg County: Dauphin			
			icial: John Lukens Title: Director			
Perso	n Inte	rview	ved: Same Title:			
			ert Belfanti, Joe Kozlosky, Joe Mattucci Title: Solid Waste Spe PF 100758 SF	cialist		
			tine Inspection			
			06 /16 / 2003 Type: Routine Results: Violations	Res	solved: / /	1
Permi	t Expi	ratio	n Date: Quarterly Groundwater Due Date:	Days/Wei	ek Operated: 7	
			Annual Groundwater Due Date:	Max. Dail	y Volume:	
			1 - No Violation Observed 2 - Not-Applicable 3 - Not-Determined 4 -	Non-Com	oliance	
ST	ATUS			OMMENTS	CHAPTER	LINE
1 2	3	4.	REQUIREMENT	TTACHED	CITATION	ITEM
			GENERAL PROVISIONS			
			Required insurance in effect (expiration date).		271.371	1
			Facility issued permit from the Department.		283.201(a)	2
		\boxtimes	Operation in accordance with approved plan and permit.		283.201(b)	3
			No unapproved wastes accepted.		283.201(c), (e)	4
			Ban on explosive waste and mixing or storing waste to create a risk of fir explosion, or hazardous gas adhered to.	е, 🗆	283.201(d)	5
			All radioactive waste prohibited unless approved by law, or approved by to Department in writing.	he 🗌	283.201(k), (l)	6
			DAILY OPERATIONS			
			Proper signs posted for Facility and for the Recycling Drop-off Center.		283.211(a)	7
			Permit area markers and site perimeter clearly marked and maintained.		283.211(b)-(c)	8
			Proper barriers installed and access controlled when attendant not present.		283.212(a)-(c)	9
			Access roads maintained in accordance with Chapter 105 and 283, includir negotiable by collection vehicles,.	ng 🗆	283.213(a)-(h)	10
			Approved means of measuring waste utilized.		283.214(a),(b)	11
			Incoming loads inspected for radioactive and other unapproved wastes.		283.214(c)	12
			Adequate equipment on-site and standby equipment available.		283.215(a)-(d)	13
			Approach and unloading areas of adequate size, design and construction.		283.216(a), (b)	14
			Wheel curb and tie downs at unloading pits.		283.216(c)	15
			Attendant or signs to direct vehicles.		283.216(d)	16
			Collection vehicles promptly unloaded.		283.216(e)	17
			Solid waste confined to unloading and approved storage areas.		283.216(f)	18

Harrisburg M.E.R.R.F.

100758 06/16/2003

INSPECTION REPORT – MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES (Cont'd)

	STA	TUS		COMM	ENTS	CHAPTER	LINE
1	2	3	4	REQUIREMENTS ATTAI		CITATION	ITEM
_	_		-	DAILY OPERATIONS (Continued)	-	248 8444 1 181	
			⊠	Areas within building kept clean. Putrescible waste removed within 24 hours unless a longer holding time is approved in the permit.		283.217(a), (b)	19
			☒	Plumbing properly maintained; floors well drained. Vehicle wash water and leachate properly characterized and treated.		283.217(c) 283.217(d)	20
		Ø		Daily inspection conducted.		283.217(f)	21
Ø				No open burning(*) or other fugitive dust emissions.		283.218(a), (c)	22
		Ø		Ambient air quality maintained.		283.218(b)	23
X				Effective vector control implemented and public nuisances prevented.		283.219(a), (b)	24
\boxtimes				Litter controlled/collected and barriers/fences in place.		283.221(a)-(c)	25
X				Daily volume of waste received does not exceed permit allowance.		283.223	26
				RADIATION MONITORING AND RESPONSE			
		⊠		Action plan implemented according to 283.113. Waste monitored according to Department's Guidance Document (250-3100-001).		283.220(a), (b)	27
				Detectors properly installed and activated to accurately monitor incoming loads.		283.220(c)	28
		Ø		Portable dose-meters available; radiation survey conducted on suspect loads.		283.220(d)	29
		⊠		Operator notifies Department when radiation monitors detect alarm levels .		283.220(e)	30
		Ø		Radiation monitors accurately calibrated at least once a year.		283.220(f)	31
		Ø		Radioactive vehicles obtain Department approval before departure from facility.		283.220(g)	32
				SOIL AND WATER PROTECTION			
X				No point or nonpoint discharges allowed the violation of "Clean Streams Law".		283.231(a)	33
Ø				Pollution treatment facilities properly operated and maintained as required.		283.231(b)	34
Ø				Surface or groundwater contact with solid waste or processed material prevented or minimized.		283.231(c)	35
Ø				Operator does not cause or allow water pollution on or off the site.		283.231(d)	36
Ø				Soil contamination prevented.		283.231(e)	37
Ø				Adequate management of surface water and control of erosion and sedimentation. Operator meets requirements of chapters 102 and 105.		283.232(1)-(3)	38
X				Soil and groundwater monitoring conducted as required.		283.233	39
X				Water Supply Replacement, if required.		283.234	40
				SAFETY AND OPERATIONS			
X				Operational safety plan on-site and implemented.		283.241(a)-(c)	41
		⊠		Facility ventilated in a manner consistent with Section 283.21 8 (relating to air resources protection).		283.241(d)	42
X				At least one set of up-to-date as-built construction drawings and up-to-date equipment operation and maintenance manuals on-site.		283.242(a), (b)	43

Harrisburg M.E.R.R.F.

100758 06/16/2003

INSPECTION REPORT – MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES (Cont'd)

	STA	ATUS	3	COMM	ENTS	CHAPTER	LINE
1	2	3	4	REQUIREMENTS ATTAC	HED	CITATION	ITEM
				EMERGENCY PROCEDURES	5.1		
X				Facility operated and maintained to prevent and minimize potential for fire, explosion, or environmental release.		283.251	44
X				Internal communication or alarm system operable.		283.252(a)(1)	45
X				Communications systems capable of summoning emergency assistance from outside agencies.		283.252(a)(2)	46
X				Adequate fire and safety equipment available, maintained and accessible.		283.252(a)(3), (c), (d)	47
X				Contingency plan implemented in emergency		283.253(a)-(c)	48
	E	H		RECORDKEEPING/REPORTING			
X				Daily operation record maintained and contains the following:		283.261(a)	49
X				Operator maintains a daily operational record, containing the following:		283.261(b)	50
X				The type and weight or volume of waste received.		283.261(b)(1)	51
X				The county (in PA) of waste origin, or if from outside PA, the state.		283.261(b)(2)	52
X				The transporters of the waste.		283.261(b)(3)	53
Ø				Accurate records of marketed, recycled or bypassed wastes.		283.261(b)(4), (5)	54
		×		Description of waste handling problems or emergency disposal activities.		283.261(b)(6)	55
		×		Deviations from operational plans; actions taken to correct regulatory violations.		283.261(b)(7)	56
		\boxtimes		A list of rejected waste loads with an explanation fro rejection.		283.261(b)(10)	57
]	×			Detailed record of incidents where radioactive material is detected in waste loads.		283.261(b)(11)	58
		\boxtimes		Detailed record of all overweight vehicles.		283.261(b)(12)	59
X				Annual operation report submitted.		283.262	60
	\boxtimes			Alternate facility available during temporary shutdown.		283.271(a), (b)	61
	×			Removal of all solid waste and structures or other materials which contain or are contaminated with solid waste upon cessation of operations.		283.272(a)-(c)	62
	\boxtimes			Operator has implemented a salvaging program for recyclable wastes		283.281	63
X				Operator has established a recycled materials collection center for the public		283.282	64
X				Operator has implemented a plan for the removal of hazardous materials from the waste to be processed.		283.283	65
X				Incineration ash residue sampled and analyzed quarterly.		283.403(a), (b)	66
X				Ash residue disposed of properly.		283.403(c)	67
X				Ash residue stored according to 285.131, including prevention of dispersal.		283.403(d)	68
X				Ash residue transported according to 285.221, including wetting of ash.		283.403(e)	69

Harrisburg M.E.R.R.F.

06/16/2003

INSPECTION REPORT – MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES (Cont'd)

	(report)	100		No violation observed 2-Not-Applicable 3-Not-Determined 4-N	-	omphance	1
1	STA 2	TUS 3	4	REQUIREMENTS ATTAC		CHAPTER	LINE
			Ī	ADDITIONAL REQUIREMENTS FOR INFECTIOUS AND CHEMOTHERAPEUTIC WASTE PROCESSING FACILITIES			
				Infectious waste incineration/sterilization residue monitored and monitoring results submitted to the Department, on a quarterly basis.		284.321(a), (b)	70
	\boxtimes			Operators who process infectious waste by means other than incineration or thermal processing, conduct microbiological analysis every 40 hours during the operational life of the facility, unless otherwise provided for in the permit.		284.321(d)	71
				Indicators and methods used to verify disinfection approved by the Department.		284.321(a)(2) 284.321(e)	72
	\boxtimes			Disinfection indicators placed correctly in the process, and results analyzed accurately.		284.321(f), (g)	73
	\boxtimes			Operator maintains daily record of waste processing and results of disinfection.		284.321(h)	74
	\boxtimes			Operator disinfects infectious waste prior to grinding or compacting in order to reduce volume.		284.321(k)	75
	\boxtimes			Operators of autoclaves do not process pathological waste.		284.321(m)(1)	76
	×			Operators of autoclaves maintain a process time that completely vaporizes infectious waste fluids.		284.321(m)(2)	77
							I I



	INSPECTION	REPORT COMMENTS	
Type of Inspection	WM Identification Number	Entry Time/Date	Exit Time/Date
Routine	Site #100758	06/16/2003	04/22/2003
Facility/Incident Name and Location Harrisburg Materials, Energy, Recycling and	d Recovery Facility		Municipality City of Harrisburg
			County Dauphin
Name, Address of Responsible Official John Lukens 1670 North 19 th Street Harrisburg, Pa 17104		Title Director	
		Telephone	Interviewed
			☐ Yes ☒ No
Observations: 1. The facility's tipp 2. Waste was found 3. The facility is no 4. The facility's tran 5. Ash and water ac 6. Units One and Ty	Mattucci and myself conducted a bing floor was wet and muddy. to be below the level of the tippin longer adding any waste to the starsfer station was nearly full. The cumulation was observed in the bwo cease operation permanently of in the storage pit will be removed.	ng floor and in compliance with lorage pit. materials were primarily demolitasement of the facility. n 06/18/2003 at approximately 3	Permit Condition #14. tion waste. :30 PM.
VIOLATIONS: 1. The facility is not of 283.201(b). 2. Areas in the build 3. Water and ash we This constitutes a viol 4. The disposal of the consequence, adversed 5. The aforemention the SWMA.	operating in accordance with its partial ding were found to be in an unclearer observed in the facility's based action of 25 Pa Code section 283.2 he solid waste in a manner contrainly affects the environment and canned actions and conduct constituted	ermit as listed below. This constant state. This constitutes a violatement. Water was also observed p217(c). The ry to the rules and regulations of uses a public nuisance, is a violate unlawful conduct pursuant to Security 1985.	titutes a violation of 25 Pa Code Section tion of 25 Pa Code section 283.217(a), pooling on the tipping floor.

Sample Collected ☐ Yes ☑ No	Sample Numbers	Analyse	8
Inspector Name Robert Belfanti	Inspector Signature	Headquarters S.C.R.O.	Date: Tuesday, July 15, 2003 Telephone 717-705-4955
Person Interviewed Name John Lukens	Signature of Person Intervelved Mailed	Title	Date: Tuesday, July 15, 2003 Telephone 717-236-5361

This document is official notification that a representative of the Department of Environmental Protection inspected the above-mentioned facility. The findings of the inspection are shown above and on any attached pages. Violations discovered as a result of this inspection are indicated. Violations may also be discovered upon examination of the results of laboratory analyses, review of pertinent documents and further investigation. Notification will be forthcoming if such violations are discovered.

Page 5 of 5



Inspection ID 1170239

Field Code 4E

INSPECTION REPORT – MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES

Telephone #: 717-236-5361		
Operator Name: The Harrisbu	urg Authority	
Address: 1 Keystone Plaza S	Suite 104 Front and I	Market
		ilottio.
County: Dauphin		
Title:		
		_
Decultor Violations	Panalyad: /	,
3 - Not-Determined 4 - Non-Co	ompliance	
COMMENT	CHAPTER CITATION	LINE
).	271.371	1
	283.201(a)	2
ermit.	283.201(b)	3
	283.201(c), (e)	4
vaste to create a risk of fire,	283.201(d)	5
by law, or approved by the	283.201(k), (l)	6
S		
ng Drop-off Center.	283.211(a)	7
ked and maintained.	283.211(b)-(c)	8
en attendant not present.	283.212(a)-(c)	9
apter 105 and 283, including	283.213(a)-(h)	10
C	283.214(a),(b)	11
unapproved wastes.	283.214(c)	12
nt available.	283.215(a)-(d)	13
esign and construction.	283.216(a), (b)	14
	283.216(c)	15
	283.216(d)	16
	283.216(e)	17
orage areas.	283.216(f)	18
	Address: 1 Keystone Plaza, S Streets, Harrisburg, Pa 17101 County: Dauphin Title: Director Title: Title: Solid Waste Specialist Results: Violations Property Date: Days A The Due Date: Max. D The Days A The Days	Title: Director Title: Title: Solid Waste Specialist

Harrisburg M.E.R.R.F.

100758 09/24/2002

INSPECTION REPORT – MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES (Cont'd)

1	STA 2	TUS 3	4		MENTS	CHAPTER CITATION	LINE
	1 %			DAILY OPERATIONS (Continued)			
				Areas within building kept clean. Putrescible waste removed within 24 hours unless a longer holding time is approved in the permit.		283.217(a), (b)	19
			×	Plumbing properly maintained; floors well drained. Vehicle wash water and leachate properly characterized and treated.		283.217(c) 283.217(d)	20
		×		Daily inspection conducted.		283.217(f)	21
Ø				No open burning(*) or other fugitive dust emissions.		283.218(a), (c)	22
		×		Ambient air quality maintained.		283.218(b)	23
Ø				Effective vector control implemented and public nuisances prevented.		283.219(a), (b)	24
\boxtimes				Litter controlled/collected and barriers/fences in place.		283.221(a)-(c)	25
\boxtimes				Daily volume of waste received does not exceed permit allowance.		283.223	26
				RADIATION MONITORING AND RESPONSE			
		Ø		Action plan implemented according to 283.113. Waste monitored according to Department's Guidance Document (250-3100-001).	:o 🗆	283.220(a), (b)	27
		×		Detectors properly installed and activated to accurately monitor incoming loads.		283.220(c)	28
		\boxtimes		Portable dose-meters available; radiation survey conducted on suspect loads.		283.220(d)	29
		\boxtimes		Operator notifies Department when radiation monitors detect alarm levels .		283.220(e)	30
		\boxtimes		Radiation monitors accurately calibrated at least once a year.		283.220(f)	31
		\boxtimes		Radioactive vehicles obtain Department approval before departure from facility.		283.220(g)	32
			ΙΞ	SOIL AND WATER PROTECTION			
\boxtimes				No point or nonpoint discharges allowed the violation of "Clean Streams Law".		283.231(a)	33
\boxtimes				Pollution treatment facilities properly operated and maintained as required.		283.231(b)	34
Ø				Surface or groundwater contact with solid waste or processed material prevented or minimized.		283.231(c)	35
\boxtimes				Operator does not cause or allow water pollution on or off the site.		283.231(d)	36
\boxtimes				Soil contamination prevented.		283.231(e)	37
×				Adequate management of surface water and control of erosion and sedimentation. Operator meets requirements of chapters 102 and 105.		283.232(1)-(3)	38
\boxtimes				Soil and groundwater monitoring conducted as required.		283.233	39
Ø				Water Supply Replacement, if required.		283.234	40
				SAFETY AND OPERATIONS			
\boxtimes				Operational safety plan on-site and implemented.		283.241(a)-(c)	41
		×		Facility ventilated in a manner consistent with Section 283.21 8 (relating to air resources protection).		283.241(d)	42
×				At least one set of up-to-date as-built construction drawings and up-to-date equipment operation and maintenance manuals on-site.		283.242(a), (b)	43

Harrisburg M.E.R.R.F. 100758

100758 09/24/2002

INSPECTION REPORT – MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES (Cont'd)

	STA	ATUS		СОММ	ENTS	CHAPTER	LINE
2	2	3	4	REQUIREMENTS ATTAC	GCPRF511	CITATION	ITEM
		1		EMERGENCY PROCEDURES			
×				Facility operated and maintained to prevent and minimize potential for fire, explosion, or environmental release.		283.251	44
\boxtimes				Internal communication or alarm system operable.		283.252(a)(1)	45
\boxtimes				Communications systems capable of summoning emergency assistance from outside agencies.		283.252(a)(2)	46
×				Adequate fire and safety equipment available, maintained and accessible.		283.252(a)(3), (c), (d)	47
\boxtimes				Contingency plan implemented in emergency		283.253(a)-(c)	48
				RECORDKEEPING/REPORTING			
\boxtimes				Daily operation record maintained and contains the following:		283.261(a)	49
\boxtimes				Operator maintains a daily operational record, containing the following:		283.261(b)	50
X				The type and weight or volume of waste received.		283.261(b)(1)	51
X				The county (in PA) of waste origin, or if from outside PA, the state.		283.261(b)(2)	52
X				The transporters of the waste.		283.261(b)(3)	53
X				Accurate records of marketed, recycled or bypassed wastes.		283.261(b)(4), (5)	54
Ø				Description of waste handling problems or emergency disposal activities.		283.261(b)(6)	55
		\boxtimes		Deviations from operational plans; actions taken to correct regulatory violations.		283.261(b)(7)	56
		×		A list of rejected waste loads with an explanation fro rejection.		283.261(b)(10)	57
	\boxtimes			Detailed record of incidents where radioactive material is detected in waste loads.		283.261(b)(11)	58
		\boxtimes		Detailed record of all overweight vehicles.		283.261(b)(12)	59
X				Annual operation report submitted.		283.262	60
X				Alternate facility available during temporary shutdown.		283.271(a), (b)	61
	×			Removal of all solid waste and structures or other materials which contain or are contaminated with solid waste upon cessation of operations.		283.272(a)-(c)	62
	\boxtimes			Operator has implemented a salvaging program for recyclable wastes		283.281	63
X				Operator has established a recycled materials collection center for the public		283.282	64
X				Operator has implemented a plan for the removal of hazardous materials from the waste to be processed.		283.283	65
X				Incineration ash residue sampled and analyzed quarterly.		283.403(a), (b)	66
X				Ash residue disposed of properly.		283.403(c)	67
X				Ash residue stored according to 285.131, including prevention of dispersal.		283.403(d)	68
\boxtimes				Ash residue transported according to 285.221, including wetting of ash.		283.403(e)	69

Harrisburg M.E.R.R.F.

100758 09/24/2002

INSPECTION REPORT – MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES (Cont'd)

			1	No Violation Observed 2-Not-Applicable 3-Not-Determined 4-N	1011-0	compliance	The same
1	STA 2	3	4	REQUIREMENTS ATTA		CHAPTER CITATION	LINE
				ADDITIONAL REQUIREMENTS FOR INFECTIOUS AND CHEMOTHERAPEUTIC WASTE PROCESSING FACILITIES			
	×			Infectious waste incineration/sterilization residue monitored and monitoring results submitted to the Department, on a quarterly basis.		284.321(a), (b)	70
	\boxtimes			Operators who process infectious waste by means other than incineration or thermal processing, conduct microbiological analysis every 40 hours during the operational life of the facility, unless otherwise provided for in the permit.		284.321(d)	71
	\boxtimes			Indicators and methods used to verify disinfection approved by the Department.		284.321(a)(2) 284.321(e)	72
				Disinfection indicators placed correctly in the process, and results analyzed accurately.		284.321(f), (g)	73
	×			Operator maintains daily record of waste processing and results of disinfection.		284.321(h)	74
	\boxtimes			Operator disinfects infectious waste prior to grinding or compacting in order to reduce volume.		284.321(k)	75
	\boxtimes			Operators of autoclaves do not process pathological waste.	3	284.321(m)(1)	76
	×			Operators of autoclaves maintain a process time that completely vaporizes infectious waste fluids.		284.321(m)(2)	77
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INSPECTION REPORT COMMENTS

Date of Inspection: September 24, 2002 Identification Number 100758
Company/Facility/Site Name <u>Harrisburg Materials, Energy, Recycling and Recovery Facility - The Harrisburg Authority</u>

Today, I conducted a routine inspection at the aforementioned facility. The facility's current Waste Permit will expire on November 30, 2002

The following observations were made:

- 1. Unit #2 was out of service for repairs.
- 2. The facility's tipping floor was wet and muddy. A large puddle was observed near bays 1 and 2. According to the facility, repairs to the floor are planned.
- 3. The facility's transfer station contained mostly demolition waste.
- 4. Ash accumulation was observed in the basement of the facility. Unit #2 was being serviced.

The following violations were noted and documented:

- 1. The facility is not operating in accordance with its permit as listed below. This constitutes a violation of 25 Pa Code Section 283.201(b).
- Areas in the building were found to be in an unclean state. This constitutes a violation of 25 Pa Code section 283.217(a).
- 3. Water and ash were observed in the facility's basement. Water was also observed leaking on the tipping floor. This constitutes a violation of 25 Pa Code section 283.217(c).
- 4. The disposal of the solid waste in a manner contrary to the rules and regulations of the Department, which as a consequence, adversely affects the environment and causes a public nuisance, is a violation of 6018.610 (4) of the SWMA.

In the "Requirement" Section of this inspection report, each listed inspection item may provide only a brief version of its corresponding obligation as described in the body of the regulations. Please use the Chapter citations listed on this inspection report as a reference to obtain a detailed description of compliance requirements.

This inspection report is official notification that a representative of the Department of Environmental Protection, Waste Management Program, inspected the above installation. The findings of this inspection are shown in this report. This inspection report shall serve a formal notification of any violations which were observed during the inspection. Violations may also be discovered upon examination of the results of laboratory analyses and review of Department records. Additional notification may be forthcoming, concerning any violations indicated herein and listing any additional violations.

This report does not constitute an order or other appealable action of the Department. Nothing contained herein shall be deemed to grant or imply immunity from legal action for any violation noted herein.

Signature by the person interviewed does not necessarily imply concurrence with the findings on this report, but does acknowledge that the person was shown the report or that a copy was left with the person.

Person Interviewed (Signature)	Date	
Inspector (Signature)	Date	

File name:09 24 02CS.doc Page 5 of 6

INSPECTION REPORT COMMENTS

Date of Inspection: September 24, 2002 Identification Number 100758

Company/Facility/Site Name Harrisburg Materials, Energy, Recycling and Recovery Facility - The Harrisburg Authority

 The aforementioned actions and conduct constitute unlawful conduct pursuant to Sections 6018.501(a), 6018.610 (9) of the SWMA.

The aforementioned actions and conduct subject you to civil penalty liability pursuant to Section 6018.605 of the SWMA.

In the "Requirement" Section of this inspection report, each listed inspection item may provide only a brief version of its corresponding obligation as described in the body of the regulations. Please use the Chapter citations listed on this inspection report as a reference to obtain a detailed description of compliance requirements.

This inspection report is official notification that a representative of the Department of Environmental Protection, Waste Management Program, inspected the above installation. The findings of this inspection are shown in this report. This inspection report shall serve a formal notification of any violations which were observed during the inspection. Violations may also be discovered upon examination of the results of laboratory analyses and review of Department records. Additional notification may be forthcoming, concerning any violations indicated herein and listing any additional violations.

This report does not constitute an order or other appealable action of the Department. Nothing contained herein shall be deemed to grant or imply immunity from legal action for any violation noted herein.

Signature by the person interviewed does not necessarily imply concurrence with the findings on this report, but does acknowledge that the person was shown the report or that a copy was left with the person.

Person Interviewed (Signature)

Inspector (Signature)

Date 9-25-02

Date 9-25-02

File name:09 24 02CS.doc

Page 6 of 6



Inspection ID 1159/22

Field Code 4E

INSPECTION REPORT – MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES

Comment: Routine Inspection Inspection Inspection Date:
Address: 1 Keystone Plaza, Suite 104, Front and Mark Streets, Harrisburg, Pa 17104 Municipality: City of Harrisburg Responsible Official: John Lukens Person Interviewed: Same Interviewed: Same Inspector: Robert Belfanti, Joe Kozlosky, Mike Maiolie eFACTS ID #: PF 100758 SF Comment: Routine Inspection Inspection Date: 98/141/2802 Quarterly Groundwater Due Date: Days/Week Operated: 7 II-30-92 Annual Groundwater Due Date: Days/Week Operated: 7 II-30-92 Annual Groundwater Due Date: Days/Week Operated: 7 II-30-92 Annual Groundwater Due Date: Days/Week Operated: 7 II-30-92 Annual Groundwater Due Date: Days/Week Operated: 7 II-30-92 Annual Groundwater Due Date: Days/Week Operated: 7 II-30-92 Annual Groundwater Due Date: Days/Week Operated: 7 III-30-92 Annual Groundwater Due Date: Days/Week Ope
Municipality: City of Harrisburg Responsible Official: John Lukens Title: Director Title: Same Title: Same Title: Solid Waste Specialist Title:
Responsible Official: John Lukens Person Interviewed: Same Inspector: Robert Belfanti, Joe Kozlosky, Mike Maiolie eFACTS ID #: PF 100758 Comment: Routine Inspection Inspection Date: 41/30/2002 8/H-0/Type: Routine Permit Expiration Date: 41/30/2002 8/H-0/Type: Routine Inspection Date: 41/30/2002 8/H-0/Type: Routine Permit Expiration Date: 41/30/2002 8/H-0/Type: Routine Permit Expiration Date: 41/30/2002 8/H-0/Type: Routine Inspection Date: 41/30/2002 8/H-0/Type: Routine Permit Expiration Date: 41/30/2002 9/H-0/Type: Routine Permit Expiration Date: 9/H-0/Type: Routine Permit Expiration Date: 9/H-0/Type: Routine Permit Expiration Date: 9/H-0/Type: Routine Permit Expiration Date: 9/H-0/Type: Routine Permit Expiration Date: 9/H-0/Type: Routine Permit Expiration Date: 9/H-0/Type: Routine Permit Expiration Date: 9/H-0/Type: Routine Permit Expiration Date: 9/H-0/Type: Routine Permit Expiration Date: 9/H-0/Type: Routine Permit Expiration Date: 9/H-0/Type: Routine Permit Expiration Date: 9/H-0/Type: Routine Permit Expiration Date: 9/H-0/Type: Routine Permit Expiration Date: 9/H-0/Type: Routine Permit Expiration Date: 9/H-0/Type: Routine Permit Expiration Date: 9/H-0/Type: Routine Permit Expiration Date: 9/H-0/Type: Routine Permit Expiration Date: 9/H-0/Type: Routine Permit Expiration Date: 9/H-0/Type: Routine Permit Pe
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Person Interviewed: Same Inspector: Robert Belfanti, Joe Kozlosky, Mike Maiolie EFACTS ID #: PF 100758 Comment: Routine Inspection Inspection Date: 41 /30 / 2002 FM 2 Type: Routine Permit Expiration Date: 44 /30 / 2002 FM 2 Type: Routine Inspection Date: 41 /30 / 2002 FM 2 Type: Routine Permit Expiration Date: 41 / 30 / 2002 FM 2 Type: Routine Inspection Date: 41 / 30 / 2002 FM 2 Type: Routine Permit Expiration Date: 41 / 30 / 2002 FM 2 Type: Routine Inspection Date: 41 / 30 / 2002 FM 2 Type: Routine Permit Expiration Date: 41 / 30 / 2002 FM 2 Type: Routine Inspection Date: 41 / 30 / 2002 FM 2 Type: Routine Permit Expiration Date: 41 / 30 / 2002 FM 2 Type: Routine Permit Expiration Date: 42 / 1 / 2002 PM 2 Type: Routine Permit Expiration Date: 44 / 30 / 2002 PM 2 Type: Routine Permit Expiration Date: 44 / 30 / 2002 PM 2 Type: Routine Permit Expiration Date: 44 / 30 / 2002 PM 2 Type: Routine Permit Expiration Date: 44 / 30 / 2002 PM 2 Type: Routine Permit Expiration Date: 44 / 30 / 2002 PM 2 Type: Routine Permit Expiration Date: 44 / 30 / 2002 PM 2 Type: Routine Permit Expiration Date: 44 / 30 / 2002 PM 2 Type: Routine Permit Expiration Date: 44 / 30 / 2002 PM 2 Type: Routine Permit Expiration Date: 44 / 30 / 2002 PM 2 Type: Routine Permit Expiration Date: 44 / 30 / 2002 PM 2 Type: Routine Permit Expiration Date: 44 / 30 / 2002 PM 2 Type: Routine Permit Expiration Date: 44 / 30 / 2002 PM 2 Type: Routine Permit Expiration Date: 44 / 30 / 2002 PM 2 Type: Routine Permit Expiration Date: 44 / 30 / 2002 PM 2 Type: Routine Permit Expiration Date: 44 / 30 / 2002 PM 2 Type: Routine Permit Expiration Date: 44 / 30 / 2002 PM 2 Type: Routine Permit Expiration Date: 44 / 30 / 2002 PM 2 Type: Routine Permit Expiration Date: 44 / 30 / 2002 PM 2 Type: Routine Permit Expiration Date: 44 / 30 / 2002 PM 2
SF Comment: Routine Inspection Inspection Date: 41/30/2002 8 4/07 Type: Routine Results: Violations Resolved: / / Permit Expiration Date: 44/30/2002 Quarterly Groundwater Due Date: Days/Week Operated: 7 Annual Groundwater Due Date: Days/Week Operated: 7 Annual Groundwater Due Date: Max. Daily Volume: 1 - No Violation Observed 2 - Not-Applicable 3 - Not-Determined 4 - Non-Compliance STATUS 1 2 3 4 REQUIREMENT COMMENTS ATTACHED CITATION ITI GENERAL PROVISIONS
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1 - No Violation Observed 2 - Not-Applicable 3 - Not-Determined 4 - Non-Compliance STATUS
STATUS 1 2 3 4 REQUIREMENT GENERAL PROVISIONS GENERAL PROVISIONS Required insurance in effect (expiration date). 271.371 GENERAL PROVISIONS Operation in accordance with approved plan and permit. 283.201(a) 283.201(b) 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and 300 and
REQUIREMENT GENERAL PROVISIONS Required insurance in effect (expiration date).
GENERAL PROVISIONS
Required insurance in effect (expiration date).
□ □ Facility issued permit from the Department. □ 283.201(a) □ □ □ □ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○
□ □ □ Operation in accordance with approved plan and permit. □ 283.201(b) □ □ □ □ No unapproved wastes accepted. □ 283.201(c), (e) □ □ □ □ Ban on explosive waste and mixing or storing waste to create a risk of fire, explosion, or hazardous gas adhered to. □ 283.201(d) □ □ □ □ □ All radioactive waste prohibited unless approved by law, or approved by the □ □ 283.201(k), (l) □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
□ □ No unapproved wastes accepted. □ 283.201(c), (e) 4 □ □ □ Ban on explosive waste and mixing or storing waste to create a risk of fire, explosion, or hazardous gas adhered to. □ 283.201(d) 9 □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
Ban on explosive waste and mixing or storing waste to create a risk of fire, explosion, or hazardous gas adhered to. All radioactive waste prohibited unless approved by law, or approved by the Department in writing. DAILY OPERATIONS
explosion, or hazardous gas adhered to. All radioactive waste prohibited unless approved by law, or approved by the Department in writing. DAILY OPERATIONS
Department in writing. DAILY OPERATIONS
□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
□ □ □ Proper signs posted for Facility and for the Recycling Drop-off Center. □ 283.211(a) □ 283.211(a) □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
☑ ☐ ☐ Proper signs posted for Facility and for the Recycling Drop-off Center. ☐ 283.211(a) ☐ ☑ ☐ ☐ Permit area markers and site perimeter clearly marked and maintained. ☐ 283.211(b)-(c) ☐
□ □ □ Proper barriers installed and access controlled when attendant not present. □ 283.212(a)-(c) □ 1.00
Access roads maintained in accordance with Chapter 105 and 283, including 283.213(a)-(h) 1 negotiable by collection vehicles,.
□ □ □ Approved means of measuring waste utilized. □ 283.214(a),(b) 1
□ □ □ Incoming loads inspected for radioactive and other unapproved wastes. □ 283.214(c) 1
□ □ □ Adequate equipment on-site and standby equipment available. □ 283.215(a)-(d) 1
Approach and unloading areas of adequate size, design and construction.
□ ☑ □ □ Wheel curb and tie downs at unloading pits. □ 283.216(c) 1
□ □ ⊠ □ Collection vehicles promptly unloaded. □ 283.216(e) 1
□ □ □ ⊠ Solid waste confined to unloading and approved storage areas. ⊠ 283.216(f) 1

Harrisburg M.E.R.R.F.

100758 08/14/2002

INSPECTION REPORT – MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES (Cont'd)

1 - No Violation Observed 2-Not-Applicable 3-Not-Determined 4-Non-Compliance

		TUS		СОММЕ		CHAPTER	LINE
1	2	3	4	REQUIREMENTS ATTAC	HED	CITATION	ITEM
_		_		DAILY OPERATIONS (Continued)			
Ц				Areas within building kept clean. Putrescible waste removed within 24 hours unless a longer holding time is approved in the permit.	\boxtimes	283.217(a), (b)	19
				Plumbing properly maintained; floors well drained. Vehicle wash water and leachate properly characterized and treated.		283.217(c) 283.217(d)	20
		\boxtimes		Daily inspection conducted.		283.217(f)	21
X				No open burning(*) or other fugitive dust emissions.		283.218(a), (c)	22
		×		Ambient air quality maintained.		283.218(b)	23
X				Effective vector control implemented and public nuisances prevented.		283,219(a), (b)	24
X				Litter controlled/collected and barriers/fences in place.		283.221(a)-(c)	25
Ø				Daily volume of waste received does not exceed permit allowance.		283.223	26
				RADIATION MONITORING AND RESPONSE			
		Ø		Action plan implemented according to 283.113. Waste monitored according to Department's Guidance Document (250-3100-001).		283.220(a), (b)	27
		\boxtimes		Detectors properly installed and activated to accurately monitor incoming loads.		283.220(c)	28
		\boxtimes		Portable dose-meters available; radiation survey conducted on suspect loads.		283.220(d)	29
				Operator notifies Department when radiation monitors detect alarm levels .		283.220(e)	30
		Ø		Radiation monitors accurately calibrated at least once a year.		283.220(f)	31
		\boxtimes		Radioactive vehicles obtain Department approval before departure from facility.		283.220(g)	32
				SOIL AND WATER PROTECTION			
X				No point or nonpoint discharges allowed the violation of "Clean Streams Law".		283.231(a)	33
X				Pollution treatment facilities properly operated and maintained as required.		283.231(b)	34
X				Surface or groundwater contact with solid waste or processed material prevented or minimized.		283.231(c)	35
\boxtimes				Operator does not cause or allow water pollution on or off the site.		283.231(d)	36
X				Soil contamination prevented.		283.231(e)	37
X				Adequate management of surface water and control of erosion and sedimentation. Operator meets requirements of chapters 102 and 105.		283.232(1)-(3)	38
X				Soil and groundwater monitoring conducted as required.		283.233	39
X				Water Supply Replacement, if required.		283.234	40
П				SAFETY AND OPERATIONS			
X				Operational safety plan on-site and implemented.		283.241(a)-(c)	41
		×		Facility ventilated in a manner consistent with Section 283.21 8 (relating to air resources protection).		283.241(d)	42
Ø				At least one set of up-to-date as-built construction drawings and up-to-date equipment operation and maintenance manuals on-site.		283.242(a), (b)	43

Harrisburg M.E.R.R.F.

100758 08/14/2002

INSPECTION REPORT - MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES (Cont'd)

				No Violation Observed 2-Not-Applicable 3-Not-Determined 4-N	- 247	ompliance	VALUE -
1	2	TUS 3	4	REQUIREMENTS ATTAC		CHAPTER	LINE
Ц				EMERGENCY PROCEDURES			
X				Facility operated and maintained to prevent and minimize potential for fire, explosion, or environmental release.	П	283.251	44
X				Internal communication or alarm system operable.		283.252(a)(1)	45
X				Communications systems capable of summoning emergency assistance from outside agencies.		283.252(a)(2)	46
X				Adequate fire and safety equipment available, maintained and accessible.		283.252(a)(3), (c), (d)	47
X				Contingency plan implemented in emergency		283.253(a)-(c)	48
				RECORDKEEPING/REPORTING			
X				Daily operation record maintained and contains the following:		283.261(a)	49
X				Operator maintains a daily operational record, containing the following:		283.261(b)	50
X				The type and weight or volume of waste received.		283.261(b)(1)	51
X				The county (in PA) of waste origin, or if from outside PA, the state.		283.261(b)(2)	52
X				The transporters of the waste.		283.261(b)(3)	53
X				Accurate records of marketed, recycled or bypassed wastes.		283.261(b)(4), (5)	54
X				Description of waste handling problems or emergency disposal activities.		283.261(b)(6)	55
]		×		Deviations from operational plans; actions taken to correct regulatory violations.		283.261(b)(7)	56
				A list of rejected waste loads with an explanation fro rejection.		283.261(b)(10)	57
	×			Detailed record of incidents where radioactive material is detected in waste loads.		283.261(b)(11)	58
		\boxtimes		Detailed record of all overweight vehicles.		283.261(b)(12)	59
X				Annual operation report submitted.		283.262	60
X				Alternate facility available during temporary shutdown.		283.271(a), (b)	61
	×			Removal of all solid waste and structures or other materials which contain or are contaminated with solid waste upon cessation of operations.		283.272(a)-(c)	62
	\boxtimes			Operator has implemented a salvaging program for recyclable wastes		283.281	63
X				Operator has established a recycled materials collection center for the public		283.282	64
X				Operator has implemented a plan for the removal of hazardous materials from the waste to be processed.		283.283	65
X				Incineration ash residue sampled and analyzed quarterly.		283.403(a), (b)	66
X				Ash residue disposed of properly.		283.403(c)	67
X				Ash residue stored according to 285.131, including prevention of dispersal.		283.403(d)	68
X				Ash residue transported according to 285.221, including wetting of ash.		283.403(e)	69

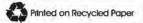
Harrisburg M.E.R.R.F.

100758 08/14/2002

INSPECTION REPORT – MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES (Cont'd)

1 - No Violation Observed 2-Not-Applicable 3-Not-Determined 4-Non-Compliance

	7.00	307		The violation observed 2-Not-Applicable 3-Not-Determined 4	11011	on-compliance	
1	STA 2	3	4		MENTS	CHAPTER	LINE
				ADDITIONAL REQUIREMENTS FOR INFECTIOUS AND CHEMOTHERAPEUTIC WASTE PROCESSING FACILITIES			
	\boxtimes			Infectious waste incineration/sterilization residue monitored and monitoring results submitted to the Department, on a quarterly basis.		284.321(a), (b)	70
	\boxtimes			Operators who process infectious waste by means other than incineration of thermal processing, conduct microbiological analysis every 40 hours during the operational life of the facility, unless otherwise provided for in the permit.		284.321(d)	71
	×			Indicators and methods used to verify disinfection approved by the Department.	• 🗆	284.321(a)(2) 284.321(e)	72
	\boxtimes			Disinfection indicators placed correctly in the process, and results analyzed accurately.		284.321(f), (g)	73
	×			Operator maintains daily record of waste processing and results of disinfection.	f 🗆	284.321(h)	74
	×			Operator disinfects infectious waste prior to grinding or compacting in orde to reduce volume.	r 🗆	284.321(k)	75
	\boxtimes			Operators of autoclaves do not process pathological waste.		284.321(m)(1)	76
	×			Operators of autoclaves maintain a process time that completely vaporize infectious waste fluids.	s 🗆	284.321(m)(2)	77
					18		



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

INSPECTION REPORT COMMENTS

Date of Inspection: August 14, 2002 Identification Number 100758

Company/Facility/Site Name Harrisburg Materials, Energy, Recycling and Recovery Facility - The Harrisburg Authority

Today, I conducted a routine inspection at the aforementioned facility. Joe Kozlosky, Mike Maiolie, and Dina Hartzel, accompanied me during this inspection. The facility's current Waste Permit will expire on November 30, 2002

The following observations were made:

- Putrescible waste was found to be stored on the tipping floor. All waste must be stored in the
 facility's pit. Bays 2 through 7 appeared to be near vertical capacity. A portion of the incoming
 waste is bypassing the facility's incinerator and being moved through the transfer station.
- 2. Unit #2 was out of service for repairs.
- The facility's tipping floor was wet and muddy. Water was observed to be dripping from the ceiling area. Again, it is recommended that the tipping floor be cleaned on a more frequent basis.
- The facility's transfer station contained approximately 50% municipal waste and 50% demolition waste.
- 5. Water and ash accumulation were observed in the basement of the facility.

The following violations were noted and documented:

- 1. The facility is not operating in accordance with its permit as listed below. This constitutes a violation of 25 Pa Code Section 283.201(b).
- Areas in the building were found to be in an unclean state. This constitutes a violation of 25 Pa Code section 283.217(a).

In the "Requirement" Section of this inspection report, each listed inspection item may provide only a brief version of its corresponding obligation as described in the body of the regulations. Please use the Chapter citations listed on this inspection report as a reference to obtain a detailed description of compliance requirements.

This inspection report is official notification that a representative of the Department of Environmental Protection, Waste Management Program, inspected the above installation. The findings of this inspection are shown in this report. This inspection report shall serve a formal notification of any violations which were observed during the inspection. Violations may also be discovered upon examination of the results of laboratory analyses and review of Department records. Additional notification may be forthcoming, concerning any violations indicated herein and listing any additional violations.

This report does not constitute an order or other appealable action of the Department. Nothing contained herein shall be deemed to grant or imply immunity from legal action for any violation noted herein.

Signature by the person interviewed does not necessarily imply concurrence with the findings on this report, but does acknowledge that the person was shown the report or that a copy was left with the person.

Person Interviewed (Signature)	Date	
Inspector (Signature)	Date	

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

INSPECTION REPORT COMMENTS

Date of Inspection: August 14, 2002 Identification Number 100758

Company/Facility/Site Name Harrisburg Materials, Energy, Recycling and Recovery Facility - The Harrisburg Authority

- 3. Solid waste was found to be stored in unapproved areas. Waste was observed on the tipping floor. This constitutes a violation of 25 Pa Code section 283.216(f).
- Water and ash were observed in the facility's basement. Water was also observed leaking on the tipping floor. This constitutes a violation of 25 Pa Code section 283.217(c).
- 5. The disposal of the solid waste in a manner contrary to the rules and regulations of the Department, which as a consequence, adversely affects the environment and causes a public nuisance, is a violation of 6018.610 (4) of the SWMA.
- The aforementioned actions and conduct constitute unlawful conduct pursuant to Sections 6018.501(a), 6018.610 (9) of the SWMA.

The aforementioned actions and conduct subject you to civil penalty liability pursuant to Section 6018.605 of the SWMA.

In the "Requirement" Section of this inspection report, each listed inspection item may provide only a brief version of its corresponding obligation as described in the body of the regulations. Please use the Chapter citations listed on this inspection report as a reference to obtain a detailed description of compliance requirements.

This inspection report is official notification that a representative of the Department of Environmental Protection, Waste Management Program, inspected the above installation. The findings of this inspection are shown in this report. This inspection report shall serve a formal notification of any violations which were observed during the inspection. Violations may also be discovered upon examination of the results of laboratory analyses and review of Department records. Additional notification may be forthcoming, concerning any violations indicated herein and listing any additional violations.

This report does not constitute an order or other appealable action of the Department. Nothing contained herein shall be deemed to grant or imply immunity from legal action for any violation noted herein.

Signature by the person interviewed does not necessarily imply concurrence with the findings on this report, but does acknowledge that the person was shown the report or that a copy was left with the person.

Person Interviewed (Signature) _	mailies	Date 8-15-02
Inspector (Signature)	Tolan The	Date 8-15-02

File name:08 14 02CS.doc Page 6 of 6





COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF LAND RECYCLING AND WASTE MANAGEMENT

File He Darphin County /

> Inspection ID 1310980

Field Code 4E

INSPECTION REPORT – MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES

Site I	.D. 1	10075	8	Telephone #: 717-236-5361				
		e: Ha	risburg Materials, Energy, Recycling and Recovery	Operator Name: The Harrisbur	g Authority			
Facili		1670	North 19 th Street	Address: 1 Keystone Plaza, Suite 104, Front and Mark				
			17104	Streets, Harrisburg, Pa 17101	ite 104, Front and it	nai ket		
-								
			ty of Harrisburg	County: Dauphin				
			ricial: John Lukens ved: Same	Title: <u>Director</u> Title:				
			Mattucci	Title: Solid Waste Specialist				
			PF 100758 SF					
Com	ment	Rou	tine Inspection					
Inspe	ection	Date	: _02 /23 / 2004 Type: Routine	Results: Violations R	esolved: / /			
Perm	it Ex	piratio	n Date: 11 / 30 / 2012 Quarterly Groundwater D	ue Date: Days/W	eek Operated: 7			
			Annual Groundwater Due	Date: Max. Da	ily Volume:			
			1 - No Violation Observed 2 - Not-Applicable 3	- Not-Determined 4 - Non-Cor	noliance			
	- A - T (10			I I de la company	1 1615		
1 2	TATL	- P	REQUIREMENT	COMMENTS	CHAPTER	LINE		
-			GENERAL PROVISIONS		on American	112.11		
Ø C	1 0		Required insurance in effect (expiration date).		271.371	1		
Ø C] [Facility issued permit from the Department.		283.201(a)	2		
) E		Operation in accordance with approved plan and perm	nit.	283.201(b)	3		
] [No unapproved wastes accepted.		283.201(c), (e)	4		
] [Ban on explosive waste and mixing or storing was explosion, or hazardous gas adhered to.	te to create a risk of fire,	283.201(d)	5		
] [All radioactive waste prohibited unless approved b Department in writing.	y law, or approved by the	283.201(k), (l)	6		
			DAILY OPERATIONS					
			Proper signs posted for Facility and for the Recycling	Drop-off Center.	283.211(a)	7		
			Permit area markers and site perimeter clearly market	d and maintained.	283.211(b)-(c)	8		
			Proper barriers installed and access controlled when a	attendant not present.	283.212(a)-(c)	9		
] [Access roads maintained in accordance with Chapt negotiable by collection vehicles,.	ter 105 and 283, including	283.213(a)-(h)	10		
			Approved means of measuring waste utilized.		283.214(a),(b)	11		
	3 [Incoming loads inspected for radioactive and other un	approved wastes.	283.214(c)	12		
Ø C] [Adequate equipment on-site and standby equipment a	available.	283.215(a)-(d)	13		
] [Approach and unloading areas of adequate size, design	gn and construction.	283.216(a), (b)	14		
	a C		Wheel curb and tie downs at unloading pits.		283.216(c)	15		
] [Attendant or signs to direct vehicles.		283.216(d)	16		
			Collection vehicles promptly unloaded.		283.216(e)	17		
] [Solid waste confined to unloading and approved stora	ge areas.	283.216(f)	18		

Harrisburg M.E.R.R.F.

100758 02/23/2004

INSPECTION REPORT – MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES (Cont'd)

1 - No Violation Observed 2-Not-Applicable 3-Not-Determined 4-Non-Compliance

1	STA 2	ATUS 3	4	REQUIREMENTS COMME ATTAC	252	CHAPTER	LINE
				DAILY OPERATIONS (Continued)			
			×	Areas within building kept clean. Putrescible waste removed within 24 hours unless a longer holding time is approved in the permit.	\boxtimes	283.217(a), (b)	19
			\boxtimes	Plumbing properly maintained; floors well drained. Vehicle wash water and leachate properly characterized and treated.		283.217(c) 283.217(d)	20
		\boxtimes		Daily inspection conducted.		283.217(f)	21
X				No open burning(*) or other fugitive dust emissions.		283.218(a), (c)	22
		Ø		Ambient air quality maintained.		283.218(b)	23
\boxtimes				Effective vector control implemented and public nuisances prevented.		283.219(a), (b)	24
			Ø	Litter controlled/collected and barriers/fences in place.	\boxtimes	283.221(a)-(c)	25
×				Daily volume of waste received does not exceed permit allowance.		283.223	26
				RADIATION MONITORING AND RESPONSE			
×				Action plan implemented according to 283.113. Waste monitored according to Department's Guidance Document (250-3100-001).		283.220(a), (b)	27
\boxtimes				Detectors properly installed and activated to accurately monitor incoming loads.		283.220(c)	28
X				Portable dose-meters available; radiation survey conducted on suspect loads.		283.220(d)	29
X				Operator notifies Department when radiation monitors detect alarm levels .		283.220(e)	30
Ø				Radiation monitors accurately calibrated at least once a year.		283.220(f)	31
×				Radioactive vehicles obtain Department approval before departure from facility.		283.220(g)	32
				SOIL AND WATER PROTECTION			
X				No point or nonpoint discharges allowed the violation of "Clean Streams Law".		283.231(a)	33
×				Pollution treatment facilities properly operated and maintained as required.		283.231(b)	34
X				Surface or groundwater contact with solid waste or processed material prevented or minimized.		283.231(c)	35
X				Operator does not cause or allow water pollution on or off the site.		283.231(d)	36
X				Soil contamination prevented.		283.231(e)	37
X				Adequate management of surface water and control of erosion and sedimentation. Operator meets requirements of chapters 102 and 105.		283.232(1)-(3)	38
\boxtimes				Soil and groundwater monitoring conducted as required.		283.233	39
X				Water Supply Replacement, if required.		283.234	40
	15	1		SAFETY AND OPERATIONS			
X				Operational safety plan on-site and implemented.		283.241(a)-(c)	41
		Ø		Facility ventilated in a manner consistent with Section 283.21 8 (relating to air resources protection).		283.241(d)	42
Ø				At least one set of up-to-date as-built construction drawings and up-to-date equipment operation and maintenance manuals on-site.		283.242(a), (b)	43

Harrisburg M.E.R.R.F.

100758 02/23/2004

INSPECTION REPORT – MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES (Cont'd)

1 - No Violation Observed 2-Not-Applicable 3-Not-Determined 4-Non-Compliance

		_	1	No Violation Observed 2-Not-Applicable 3-Not-Determined 4-N	lon-C	ompliance	
1	STA 2	TUS 3	4	REQUIREMENTS ATTAC		CHAPTER CITATION	LINE
				EMERGENCY PROCEDURES			
\boxtimes				Facility operated and maintained to prevent and minimize potential for fire, explosion, or environmental release.		283.251	44
X				Internal communication or alarm system operable.		283.252(a)(1)	45
X				Communications systems capable of summoning emergency assistance from outside agencies.		283.252(a)(2)	46
X				Adequate fire and safety equipment available, maintained and accessible.		283.252(a)(3), (c), (d)	47
X				Contingency plan implemented in emergency		283.253(a)-(c)	48
				RECORDKEEPING/REPORTING			
X				Daily operation record maintained and contains the following:		283.261(a)	49
X				Operator maintains a daily operational record, containing the following:		283.261(b)	50
X				The type and weight or volume of waste received.		283.261(b)(1)	51
Ø				The county (in PA) of waste origin, or if from outside PA, the state.		283.261(b)(2)	52
X				The transporters of the waste.		283.261(b)(3)	53
X				Accurate records of marketed, recycled or bypassed wastes.		283.261(b)(4), (5)	54
		\boxtimes		Description of waste handling problems or emergency disposal activities.		283.261(b)(6)	55
		×		Deviations from operational plans; actions taken to correct regulatory violations.		283.261(b)(7)	56
		\boxtimes		A list of rejected waste loads with an explanation fro rejection.		283.261(b)(10)	57
	×			Detailed record of incidents where radioactive material is detected in waste loads.		283.261(b)(11)	58
		\boxtimes		Detailed record of all overweight vehicles.		283.261(b)(12)	59
X				Annual operation report submitted.		283.262	60
	×			Alternate facility available during temporary shutdown.		283.271(a), (b)	61
				Removal of all solid waste and structures or other materials which contain or are contaminated with solid waste upon cessation of operations.		283.272(a)-(c)	62
	×			Operator has implemented a salvaging program for recyclable wastes		283.281	63
X				Operator has established a recycled materials collection center for the public		283.282	64
X				Operator has implemented a plan for the removal of hazardous materials from the waste to be processed.		283.283	65
X				Incineration ash residue sampled and analyzed quarterly.		283.403(a), (b)	66
X				Ash residue disposed of properly.		283.403(c)	67
X				Ash residue stored according to 285.131, including prevention of dispersal.		283.403(d)	68
\boxtimes				Ash residue transported according to 285.221, including wetting of ash.		283.403(e)	69

Harrisburg M.E.R.R.F.

100758 02/23/2004

INSPECTION REPORT - MUNICIPAL WASTE RESOURCES RECOVERY AND OTHER PROCESSING FACILITIES (Cont'd)

1		1	No Violation Observed 2-Not-Applicable 3-Not-Determined 4-1	Compliance			
1	ST/	TUS 3	4		IENTS CHED	CHAPTER CITATION	LINE
				ADDITIONAL REQUIREMENTS FOR INFECTIOUS AND CHEMOTHERAPEUTIC WASTE PROCESSING FACILITIES			
	×			Infectious waste incineration/sterilization residue monitored and monitoring results submitted to the Department, on a quarterly basis.		284.321(a), (b)	70
	\boxtimes			Operators who process infectious waste by means other than incineration or thermal processing, conduct microbiological analysis every 40 hours during the operational life of the facility, unless otherwise provided for in the permit.		284.321(d)	71
				Indicators and methods used to verify disinfection approved by the Department.		284.321(a)(2) 284.321(e)	72
	\boxtimes			Disinfection indicators placed correctly in the process, and results analyzed accurately.		284.321(f), (g)	73
	×			Operator maintains daily record of waste processing and results of disinfection.		284.321(h)	74
				Operator disinfects infectious waste prior to grinding or compacting in order to reduce volume.		284.321(k)	75
	\boxtimes			Operators of autoclaves do not process pathological waste.		284.321(m)(1)	76
				Operators of autoclaves maintain a process time that completely vaporizes infectious waste fluids.		284.321(m)(2)	77
						J. T. T. T.	

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF LAND RECYCLING AND WASTE MANAGEMENT



INSPECTION REPORT COMMENTS

Type of Inspection Routine	WM Identification Number Site #100758	Entry Time/Date 10:30 AM Feb. 23, 2004	Exit Time/Date 11:30 AM Feb. 23, 2004
Facility/Incident Name an Harrisburg Materials, Energ	d Location gy, Recycling and Recovery Facility		Municipality City of Harrisburg
			County Dauphin

Title
Director
Interviewed
⊠ Yes □ No

REMARKS: On February 23, 2004 the Department conducted a routine monthly inspection of the Harrisburg Incinerator. Present for the Department was Joe Mattucci. The Department met with John Lukens, Director, before exiting the site.

Areas Covered

- 1. Tipping Floor
- 2. Transfer Truck Loading Station
- 3. White Goods Area
- 4. Grounds Surrounding Building
- 5. Landfill

Elements Reviewed

- 1. Odor Patrol
- 2. Radiation Log

Tipping Floor:

The tipping floor was covered with standing water and mud. The Department recommends the tipping floor be kept free of standing water and mud. The waste was separated into municipal waste and construction/demolition waste before being loaded into a transfer truck. The building was near capacity during the inspection.

Transfer Truck Loading Station:

The transfer truck loading station had waste on the floor, the floor is cleaned nightly and the waste collected is taken back to the tipping floor.

White Goods Area:

About 25-30 appliances were located in the white goods area. The freon had been drained from the appliances by C&D Freon Recovery.

Grounds Surrounding Building:

The hill next to the transfer truck loading station recently had the tall grasses cut. Litter was still present in the area. The litter fence along the road leading from the transfer truck loading station had portions knocked down allowing paper and other litter to blow into the trees next to the road. This area should be free of litter, the Department recommends the Incinerator removes the litter before the next inspection.

Landfill/Leachate System:

The landfill remains inactive. Mulch has been put down on a portion of the bare soil. After the recent snow melt, more barren areas have been found and are in need of intermediate cover.

Disposal Area B3 near Gibson St continues to have an area showing signs of a leachate seep. Water was found pooling in the same area where the leachate seep was noted in the past.

Odor Patrol:

No off-site odors were noted by the Department at the time of the inspection.

Radiation Logs:

The daily logs for the testing of the radiation detection equipment were reviewed. During the inspection the Department found

the radioactive material used to test the detection equipment was left unattended outside the scalehouse. This material should be kept in a more secure location.

Mr. Lukens told the Department he is planning to have a mock radiation event in the near future

VIOLATIONS:

- The facility is not operating in accordance with its permit and the Department's regulations as listed below. This
 constitutes a violation of 25 Pa Code Section 283.201(b).
- Areas in the building were found to be in an unclean state. This constitutes a violation of 25 Pa Code section 283.217(a).
- Water was also observed pooling on the tipping floor. This constitutes a violation of 25 Pa Code section 283.217(c).
- Litter was not controlled outside of the building. This constitutes a violation of 25 Pa Code section 283.221.
- Portions of the intermediate cover on the landfill were not seeded or growing vegetation. This constitutes a violation
 of 25 Pa Code section 273.233 (e) and 25 PA Code Sections 273.235 (a)-(e).
- The facility has allowed leachate seeps in Disposal Area B2 in violation of 25 Pa Code section 273.241(a)(b), 273.272(a), and 273.301(a).
- The facility did not securely store their radiation detection test source. This is a violation of permit conditions.

Sample Collected ☐ Yes ⊠ No	Sample Numbers		Analyses		
Inspector Name	Inspector Signature	Headquart	Date: Monday, March 01, 2004		
Joe Mattucci	Joseph m m stew	S.C.R.O.	Telephone 717-705-4950		
Person Interviewed Name	Signature of Person Interviewed	Title	Date: Monday, March 01, 2004		
John Lukens	Mailed		Telephone 717-236-5361		

This document is official notification that a representative of the Department of Environmental Protection inspected the above-mentioned facility. The findings of the inspection are shown above and on any attached pages. Violations discovered as a result of this inspection are indicated. Violations may also be discovered upon examination of the results of laboratory analyses, review of pertinent documents and further investigation. Notification will be forthcoming if such violations are discovered.

Page 6 of 6

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES

In the Matter of:

City of Harrisburg

Harrisburg Steam Generating Facility

1670 South Nineteenth Street

Harrisburg, PA 17104

Waste Management

Closure of Disposal Areas A, B-1

and Temporary Storage Area

Construction Of Disposal Area B-2

AMENDMENT TO CONSENT ORDER AND AGREEMENT

This Amendment To Consent Order and Agreement is entered into this 21¹⁴ day August... of July, 1990, by and between the Commonwealth of Pennsylvania, Department of Environmental Resources ("Department"), and the City of Harrisburg ("Harrisburg").

Additional Findings

The Department has found and determined the following findings which Harrisburg agrees are true and correct.

- A. On December 20, 1988, the Department and Harrisburg entered into a Consent Order and Agreement ("1988 Consent Order") which resolved certain violations of the Solid Waste Management Act, Act of July 7, 1980, P.L. 380, 35 P.S. §6018.101 et seq; The Clean Streams Law, Act of June 22, 1937, P.L. 1987, as amended, 35 P.S. §691.1 et seq. ("Clean Streams Law") and rules and regulations promulgated pursuant to them at Harrisburg's Steam Generating Facility ("Facility") and established a schedule for closure of existing ash disposal areas, Areas A and B-1, and construction of a new ash disposal areas, Area B-2. A copy of the 1988 Consent Order is attached as Exhibit A.
- B. Paragraphs A V of the 1988 Consent Order are incorporated by reference.

- C. In a letter dated June 1, 1989, Harrisburg requested that the Department modify Paragraph 6 of the 1988 Consent Order to allow Harrisburg to deposit incinerator ash in Area B-1 after June 15, 1989.
 - D. In a letter dated June 15, 1989, the Department denied the request.
- E. Harrisburg appealed the Department's June 15, 1989 letter to the Environmental Hearing Board. The appeal is docketed at EHB Docket No. 89-201-W.
- F. In separate letters dated January 30, 1990, the Department approved Harrisburg's Closure Plans for Areas A and B-1.
- G. In a letter dated January 29, 1990, the Department approved Marrisburg's application for a modification to Permit No. 100992 with comments. The modification authorized the construction and operation of Disposal Area B-2.
- II. On or about February 28, 1990, Harrisburg appealed the Department's approval of Closure Plans for Areas A and B-1 and modification of Permit Ho. 100992 to the Environmental Hearing Board. The appeals are docketed at EHB Docket Hos. 90-093-W and 90-094-W.
- I. Harrisburg constructed a Temporary Ash Storage Area at the Facility and began using it on or about October 1, 1989.
- J. On numerous days between June 15, 1989 and October 1, 1989 Harrisburg deposited ash in Areas B-1 in violation of Paragraph 6 of the 1988 Consent Order. Harrisburg has not deposited any ash in Area B-1 since October 1, 1989.
- K. The violations of the 1988 Consent Order identified in Paragraph J, supra, subject Harrisburg to, among other things, to a stipulated penalty of \$500 per day of violation pursuant to Paragraph 10 of the 1988 Consent Order.
 - L. In a letter dated May 23, 1990, Harrisburg proposed a revised schedule

for the construction of Area B-2, the closure of Areas A and B-1 and permanent disposal of ash deposited in the Temporary Ash Storage Area.

- M. Based solely upon Harrisburg's representations that it can meet the dates set forth in the May 23, 1990 letter, the Department concurs with Harrisburg's request. The Department has not performed an independent analysis or detailed review of the schedule.
- II. The Department and Harrisburg realize that the schedule set forth in the 1988 Consent Order are no longer relevant or reasonable and should be modified without the payment of a penalty by Harrisburg's for its failure to meet the schedule set forth in Paragraphs 2 - 7 of the 1988 Consent Order.
- O. Pursuant to Paragraph 21 of the 1988 Consent Order the Department and llarrisburg wish to modify and amend the terms of the 1988 Consent Order to revise the schedule for construction of Area B-2 and closure of Areas A and B-1 and settle violations of Paragraph 6 of the 1988 Consent Order discussed in Paragraph J, supra.

 The parties desire to resolve certian of the foregoing matters without

The parties desire to resolve certian of the foregoing matters without resorting to further litigation.

ORDER

After full and complete negotiation of all matters set forth in this

Consent Order and Agreement and upon mutual exchange of covenants contained

herein, the parties intending to be legally bound, it is hereby ORDERED by the

Department and AGREED to by Harrisburg as follows:

- 1. On or before September 21, 1990, Harrisburg shall have completed construction of Area B-2.
- 2. On or before September 21, 1990, Harrisburg shall commence removal of ash from the Temporary Storage Area to Area B-2.

- 3. On or before December 21, 1990, Harrisburg shall have completed removal of ash from the Temporary Storage Area to Area B-2.
- 4. On or before December 22, 1990, Harrisburg shall begin removing ash from the Areas A and B-1 to Area B-2 pursuant to its approved closure plans.
- 5. On or before September 15, 1990, Harrisburg shall begin the bidding process to let contracts for the final closure of Areas A and B-1.
- 6. On or before November 15, 1990, Narrisburg shall have awarded a contract or contracts for the final closure of Areas A and B-1 to the successful bidder or bidders.
- 7. Closure of Areas A and B-1 will commence as soon as conditions permit in the spring of 1991 and will continue on a daily basis until complete.
- 8. On or before September 1, 1991, Harrisburg shall have completed closure and fully implemented its approved closure plans for Areas A and B-1, except for those provisions of the closure plans which relate to maintenance of the closed areas.
- 9. The schedule set forth in Paragraphs 1 8, <u>supra</u>, shall be unaffected by the appeals docketed at EHB Docket Nos. 90-093-W and 90-094-W.
- 10. Within five (5) days of the date of this Amendment To Consent Order and Agreement, Harrisburg shall pay a civil penalty of \$5,000 for the violations set forth in Paragraph K, above, covering the period specifically identified and no others. The payment shall be made by corporate check or the like made payable to "Commonwealth of Pennsylvania -- Solid Waste Abatement Fund" and sent to:

Regional Solid Waste Manager Bureau of Waste Management Department of Environmental Resources One Ararat Boulevard Harrisburg, PA 17110

- 11. Within five (5) days of the date of this Amendment to Consent Order And Agreement Harrisburg shall withdraw the appeal docketed at EHB Docket No. 89-201-N.
- term or provision in Paragraphs 5, 6 and/or 7 of this Amendment To Consent Order and Agreement, Harrisburg shall be in violation of this Consent Order and Agreement and, in addition to other applicable remedies, shall pay a civil penalty in the amount of \$200 per day for each violation. The penalty shall be due automatically and payable upon demand by the Department. Such penalty payments shall be forwarded as described in Paragraph 10, above. It is understood by the parties hereto that payment of any money hereunder shall neither constitute a waiver of Harrisburg's duty to meet its obligations under this Consent Order and Agreement nor preclude the Department from commencing an action to compel Harrisburg's compliance with the terms and conditions of this Consent Order and Agreement, or any applicable statute, rule, regulation, permit, or order of the Department.
- 13. In the event Harrisburg fails to comply in a timely manner with any term or provision in Paragraphs 2 and/or 4 of this Amendment To Consent Order and Agreement, Harrisburg shall be in violation of this Consent Order and Agreement and, in addition to other applicable remedies, shall pay a civil penalty in the amount of \$500 per day for each violation. The penalty shall be due automatically and payable upon demand by the Department. Such penalty paymentshall be forwarded as described in Paragraph 10, above. It is understood by the parties hereto that payment of any money hereunder shall neither constitute a waiver of Harrisburg's duty to meet its obligations under this Consent Order and Agreement nor preclude the Department from commencing an action to compel

Harrisburg's compliance with the terms and conditions of this Consent Order and Agreement, or any applicable statute, rule, regulation, permit, or order of the Department.

- 14. In the event Harrisburg fails to comply in a timely manner with any term or provision in Paragraphs 1, 3 and/or 8 of this Amendment To Consent Order and Agreement, Harrisburg shall be in violation of this Consent Order and Agreement and, in addition to other applicable remedies, shall pay a civil penalty in the amount of \$700 per day for each violation. The penalty shall be due automatically and payable upon demand by the Department. Such penalty payments shall be forwarded as described in Paragraph 10, above. It is understood by the parties hereto that payment of any money hereunder shall neither constitute a waiver of Harrisburg's duty to meet its obligations under this Consent Order and Agreement nor preclude the Department from commencing an action to compel Harrisburg's compliance with the terms and conditions of this Consent Order and Agreement, or any applicable statute, rule, regulation, permit, or order of the Department.
- 15. In the event Harrisburg fails to comply with Paragraph 8, <u>supra</u>, on or before November 1, 1991, Harrisburg shall be in violation of this Amendment To Consent Order and Agreement and, in addition to other applicable remedies, shall pay a civil penalty in the amount of \$1000 per day for each violation. The penalty shall be due automatically and payable upon demand by the Department. Such penalty payments shall be forwarded as described in Paragraph 10, above. It is understood by the parties hereto that payment of any money hereunder shall neither constitute a waiver of Harrisburg's duty to meet its obligations under this Consent Order and Agreement nor preclude the Department from commencing an action to compel Harrisburg's compliance with the terms and conditions of this

Consent Order and Agreement, or any applicable statute, rule, regulation, permit, or order of the Department.

16. In the event that Marrisburg fails to forward any penalty payment required under Paragraph 9 - 12, <u>supra</u>, in a timely manner the Department may suspend Permit No. 100992 until such penalty payment is received.

17. Force majeure

- a. In the event that Harrisburg is prevented from complying in a timely manner with any time limit imposed in this Consent Order and Agreement solely because of a strike, fire, flood, act of God, or other circumstances entirely beyond Harrisburg's control and which Harrisburg, by the exercise of all reasonable diligence, is unable to prevent, or mitigate then Harrisburg may petition the Department for an extension of time. An increase in the cost of performing the obligations set forth in this Consent Order and Agreement shall not constitute circumstances beyond Harrisburg's control. Harrisburg expressly agrees that its economic inability to comply with any of the obligations of this Consent Order and Agreement shall not be grounds for any extension of time otherwise available under this paragraph.
- b. Harrisburg shall only be entitled to the benefits of this paragraph if it notifies the Department within two (2) days by telephone and within ten (10) days in writing of the date it becomes aware or reasonably should have become aware of the event impeding performance. The written submission shall include all related documentation, as well as a notarized affidavit from a responsible official of Harrisburg specifying the reasons for the delay, the expected duration of delay, and the efforts which have been made and are being made by Harrisburg to minimize the length of the delay. Harrisburg's failure to comply with the requirements of this

paragraph specifically and in a timely fashion shall render this paragraph null and of no effect as to the particular incident involved.

c. Harrisburg shall have the burden of proof as to the justification for an extension and the length of such extension pursuant to this paragraph, both to the Department and in the event the matter results in litigation. Such burden of proof shall be by clear and convincing evidence. The total of all extensions to this paragraph, individually or in addition to previous extensions, shall in no event exceed one hundred twenty (120) days.

. ;

- 18. If any time limit in this Consent Order and Agreement is extended pursuant to Paragraph 17, <u>supra</u>, (Force Majure) Marrisburg shall also be granted an extension of time for complying with subsequent time limits, set forth in Paragraphs 1 8, <u>supra</u>, if those compliance dates depend, directly or indirectly, upon timely completion of the activity subject to the force majure event.
- 19. Paragraphs 2 7, 10 and 17 of the 1988 Consent Order are superceded by the this Amended Consent Order and Agreement.
- 20. Paragraphs 1, 8, 11 16, 18 22 of the 1988 Consent Order are incorporated by reference.
- 21. Paragraph 9 of the 1988 Consent Order has been previously satisfied by Harrisburg.

IN WITNESS WHEREOF, the parties hereto have caused this Consent Order and Agreement to be executed by their duly authorized representatives. The undersigned representatives of Harrisburg certify under penalty of law, as provided by 18 Pa.C.S. §4904, that they are authorized to execute this Consent

1 1

Order and Agreement on behalf of Harrisburg that Harrisburg consents to the entry of this Consent Order and Agreement and the foregoing Findings as an ORDER of the Department; and that Harrisburg hereby knowingly waives its right to appeal this Consent Order and Agreement and the foregoing Findings, which rights may be available under the Administrative Code, 71 P.S. §510-1 et seq., the Administrative Agency Law, 2 Pa.C.S. §§501-508 and 701-704 or any other provision of law.

FOR THE CITY OF HARRISBURG:

Stephen R. Reed Mayor of Harrisburg

James J. McCarthy / Controller of Harrisburg

3

FOR THE COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL RESOURCES:

llugh V. Archer, Ph.D., P.E

Regional Director

Michael J. Melyman

Assistant Counsel

Approved For Legality And Form:

Bradley C. Bechtel, Esquire

City Solicitér

loward J. Wein, Esquire

-Klett, Lieber, Rooney & Schorling

Attorney for Harrisburg

COMMORHEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES

In the Matter of:

City of Harrisburg Harrisburg Municipal Incinarator 1670 South Minateanth Stract Harrisburg, PA 17104 Air Quality

Air Pollution Abatement Order No. 89-575

ORDER

HOW, this 17+1 day of March, 1989, the Commonwealth of Pennsylvania,

Department of Environmental Resources ("Department") has found and determined the
following findings:

- A. The Department is the agency with the duty and authority to administer and enforce the Air Pollution Control Act, Act of January 8, 1960, P.L. 2119; (1959), as emended, 35 P.S. §4001 et agg. ("Air Pollution Control Act"); Section 1917-A of the Administrative Code of 1929, Act of April 9, 1929, P.L. 177, as amonded, 71 P.S. §510-17 ("Administrative Code") and the rules and regulations promulgated thereunder.
- B. The City of Harrisburg ("Harrisburg") is a City of the Third Class located in Dauphin County with a mailing address of 10 North Second Street, Harrisburg, PA 17101.
 - C. Staphen R. Reed is the mayor of Harrisburg.
- D. Harrisburg owns and operates a municipal incinerator located at 1670 South Hineteenth Street, Harrisburg, PA 17104. ("Incinerator") Municipal wasts from Harrisburg and surrounding communities is burned in the incinerator.
- E. The Incinerator contains two Joseph Hartin GmbH incinerator units. Emissions from each of these units are controlled by a Rothemuhle-Walthor electro-static precipitator.
 - F. The Department issued Operating Permit No. 22-301-052 to Herrisburg.



- G. The Incinerator is an Air Contamination Source as defined in the Section 3 of the Air Pollution Control Act, <u>supra</u>, 35 P.S. §4003, and must comply with the provisions of the Air Pollution Control Act and all relevant regulations.
- H. Section 123.12 of the Department's Rules and Regulations, 25 Pa. Code \$123.12, forbids the emission of particulate satter from any incinerator into the atmosphere at a rate greater than 0.1 grains per dry standard cubic foot (gr/decf) corrected to 12% carbon dioxide.
- On April 21, 1988, a stack tast was performed on Incinerator unit No.
 Particulate emissions of .759 gr/dscf and .551 gr/dscf were measured. These values exceed the limits of 25 Pa. Code \$123.12.
- J. On August 25, 1988, a stack test was performed on Incinerator unit Ho.
 The particulate emissions of .187 gr/dscf and .186 gr/dscf were measured.
 These values exceed the limits of 25 Pa. Code §123.12.
- K. On Hovember 9, 1988 and Hovember 10, 1988 stack tests were conducted on both incinerator units. Particulate emissions of .254 gr/dscf, .190 gr/dscf and .214 gr/dscf were measured for Unit 1 and .579 gr/dscf, .446 gr/dscf and .550 gr/dscf were measure for Unit 2. These values exceed the limits of 25 Pa. Code \$123.12.
- L. Harrisburg has failed to demonstrate that the Incinerator can comply with the Departments requirements including 25 Pa. Code \$123.12.
- M. On October 19, 1988, October 26, 1988 and November 16, 1986, the Department observed visible emissions in excess Section 123.41 of the Department's Rules and Regulations, 25 Pa. Code \$123.41, from the Incinerator. Harrisburg pled guilty to summary criminal citations filed for these violations.

- N. On August 11, 1988, August 17, 1988, August 31, 1989, September 12, 1983 and October 7, 1988 ash from the Incinerator escaped the property and fell upon private property in Harrisburg, Pa. and Steelton, Pa. causing Air Pollution in violation of 25 Pa. Code §121.7. Harrisburg plad guilty to summary criminal charges filed for these violations.
- O. The violations sat forth in paragraphs M and N also constitute non-compliance with the conditions of Permit No. 22-301-052, and violations of 25 Pa. Code \$127.25, which requires compliance with all permit conditions. Harrisburg plad guilty to summary criminal charges filed for these violations.
- P. Based upon Harrisburg's inability to demonstrate compliance with the Department's rules and regulations, Permit No. 22-301-052 was not renewed upon its expiration on November 30, 1986.
- Q. The Joseph Martin GmbH incinerator units and Rothemuhle-Walther alectro-static precipitator units are in need of maintenance, rehabilitation, improvements, modification and/or replacement if the Incinerator is to operate in compliance with the Department's Rules and Regulations and the Air Foliation Control Act, supra.
- R. The violations described in Paragraphs I, J, K, H, H and O constitute unlawful conduct under Section 8 of the Air Pollution Control Act, 35 F.S. \$4008 and a statutory nuisance under Section 13.4 of the Air Pollution Control Act, 35 P.S. \$4013.4.

NOW THEREFORE, pursuant to Sections 4 and 11 of the Air Pollution Control Act, supra, 35 P.S. \$4004, 4011, and Section 1917-A of the Administrative Code, Furra, 71 P.S. \$510-17, it is hereby Ordered that:

1. Within sixty (50) days of the date of this Order Harrisburg shall file

a document detailing a plan for rehabilitating, upgrading, repairing, improving and/or replacing the air pollution control equipment at the Incinerator. The submittal shall include a detailed description of the work to be done, plans and sketches, a showing that the proposed efforts will result in compliance and a schedule for performing all associated work.

- 2. Harrisburg shall respond to any Department comments to the submittal within thirty (30) days of receipt.
- 3. Within thirty (30) days of the Department's approval or approval with modifications of the submittal, Harrisburg shall implement the plan. Actual construction shall begin at this time unless the Department approves a different schedule.
- 4. Within one hundred and eighty (180) days of approval or approval with modifications of the submittal, Harrisburg shall have fully implemented the plan. All work on the units shall be complete at this time.
- 5. Within two hundred and seventy (270) days of approval or approval with modifications of the submittal, Harrisburg shall demonstrate compliance with the Air Pollution Control Act and relevant provisions of the Rules and Regulations, particularly 25 Pa. Code \$123.12 by stack testing.
- 5. No less than thirty (30) days before stack testing Harrisburg shall notify the Department of the date or dates of the test and provide a test protocol to the Department for its review.
- 7. If Harrisburg fails to demonstrate compliance within two hundred and seventy (270) days of approval of the submittal or approval with modifications, but in no event later than June 15, 1990, it shall cease operations at the Incinerator unless and until it has demonstrated compliance.

This action of the Department may be appealable to the Environmental Hearing Board, 101 South Second Street, Suites 3-5, Harrisburg, PA 17101 (717-787-3483) by any aggrieved person pursuant to Section 4 of the Environmental Hearing Board Act, Act of July 13, 1988, P.L. 374, 35 P.S.\$7514; and the Administrative Agency Law, 2 Pa. C.S., Chapter 5A. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the regulations governing practice and procedure before the Board may be obtained from the Board. This paragraph does not, in and of itself, creats any right of appeal beyond that permitted by applicable statutes and decisional law.

Left Priceson
Regional Air Pollution Control Engineer

QUALITY ASSURANCE QUALITY CONTROL PLAN

CITY OF HARRISBURG

DEPARTMENT

of

INCINERATOR AND STEAM GENERATION

Quality Assurance Quality Control Plan

for

Residue Disposal Areas

B-3 and B-2

PREPARED PURSUANT TO THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES MUNICIPAL WASTE MANAGEMENT REGULATIONS, 25 PA CODE CHAPTER 271-285.

MARCH 1992

CITY OF HARRISBURG DEPARTMENT OF INCINERATION AND STEAM GENERATION

QUALITY ASSURANCE/QUALITY CONTROL PLAN

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PREFACE

The following Quality Assurance and Quality Control (QA/QC) Plan has been prepared in order to comply with the requirements of the Pennsylvania Department of Environmental Resources and is intended to be utilized during the proposed landfill construction related activities which are to be undertaken by the City of Harrisburg for Residue Disposal Areas B-2 and B-3 of their Steam Generating Incinerator. Therefore it will be included as a portion of the proposed Contract Documents, which will also include the Drawings and Specifications, as prepared by the Design Engineer for each particular Residue Disposal Area. In instances of conflict between the requirements of the Contract Documents including the Drawings and Specifications, and the requirements of the QA/QC Plan, the provisions contained in the General Conditions of the Contract Documents regarding such will govern.

I. INTRODUCTION

This document will serve to provide the Quality Assurance Engineer with the minimum effort requirements necessary to assure that the design criteria for the landfill components relative to Site B-2 and B-3 of the Harrisburg Steam Generating Facility are met during construction.

The scope of this document includes a system of documentation for all reports and data necessary in assuring compliance with design and landfill component requirements for Site B-2 and B-3. Testing methods and frequencies, as well as procedures for the distribution of test results, are provided. Documentation and correction procedures for construction and material deficiencies are also provided.

CITY OF HARRISBURG

DEPARTMENT OF INCINERATION AND STEAM GENERATION

MAJOR PERMIT MODIFICATION TO SOLID WASTE PERMIT NUMBER 100758

FOR

HARRISBURG MATERIALS, ENERGY, RECYCLING AND RECOVERY FACILITY

MARCH, 1993

MAYOR: Stephen R. Reed DIRECTOR: John A. Lukens



Nassaux-Hemsley, Inc. 132 Kline Plaza, Suite E Harrisburg, PA 17104 (717)234-6391

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HARRISBURG MATERIALS, ENERGY, RECYCLING & RECOVERY FACILITY

Introduction: The City of Harrisburg, Pennsylvania currently operates and maintains a mitted 720 to per de Municipal Solid Waste Processing Facility wholly located within the City of Harrisburg 15 1670 South 19th Street, Harrisburg, PA (17104). The City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates this facility and the City operates the City operates this facility and the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates the City operates t

This "Major Permit Modification" application has been prepared after and in accordance with consultations of the Pennsylvania Department of Environmental Resources, Solid Waste Management Bureau.

The application is a "generic" request by the City to process and dispose of Municipal-like Residual waste and residual waste materials. As this is a recently permitted/repermitted facilities, this application consists of only the following specific Departmental Forms and Regulatory requirements:

FORM A

FORM R

FORM S

FORM C1

Public Notification

Certification of the newspaper advertisement and copies of the U.S. Mail Return Receipts will be forwarded to the Department within 30 days of this application submission.

As indicated above, this application request is for approval to process and dispose of MSW-like residual and residual waste materials. These will be received from various industrial and large commercial establishments throughout the area.

The Facility will fully comply with the 1990 Federal Air Quality Regulations. The major processing components of the Facility consist of 1) two 400 TPD furnace/boilers, 2) air quality control systems, 3) turbine generator systems for the production of electrical energy for sale, 4) a complete Front-End Material Separation (MRF) plant to accommodate both the collected curbside recycling materials and MSW. This MRF will also recover materials

inadvertently discarded into the City's waste stream or are available from the residual waste streams.

The Facility will process source separated, municipal solid waste, residual wastes, waste tires and sewage sludge at the rate of 359,525 tons per year. The typical combined fuel that is produced consists of prepared municipal solid waste (235,060 TPY), chopped tires (30,660 TPY) and municipal sewage sludge (26,280 TPY). Residual wastes which are processed for fuel feed into the furnaces will displace a portion either the MSW, tires and/or the sewage sludge fraction(s). In this typical composite fuel the MSW fraction represents 80.5 percent of the total input to the furnaces by weight, and the chopped tires 10.5 percent. introduced into the respective furnace through dedicated charging hoppers. Typically 9.0 percent of the total composite fuel will be municipal sewage sludge initiated extraneous to the feed chute and introduced in the proximity of the overfire air nozzles. combustion air for the primary and secondary forced draft fans shall be drawn from the tipping floor area through the refuse pit.

Dry acid gas scrubbers and pulse-jet fabric filters will condition the traces producted by acid combustion products. The dry acid combustion products acid flue gases. The quantity and mixture of water and lime is selected by integrated computer controls to meet the acid gas emissions compliance parameters. The in-series down stream pulse jet fabric filter particulate collection and removal systems basic design purpose is to remove fly ash and solid reaction products (and unused reactant) from the acid gas scrubbers entrained in the flue gas.

On fabric filter (baghouse) unit is dedicated to each furnace/boiler system and is located between the dry acid scrubber units and the induced draft fan. The fabric filter systems are designed such that the guaranteed environmental compliance conditions will be sustained continuously on a year round basis under all operating conditions. The scrubbed and conditioned flue gas is then discharged through one of the two flues in the single shell 250 foot high stack.

MAJOR PROCESS SYSTEMS DESCRIPTIONS:

Wastes which are processed by the Facility will be:

- Municipal Solid Waste (as defined by PaDER)
- Combined Source Separated Recyclable Materials
- Sewage Sludge

- Waste Tires
- Municipal-like Residual Solid Waste (as defined by PaDER)
- Residual Solid Waste (as defined by PaDER)

Major components of the Facility include:

- * A tipping receiving area in conjunction with a Front Following Recovery Plant
- * Waste tire chopping and storage facilities
- * Sewage sludge receiving and processing equipment
- * Two 400 tons/day furnace/boilers
- * State of the art quality control system with continuous monitoring equipment
- * Turbine/generator systems for electrical power generation
- * Ash residue handling system as required for the furnace/boiler and AQCS Systems
- * On-site waste water treatment facilities to permit closed loop water recycle.

Electric power will be sold to PP&L under the existing contract. Any excess steam may be sold to the Bethlehem Steel Works and/or the Harrisburg Steam Company.

Ash residue will be disposed of in an adjacent on-site existing permitted landfill after removal and reclamation of residual ferrous scrap for salvage.

The plant is configured to include the following:

Tire Chopping Plant

M.S.W. Separation Area

Front End Material Recovery Plant

A summary of the Facility are key features are as follows:

1. Tire Chopping Plant

The plant is designed to process waste tires (all sizes). These materials will be received at the plant in trucks

and immediately processed to provide chopped tires directly into the pit for feed to the furnaces. The system will consist of truck tipper, conveyors and a chopper.

*

. Front End Material Recovery Plant

The design will allow for the processing of mixed refuse, MSW or residual wastes, and source separated materials at a rate of 120 tons per hour. The system will allow for the recover of:

- * Ferrous
- * Aluminum
- * Plastic Containers -
- * Plastic Containers **

 * Glass flint, green, brown
- * Corrugated Card Board
- Major Appliances (white goods and oversized items)
- * Wood Packaging, Pallets, Dunnage

The system will be a combination of mechanical/electrical and manual separation.

3. Waste Receiving Building

The receiving building addition is designed to receive MSW, residual wastes and source separated recyclable materials. The building is approximately 300' X 146'.

4. Ash Loading and Ferrous Separation Facility

The totally enclosed ash load out facility serves as a building for the storage, load out and shipping of ash residue, and for removal, storage and shipping of ash recovered ferrous materials. The ferrous removal system will consist of vibrating conveyors and magnetic separators.

Boilers/Furnaces

Two units, each unit with a capacity to process 400 tons per day. Each unit will consist of:

- * Feed Chute
- * Furnace
- * Boiler/Superheater/Economizer
- * Primary Air and Secondary Air Fans
- * Ash Extractor

Supporting Systems

These units are designed to comply with the present PaDER regulations.

6. Flue Gas Cleaning System (AQCS)

Acid gas scrubbers and fabric filters will clean the flue gas to comply with the PaDER and USEPA emission limitations.

7. Ash Residue Removal System

The ash handling system is designed to meet the requirements of both of the furnaces/boilers and the AQCS systems. Ferrous metals, which will be a portion of the ash stream from the combustion of waste tires, will be magnetically removed prior to mixing with fly ash from the AQCS systems. The combined ash will be outloaded onto trucks inside of the ash handling building for transport to final disposal at the adjacent on-site permitted ash cell. The recovered ferrous will be stored and outloaded inside of the materials recovery facility for shipment to the scrap markets.

The recovery facility operates a pretreatment facility, for waste water prior to discharge to the sanitary sewer system, for process waste waters. This facility is permitted through the City of Harrisburg's Industrial User Permit System for the disposal of waste waters at the City's Sewage Treatment Facility. The HSGF's Industrial User Permit Number is 032095-5 which was issued by the Bureau of Sewerage.

The wastewater from the Harrisburg Materials & Energy Recycling & Recovery Facility are classified into three distinct categories. These are (1) sanitary wastewater; (2) utility wastewater; and, (3) blowdown wastewater.

The sanitary wastewater is transported, via existing sewers, to the Harrisburg Sewage Treatment Plant where it will be treated. These wastes also contain floor washings and minor drainage from the tipping floor and the front end separated materials storage areas.

The utility wastewater is collected, in a separate system, from the various floor drains and miscellaneous collection points throughout the plant for treatment at the Facility's Wastewater Pretreatment Plant. This wastewater is treated and recycled to the Resource Recovery Facility for use as Service Water Supply.

Blowdown wastewater is collected as above. These waters are treated at the Facility's Wastewater Pretreatment Plant and recycled to the Facility's service water supply which includes supply for the cooling tower(s), acid gas scrubber systems and other nonpotable process water uses. This makeup supply is augmented by treated effluent from the City of Harrisburg's Sewage Treatment Plant. This effluent is further treated to remove phosphates prior to reuse.

ER-WM-4: Rev. 3/88 Date Prepared

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

1	
1.D. Number	

March 5, 1993

FORM A APPLICATION FOR MUNICIPAL WASTE PERMIT

100758

City of Harrisburg Department of Incineration and Steam Generation	Taypayer I D. Nember
	Taxpayer I.D. Number
1670 South 19th Street Harrisburg, PA 17104	69-0235025
nail isbuig, ra 1/104	# 22 m
Name of Facility Harrisburg Materials, Energy, Recycling &	Recovery Facility
Address of Facility 1670 south 19th Street	
(Include Access Road Name and Legislative Number)	
Harrisburg, PA Zip 17104	
City-Borough-Township Harrisburg	
County <u>Dauphin</u>	
Type of Facility Municipal Waste Landfill Construction/Demolition Waste Landfill Composting Facility Demonstration Facility Transfer Facility Incinerator or Resource Recovery Facility Other Processing Facility Sewage Sludge Agricultural Utilization Sewage Sludge Land Reclamation Cher, Specify Residual Waste Processing & Disposal Facility Type of Application Permit Reissuance—271.221 Permit Renewal—271.223 Major Permit Modification—287.222 Minor Permit Modification Construction	
Property Owner(s) (Name and Address) Surface	Telephone Number
City of Harrisburg	(717) 236-5361
Rev. Dr. Martin Luther King, Jr. Government Center	
10 North Second Street - Harrisburg, PA 17101	
Subsurface	
City of Harrisburg	_(717) 236-5361
Rev. Dr. Martin Luther King, Jr. Government Center	
10 North Second Street, Harrisburg, PA 17101	

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DATE	NAME	J	RECEIPT NUMBER	CHECK NUMBER	AMOUNT PAID	TAX INCL.	ISSUED FOR	REVENUE ID	REF.
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ER-AO-20 (1/84)

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6.	U.S.G.S. Map Location of Facility 7.5' Map Name Steelton, PA		
	Center of Facility:		
	LATITUDE /4/00 /1/4/ A/3/"		·
	LONGITUDE/_6/º/51/'/1/9/"		
7.	General Information: Number of New Acres Proposed for Permit / / / /0 / 0 /0/		
	Total Acres of the Property		
	Number of Previously Permitted Acres		
		Effective/Expired	7/13/72/ none
8.	Documents Prepared By: (Name and Addres Nassaux-Hemsley, Incorporated	rs) To	elephone Number (717) 234-6391
	132 Kline Plaza, Suite E		
9.	Harrisburg, PA 17104 AFFIDAVIT: COMMONWEAL/THISTATE OF LINESY	frosia	
	COUNTY OF COUNTY OF COUNTY OF		
	Sworp and subscribed to before me this of	//the day	Notarial Seal Maryann Ellis, Notary Public Harrisburg, Dauphin County My Commission Expires Nov. 21, 1995 Member, Pennsylvania Association of Notaries
	NOTARY PUBLIC		
		My Commission Expires:	
PRINT (OR TYPE Name to be Signed: Date:	11/01/73	
I	John A. Lukens (Print or Type Name)	being duly swor	n according to law, depose and
the doc	t I (am the applicant or permittee) or (am an of suments and statements submitted as part of t dge and belief. I am aware that there are sign the possibility of fines and imprisonment.	this application are transfer in the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second	ue and correct to the best of my
		Signature	
ļ		Title <u>Di</u>	rector

10.	Application	Fe e —Se	ection 271.128. (Attach check payable to the "Commonwealth of PA")
	☐ \$11	,400 —	new permit, or repermitting under 271.111 Municipal Waste Landfill Construction/Demolition Waste Landfill
	\$ 1 \$ 3 \$ 2 \$10 \$ 4	,400 — ,000 — ,400 — ,300 —	new permit. Transfer Facility Incinerators or Resource Recovery Facilities Other Municipal Waste Processing Facilities, including Composting Facilities Demonstration Facility Sewage Sludge Land Reclamation or Land Disposal Sewage Sludge Agricultural Utilization Facility
		600 — ,600 — ,400 — ,100 — 400 — 1,200 —	a major permit modification. Addition of types of waste not approved in the permit Municipal Waste Landfill and Construction/Demolition Waste Landfills Sewage Sludge Agricultural Utilization Sewage Sludge Land Reclamation or Land Disposal Transfer Facility Incinerator or Resource Recover Facility 287.141 (b) (6) (i) Other Municipal Waste Processing Facilities, including Composting Facilities Demonstration Facility
	D. 🗆 \$	300 —	Permit Reissuance.
	E. 🗆 \$	200 —	Permit Renewal.
	F. 🗆 \$	200 —	Minor Permit Modification

11. Public Notice—Section 287.151

For a new permit, major permit modification, permit renewal, permit reissuance and submission of a closure plan attach the proof of public notice for each of the following.

- 1. Newspaper Attach the name of the newspaper, circulation location, copies of the notice, and dates of publication. See Exhibit A-1
- 2. Municipality Attach copies of the written notices sent to the township and county, and copies of the returned certified mail signature cards. See Exhibit A-2
- 3. Contiguous Landowners Attach copies of the written notice(s) sent to each landowner and copies of the returned certified mail signature cards. See Exhibit A-3

NOTE: For each permit application please submit the original (mark as such) and six copies of all required forms, plans and information.

I.D. NO. 100758

MATERIALS, ENERGY, RECYCLING & RECOVERY FACILITY

EXHIBIT A-1

PUBLIC NOTICE ADVERTISEMENT

f , , , , , ,

THE HARRISBURG PATRIOT

The public notice advertisement as required under Pennsylvania Code Chapter 25, Part I, Subpart D, Article VII, Chapter 287, Subchapter B, Section 287.151 has been prepared and advertised in the Harrisburg Patriot-News newspaper. A copy of this notice is attached for reference and information.

The Patriot serves a average daily circulation of 106,379 homes and businesses in a nine county area including all of Dauphin, Cumberland, Perry, Adams and Juniata Counties.

The Sunday circulation is estimated by The Patriot to be 170,576 with a service area which includes the above areas plus Washington D.C. and others.

This Public Notice is being advertised on three (3) consecutive Sundays commencing with March 14, 1993 and continuing on March 21 and March 28, 1993.

Photocopies of the advertisement taken from the respective Sunday newspaper will be submitted to the Department no later than April 15, 1993 in accordance with the requirements of Paragraph 287.151.

ENVIRONMENTAL PERMIT FILING

The CITY of HARRISBURG, PENNSYLVANIA

The City of Harrisburg, Pennsylvania has filed an application for a major permit modification, as defined by the Pennsylvania Department of Environmental Resources (PaDER), to its existing Incineration and Steam Generation Facility located at 1670 South 19th Street, Harrisburg, Pennsylvania (17104).

The permit applications have been filed with the Pennsylvania Department of Environmental Resources, Harrisburg Regional Office. Copies of the applications are available for review and copying at the PaDER Regional Office located at One Ararat Boulevard, Harrisburg, Pennsylvania (17110) between the hours of 8:00 AM and 4:00 PM by appointment only, after the Department determines that the application is administratively complete. Fees for copying may be charged by the Department. Copies will be submitted to the City of Harrisburg located at 10 North Second Street, Harrisburg, Pennsylvania (17101) and to the Dauphin County Planning Commission on Market Street in Harrisburg by the Department.

The permit modification is required for the Incineration and Steam Generation Facility to accept residual and Municipal Waste-Like Residual Solid Wastes from commercial and industrial The facility will recover recyclable materials and incinerate the remaining waste to produce steam and electricity.

The Host Municipality, which is the City of Harrisburg, and the County may submit recommendations for permit conditions, revisions, permit approval or disapproval, and other comments to the Department within sixty (60) days of receipt of the complete application. Comments concerning the application must contain specific reasons for the comment(s).

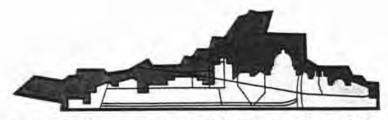
The Department will also accept and consider comments from the public during the permit review. Comments are to be addressed to Mr. Robert Benvin, Regional Waste Manager, Pennsylvania Department of Environmental Resources, Harrisburg Regional Office, One Ararat Boulevard, Harrisburg, Pennsylvania (17110).

Stephen R. Reed, Mayor

I.D. NO. 100758

MATERIALS, ENERGY, RECYCLING & RECOVERY FACILITY

EXHIBIT A-2



HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

March 5, 1993

Mr. Russell L. Sheaffer, Chairman Dauphin County Commissioners Dauphin County Courthouse P.O. Box 1295 Harrisburg, Pennsylvania 17108

Dear Sir:

In compliance with Pennsylvania Code Title 25, Part I, Subpart D, Article VII, Chapter 287, Subchapter B, Section 287.151, the City of Harrisburg, Pennsylvania informs you of its intention to submit applications to the Pennsylvania Department of Environmental Resources (PaDER) for a major permit modification, as defined by the Department, to its existing Incineration and Steam generation Facility.

The permit modification is required for the Incineration and Steam Generation Facility to accept Residual and Municipal Wastelike Residual Solid Wastes from commercial and industrial facilities. The Facility will recover recyclable materials and incinerate the remaining waste to produce steam and electricity.

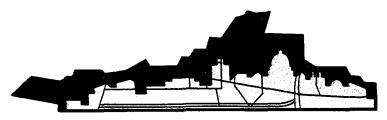
Very truly yours,

John A. Lukens

Director

Certified Letter No.

P 831 108 837



HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

March 5, 1993

Honorable Mayor Stephen R. Reed City of Harrisburg City Government Center Suite 202 10 North Second Street Harrisburg, Pennsylvania 17101-1681

Dear Mayor Reed:

In compliance with Pennsylvania Code Title 25, Part I, Subpart D, Article VII, Chapter 287, Subchapter B, Section 287.151, the City of Harrisburg, Pennsylvania informs you of its intention to submit applications to the Pennsylvania Department of Environmental Resources (PaDER) for a major permit modification, as defined by the Department, to its existing Incineration and Steam generation Facility.

The permit modification is required for the Incineration and Steam Generation Facility to accept Residual and Municipal Wastelike Residual Solid Wastes from commercial and industrial facilities. The Facility will recover recyclable materials and incinerate the remaining waste to produce steam and electricity.

Very truly yours

John A. Lukens Director

Certified Letter No.

P 831 108 839

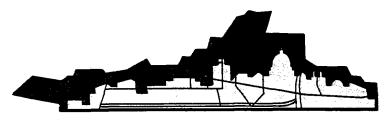
JAL/dh

1670 Canal 1046 Canad a II-mi-buna Banambuania 17104

I.D. NO. 100758

MATERIALS, ENERGY, RECYCLING & RECOVERY FACILITY

EXHIBIT A-3



HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

March 5, 1993

Mr. William and Louis Rozman 1711 S. Cameron Street Harrisburg, Pennsylvania 17104-3148

Re: Property at 1711 Rear Cameron Street

Dear Sirs:

In compliance with Pennsylvania Code Title 25, Part I, Subpart D, Article VII, Chapter 287, Subchapter B, Section 287.151, the City of Harrisburg, Pennsylvania informs you of its intention to submit applications to the Pennsylvania Department of Environmental Resources (PaDER) for a major permit modification, as defined by the Department, to its existing Incineration and Steam generation Facility.

The permit modification is required for the Incineration and Steam Generation Facility to accept Residual and Municipal Wastelike Residual Solid Wastes from commercial and industrial facilities. The Facility will recover recyclable materials and incinerate the remaining waste to produce steam and electricity.

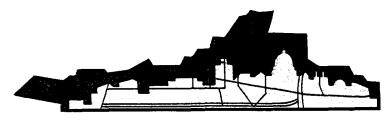
Very truly yours,

John A. Lukens

Director

Certified Letter No.

P 831 108 840



HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

March 5, 1993

Mr. Thomas J. Flynn P.O. Box 10081 Harrisburg, Pennsylvania 17105-0081

Re: Property at 1701 S. Cameron Street

Dear Sir:

In compliance with Pennsylvania Code Title 25, Part I, Subpart D, Article VII, Chapter 287, Subchapter B, Section 287.151, the City of Harrisburg, Pennsylvania informs you of its intention to submit applications to the Pennsylvania Department of Environmental Resources (PaDER) for a major permit modification, as defined by the Department, to its existing Incineration and Steam generation Facility.

The permit modification is required for the Incineration and Steam Generation Facility to accept Residual and Municipal Wastelike Residual Solid Wastes from commercial and industrial facilities. The Facility will recover recyclable materials and incinerate the remaining waste to produce steam and electricity.

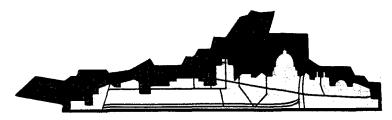
Very truly yours,

John A. Lukens

Director

Certified Letter No.

P 831 108 832



HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

March 5, 1993

Mr. Thomas Maslowski and Ms. Fae Maslowski 704 East Coovers Mechanicsburg, Pennsylvania 17055-3413

Dear Sir and Madam:

In compliance with Pennsylvania Code Title 25, Part I, Subpart D, Article VII, Chapter 287, Subchapter B, Section 287.151, the City of Harrisburg, Pennsylvania informs you of its intention to submit applications to the Pennsylvania Department of Environmental Resources (PaDER) for a major permit modification, as defined by the Department, to its existing Incineration and Steam generation Facility.

The permit modification is required for the Incineration and Steam Generation Facility to accept Residual and Municipal Wastelike Residual Solid Wastes from commercial and industrial facilities. The Facility will recover recyclable materials and incinerate the remaining waste to produce steam and electricity.

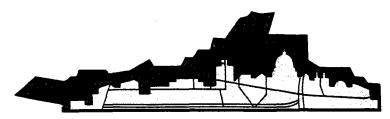
Very truly yours,

John A. Lukens

Director

Certified Letter No.

P 831 108 833



HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

March 5, 1993

Downtown Car Wash P.O. Box 10081 Harrisburg, Pennsylvania 17105-0081

Dear Sirs:

In compliance with Pennsylvania Code Title 25, Part I, Subpart D, Article VII, Chapter 287, Subchapter B, Section 287.151, the City of Harrisburg, Pennsylvania informs you of its intention to submit applications to the Pennsylvania Department of Environmental Resources (PaDER) for a major permit modification, as defined by the Department, to its existing Incineration and Steam generation Facility.

The permit modification is required for the Incineration and Steam Generation Facility to accept Residual and Municipal Wastelike Residual Solid Wastes from commercial and industrial facilities. The Facility will recover recyclable materials and incinerate the remaining waste to produce steam and electricity.

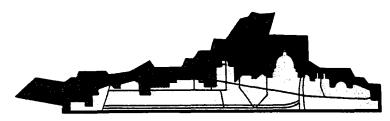
Very truly yours,

John A. Lukens

Director

Certified Letter No.

P 831 108 834



HARRISBURG STEAM GENERATING FACILITY DEPARTMENT OF INCINERATION AND STEAM GENERATION

March 5, 1993

Automotive Financial Service, Inc. P.O. Box 254 Middletown, Delaware 19709-0254

Dear Sirs:

In compliance with Pennsylvania Code Title 25, Part I, Subpart D, Article VII, Chapter 287, Subchapter B, Section 287.151, the City of Harrisburg, Pennsylvania informs you of its intention to submit applications to the Pennsylvania Department of Environmental Resources (PaDER) for a major permit modification, as defined by the Department, to its existing Incineration and Steam generation Facility.

The permit modification is required for the Incineration and Steam Generation Facility to accept Residual and Municipal Wastelike Residual Solid Wastes from commercial and industrial The Facility will recover recyclable materials and facilities. incinerate the remaining waste to produce steam and electricity.

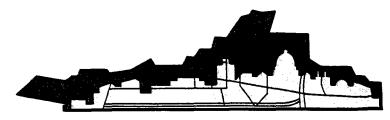
Very truly yours,

John A. Lukens

Director

Certified Letter No.

P 831 108 836



HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

March 5, 1993

Pennsylvania Power & Light Company 2 North 9th Street Allentown, Pennsylvania 18101-1103

Dear Sirs:

In compliance with Pennsylvania Code Title 25, Part I, Subpart D, Article VII, Chapter 287, Subchapter B, Section 287.151, the City of Harrisburg, Pennsylvania informs you of its intention to submit applications to the Pennsylvania Department of Environmental Resources (PaDER) for a major permit modification, as defined by the Department, to its existing Incineration and Steam generation Facility.

The permit modification is required for the Incineration and Steam Generation Facility to accept Residual and Municipal Wastelike Residual Solid Wastes from commercial and industrial facilities. The Facility will recover recyclable materials and incinerate the remaining waste to produce steam and electricity.

Very truly yours,

John A. Lukens Director

Certified Letter No.

P 360 020 149

ER'--WM-- 195: 4/88

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

	I.D.	Numi	ber	
_				

FORM C1 10075
COMPLIANCE HISTORY CERTIFICATION

This is to certify that no changes, additions, or oth	ner supplemen	ital data are requi	red to amend the most recent
Compliance History, (Form C or Module 10) date	ed <u>August</u>	26, 1991 (Date)	and submitted to the
Pennsylvania Department of Environmental Resour	ces by <u>Mat</u>	erials, Energy (Name of Co	Recycling & Recovery Facility (mpany)
which amendments would update and make curr	rent and comp	olete all the inforr	mation provided therein. The
Compliance History now in the Department's po	ssession refle	cts the Company	's current status of officers,
corporate structure as applicable, and complian	ce with envir	onmental laws a	nd regulations.
		(Signature)	
	Name:	John Lukens (Print or Ty	pe Name)
	Title:	Director (Print or T	
	Social Secur	rity No.: 182-	-46-3244
Sworn to and subscribed before me this			
Notarial Seal Maryann Effis, Notary Public Harrisburg, Dauphin County My Commission Expires Nov. 21, 1995 Member, Pennsylvania Association of Notaries	Name:	(Signature) (Print or Ty	N
	Title:	(Print or T	ype Title)
Sworn to and subscribed before me this day of, 19	Social Secul	ity NO.;	
Notary Public		Affix Corpo	rate Seal:

March 5, '93

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

DE Facility	WM Numb	er

FORM R

100758

WASTE ANALYSIS AND CLASSIFICATION PLAN

General References: Sections 271.613; 272.201; 287.134; 288.415/288.423; 288.515/288.523;

288.612/288.623; 289.415/289.423; and 289.515/289.523

Important: Read all instructions carefully before completing this form.

Facility Name: Harrisburg Materials, Energy, Recycling & Recovery Facility

County: Dauphin Township or Municipality Harrisburg

See Attached

ER-WM-396: 5/92

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

INSTRUCTIONS FOR COMPLETING FORM R WASTE ANALYSIS AND CLASSIFICATION PLAN

General References: Sections 271.613; 273.201; 287.134; 288.415/288.423; 288.515/288.523;

288.612/288.623; 289.415/289.423; and 289.515/289.523

Important: Read all instructions carefully before completing the attached form.

Instructions: Complete the attached form and provide the Waste Analysis and Classification Plan addressing all of the following requirements. The Plan should begin on the attached form and continue on 8½ x 11 sheets of paper which should be attached to the form.

This plan shall address all of the requirements set forth in the General References cited above which are applicable to the facility. These requirements relate to three general areas:

- 1. Sampling and analytical procedures and rationale which will be employed to determine whether a proposed waste is acceptable for management at the facility.
- Screening and management procedures for incoming waste which will be used on a daily basis to
 ensure that the incoming waste is reasonably consistent in content with the waste as it was
 originally approved.
- 3. Methodology (including specific numerical limits) which will be used to determine whether a proposed waste is acceptable for management at the class of facility for which it is being proposed. This will address leachate treatability, waste/leachate compatibility with the facility liner (if applicable) and with other wastes/leachates in the facility (if applicable), and groundwater protection (based on compliance with groundwater parameter limitations set forth in the section applicable to the facility).

Samoling and Analytical Procedures: The plan shall specify each parameter for which each waste will be analyzed as well as the rationale for selection of that parameter. Analysis shall include the following list of parameters as specified by facility Class (I, II or III) unless, on a case-by-case basis, the generator certifies in writing the absence of the constituent based on his or her knowledge of the process which generated the waste. Also, based on this same knowledge, it may be necessary to include additional parameters not included on the following lists. For each waste type proposed to be managed at the facility, these additional parameters should be specified. For some generator-specific wastes which could be proposed for management at the facility in the future but which are not included under a previously approved waste type, it may be necessary to include other additional parameters. These should be included in the analysis provided with Form U at the time that the waste is being proposed for management at the facility.

Parameters For Class I and Municipal Waste Facilities

- pH
- Ignitability
- Reactive sulfide
- Reactive cyanide
- Toxicity Characteristic Leaching Procedure (TCLP) all parameters found in either 25 Pa. Code 261.24 or 40 CFR 261.24 plus copper, nickel and zinc
- pH of TCLP extract
- Free liquids
- PCBs
- Water leaching procedure (ASTM Method D3987-85) COD, total solids, oil and grease or petroleum hydrocarbons, and ammonia nitrogen
- Total solids
- Total volatile solids
- Total oil and grease or petroleum hydrocarbons

Parameters for Class II and Class III Facilities

- All parameters specified for Class I facilities.
- Additional TCLP parameters iron and manganese
- Phenolics
- Additional water leaching procedure parameters chloride, cyanide, fluoride, nitrate, sulfate and total organic halide

Test Methods

This plan shall also include the test method(s) to be used for each parameter. The analytical methodologies used shall be those set forth in the most recent edition of the EPA's <u>Test Methods for Evaluating Solid Waste</u> (SW-846), <u>Methods for Chemical Analysis of Water and Wastes</u> (EPA 600/4-79-020), <u>Standard Methods for the Examination of Water and Wastewater</u> (prepared jointly by the American Public Health Association, American Waterworks Association, and Water Environment Federation), or a comparable method subsequently approved by EPA or the Department.

Reanalysis Frequency

This plan shall also include a discussion concerning the frequency with which the sampling and analysis of any waste will be repeated or reviewed to ensure that the original analytical data are accurate and up-to-date. The rationale for the specified frequency shall be clearly explained.

Sampling Methodology

The plan shall include an explanation of the sampling methods that will be used to obtain accurate and representative samples of the waste to be analyzed, including quality assurance and quality control procedures employed in the field. A discussion concerning the manner in which temporal and spatial variability of each waste will be addressed (especially in terms of numbers of samples needed and statistical tests to be employed to define variability) should be included.

Screening of Incoming Waste: The plan shall include description of a method or procedure to screen incoming waste daily to ensure that the waste is reasonably consistent in content with the waste as it was originally approved. This procedure shall, at a minimum, be applied to each waste load as it is received at the facility and shall include a check of the waste's color, physical state and phases. These characteristics shall be compared to those specified on Form U which was originally approved. Additional screening parameters may include texture, density or particle sizes (determined visually) of the waste

Since these screening parameters are very subjective, a procedure to determine whether a waste meets or fails them should be included in the plan. In addition, for a waste which is rejected based on the screening procedure, a description of the manner in which the rejected waste will be managed shall be included in the plan. This description shall include, as applicable, additional sampling and analysis which may be necessary to verify that the waste is the same waste that was originally approved (or meets the limitations for that waste type), names of responsible persons and municipalities, and the method by which an alternate waste management facility will be selected (if the waste is rejected).

<u>Waste Acceptance Procedure</u>: The purpose of this procedure is to quickly and easily determine the acceptability of a waste at the facility by allowing a detailed comparison of the waste characteristics (submitted with Form U for specific waste streams) with maximum allowable levels (which are based on leachate treatability, waste and liner compatibility, protection of groundwater and any other factors specified in the applicable sections related to minimum requirements for acceptable waste).

In addition, this procedure shall set forth descriptions of how various "no degradation" demonstrations (applicable for certain wastes and facility classes) will be made.

The following discussion sets forth the information which shall be included in the waste acceptance procedure for municipal waste landfills and for each of the different classes of residual waste landfills and disposal impoundments.

Class | Residual Waste Landfills/Disposal Impoundments and Municipal Waste Landfills Waste Acceptance Procedure Requirements (271.613, 273.201, 288.423 and 289.423)

- For each parameter or contaminant which may be applicable to or exist in any waste (or its leachate) which may be disposed at the facility, the following limits shall be set forth:
 - Concentration limits in waste/leachate which will adequately ensure the ability of the liner system to prevent groundwater degradation. These limits may be based on actual testing or, in lieu of testing, existing published or documented data on the waste or waste generated from similar processes. Testing protocols and use of existing published or documented data is subject to Department approval.
 - Concentration limits in waste/leachate which can be adequately treated by the leachate treatment system in a manner that will protect public health, safety, and the environment. These limits may be based on actual testing or, in lieu of testing, existing published or documented data on the waste or waste generated from similar processes. Testing protocols and use of existing published or documented data is subject to Department approval.
 - For those contaminants to which the hazardous waste Toxicity Characteristic applies, the Maximum Concentration of Contaminants for the Toxicity Characteristic (as listed in Table 1 of 25 Pa Code Chapter 261 and/or 40 CFR Part 261) shall be set forth.
- For pH, the hazardous waste limits specified in 25 Pa. Code Chapter 261 shall be set forth.
- For ignitability and reactivity, the hazardous waste limits specified in 25 Pa. Code Chapter 261 shall be set forth.
- For free liquid content, a statement that the waste must pass EPA Method 9095, the Paint Filter Liquids Test, shall be included. (This is not applicable to Class I disposal impoundments.)
- In order to determine whether a waste and/or its leachate is compatible with any other wastes or leachates already existing at the facility, either a laboratory compatibility test protocol or a description of how such compatibility will be ensured shall be set forth. The procedure set forth in EPA's "A Method for Determining the Compatibility of Hazardous Wastes" (EPA-600/2-80-076) or another equivalent method approved by the Department may be used.
- For wastes containing contaminants for which no concentration limits (relating to liner compatibility, treatability and groundwater protection) have been specified, a procedure for estimating or determining such contaminant concentrations should be set forth in this plan.

Class II Residual Waste Landfills/Disposal Impoundments Waste Acceptance Procedure Requirements (288.523 and 289.523)

- For each parameter or contaminant which may be applicable to or existing in any waste (or its leachate) which may be disposed at the facility, the following limits shall be set forth:
 - Concentration limits in waste/leachate which will adequately ensure the ability of the liner system to prevent groundwater degradation. These limits may be based on actual testing or, in lieu of testing, existing published or documented data on the waste or waste generated from similar processes. Testing protocols and use of existing published or documented data is subject to Department approval.
 - Concentration limits in waste/leachate which can be adequately treated by the leachate treatment system in a manner that will protect public health, safety and the environment. These limits may be based on actual testing or, in lieu of testing, existing published or documented data on the waste or waste generated from similar processes. Testing protocols and use of existing published or documented data is subject to Department approval.
 - Concentration limits in leachate (or liquid waste for disposal impoundments) equivalent to 50 times the groundwater parameter. For each parameter, each of the following, as applicable, should be included: (1) final non-zero MCL; (2) final MCL; (3) final SMCL; (4) oral cancer slope factor (from IRIS); (5) oral chronic reference dose (from IRIS); and (6) groundwater parameter.

(For facilities which are monofills and which exceed the 50 times limit solely on the basis of the SMCL, a description of the procedure that will be used to demonstrate that the SMCL will not be exceeded in groundwater at a monitoring point or that background will not be exceeded in groundwater at the property boundary shall be set forth.)

- For those contaminants to which the hazardous waste Toxicity Characteristic applies, the Maximum Concentration of Contaminants for the Toxicity Characteristic (as listed in Table 1 of 25 Pa. Code Chapter 261 and/or 40 CFR Part 261) shall be set forth.
- For pH, the limits specified in Sections 288.523 and 289.523 shall be set forth (5.0 to 12.5) unless the permit gives other limits as specified by the Department.
- For ignitability and reactivity, the hazardous waste limits specified in 25 Pa. Code Chapter 261 shall be set forth.
- For free liquid content, a statement that the waste must pass EPA Method 9095, the Paint Filter Liquids Test, shall be included. (This is not applicable to Class II disposal impoundments.)
- In order to determine whether a waste and/or its leachate is compatible with any other wastes or leachates already existing at the facility, either a laboratory compatibility test protocol or a description of how such compatibility will be ensured shall be set forth. The procedure set forth in EPA's "A Method for Determining the Compatibility of Hazardous Wastes" (EPA-600/2-80-076) or another equivalent method approved by the Department may be used.
- For wastes containing contaminants for which no concentration limits (relating to liner compatibility, treatability and groundwater protection) have been specified, a procedure for estimating or determining such contaminant concentrations should be set forth in this plan.

Class III Residual Waste Landfills Waste Acceptance Procedure Requirements (288.623)

- For each metal and other cationic contaminant which may be applicable to or exist in any waste (or its leachate) which may be disposed at the facility, the following limits shall be set forth: Concentration limits in leachate equivalent to 25 times the groundwater parameter. For each metal and other cationic contaminant, each of the following, as applicable, should be included: (1) final non-zero MCL; (2) final MCL; (3) final SMCL; (4) oral cancer slope factor (from IRIS); (5) oral chronic reference dose (from IRIS); and (6) groundwater parameter.
- For contaminants other than metals or cations which may be applicable to or exist in any waste (or its leachate) which may be disposed at the facility, the following limits shall be set forth: Concentration limits in leachate equivalent to the groundwater parameter. For each contaminant, each of the following, as applicable, should be included: (1) final non-zero MCL; (2) final MCL; (3) final SMCL; (4) oral cancer slope factor (from IRIS); (5) oral chronic reference dose (from IRIS); and (6) groundwater parameter.

(For facilities which are monofills and which exceed the groundwater parameter for a non-metal/non-cation contaminant but which meet a concentration limit of 10 times the groundwater parameter, a description of the procedure that will be used to demonstrate that the disposal of the waste will improve pre-existing groundwater degradation shall be set forth.)

- For ignitability and reactivity, the hazardous waste limits specified in 25 Pa. Code Chapter 261 shall be set forth.
- For free liquid content, a statement that the waste must pass EPA Method 9095, the Paint Filter Liquids Test, shall be included.
- In order to determine whether a waste and/or its leachate is compatible with any other wastes or leachates already existing at the facility, either a laboratory compatibility test protocol or a description of how such compatibility will be ensured shall be set forth. The procedure set forth in EPA's "A Method for Determining the Compatibility of Hazardous Wastes" (EPA-600/2-80-076) or another equivalent method approved by the Department may be used.
- For pH, the limits specified in Section 288.623 shall be set forth (5.5 to 9.5) unless the permit gives other limits as specified by the Department.
- A statement that the waste may not exceed a petroleum-based oil and grease content of 1% dry weight shall be included.
- A description of the procedure that will be used to demonstrate that the disposal of waste will not result in any greater groundwater degradation than if the waste were disposed at a Class II landfill shall be set forth. This description shall include a discussion of the attenuative capacity of the underlying soil and how it relates to prevention of groundwater degradation.
- For wastes containing contaminants for which no concentration limits (based on groundwater parameters) have been specified, a procedure for estimating or determining such contaminant concentrations should be set forth in this plan.

FORM R: Waste Analysis and Classification Plan

Sampling and Analytical Procedures

The inclusion of this Form to the City of Harrisburg's application for a major permit modification to the existing Solid Waste Permit (Permit No. 100758) in intended to obtain approval to process residual waste in combination with MSW, chopped tires and sewage sludge at the Harrisburg Materials, Energy, Recycling and Recovery Facility.

The sampling and analytical procedures of waste are required to be provided by the generating facility before waste is evaluated by the Harrisburg Facility for acceptance to dispose of these materials.

Evaluation of the waste shall be performed by the Harrisburg Disposal Facility including review of the generating facilities Form U, and Source Reduction Strategy (SRS). Waste sources which are deemed acceptable for handling at the facility warrant the processing of the Forms and ultimate submission to PaDER.

The sampling and analytical procedures will be performed in accordance with U.S. EPA, PaDER and/or acceptable industry standards in lieu of a specific required sampling or analytical procedure. A complete chemical analysis is required to be supplied to the disposal facility in the form of a Form U by the generating facility.

The generating facility's Form U shall be examined for Class I parameters. The facility will not accept any hazardous waste as specified in 40 CFR Section 261. It is required for the generating facility to provide the testing and analysis results of applicable Class I parameters. The following residual waste property limits will be followed for acceptance:

- 1. pH Allowable pH range 5.0-10.5.
- √2. Ignitability Wastes that exhibit the characteristic of ignitability as defined by 40 CFR Section 261.21 will not be accepted.
- 3. Reactive Sulfide Wastes that exhibit the characteristic of reactivity, resulting from being sulfide bearing, as defined by 40 CFR

Section 261.23 will not be accepted.

- 4. Reactive Cyanide Wastes that exhibit the characteristic of reactivity, resulting from being cyanide bearing, as defined by 40 CFR Section 261.23 will not be accepted.
- 5. Toxicity Characteristic Leading Procedure (TCLP) for the following parameters:

E	Contaminant	Maximum Concentration (mg/l)
		2.2
	Arsenic	5.0
	Barium	100.0
	Cadmium	1.0
	Chromium	5.0
	Lead	5.0
	Mercury	0.2
	Selenium	1.0
	Silver	5.0
	Endrin	0.02
	Lindane	0.4
	Methoxychlor	10.0
	Toxaphene	0.5
	2,4-D	10.0
	2,4,5-TP	1.0
	Copper	*
	Nickel	*
	Zinc	*

- * Testing for these parameters is required but no limit has been established either by the U.S. EPA or PaDER at this time.
- 6. pH of TCLP Extract Not required for incineration type disposal facility, pH of material shall be in accordance with Item 1. Minimum allowable pH 5.0; maximum allowable 10.5.
- Free Liquids Not applicable for incineration type disposal facility.
- Water Leaching Procedure Not applicable for incineration type disposal facility.
- Total Solids Required for the acceptance of sludge type industrial wastes only. Acceptance will be limited to

0.5 - 30% total solids due to the handling capabilities of the sludge system to inject the waste to the incinerator.

- 10. Total Volatile Solids Required for acceptance of sludge type industrial wastes only. Wastes meeting the definition of hazardous wastes will not be accepted by the facility.
- Total Oil & Grease Required for acceptance of liquid or sludge type industrial wastes, waste oil will not be considered for acceptance.

The test methods shall be the analytical methods set forth in the most recent editions of the EPA's <u>Test Methods for Evaluating Solid Waste</u> (SW-846), <u>Methods for Chemical Analysis of Water and Wastes</u> (EPA 600/4-79-020), <u>Standard Methods for the Examination of Water and Wastewater</u> (prepared jointly by the American Public Health Association, American Waterworks Association, and Water Environment Federation), or a comparable method subsequently approved by EPA or the Department.

The Facility will inspect incoming waste streams on a random Applicable parameters will be checked immediately if the facility encounters operating problems or occurrences which include high ash metals content, process equipment corrosion, process equipment failure, deemed safety hazards, or combustion problems.

The disposal facility will evaluate the chemical analyses and decide if the waste is capable of being physically and chemically handled by the facility. The waste composition and flow will be evaluated for addition to the "composite fuel" which is fed into the furnaces. Composite fuel composition (including BTU content) will be calculated for the utilized flows of residual waste, municipal waste, sludge, and waste tires (see Section 3 Methodology). The composite fuel composition calculation will be within the permitted ranges during all residual waste acceptance conditions. This insures compliance with existing permitted Air Quality Plan emission and permitted Ash Quality as well as maintaining the incineration facility's existing guarantees for boiler combustion. The generating Facility's Form U shall also be evaluated for parameters which could result in problems for incineration. This includes safety hazards, air emissions excursions, or ash composition excursions.

The combustion of composite fuel with composition within required range values (see Section 3 Methodology) will achieve compliance with existing emission air quality requirements. These requirements are documented by Amendment to Previous Air Permit Application Number 22-340-001.

The air quality which will be maintained regardless of the amount and properties of residual waste firing will include:

Particulate Matter	0.010 gr/dscf*
Opacity (6 min. avg.)	10%
(24 hour avg.)	30 ppmdv *
(24 hour avg.)	25 ppmdv *
(4 hr avg.)	100 ppmdv *
(24 hr avg.)	180 ppmdv *

* Note: Corrected to 7% Oxygen

2. Screening of Incoming Waste

The waste loads, arriving at the Facility tipping floor, are not automatically commingled with the existing refuse in the pit. The incoming waste will be dumped on the tipping area floor, one load at a time, and examined closely for hazardous waste, infectious or unprocessed medical, and other unacceptable items prohibited by this Facility. This is enforced by contractual requirements and physical inspection of incoming loads by the receiving supervisor and the tipping floor staff. Should any material be identified as being nonpermitted, it is rejected either prior to dumping or, if it has been dumped on the tipping area floor, immediately reclaimed and reloaded by front end loader and subsequently removed from the site by the contracted originator. Further continued inspection of the incoming waste is accomplished as the waste travels through the front end separation facility and the recyclable materials are removed.

Hazardous and/or explosive wastes can not be incinerated in this facility as they represent a major potential human and environmental safety risk. Should materials, inadvertently, be accepted at the Facility which may pose a potential risk, the Department will be immediately notified by the Facility Director and a request made to the Department for assistance in 1) determining the nature of the materials(s), 2) ultimate proper disposal of the material under the direction of the Department, and 3) assist the Department in any action(s) which may be required under law.

Should waste materials of this type be brought to the Facility and deemed unacceptable, the Department will be notified by the Facility Emergency Coordinator within 24 hours. This notification will consist of 1) telephone alert to the Department as to the vehicle, complete with company name, drivers name (if possible), vehicle license number, type of waste for which disposal was requested, waste material(s) composition and amount of waste, and 2) a follow up confirming letter to the Department detailing all of the above, signed by the tipping floor operator, shift supervisor and Emergency Coordinator.

Methodology

The methodology for determination of residual wastes which will be acceptably managed by the facility is based on maintaining the composite fuel composition of the incinerator as permitted for MSW, residual waste, sludge, and used tire in the maintaining the proper composite fuel composition regardless of waste flows will assure compliance with existing permitted emissions values for air quality and ash composition.

Separation Plant will recover recyclable materials in the waste stream and control "composite fuel" composition with proper blending with the chopped tire flow.

The firing of residual waste will not effect current design of Furnace Boiler and Air Quality Control System. The lime acid gas scrubbing technology will maintain proper air quality control with the firing of the residual wastes.

The range of chemical compositions and flows for Residual Waste which will be accepted by the facility is as follows:

Critical Residual Waste Compositions Ranges:

Flow (TPD)	000 (-cuima)
Hydrogen (%)	0-36.6
Nitrogen (%)	0-22.0
Sulfur (%)	0-2.85
Chlorine (%)	0-92.0

The actual residual waste composition is dependent on amount of flow of the residual waste stream and the total waste stream composition. The ranges indicate that at low flows of the residual waste, compositions of the waste may contain a large percentage of certain composition parameters. The residual waste composition ranges are stated only as a guideline indicating the overall range of possible waste

stream composition which may be accepted by the disposal facility.

The acceptance criteria for residual wastes which will be accepted by are based on the following:

- 100% of the residual waste flow is assumed to pass through the Front End Separation Plant to the fuel pit. Residual materials which are not acceptable for incineration but are accepted as recyclable shall not enter into the calculations.
- Dewatered sludge (20% nominal dry solids content) will be fed to the incinerator at a maximum constant rate of 9% of total fuel by weight.
- The 800 ton/day total fuel capacity shall be utilized for calculations.

The BTU range of 5500 to 6500 BTU/#/of fuel of the composite fuel is required for proper incineration of the waste as guaranteed by the boiler manufacturer.

4. The following BTU heat values shall be utilized for calculations:

Tires 13211 BTU/lb
MSW 5612 BTU/lb
Sewage Sludge 1060 BTU/lb
Residual Waste *

- * The residual waste heat value shall be calculated from weight fractions of the various residual wastes being accepted by the disposal facility. The disposal facility requires the BTU heat value to be provided by the generating facility. The value shall be the average value of at least three (3) samples of the waste.
- 5. The following are the allowable compositions ranges for the composite fuel which includes any Form R wastes:

Composite Fuel Content	ntent Ranges (%)	
Carbon & by wt.	24.0 t	0 35.0
Hydrogen, % by wt.	3.5 t	0 5.1
Oxygen, % by wt.	18.0 t	0 29.0
Nitrogen, % by wt.	0.1 t	0.8
Cultur 9 hu		0 0.2

I.D. NO. 100758

Chlorine, & by wt.	0.1 to	0.8
Moisture, & by wt.	18.0 to	40.0
Ash, & by wt.	10.0 to	25.0
Higher Heating		
Value, ATTIVITY	5500 to	6500

 The following nominal fuel chemical compositions shall be utilized for calculations at 6000 BTU per pound of composite fuel.

COMPOSITION	(% By Weight)		
	MSM	SEWAGE SLUDGE	TIRES
Carbon	30.71	5.42	67.18
Hydrogen	4.43	0.08	5.94
Oxygen	24.66	2.91	0.81
Nitrogen	0.17	0.60	0.25
Sulfur	0.12	0.20	1.23
Chlorine	0.46	0.40	0.04
Moisture	25.37	82.56	0.56
Ash	14.08	7.83	23.43



MSW like residual waste as defined by Form S are treated as having the same properties as MSW including chemical composition and BTU content.

- 8. The maximum contribution of tires to the composite fuel will be at 6500 BTU per pound of composite fuel.
- 9. The weight fractions of residual waste (X_R) for each component which is utilized in the calculations shall be calculated based on Form U information, as provided by the generator, and the waste stream flow.
- 10. The following calculations will be performed substituting values for the weights and compositions of the waste:
 - W = Total Weight of Waste (tons)
 - T = Weight of Tires (tons)
 - S = Weight of Sludge (tons)
 M = Weight of MSW (tons)
 - R = Weight of Residual Waste (Tons)
 - $H_{\rm T}$ = BTU of Tires (BTU/lb)
 - H_s^T = BTU Content of Sludge (BTU/lb) H_w = BTU Content of MSW (BTU/lb)

 - X_R = Wright Fraction of Residual Waste for Each Component

Total Mass Balance

T + S + M + R = W

BTU Mass Balance

 $\frac{T(H_T) + S(H_S) + M(H_M) + R(H_R)}{W} = H_W$

Carbon Balance

100 x $(67.18 \text{ T} + 5.42 \text{ S} + 30.71 \text{ M} + X_R \text{ R}) = 24\% \text{ to } 35\%$

Hydrogen

100 x $(5.94T + 0.085 + 4.43M + X_R R) = 3.5% to 5.1% W$

Oxygen

100 x $(0.81T + 2.91S + 24.66M + X_R R) = 18.0% to 29.0% W$

Nitrogen

100 x $(0.25T + 0.60S + 0.17M + X_R R) = 0.1%$ to 0.8%

Sulfur

100 x $(1.23T + 0.20 S + 0.12M + X_R R) = 0.1%$ to 0.2%

Chlorine

100 x $(0.04T + 0.40S + 0.46M + x_R R) = 0.1% to 0.2%$

Moisture

100 x $(0.56T + 82.56S + 25.37M + X_R R) = 18.0% to 40.0%$

Ash

100 x $(24.43T + 7.83S + 14.08M + X_R R) = 10.0% to 25.0%$

The disposal facility will perform these calculations for each waste which is to be processed and disposed of at the facility to assure that the waste is within permitted values for air emissions. The waste provided to the disposal facility from generators, including flow and composition, will be contracted once the overall weight accepted meets the above criteria. Additional or new residual wastes which are solicited for acceptance by the disposal facility also require revision of

waste stream data and performing the calculations by the disposal facility, before acceptance and ultimate contracting.

The residual waste stream shall also be in compliance with Class I parameters as described in Section 1 of this Form R. The Facility will not accept any hazardous wastes as defined in 40 CFR 261.

Additionally, as required by regulations, each generator presenting an application for the disposal of a waste stream must have in place a valid Source Reduction Strategy (SRS). This, together with the completed Form U, will be submitted to PaDER at least 15 days before actual acceptance and disposal by the facility.

The production of incinerator combustion ash is based on the firing of composite fuel which contains metals content which is approximately equivalent to MSW. The utilization of acid gas scrubbing technology will provide ash metals content of approximately one half of untreated combustion facilities.

All ash generated by the Facility will be directed to an ash loadout building adjacent to the main furnace/boiler area. This totally enclosed building has the capability of days temporary ash production storage. From there the ash is sampled for analysis per the protocol below. The transport vehicles used to move the ash from the loadout building to the on-site PaDER permitted residue disposal site will be loaded inside of this totally enclosed building.

Upon generation of ash from the first new incinerator on line ash sampling and the Department's Municipal Incinerator Ash Residue Monitoring Report, will be performed and submitted to the Department at the following frequency:

- Once a week for the first ten weeks
- Once a month for the following six months
- Quarterly thereafter

This protocol is per the Facility's existing Solid Waste Permit, Permit No. 100758 Condition 14 dated August 14, 1992.

Ash sampling and disposal will be in accordance with the Ash Landfill Permit and Department Policy

3097

SOUTHCENTRAL REGION - FIELD OPERATIONS
Waste Management Program
One Ararat Boulevard
Harrisburg, Pennsylvania 17110
(717) 657-4588

OCT 2 9 1993

Mr. John A. Lukens
City of Harrisburg
Department of Incineration and
Steam Generation
1670 South 19th Street
Harrisburg, PA 17104

Re: Major Permit Modification
Form S - Approval
Harrisburg Materials, Energy, Recycling,
and Recovery Facility
Permit No. 100758
Swatara Township, Dauphin County

Dear Mr. Lukens:

I am pleased to enclose a Permit Modification approving a Form S submission for Harrisburg Materials, Energy, Recycling, and Recovery Facility received March 16, 1993. It is issued in accordance with the Pennsylvania Solid Waste Management Act, Act 97.

Compliance with the limitations and stipulations that have been set forth on your permit is mandatory. You have the right to appeal any limitation or stipulation as stated on your permit.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa. C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Market Street State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, (717) 787-3483. TDD users may contact the Board through the Pennsylvania Relay Service, (800) 654-5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on audiotape from the Secretary to the Board at (717) 787-3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

Mr. John A. Lukens Page 2

If you have any questions concerning the enclosed permit and/or the requirements set forth by the Pennsylvania Solid Waste Management Act, please call me at the above number.

Sincerely,

Michael R. Steiner Assistant Director

MRS:tlb

Enclosure

cc: Swatara Township Supervisors
Tri-County Regional Planning Commission

Central Office - Permits
Facility Specialist
Operations
Leif Ericson
Richard Roller
Robert Benvin
John Spang
Anthony Kar
File

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES WASTE MANAGEMENT PROGRAM SOUTHCENTRAL REGION

FORM NO. 13-A

MODIFICATION TO SOLID WASTE DISPOSAL AND/OR PROCESSING PERMIT

Under the provisions of Act 97, the Solid Waste Management Act of July 7, 1980, Solid Waste Permit Number 100758 issued on June 30, 1992 and revised October 7, 1992 to

City of Harrisburg
Department of Incineration and Steam Generation
1670 South 19th Street
Harrisburg, PA 17104

is hereby modified as follows.

The City of Harrisburg Materials, Energy, Recycling, and Recovery Facility [hereinafter referred to as Harrisburg Resource Recovery Facility (RRF)] is hereby authorized to accept for disposal Municipal Waste-Like residual wastes having characteristics substantially similar to those detailed in the Form S submission received March 16, 1993 by the Department. This authorization is given subject to the following conditions:

- Nothing herein shall be construed to supercede, amend, or authorize violation of the provisions of any valid and applicable local law, ordinance or regulation; provided that said local law, ordinance or regulation is not preempted by the Pennsylvania Solid Waste Management Act, the Act of July 7, 1980, Act 97, 35 P.S. \$6018.101, et seq.
- 2. Processing and disposal shall be conducted pursuant to policies and procedures set forth in Harrisburg RRF Form S submission and the Department's Technical Review letter of August 31, 1993 written in response to this Form S submission. Compliance with this Form S submission and Technical Review letter are necessary conditions for waste acceptance, processing, and disposal.

Under no circumstances shall either the Harrisburg RRF Form S submission of March 16, 1993 or the Department's Technical Review of August 31, 1993 supercede the limitations and stipulations set forth by permit conditions contained within Solid Waste Permit No. 100758 issued June 30, 1992 and revised October 7, 1992.

This modification shall be attached to the existing Solid Waste Permi above and shall become a part thereof effective on (date) OCT 2 9 190	t described
FOR THE DEPARTMENT OF ENVIRONMENTAL RESOURCES	

Page 1 of 4

City of Harrisburg Permit No. 100758 Page 2

- 3. Prior to incineration all bulky material, regardless of waste type, must be sized to insure complete combustion and easy access through the hopper before placement in the furnace units.
- 4. Harrisburg RRF is authorized to accept, process, and dispose of Municipal Waste-Like (Form S) residual wastes associated with the following general categories as defined in Harrisburg RRF, Form S submission, Exhibit S-II-A-5:

Untreated Wood Wastes
Fabric, Cloth and Textile Wastes
Waste Paper and Cardboard
Scrap Carpet Wastes
Cured Rubber Scrap
Non-Chlorinated Waste Plastic
Food Wastes
Sawdust
Fiberglass Insulation Scrap
Non-Metallic Containers
Off-Spec and Expired Pharmaceutical Wastes (Approval on a case-by-case basis. See Permit Condition 6 for an explanation of case-by-case approval process.)

5. Harrisburg RRF is not authorized to accept, process, and dispose of Municipal Waste-Like (Form S) residual wastes associated with the following general categories as defined in Harrisburg RRF, Form S submission, Exhibit S-II-A-5:

Leather Waste
Used Oil Filters
Metal Scrap Wastes
Chlorinated Plastic Wastes

6. Processing/Disposal of Municipal Waste-Like (Form S) residual wastes that require approval on a case-by-case basis requires the submittal of a complete and accurate Form S application to the Department. Each application shall contain all information mandated by PA Code Subsection 271.611 and 27.612.

Applications shall be sent to the Department's Southcentral Regional Office by certified mail or hand delivered. Acceptance of the waste may begin upon receiving written approval from the Department or after fifteen (15) business working days (hereinafter "waiting period") from the date the application was received by the Department if the facility does not hear from the Department within 15-day

City of Harrisburg Permit No. 100758 Page 3

waiting period. Absence of objection or approval by the Department within the 15-day waiting period does not constitute a final action or ruling by the Department. The Department reserves the right to subject the permittee to any and all applicable enforcement actions stipulated by the Solid Waste Management Act and the Department's rules and regulations promulgated thereunder.

- 7. Municipal Waste-Like residual wastes that fall outside the scope of approved Form S general waste catergories in Permit Condition 4 cannot be accepted for processing and disposal. Acceptance of a new type of Municipal Waste-Like residual waste at Harrisburg RRF requires the submittal of a new completed Form S to the Department for review as a major permit modification including a \$600.00 application fee for municipal waste facilities.
- 8. An amended appendix to this permit shall be submitted to the Department on a quarterly basis which lists all Municipal Waste-Like residual wastes currently approved for processing and disposal at Harrisburg RRF. The amended appendix shall provide information on the name of each generator, waste type and date the waste was first accepted for disposal. The appendix shall also list the aforesaid information for small quantity wastestreams from large quantity generators.
- 9. Small quantity waste generators as defined per Subsection 287.51 shall supply certification and/or documentation to the processing and disposal facility on an annual basis that demonstrates their wastes are non-hazardous. These records shall be maintained at the processing and disposal facility for inspection by representatives of the Department.
- 10. The Department may require additional tests of certain types of Municipal Waste-Like residual wastes in order to prevent potential harm or threat of harm to the health, safety, or welfare of the community or environment.
- 11. Combined loads of Municipal Waste-Like Residual and wastes from small quantity generators can be received at Harrisburg RRF provided generator logs are maintained and that acceptance does not violate the generating county plan or any regulations adopted by the respective county.
- 12. All Municipal Waste-Like residual wastes accepted for disposal at Harrisburg RRF are subject to the fees required by the Municipal Waste Planning, Recycling and Waste Reduction Act (101).

City of Harrisburg Permit No. 100758 Page 4

- 13. Hazardous waste as defined under 25 Pa. Code 261 may not be accepted at the facility for processing and disposal. Any Municipal Waste-Like residual waste generator whose analysis reaches 50% of the hazardous waste limit shall provide additional analysis, documentation, etc. to justify the waste is below hazardous waste limits.
- 14. Harrisburg RRF shall notify the Department at the earliest possible time of any rejected waste loads. This notification shall include names of responsible persons or municipalities, and if possible the method by which an alternative processing or disposal facility will be selected.
- 15. The host Township and County shall receive copies of the forms described in Permit Condition 6 and 7 concurrent with the submission to the Department, unless an alternative notification timetable is approved by the host Township and County.
- 16. The annual Harrisburg RRF operation's report must include documentation that the analysis or certification required under Section 287.54 (Form 26R) for chemical analysis of waste is on file for each wastestream from each large quantity generator. (Small quantity generators must provide at a minimum documentation that their wastes are characteristically non-hazardous.) If the Form 26R is not supplied by the generator on an annual basis to Harrisburg RRF, approval for acceptance of the waste for disposal will be suspended until the Form 26R is supplied.
 - The Form 26R is to be kept on file for each Municipal Waste-Like residual waste generator at the Harrisburg RRF site.
- 17. This modification does not supersede the average and maximum daily waste acceptance volumes of the original permit issued June 30, 1992 and revised October 7, 1992. Fluctuations in Municipal Waste-Like residual waste acceptance volumes must not exceed these limitations.

March 5, 1993

DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

100758

FORM S

REQUEST FOR APPROVAL TO PROCESS OR DISPOSE OF MUNICIPAL WASTE-LIKE RESIDUAL WASTE

1. GENERAL INFORMATION (must be completed by processing/disposal facility)

1.	Name of facility	Harrisburg Materials, Energy, Recycling & Recovery Facil			
	Address	1670 South 19th Street,	Harrisbur	g, PA Zip:	17104
	Municipality	Harrisburg	County _	Dauphin	
	Location of site if	different from mailing address	N/A		
2.	Name and address	of permittee (if different from	(1) above) _	N/A	
	Municipality	N/A	County _	N/A	
3.	Solid waste permi	t number(s) for the disposal faci	100758	I	
			·		
4.	Facility contact pe	rson			
	Name John	Lukens	_ Title	Director	
	Telephone Numbe	r <u>717/236-5361</u>		<u> </u>	
Ge	•	717/236-5361 See Exhibits S-I-B 🗸	/	•	
Ge 1.	nerator of the Waste				
	nerator of the Waste Name of generato	See Exhibits S-I-B			N/A
	nerator of the Waste Name of generato Mailing address	See Exhibits S-I-B V		Zip:	
	Name of generator Mailing address Location of site if	See Exhibits S-I-B V		Zip:	N/A
	Name of generator Mailing address Location of site if	See Exhibits S-I-B N/A N/A different from mailing address N/A	County _	Zip:	N/A
1.	Name of generator Mailing address Location of site if Municipality If a subsidiary, nar	See Exhibits S-I-B V N/A N/A different from mailing address	County _	Zip:	N/A
1.	Name of generator Mailing address Location of site if Municipality If a subsidiary, nar Residual Waste Ide	See Exhibits S-I-B V N/A N/A different from mailing address N/A me of parent co. N/ entification number	County_	Zip: N/A N/A	N/A
 2. 3. 	Name of generator Mailing address Location of site if Municipality If a subsidiary, nar Residual Waste Ide	See Exhibits S-I-B N/A N/A different from mailing address N/A me of parent co. entification number t number(s) for the generator, i	County_	Zip: N/A N/A	N/A

FORM S

- II. WASTE DESCRIPTION (Must be completed by generator)
 - A. General Properties (include physical state and physical appearance)
 - 1. Description of the waste, its origin, and containerization.

SEE EXHIBIT S-II-A-1

2.	Typical volume of wast	e to be shipped Exhibit	to processin	ng/dis	posal faci	iity:		
	a. Monthly S-II		gais., ibs.,	tons,	cu. yds. (c	ircie one	•)	÷
3.	Disposal frequency: _	24 hours	per	day.			See Exhil	oit
4.	Current volume to be s	hipped to prace	ssing/dispos	sai fad	cility	-	S-II-A-2 s., tons, cu	ı. yds.
5.	is the waste a hazardo by a conditionally exer Yes No if yes,	not small quant	ity generato	or as c	tefined in	40 CFR :	151.5?	erated
5.	Check the following bo	ox(es) for applica	able waste t	type(:): See	Exhibi	t S-II-A	- 5
	wood wastes (excluding fabric/cloth/textile/le fabric/cloth/textile/le waste paper sningle scrap (non a hot drained used oil if carpet scraps cured rubber scrap burnt demolition debat	ather wastes asbestos) liters (non-terno	e plated)		nanufactu ood waste netal scrae awdust (e liberglass i	iring and es (exclud p (exclud excluding insulatio	ing powd	resins) ment sludges) ered grindings) rood)
4	☑ *Other (specify)	Pharmaceutica	al Wastes	_				

*All waste types not listed above must be approved in writing in the permit by the Department prior

to processing or disposal facility acceptance. See instructions.

FORM S

	8.	Chemical Analyses - if applicable, as specified in the instr	uctions.	See Exhibit S-II	- B
III.		SCRIPTION OF WASTE GENERATION (must be complete ditional sheets if necessary). For each waste type requeste		generator of waste.	Use
	A.	Detailed description and schematic of waste generat specified in the instructions.	ion proces	s producing the wa	ste as
		See Exhibit S-III			•
	8.	Provide written justification for the municipal waste-life	ke designa	tion of this residual	waste
		stream. See Exhibit S-III			
	C.	Have other processing, disposal, recycling, beneficial considered? Yes No If yes, describe alternatives	use, or reconsidered	eclamation methods i. N/A See Exhibit	been 5-III
٧.	DOG	CUMENT PREPARED BY: (Name, Address, and Title)		Telephone Number	•
	Na	ssaux-Hemsley, Incorporated		717/234-6391	·
	13	2 Kline Plaza, Suite E			
	Ha	errisburg, PA 17104			
1.	l certi subm imme true,	IFICATION OF DOCUMENTS BY GENERATOR ify under penalty of law that I have personally examined a litted in this and all attached documents and that based ediately responsible for obtaining the information, I belie accurate, and complete. I am aware that there are sign mation, including the possibility of fine and imprisonment.	upon my i eve that th nificant per	nquiry of those indiv e submitted informat	iduals tion is
	ne of i	Responsible	Titl	e	
ig	nature		Da	te	
Γak	en, sv	vorn, and subscribed before me, this day of Notary Seal		_ A.D. 19	

DEPARTMENT OF ENVIRONMENTAL RESOURCES SUREAU OF WASTE MANAGEMENT

INSTRUCTIONS FOR COMPLETING FORM S

REQUEST FOR APPROVAL TO PROCESS/DISPOSE OF MUNICIPAL WASTE-LIKE RESIDUAL WASTE (Form ER-WM-394: 6/92)

Important: Read all instructions carefully before completing form.

Applicability: A municipal waste-like designation for certain residual waste streams is designed to be limited in scope to only those residual wastes which are truly municipal-like. Further, it is important to note that only lined disposal facilities and processing facilities which dispose of their waste at lined disposal facilities may accept these wastes. Typically, municipal waste-like residual wastes will include wood wastes, fabric/cloth/textile/leather wastes, waste paper, waste plastic, and carpet wastes, etc. However, other residual waste types may be considered for this designation provided adequate documentation and justification are submitted and approved in the permit by the Department.

Instructions: Complete one of these forms for each municipal waste-like residual waste requested for processing or disposal. Provide all technical documentation, justification, analyses (if required), and waste characterization on 8½ x 11 sheets of paper. Attach the page(s) to this form and identify as Request for Approval to Process/Dispose of Municipal Waste-Like Residual Waste. This form and attachments must be submitted by the facility operator to the appropriate Department regional office when a waste other than those listed in Section II, Item A of this form, is requested for approval. Such a request will be processed as a major permit modification. All wastes listed in Section II, Item A may be accepted by the processing or disposal facility with an appropriate Form R approval.

SECTION I - GENERAL INFORMATION - Self-Explanatory.

SECTION II - WASTE DESCRIPTION

Item A. General Properties

- #1. Describe the physical state, color and phases of the waste. For example, gray, solid and granular. Also, Material Safety Data Sheets (MSDS) must be submitted with the application, when available.
- #5. Check the appropriate box(es) which most closely categorizes the waste. Only municipal waste-like residual waste will be accepted via this application. Typically, municipal waste-like residual wastes will include wood wastes, fabric/cloth/textile/leather wastes, waste paper, waste plastics, carpet wastes, etc. In addition, other residual wastes may be considered and approved provided adequate documentation and justification are submitted to the Department by the processing or disposal facility operator and approved in writing in the permit.

Item B. Chemical Analyses

The generator must determine if his waste is hazardous waste under Chapter 261 and 262 of the Department's hazardous waste management regulations. This determination must include a chemical analysis, generator knowledge or a combination of both. Typically, the waste evaluation is all that will be required; however, if the generator cannot demonstrate to the Department's satisfaction that no additional analysis is necessary to determine if the waste to be processed or disposed will not adversely affect the operation or the effectiveness of the facility liner or leachate treatment systems, then such additional analysis as deemed necessary may be required.

SECTION III - DESCRIPTION OF WASTE GENERATION

Item A. Describe the waste generation process which produced the waste. This must include the waste type and any substances added during or after generation. Also, the description must adequately characterize where and how the waste is generated.

FORM S

VI. CERTIFICATION OF PROCESSING OR DISPOSAL FACILITY

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name of Responsible
Official John A. Lukeris

Title Director

Signature

Date 3/11/93

Taken, sworn, and subscribed before me, this

Notary
Seal

VII. CERTIFICATION OF REGISTERED PROFESSIONAL ENGINEER FOR THE PROCESSING AND/OR DISPOSAL FACILITY

This is to certify that I have personally reviewed all engineering information contained in the accompanying modules, drawings, specifications, and other documents which are part of this application and that I have found it to be of good engineering quality, true, and correct, and is in conformance with the requirements of the Department of Environmental Resources, and it does not, to the best of my knowledge, withhold information that is pertinent to a determination of compliance with the requirements of the Department.

NOTICE: It is an offense under Pennsylvania Crimes Code to affirm a false statement in documents submitted to the Department.

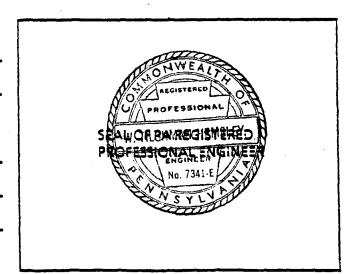
Name William T. Hemsley

Signature // MAIN 73

Address 56 North Second Street

Chambersburg, PA 17201

Phone No. 717/263-4109



which occur during the process, the points of waste generation in the process, and the manner in which the waste is managed subsequent to its generation.

Item B. A written justification for a municipal waste-like designation must be provided. This must include why the waste is municipal-like and that the waste does not contain any hazardous waste.

Item C. Self-Explanatory

SECTION IV - DOCUMENT PREPARATION - The section must be completed if the documents are prepared by someone other than the facility owner/operator or the registered professional engineer.

SECTION V - CERTIFICATION OF DOCUMENTS BY GENERATOR

The Application Must be Certified in the Following Manner:

- #1. Corporations A corporate officer must sign the document and the corporate seal must be affixed.
- #2. Limited partnerships A general partner must sign the document.
- #3. All other partnerships A partner must sign the document.
- #4. Sole proprietorships The proprietor.
- #5. Municipal, state, or federal authority or agency An executive officer or ranking elected official responsible for compliance of the authority's or agency's waste activities and facilities with all applicable regulations.

All signatures affixed to the document must be notarized.

This certification must be provided to ensure the accuracy of all the information submitted in the request and that the waste is not a RCRA hazardous waste.

SECTION VI - CERTIFICATION OF OWNER/OPERATOR OF PROCESSING/DISPOSAL FACILITY

The Application Must be Certified in the Following Manner:

- #1. Corporations A corporate officer must sign the document and the corporate seal must be affixed.
- #2. Limited partnerships A general partner must sign the document.
- #3. All other partnerships A partner must sign the document.
- #4. Sole proprietorships The proprietor.
- #5. Municipal, state, or federal authority or agency An executive officer or ranking elected official responsible for compliance of the authority's or agency's waste activities and facilities with all applicable regulations.
- #6. The general manager of chief operator of the facility.

All signatures affixed to the document must be notarized.

SECTION VII - CERTIFICATION OF REGISTERED PROFESSIONAL ENGINEER FOR THE PROCESSING AND/OR DISPOSAL FACILITY - Self Explanatory

Exhibit S-I-B: Generator of the Waste

This form is a major permit modification to Solid Waste Permit Number 100758 for approval by the Pennsylvania Department of Environmental Resources (PaDER) for the Harrisburg Materials, Energy, Recycling & Recovery Facility to accept Municipal Waste-Like Residual Waste from various generating facilities for processing and disposal via resource recovery incineration technology. The generators of the waste will include various commercial and industrial facilities located in Pennsylvania and nearby states. The waste will be transported to the disposal facility by the City, waste generators, or other permitted contractors.

Exhibit S-II-A-1: II Waste Description (must be completed by generator)

- A. General Properties (include physical state and physical appearance).
 - Description of the waste, its origin and containerization.

The MSW-like residual waste is collected and received from various commercial and industrial generating facilities and will be delivered to the processing facility via City and contracted transporters. Receipt of these materials will be 24 hours per day, 7 days per week year-round as currently permitted for facility operations.

MSW-like residual waste materials will be received from various generators and permitted contract transporters from sites within Pennsylvania and nearby states. The MSW-like residual waste, as identified by this Form S, are deemed to have MSW-like properties and will be handled by the facility as MSW.

These MSW-like residual wastes may include the following:

General Types of Waste Materials:

Wood wastes (untreated) Fabric and cloths wastes Textile wastes

Leather wastes

Expired pharmaceutical wastes Off specification pharmaceutical wastes

Waste paper

Waste corrugated paper board

Waste oil filters

10. Carpet wastes

11. Rubber wastes

12. Plastic wastes

13. Food wastes

14. Metal scrap wastes

15. Sawdust

16. Fiberglass insulation waste

17. Non-metallic empty containers.

See Exhibit S-II-A-5 for a brief general description as to type of industry which may provide the above wastes.

Materials may be received which are in compactor type containers, typically 10 to 20 cubic yard containers, roll-offs, self-packer trucks, boxes, fiber drums, etc. which are convenient from a plant materials handling aspect. Most all of these materials may be directed through the Front End Separations Unit, either for recyclable materials recovery or size reduction. Some waste, either due to its physical nature or customer requirements, may require separate/special handling into the furnace feed pit.

The facility will accept no more than 359,525 tons per year total of all wastes per the facility's existing Solid Waste Permit. The facility is permitted to accept for disposal no more than 292,000 tons per year of municipal waste, sewage sludge, residual waste, and/or tires, calculated for each calendar quarter as required under the existing Solid Waste Permit. "Disposal" is defined in the facility's existing permit as waste which is incinerated and does not include waste which is removed and recycled. The acceptance of residual waste will displace the acceptance of MSW, sewage sludge and/or used tires. The acceptance of MSW, sewage sludge

The same day inside of the building. Preprocessing staging of this material is on the tipping area floor, therefore no odors are anticipated from these sources.

No other or additional potential environmental pollution or handling problems are anticipated from handling of the MSW-like residual waste.

The fuel feed supply, as fired by the incinerator, will be a prepared Municipal Solid Waste including (MSW), chopped tires, sewage sludge, and residual waste. A typical analysis of this waste is given below as the "composite fuel".

"Typical Range" composition of the furnace fuel feed is as follows:

- 1. The "as received" prepared municipal solid waste shall approximate eighty and one half (80.5) percent. This includes the MSW-like residual waste.
- from various sources will be cut into squares of six (6) inches or less and will make up ten and one half (10.5) percent.
- Dewatered, 20% nominal dry solids content, municipal
 will be nine (9.0) percent.
- 4. MSW-like Residual Waste when accepted by the facility will displace either MSW, sewage sludge, or tires to achieve an acceptable BTU and chemical content of the

composite fuel: The composite fue	i will be within
-----------------------------------	------------------

<u>Ultimate Analysis</u>	Combined Fuel	Typical Range
Carbon % by wt.	30.71	24.0 to 35.0
Hydrogen, % by wt.	4.43	3.5 to 5.1
Oxygen, % by wt.	24.66	18.0 to 29.0
Nitrogen, % by wt.	0.17	0.1 to 0.8
Sulfur, % by wt.	0.12	0.1 to 0.2
Chlorine, % by wt.	0.46	0.1 to 0.8
Moisture, % by wt.	25.37	18.0 to 40.0
Ash, % by wt.	14.08	10.0 to 25.0
Higher Heating Value, BTU/lb.	6,000	5500 to 6500

These compositional fuel ranges are necessary to ensure compliance with Air Quality Plan approved and Federal Air Quality Standards

This is of incoming loads by the receiving supervisor and operator. Should any materials be found, which are non-permitted, they are rejected either prior to dumping, or, if they have been dumped, they are immediately reloaded into the vehicle by front end loader and returned to the contracted originator.

this facility as they represent a major potential human and environmental safety risk. Should materials, inadvertently, be accepted at the Facility which may pose a potential risk, the least made and appear to the material (s), and ultimate proper disposal of the material under the direction of the Department, and assist the Department in any action(s) which may be required under law.

Should waste materials of this type be brought to the Facility and deemed unacceptable, the partient will be stiffed by this notification will consist of telephone alert to the Department as to the vehicle, complete with company name, drivers name (if possible), vehicle license number, type of waste for which disposal was requested, waste material(s) composition and amount of waste, and a follow up confirming

letter to the Department detailing all of the above, signed by the tipping floor operator, shift supervisor and Emergency Coordinator. Exhibit S-II-A-2: II Waste Description (must be completed by generator)

- A. General Properties (include physical state and physical appearance).
 - Typical volume of waste to be shipped to the processing/ disposal facility.

This is based upon chemical and physical compatibility with required fuel feed compositional range, previously discussed, and availability.

"ejected extent practicable I.D. NO. 100758

Exhibit S-II-A-5: Applicable Waste Types

It is the disposal facilities intention to accept all residual wastes which can be handled by the facility and have composition which allows incineration while maintaining permitted values for Some residual waste acceptance, air quality, and ask composition. Some residual wastes will be accepted without intention of incineration and will be categorized as probable with the Examples of this include Typical municipal waste-like residual wastes will be handled as MSW which will be fed to the This all and proper blending with chopped tires to achieve proper "composite fuel" composition for incineration. Exceptions may include and f the large material to achieve proper incineration.

The following is a partial listing of typical municipal waste-like residual waste materials which may be received by the disposal facility from industrial and commercial generators.

- Wood Wastes Includes furniture, cabinetmaking, office demolition, railroad ties, shipping pallets, paper industry, flooring industry, lumber companies, veneer, industries, and home construction.
- Fabric/Cloth/Textile/Leather Wastes Includes wastes from industrial sewing facilities, clothes manufacturers, tentmakers, retail clothes and outerwear, beltmaking, shoemaking, hatmaking, knitting mills, and tanning industry.
- Waste Paper Including cardboard, packaging materials, papermaking industry, bookbinding industry, and printing.
 - Used Oil Filters From automobile garages, heating and oil suppliers, transportation facilities.
- Carpet Scraps From retail and industrial carpet and furniture operations, office demolition, and carpet manufacturing industry.
- Cured Rubber Scrap Rubber manufacturing, rubber extrusion, gaskets, mattresses, tire manufacturers, seals, washers, roofing materials, and sponges.
- Waste Plastic Plastics manufacturers, construction materials, autofluff, plastic packaging materials, plastic films, frames, injection molding and extrusion

processing wastes, plastic tubing and pipe.

- 8. Food Wastes From industrial food makers and food processing facilities (such as Hershey Foods, Quaker Oats, Kellog Co.), retail food operation (markets, etc.), restaurants, milling industry, and farming operations (excluding water treatment sludges).
- Metal Scrap From machine shop operations, automobile garages, tubemakers, appliance manufacturers, tooling operators, hardware industry, wire and cable manufacturers, and panel makers.
- 10. Sawdust From cabinet makers, carpentry operations, furniture, construction operations, logging operations, lumber yards.
 - 11. Fiberglass Insulation Scrap From building demolition, construction contractors.
- 12. Empty Containers Including plastic, glass, file and paper containers which are wastes of non-hazardous operations. This includes food containers, empty pharmaceutical containers, fiber drums and bottling industry discards.
- 13. Pharmaceutical Wastes Off specification pharmaceuticals, expired pharmaceuticals.

Exhibit S-II-B: Chemical Analysis

The intent of this form is to obtain approval to process and dispose of municipal waste-like residual waste in combination with MSW, tires, and sewage sludge at the Harrisburg Materials, Energy, Recycling, and Recovery Facility. The provide chemical composition of the party of the provide chemical composition of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the party of the

The complete Form S will be submitted to PaDER at least 15 days before actual acceptance and disposal by the facility.

accepted segment the complete 180% replacement of MSW, tires and/or accepted segment that the complete 180% replacement of MSW, tires and/or acceptable with municipal westerlike residual master. This assumes that the quantity, BTU content, and composition of the municipal wasterlike residual wastes which are being fired provides an acceptable composite fuel content. The municipal wasterlike residual waste is assumed to be approximately equal to MSW in composition and will be treated by the facility like MSW.

The methodology for determination of wastes which will be acceptably managed by the facility is based on maintaining the composite fuel composition of the incinerator as permitted for MSW, residual waste, sludge, and used tire firing. Manisipal waste like a land is assumed to be equivalent in composition to MSW. Maintaining the proper composite fuel composition regardless of waste flows will assure compliance with existing permitted emissions values for air quality and ash composition. The utilization of the Front End Materials Separation Plant will become excellent materials.

The firing of MSW-like residual wastes will not effect current design of Furnace Boiler and Air Quality Control System. The lime acid gas scrubbing technology will maintain proper air quality control and produce ash within permitted values with the firing of the residual wastes.

The acceptance criteria calculation for acceptance of waste will be performed when each new residual waste flow is considered for acceptance. NOW like residual waste flows which are requested to be displaced of by the facility does not require a recalculation if it displaces only MSW from the composite fuel.

The acceptance criteria for wastes which will be accepted are based on the following:

- 100% of the residual waste flow is assumed to pass through the Front End Separation Plant to the fuel pit. Residual materials which are not acceptable for incineration but are accepted as recyclable shall not enter into the calculations.
- Dewatered sludge (20% nominal dry solids content) will be fed to the incinerator at a maximum constant rate of 9% of total fuel by weight.
- The 800 ton/day total fuel capacity shall be utilized for calculations.

The BTU range of 5500 to 6500 BTU/# of fuel of the composite fuel is required for proper incineration of the waste as guaranteed by the boiler manufacturer.

4. The following BTU heat values shall be utilized for calculations:

Tires 13211 BTU/lb/
MSW 5612 BTU/lb/
Sewage Sludge 1060 BTU/lb/
Residual Waste *

- * The residual waste heat value shall be calculated from weight fractions of the various residual wastes being accepted by the disposal facility. The disposal facility requires the BTU heat value to be provided by the generating facility. The value shall be the average value of at least three (3) samples of the waste.
- 5. The following are the allowable compositions ranges for the composite fuel which includes any Form S waste:

Composite Fuel Content	Ranges (%)	
Carbon % by wt.	24.0 to 35.0	
Hydrogen, % by wt.	3.5 to 5.1	
Oxygen, % by wt.	18.0 to 29.0	
Nitrogen, % by wt.	0.1 to 0.8	
Sulfur, % by wt.	0.1 to 0.2	
Chlorine, % by wt.	0.1 to 0.8	
Moisture, % by wt.	18.0 to 40.0	
Ash, % by wt.	10.0 to 25.0	

Higher Heating Value, BTU/lb.

5500 to 6500

 The following nominal fuel chemical compositions shall be utilized for calculations at 6000 BTU per pound of composite fuel.

		(% By Weight)		
COMPOSITION	MSW	SEWAGE SLUDGE	TIRES	
Carbon	30.71	5.42	67.18	
Hydrogen	4.43	0.08	5.94	
Oxygen	24.66	2.91	0.81	
Nitrogen	0.17	0.60	0.25	
Sulfur	0.12	0.20	1.23	
Chlorine	0.46	0.40	0.04	
Moisture	25.37	82.56	0.56	
Ash	14.08	7.83	23.43	

- 7. The maximum contribution of tires to the composite fuel will be 17.1% at 6500 BTU per pound of composite fuel.
- 8. The weight fractions of residual waste (X_R) for each component which is utilized in the calculations shall be calculated based on Form U information, as provided by the generator, and the waste stream flow.
- 9. The following calculations will be performed substituting values for the weights and compositions of the waste:

Wot	al	Weight of Waste (tons)
T	=	Weight of Tires (tons)
S	=	Weight of Sludge (tons)
M	=	Weight of MSW (tons)
R	=	Weight of Residual Waste (Tons)
HT	= = =	BTU of Tires (BTU/lb)
H.	=	BTU Content of Sludge (BTU/1b)
H _s H _m	=	BTU Content of MSW (BTU/lb)
HR	=	BTU Content of Residual Waste (BTU/lb)
H _w	=	BTU Content of Total Composite Fuel (BTU/lb)
X _R	=	Wright Fraction of Residual Waste for Each Component

Total Mass Balance

T + S + M + R = W

BTU Mass Balance

$$\frac{T(H_T) + S(H_S) + M(H_M) + R(H_R)}{W} = H_W$$

Carbon Balance

100 x $(67.18 \text{ T} + 5.42 \text{ S} + 30.71 \text{ M} + \text{X}_R \text{ R}) = 24\% \text{ to } 35\%$

Hydrogen

100 x $(5.94T + 0.085 + 4.43M + X_R R) = 3.5% to 5.1%$

Oxygen

100 x $(0.81T + 2.91S + 24.66M + X_R R) = 18.0% to 29.0%$

Nitrogen

100 x $(0.25T + 0.60S + 0.17M + X_R R) = 0.1%$ to 0.8%

Sulfur

100 x $(1.23T + 0.20 S + 0.12M + X_R R) = 0.1% to 0.2%$

Chlorine

100 x $(0.04T + 0.40S + 0.46M + x_R R) = 0.1% to 0.2%$

Moisture

100 x $(0.56T + 82.56S + 25.37M + X_R R) = 18.0% to 40.0%$

Ash

100 x $(24.43T + 7.83S + 14.08M + X_R R) = 10.0% to 25.0%$

Additional or new residual wastes which are solicited for acceptance by the disposal facility also require revision of waste stream data and performing the calculations by the disposal facility, before acceptance and ultimate contracting.

The production of typical MSW incinerator combustion ash is based on the firing of municipal waste-like residual waste which contains metals content which is approximately equivalent to MSW. The utilization of acid gas scrubbing technology will provide ash metals content of approximately one half of untreated combustion facilities.

All ash generated by the Facility will be directed to an ash loadout building adjacent to the main furnace/boiler area. This totally enclosed building has the capability of days temporary ash production storage. From there the ash is sampled for analysis per the protocol below. The transport vehicles used to move the ash

from the loadout building to the on-site PaDER permitted residue disposal site will be loaded inside of this totally enclosed building.

Designmention of ash from the first new incinerator on line ash sampling and the Department's Municipal Incinerator Ash Residue Monitoring Report, will be performed and submitted to the Department at the following frequency:

- Once a week for the first ten weeks
- Once a month for the following six months
- Quarterly thereafter

This protocol is per the Facility's anisting Solid Waste Permit,

Ash sampling and disposal will be in accordance with the Ash Landfill Permit and Department Policy.

Exhibit S-III: Description of Waste Generation

The generator of Municipal Waste-like Residual Waste-must provide description, and schematic of waste generation as well-as justification of Municipal Waste-like designation for the waste which will be accepted by the disposal facility. A discussion of other methods of processing the waste must be provided by the generator. This information must be provided in the form of a Form S provided by the generator. Requiring the wastes to be disposed of under Form S assures that the facility is justified in treating the waste as MSW. If the waste to be accepted is determined to be a residual waste not covered by Form S, the Facility will then process it as under the Facility's Form R which requires the generating facility to provide a Form U and the disposal facility to evaluate the waste as described in Form R. This includes the review of Class I facility parameters and calculation of composite fuel composition based on residual waste firing compositions and flows.

Any revisions that the generator makes to his processes require a revised Form S to be provided to the Facility.

The disposal facility will evaluate the nature of the waste including waste composition and other material handling requirements. The generator facility's Form S, which has been reviewed and accepted for MSW-like residual waste material processing, will be submitted to the Department at least 15 days prior to actual acceptance and disposal of these wastes by the facility.

CANTENDED :

· DESCRIPTION

· ECHEMOTIC

· JUSTIFICATION FOR FORM = CEPTER DONN

Exhibit S-II-A-1: II Waste Description (must be completed by generator)

- A. General Properties (include physical state and physical appearance).
 - 1. Description of the waste, its origin and containerization.

The MSW-like residual waste is collected and received from various commercial and industrial generating facilities and will be delivered to the processing facility via City and contracted transporters. Receipt of these materials will be 24 hours per day, 7 days per week year-round as currently permitted for facility operations.

MSW-like residual waste materials will be received from various generators and permitted contract transporters from sites within Pennsylvania and nearby states. The MSW-like residual waste, as identified by this Form S, are deemed to have MSW-like properties and will be handled by the facility as MSW.

These MSW-like residual wastes may include the following:

General Types of Waste Materials:

Wood wastes (untreated)
 Fabric and cloths wastes

Textile wastes Leather wastes

5. Expired pharmaceutical wastes

Off specification pharmaceutical wastes Waste paper

Waste corrugated paper board
 Waste oil filters

10. Carpet wastes

11. Rubber wastes

12. Plastic wastes

13. Food wastes

14. Metal scrap wastes

15. Sawdust

Fiberglass insulation waste

17. Non-metallic empty containers.

See Exhibit S-II-A-5 for a brief general description as to type of industry which may provide the above wastes.

Materials may be received which are in compactor type containers, typically 10 to 20 cubic yard containers, roll-offs, self-packer trucks, boxes, fiber drums, etc. which are convenient from a plant

materials handling aspect. Most all of these materials may be directed through the Front End Separations Unit, either for recyclable materials recovery or size reduction. Some waste, either due to its physical nature or customer requirements, may require separate/special handling into the furnace feed pit.

The facility will accept no more than 359,525 tons per year total of all wastes per the facility's existing Solid Waste Permit. The facility is permitted to accept for disposal no more than 292,000 tons per year of municipal waste, sewage sludge, residual waste, and/or tires, calculated for each calendar quarter as required under the existing Solid Waste Permit. "Disposal" is defined in the facility's existing permit as waste which is incinerated and does not include waste which is removed and recycled. The acceptance of residual waste will displace the acceptance of MSW, sewage sludge and/or used tires. The facility shall accept for disposal no more than 292,000 tons/year of MSW, residual waste and/or used tires.

No MSW-like residual waste or MSW materials are stored external to the facility, i.e., all incoming wastes are deposited and processed the same day inside of the building. Preprocessing staging of this material is on the tipping area floor, therefore no odors are anticipated from these sources.

No other or additional potential environmental pollution or handling problems are anticipated from handling of the MSW-like residual waste.

The fuel feed supply, as fired by the incinerator, will be a prepared Municipal Solid Waste including (MSW), chopped tires, sewage sludge, and residual waste. A typical analysis of this waste is given below as the "composite fuel".

"Typical Range" composition of the furnace fuel feed is as follows:

- The "as received" prepared municipal solid waste (MSW) shall approximate eighty and one half (80.5) percent. This includes the MSW-like residual waste.
- Tires from various sources will be cut into squares of six (6) inches or less and will make up ten and one half (10.5) percent.
- Dewatered, 20% nominal dry solids content, municipal sludge will be nine (9.0) percent.
- MSW-like Residual Waste when accepted by the facility will displace either MSW, sewage sludge, or tires to achieve an acceptable BTU and chemical content of the

typical granger should be to the

<u>Ultimate Analysis</u>	Combined Fuel	Typical Range
Carbon % by wt.	30.71	24.0 to 35.0
Hydrogen, % by wt.	4.43	3.5 to 5.1
Oxygen, % by wt.	24.66	18.0 to 29.0
Nitrogen, % by wt.	0.17	0.1 to 0.8
Sulfur, % by wt.	0.12	0.1 to 0.2
Chlorine, % by wt.	0.46	0.1 to 0.8
Moisture, % by wt.	25.37	18.0 to 40.0
Ash, % by wt.	14.08	10.0 to 25.0
Higher Heating		
Value, BTU/lb.	6,000	5500 to 6500

These compositional fuel ranges are the compositional fuel ranges are the compositional fuel ranges are the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the

unacceptable wastes are prohibited and not accepted at this facility. This is enforced by contractual requirements and provided inspection of incoming loads by the receiving supervisor and operator. Should any materials be found, which are non-permitted, they are rejected either prior to dumping, or, if they have been dumped, they are immediately reloaded into the vehicle by front end loader and returned to the contracted originator.

thick is it was they represent a major potential human and environmental safety risk. Should materials, inadvertently, be accepted at the Facility which may pose a potential risk, the Department Director and a request made to the material (s), (1) ultimate proper disposal of the material under the direction of the Department, and (1) assist the Department in any action(s) which may be required under law.

Should waste materials of this type be brought to the Facility and deemed unacceptable, the second will be satisfied by the Facility condition will consist of 1) telephone alert to the Department as to the vehicle, complete with company name, drivers name (if possible), vehicle license number, type of waste for which disposal was requested, waste material(s) composition and amount of waste, and 2 a follow up confirming

letter to the Department detailing all of the above, signed by the tipping floor operator, shift supervisor and Emergency Coordinator. Exhibit S-II-A-2: II Waste Description (must be completed by generator)

- A. General Properties (include physical state and physical appearance).
 - Typical volume of waste to be shipped to the processing/ disposal facility.

The volume of municipal waste-like residual waste to be accepted by the facility for disposal will have a range of between 0 to 292,000.

This is based upon chemical and physical compatibility with required fuel feed compositional range, previously discussed, and availability.

800 TON DAY

tenove to "ejected extent practicable I.D. NO. 100758

Exhibit S-II-A-5: Applicable Waste Types

It is the disposal facilities intention to accept all residual wastes which can be handled by the facility and have composition which allows incineration while maintaining permitted values for waste acceptance, air quality, and ash composition. Some residual wastes will be accepted without intention of incineration and will be categorized as recyclable materials. Examples of this include plastic containers and metal scraps. Typical municipal waste-like residual wastes will be handled as MSW which will be fed to the Front End Separation system. This allows separation of recyclable materials and proper blending with chopped tires to achieve proper "composite fuel" composition for incineration. Exceptions may include large bulky materials slated for incineration which may be handled through the tire processing facility to facilitate shredding of the large material to achieve proper incineration.

The following is a partial listing of typical municipal waste-like residual waste materials which may be received by the disposal facility from industrial and commercial generators.

- Wood Wastes Includes furniture, cabinetmaking, office demolition, railroad ties, shipping pallets, paper industry, flooring industry, lumber companies, veneer, industries, and home construction.
- Fabric/Cloth/Textile/Leather Wastes Includes wastes from industrial sewing facilities, clothes manufacturers, tentmakers, retail clothes and outerwear, beltmaking, shoemaking, hatmaking, knitting mills, and tanning industry.
- Waste Paper Including cardboard, packaging materials, papermaking industry, bookbinding industry, and printing.
 - Used Oil Filters From automobile garages, heating and oil suppliers, transportation facilities.
- Carpet Scraps From retail and industrial carpet and furniture operations, office demolition, and carpet manufacturing industry.
- Cured Rubber Scrap Rubber manufacturing, rubber extrusion, gaskets, mattresses, tire manufacturers, seals, washers, roofing materials, and sponges.
- Waste Plastic Plastics manufacturers, construction materials, autofluff, plastic packaging materials, plastic films, frames, injection molding and extrusion

processing wastes, plastic tubing and pipe.

- 8. Food Wastes From industrial food makers and food processing facilities (such as Hershey Foods, Quaker Oats, Kellog Co.), retail food operation (markets, etc.), restaurants, milling industry, and farming operations (excluding water breatment sludges).
- Metal Scrap From machine shop operations, automobile garages, tubemakers, appliance manufacturers, tooling operators, hardware industry, wire and cable manufacturers, and panel makers.
- 10. Sawdust From cabinet makers, carpentry operations, furniture, construction operations, logging operations, lumber yards.
 - 11. Fiberglass Insulation Scrap From building demolition, construction contractors.
- V12. Empty Containers Including plastic, glass, fiber and paper containers which are wastes of non-hazardous operations. This includes food containers, empty pharmaceutical containers, fiber drums and bottling industry discards.
- 13. Pharmaceutical Wastes Off specification pharmaceuticals, expired pharmaceuticals.

Exhibit S-II-B: Chemical Analysis

The intent of this form is to obtain approval to process and dispose of municipal waste-like residual waste in combination with MSW, tires, and sewage sludge at the Harrisburg Materials, Energy, Recycling, and Recovery Facility. The generator of the waste accepted by the facility is required to provide chemical composition of the specific waste for their facility via a Form S. This information must include a chemical analyses or generator knowledge of the waste stream or combination of both.

The complete Form S will be submitted to PaDER at least 15 days before actual acceptance and disposal by the facility.

The maximum amount of municipal waste-like residual waste to be accepted assumes the complete 100% replacement of MSW, tires and/or sewage sludge with municipal waste-like residual waste. This assumes that the quantity, BTU content, and composition of the municipal waste-like residual wastes which are being fired provides an acceptable composite fuel content. The municipal waste-like residual waste is assumed to be approximately equal to MSW in composition and will be treated by the facility like MSW.

The methodology for determination of wastes which will be acceptably managed by the facility is based on maintaining the composite fuel composition of the incinerator as permitted for MSW, residual waste, sludge, and used tire firing. Manisipal waste like residual is assumed to be equivalent in composition to MSW. Maintaining the proper composite fuel composition regardless of waste flows will assure compliance with existing permitted emissions values for air quality and ash composition. The utilization of the Front End Materials Separation Plant will recover recyclable materials in the waste stream and control "composite fuel" composition with proper blending with the chopped tire flow.

The firing of MSW-like residual wastes will not effect current design of Furnace Boiler and Air Quality Control System. The lime acid gas scrubbing technology will maintain proper air quality control and produce ash within permitted values with the firing of the residual wastes.

The acceptance criteria calculation for acceptance of waste will be performed when each new residual waste flow is considered for acceptance. Well this accided waste flows which are requested to be the facility does not require a recolculation if it displaces only MSW from the composite fact.

The acceptance criteria for wastes which will be accepted are based on the following:

- 100% of the residual waste flow is assumed to pass through the Front End Separation Plant to the fuel pit. Residual materials which are not acceptable for incineration but are accepted as recyclable shall not enter into the calculations.
- Dewatered sludge (20% nominal dry solids content) will be fed to the incinerator at a maximum constant rate of 9% of total fuel by weight.
- 3. The 800 ton/day total fuel capacity shall be utilized for calculations.

The BTU range of 5500 to 6500 BTU/# of fuel of the composite fuel is required for proper incineration of the waste as guaranteed by the boiler manufacturer.

4. The following BTU heat values shall be utilized for calculations:

Tires 13211 BTU/lb/
MSW 5612 BTU/lb/
Sewage Sludge 1060 BTU/lb/
Residual Waste *

- * The residual waste heat value shall be calculated from weight fractions of the various residual wastes being accepted by the disposal facility. The disposal facility requires the BTU heat value to be provided by the generating facility. The value shall be the average value of at least three (3) samples of the waste.
- 5. The following are the allowable compositions ranges for the composite fuel which includes any Form S waste:

Composite Fuel Content	Ranges (%)	
Carbon % by wt.	24.0 to 35.0	
Hydrogen, % by wt.	3.5 to 5.1	
Oxygen, % by wt.	18.0 to 29.0	
Nitrogen, % by wt.	0.1 to 0.8	
Sulfur, % by wt.	0.1 to 0.2	
Chlorine, % by wt.	0.1 to 0.8	
Moisture, % by wt.	18.0 to 40.0	
Ash, % by wt.	10.0 to 25.0	

Higher Heating Value, BTU/lb.

5500 to 6500

 The following nominal fuel chemical compositions shall be utilized for calculations at 6000 BTU per pound of composite fuel.

		(% By Weight)		
COMPOSITION	MSW	SEWAGE SLUDGE	TIRES	
Carbon	30.71	5.42	67.18	
Hydrogen	4.43	0.08	5.94	
Oxygen	24.66	2.91	0.81	
Nitrogen	0.17	0.60	0.25	
Sulfur	0.12	0.20	1.23	
Chlorine	0.46	0.40	0.04	
Moisture	25.37	82.56	0.56	
Ash	14.08	7.83	23.43	

- 7. The maximum contribution of tires to the composite fuel will be 17.1% at 6500 BTU per pound of composite fuel.
- 8. The weight fractions of residual waste (X_R) for each component which is utilized in the calculations shall be calculated based on Form U information, as provided by the generator, and the waste stream flow.
- 9. The following calculations will be performed substituting values for the weights and compositions of the waste:

Wotal		Weight of Waste (tons)
T	=	Weight of Tires (tons)
S	=	Weight of Sludge (tons)
M	=	Weight of MSW (tons)
R	=	Weight of Residual Waste (Tons)
H	=	BTU of Tires (BTU/lb)
H _T H _S H _M	= =	BTU Content of Sludge (BTU/lb)
H,	=	BTU Content of MSW (BTU/lb)
H,	=	BTU Content of Residual Waste (BTU/lb)
H _R H _W	=	BTU Content of Total Composite Fuel (BTU/lb)
XR	=	Wright Fraction of Residual Waste for Each Component

Total Mass Balance

T + S + M + R = W

BTU Mass Balance

$$\frac{T(H_T) + S(H_S) + M(H_M) + R(H_R)}{W} = H_W$$

Carbon Balance

100 x $(67.18 \text{ T} + 5.42 \text{ S} + 30.71 \text{ M} + \text{X}_R \text{ R}) = 24\% \text{ to } 35\%$

Hydrogen

100 x $(5.94T + 0.085 + 4.43M + X_R R) = 3.5% to 5.1% W$

Oxygen

 $100 \times (0.81T + 2.91S + 24.66M + X_R R) = 18.0% to 29.0%$

Nitrogen

100 x $(0.25T + 0.60S + 0.17M + X_R R) = 0.1% to 0.8%$

Sulfur

100 x $(1.23T + 0.20 S + 0.12M + X_R R) = 0.1% to 0.2%$

Chlorine

100 x $(0.04T + 0.40S + 0.46M + x_R R) = 0.1% to 0.2%$

Moisture

100 x $(0.56T + 82.56S + 25.37M + X_R R) = 18.0% to 40.0%$

Ash

100 x $(24.43T + 7.83S + 14.08M + X_R R) = 10.0% to 25.0%$

Additional or new residual wastes which are solicited for acceptance by the disposal facility also require revision of waste stream data and performing the calculations by the disposal facility, before acceptance and ultimate contracting.

The production of typical MSW incinerator combustion ash is based on the firing of municipal waste-like residual waste which contains metals content which is approximately equivalent to MSW. The utilization of acid gas scrubbing technology will provide ash metals content of approximately one half of untreated combustion facilities.

All ash generated by the Facility will be directed to an ash loadout building adjacent to the main furnace/boiler area. This totally enclosed building has the capability of days temporary ash production storage. From there the ash is sampled for analysis per the protocol below. The transport vehicles used to move the ash

from the loadout building to the on-site PaDER permitted residue disposal site will be loaded inside of this totally enclosed building.

Upon generation of ash from the first new incinerator on line ash sampling and the Department's Municipal Incinerator Ash Residue Monitoring Report, will be performed and submitted to the Department at the following frequency:

- Once a week for the first ten weeks
- Once a month for the following six months
- Quarterly thereafter

This protocol is per the Facility's existing Solid Waste Permit, Permit No. 100758 Condition 14 dated August 14, 1992.

Ash sampling and disposal will be in accordance with the Ash Landfill Permit and Department Policy.

Exhibit S-III: Description of Waste Generation

The generator of Municipal Waste-like Residual Waste must provide description, and schematic of waste generation as well as justification of Municipal Waste-like designation for the waste which will be accepted by the disposal facility. A discussion of other methods of processing the waste must be provided by the generator. This information must be provided in the form of a Form S provided by the generator. Requiring the wastes to be disposed of under Form S assures that the facility is justified in treating the waste as MSW. If the waste to be accepted is determined to be a residual waste not covered by Form S, the Facility will then process it as under the Facility's Form R which requires the generating facility to provide a Form U and the disposal facility to evaluate the waste as described in Form R. This includes the review of Class I facility parameters and calculation of composite fuel composition based on residual waste firing compositions and flows.

Any revisions that the generator makes to his processes require a revised Form S to be provided to the Facility.

The disposal facility will evaluate the nature of the waste including waste composition and other material handling requirements. The generator facility's Form S, which has been reviewed and accepted for MSW-like residual waste material processing, will be submitted to the Department at least 15 days prior to actual acceptance and disposal of these wastes by the facility.

CARRENATION FOR FRANCE S CLIPSIFICATION

Exhibit S-I-B: Generator of the Waste

This form is a major permit modification to Solid Waste Permit Number 100758 for approval by the Pennsylvania Department of Environmental Resources (PaDER) for the Harrisburg Materials, Energy, Recycling & Recovery Facility to accept Municipal Waste-Like Residual Waste from various generating facilities for processing and disposal via resource recovery incineration technology. The generators of the waste will include various commercial and industrial facilities located in Pennsylvania and nearby states. The waste will be transported to the disposal facility by the City, waste generators, or other permitted contractors.

March 5, 1993

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

Facility I.D. Number						
	100758					

FORM S

REQUEST FOR APPROVAL TO PROCESS OR DISPOSE OF MUNICIPAL WASTE-LIKE RESIDUAL WASTE

1. GENERAL INFORMATION (must be completed by processing/disposal facility)

1.	•	Name of facility Harrisburg Materials, En	ergy, Red	cycling & Recovery Fac
		Address 1670 South 19th Street,	Harrisbu	cg, PA Zip: 17104
		Municipality Harrisburg	County	Dauphin
		Location of site if different from mailing address	N/A	
2.	-	Name and address of permittee (if different from (1) above)	N/A
		Municipality N/A	County	N/A
3.		Solid waste permit number(s) for the disposal facilit	y 10075	8
				·
4.		Facility contact person		
		Name John Lukens	Title	Director
		Telephone Number		
. G	ene	erator of the Waste See Exhibits S-I-B		
1.	•	Name of generator N/A	· ·	
		Mailing address N/A		Zip: N/A
		Location of site if different from mailing address		N/A
		Municipality N/A		N/A
2.	•	If a subsidiary, name of parent co. N/A	_	
2.			_	
	•	If a subsidiary, name of parent co. N/A		
3.	•	If a subsidiary, name of parent co. N/A Residual Waste Identification number		

100758

FORM S

II. WASTE DESCRIPTION (Must be completed by generator)

A. General Properties (include physical state and physical appearance)

			•. • •	, , , ,
1.	Description	at the waste	uts ongin, an	d containerization.
• •	~~~~	G. 416 116366	,	A 401.0011.01.000001

SEE EXHIBIT S-II-A-1

2.	Typical volume of waste to be shipped See Exhibit	to processing/disposal facility:
	a. Monthly S-II-A-2	gais., lbs., tons, cu. yds. (circle one)
3.	Disposal frequency: 24 hours	per day. *See Exhibit S-TI-A-2
4.	Current volume to be shipped to proce	ssing/disposal facility *_ gals., lbs., tons, cu. yds.
5. 5.	by a conditionally exempt small quanti	fined in 25 Pa. Code 261, 40 CFR 261, or generated ity generator as defined in 40 CFR 261.5? Not be considered municipal waste-like. Table waste type(s): See Exhibit S-II-A-5
	-	manufacturing and uncured resins) food wastes (excluding treatment sludges) metal scrap (excluding powdered grindings)
4	*Other (specify) Pharmaceutica	al Wastes
1	All waste types not listed above must be	e approved in writing in the permit by the Department prior

to processing or disposal facility acceptance. See instructions.

Facility	I.D.	Num	bei

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FORM S

	В.	Chemical Analys	es - if applicable, as specified in the	e instructions.	See Exhibit S-I	I-B
u.			ASTE GENERATION (must be con ecessary). For each waste type req		generator of waste	. Use
	A.	Detailed descrip specified in the i	otion and schematic of waste generated materials.	eneration proce	ess producing the w	aste as
			See Exhibit S-III			
	В.		justification for the municipal wa	aste-like design	ation of this residual	waste
		stream.	See Exhibit S-III			
	C.		cessing, disposal, recycling, bene Yes No If yes, describe altern			
IV.	DOG	CUMENT PREPARE	D BY: (Name, Address, and Title)		Telephone Numbe	er:
	Na	ssaux-Hemsley,	Incorporated		717/234-6391	
	_13	2 Kline Plaza,	Suite E			
	Ha	rrisburg, PA	17104		•	
! !	l certi subm imme true,	fy under penalty itted in this and a diately responsib accurate, and cor	CUMENTS BY GENERATOR of law that I have personally examile attached documents and that the for obtaining the information, inplete. I am aware that there are the possibility of fine and imprison	based upon my I believe that the re significant pe	inquiry of those indine submitted informa	viduals ation is
Nam Offic		Responsible		Tit	He	
Sign	ature					
Tako	en, sw	vorn, and subscrib		f	_ A.D. 19	
		Seal				

Instructions

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COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

INSTRUCTIONS FOR COMPLETING FORM S

REQUEST FOR APPROVAL TO PROCESS/DISPOSE OF MUNICIPAL WASTE-LIKE RESIDUAL WASTE (Form ER-WM-394: 6/92)

Important: Read all instructions carefully before completing form.

Applicability: A municipal waste-like designation for certain residual waste streams is designed to be limited in scope to only those residual wastes which are truly municipal-like. Further, it is important to note that only lined disposal facilities and processing facilities which dispose of their waste at lined disposal facilities may accept these wastes. Typically, municipal waste-like residual wastes will include wood wastes, fabric/cloth/textile/leather wastes, waste paper, waste plastic, and carpet wastes, etc. However, other residual waste types may be considered for this designation provided adequate documentation and justification are submitted and approved in the permit by the Department.

Instructions: Complete one of these forms for each municipal waste-like residual waste requested for processing or disposal. Provide all technical documentation, justification, analyses (if required), and waste characterization on 8½ x 11 sheets of paper. Attach the page(s) to this form and identify as Request for Approval to Process/Dispose of Municipal Waste-Like Residual Waste. This form and attachments must be submitted by the facility operator to the appropriate Department regional office when a waste other than those listed in Section II, Item A of this form, is requested for approval. Such a request will be processed as a major permit modification. All wastes listed in Section II, Item A may be accepted by the processing or disposal facility with an appropriate Form R approval.

SECTION I - GENERAL INFORMATION - Self-Explanatory.

SECTION II - WASTE DESCRIPTION

Item A. General Properties

- #1. Describe the physical state, color and phases of the waste. For example, gray, solid and granular. Also, Material Safety Data Sheets (MSDS) must be submitted with the application, when available.
- #5. Check the appropriate box(es) which most closely categorizes the waste. Only municipal waste-like residual waste will be accepted via this application. Typically, municipal waste-like residual wastes will include wood wastes, fabric/cloth/textile/leather wastes, waste paper, waste plastics, carpet wastes, etc. In addition, other residual wastes may be considered and approved provided adequate documentation and justification are submitted to the Department by the processing or disposal facility operator and approved in writing in the permit.

Item B. Chemical Analyses

The generator must determine if his waste is hazardous waste under Chapter 261 and 262 of the Department's hazardous waste management regulations. This determination must include a chemical analysis, generator knowledge or a combination of both. Typically, the waste evaluation is all that will be required; however, if the generator cannot demonstrate to the Department's satisfaction that no additional analysis is necessary to determine if the waste to be processed or disposed will not adversely affect the operation or the effectiveness of the facility liner or leachate treatment systems, then such additional analysis as deemed necessary may be required.

SECTION III - DESCRIPTION OF WASTE GENERATION

Item A. Describe the waste generation process which produced the waste. This must include the waste type and any substances added during or after generation. Also, the description must adequately characterize where and how the waste is generated.

FORM S

VI. CERTIFICATION OF PROCESSING OR DISPOSAL FACILITY

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based upon my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

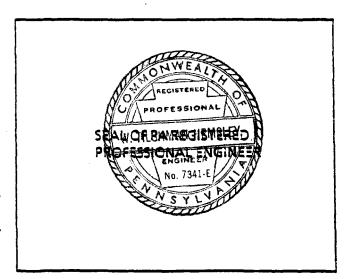
Official John A. Lukens	*	Title	Director	
1///		•	7/1/07	
Signature		Date _	3/11/93	- 4
Taken, sworn, and subscribed before me	, this			
	11th day of MAN	ch A	D. 19 93	
	\mathcal{A}			
(Notary) Seal	Hay nounsur, Hota	IV Public		
Seal	Harrisburg, Dauphin My Commission Expires (County Oct. 25, 19 93		
	Mambas Pannaulainis Angus	ayon of Motorico		

VII. CERTIFICATION OF REGISTERED PROFESSIONAL ENGINEER FOR THE PROCESSING AND/OR DISPOSAL FACILITY

This is to certify that I have personally reviewed all engineering information contained in the accompanying modules, drawings, specifications, and other documents which are part of this application and that I have found it to be of good engineering quality, true, and correct, and is in conformance with the requirements of the Department of Environmental Resources, and it does not, to the best of my knowledge, withhold information that is pertinent to a determination of compliance with the requirements of the Department.

NOTICE: It is an offense under Pennsylvania Crimes Code to affirm a false statement in documents submitted to the Department.

Name	William T. Hemsley			
Signatu	ire Mensel			
Date	11 mnr 93			
Address	56 North Second Street			
	Chambersburg, PA 17201			
Phone !	No717/263-4109			



- used in the process, the primary chemical reactions which occur during the process, the sequence of events which occur during the process, the points of waste generation in the process, and the manner in which the waste is managed subsequent to its generation.
- Item B. A written justification for a municipal waste-like designation must be provided. This must include why the waste is municipal-like and that the waste does not contain any hazardous waste.
- Item C. Self-Explanatory

SECTION IV - DOCUMENT PREPARATION - The section must be completed if the documents are prepared by someone other than the facility owner/operator or the registered professional engineer.

SECTION V - CERTIFICATION OF DOCUMENTS BY GENERATOR

The Application Must be Certified in the Following Manner:

- #1. Corporations A corporate officer must sign the document and the corporate seal must be affixed.
- #2. Limited partnerships A general partner must sign the document.
- #3. All other partnerships A partner must sign the document.
- #4. Sole proprietorships The proprietor.
- #5. Municipal, state, or federal authority or agency An executive officer or ranking elected official responsible for compliance of the authority's or agency's waste activities and facilities with all applicable regulations.

All signatures affixed to the document must be notarized.

This certification must be provided to ensure the accuracy of all the information submitted in the request and that the waste is not a RCRA hazardous waste.

SECTION VI - CERTIFICATION OF OWNER/OPERATOR OF PROCESSING/DISPOSAL FACILITY

The Application Must be Certified in the Following Manner:

- #1. Corporations A corporate officer must sign the document and the corporate seal must be affixed.
- #2. Limited partnerships A general partner must sign the document.
- #3. All other partnerships A partner must sign the document.
- #4. Sole proprietorships The proprietor.
- #5. Municipal, state, or federal authority or agency An executive officer or ranking elected official responsible for compliance of the authority's or agency's waste activities and facilities with all applicable regulations.
- #6. The general manager of chief operator of the facility.

All signatures affixed to the document must be notarized.

SECTION VII - CERTIFICATION OF REGISTERED PROFESSIONAL ENGINEER FOR THE PROCESSING AND/OR DISPOSAL FACILITY - Self Explanatory

FIRE EXTORGENELL BG. STEAM GENERALING FACILI



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES

Office of Chief Counsel
Central Region Litigation
Third Floor, City Towers
301 Chestnut Street
Harrisburg, PA 17101-27 WASTE MANAGEMENT
(717) 787-8790

August 24, 1990

AUG2 7 1990

HARRISHUNG MEGION

Howard J. Wein, Esquire Klett Lieber Rooney & Schorling 40th Floor One Oxford Centre Pittsburgh, PA 15219-6498

Re: City of Harrisburg v. Department of Environmental Resources, EHB Docket No. 89-201-W and Consent Order and Agreement.

Dear Howard:

Enclosed are two fully executed copies each of the Amended Consent Order and Agreement. Please pass one copy on to your client.

I have discussed the appeals of the Closure Plans and Permit for B-2 with the Harrisburg staff after our discussion earlier this week. The Department substantially agrees with the issues you identified as resolved. However, as of thursday the groundwater monitoring plan had not been received. When can the Department expect to receive it? The Department is also anxious to hear the City's proposal for dealing with the existing "EP Tox" ash.

Sincerely.

Michael J. Heilman Assistant Counsel

Enclosures

cc: Hugh V. Archer, Ph. D., P.E., H'burg Region (w/o)
Francis P. Fair, H'burg Waste Mgmt. (1 copy)
Robert Benvin, H'burg Waste Mgmt. (w/o)

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES

In the Matter of:

City of Harrisburg

Harrisburg Steam Generating Facility

1670 South Nineteenth Street

Harrisburg, PA 17104

Waste Management

Closure of Disposal Areas A, B-1

and Temporary Storage Area

Construction Of Disposal Area B-2

AMENDMENT TO CONSENT ORDER AND AGREEMENT

This Amendment To Consent Order and Agreement is entered into this Aryout of July, 1990, by and between the Commonwealth of Pennsylvania, Department of Environmental Resources ("Department"), and the City of Harrisburg ("Harrisburg").

Additional Findings

The Department has found and determined the following findings which Harrisburg agrees are true and correct.

- A. On December 20, 1988, the Department and Harrisburg entered into a Consent Order and Agreement ("1988 Consent Order") which resolved certain violations of the Solid Waste Management Act, Act of July 7, 1980, P.L. 380, 35 P.S. §6018.101 et seq; The Clean Streams Law, Act of June 22, 1937, P.L. 1987, as amended, 35 P.S. §691.1 et seq. ("Clean Streams Law") and rules and regulations promulgated pursuant to them at Harrisburg's Steam Generating Facility ("Facility") and established a schedule for closure of existing ash disposal areas, Areas A and B-1, and construction of a new ash disposal areas, Area B-2. A copy of the 1988 Consent Order is attached as Exhibit A.
- B. Paragraphs A V of the 1988 Consent Order are incorporated by reference.

C. In a letter dated June 1, 1989, Harrisburg requested that the Department modify Paragraph 6 of the 1988 Consent Order to allow Harrisburg to deposit incinerator ash in Area B-1 after June 15, 1989. In a letter dated June 15, 1989, the Department denied the request. Ε. Harrisburg appealed the Department's June 15, 1989 letter to the Environmental Hearing Board. The appeal is docketed at EHB Docket No. 89-201-W. F. In separate letters dated January 30, 1990, the Department approved Harrisburg's Closure Plans for Areas A and B-1. In a letter dated January 29, 1990, the Department approved G. Harrisburg's application for a modification to Permit No. 100992 with comments. The modification authorized the construction and operation of Disposal Area B-2. H. On or about February 28, 1990, Harrisburg appealed the Department's

- H. On or about February 28, 1990, Harrisburg appealed the Department's approval of Closure Plans for Areas A and B-1 and modification of Permit No. 100992 to the Environmental Hearing Board. The appeals are docketed at EHB Docket Nos. 90-093-W and 90-094-W.
- I. Harrisburg constructed a Temporary Ash Storage Area at the Facility and began using it on or about October 1, 1989.
- J. On numerous days between June 15, 1989 and October 1, 1989 Harrisburg deposited ash in Areas B-1 in violation of Paragraph 6 of the 1988 Consent Order. Harrisburg has not deposited any ash in Area B-1 since October 1, 1989.
- K. The violations of the 1988 Consent Order identified in Paragraph J, supra, subject Harrisburg to, among other things, to a stipulated penalty of \$500 per day of violation pursuant to Paragraph 10 of the 1988 Consent Order.
 - L. In a letter dated May 23, 1990, Harrisburg proposed a revised schedule

for the construction of Area B-2, the closure of Areas A and B-1 and permanent disposal of ash deposited in the Temporary Ash Storage Area.

- M. Based solely upon Harrisburg's representations that it can meet the dates set forth in the May 23, 1990 letter, the Department concurs with Harrisburg's request. The Department has not performed an independent analysis or detailed review of the schedule.
- N. The Department and Harrisburg realize that the schedule set forth in the 1988 Consent Order are no longer relevant or reasonable and should be modified without the payment of a penalty by Harrisburg's for its failure to meet the schedule set forth in Paragraphs 2 7 of the 1988 Consent Order.
- O. Pursuant to Paragraph 21 of the 1988 Consent Order the Department and Harrisburg wish to modify and amend the terms of the 1988 Consent Order to revise the schedule for construction of Area B-2 and closure of Areas A and B-1 and settle violations of Paragraph 6 of the 1988 Consent Order discussed in Paragraph J, supra.

 The parties desire to resolve certian of the foregoing matters without

The parties desire to resolve certian of the foregoing matters without resorting to further litigation.

ORDER

After full and complete negotiation of all matters set forth in this Consent Order and Agreement and upon mutual exchange of covenants contained herein, the parties intending to be legally bound, it is hereby ORDERED by the Department and AGREED to by Harrisburg as follows:

- 1. On or before September 21, 1990, Harrisburg shall have completed construction of Area B-2.
- 2. On or before September 21, 1990, Harrisburg shall commence removal of ash from the Temporary Storage Area to Area B-2.

- 3. On or before December 21, 1990, Harrisburg shall have completed removal of ash from the Temporary Storage Area to Area B-2.
- 4. On or before December 22, 1990, Harrisburg shall begin removing ash from the Areas A and B-1 to Area B-2 pursuant to its approved closure plans.
- 5. On or before September 15, 1990, Harrisburg shall begin the bidding process to let contracts for the final closure of Areas A and B-1.
- 6. On or before November 15, 1990, Harrisburg shall have awarded a contract or contracts for the final closure of Areas A and B-1 to the successful bidder or bidders.
- 7. Closure of Areas A and B-1 will commence as soon as conditions permit in the spring of 1991 and will continue on a daily basis until complete.
- 8. On or before September 1, 1991, Harrisburg shall have completed closure and fully implemented its approved closure plans for Areas A and B-1, except for those provisions of the closure plans which relate to maintenance of the closed areas.
- 9. The schedule set forth in Paragraphs 1 8, <u>supra</u>, shall be unaffected by the appeals docketed at EHB Docket Nos. 90-093-W and 90-094-W.
- 10. Within five (5) days of the date of this Amendment To Consent Order and Agreement, Harrisburg shall pay a civil penalty of \$5,000 for the violations set forth in Paragraph K, above, covering the period specifically identified and no others. The payment shall be made by corporate check or the like made payable to "Commonwealth of Pennsylvania -- Solid Waste Abatement Fund" and sent to:

Regional Solid Waste Manager Bureau of Waste Management Department of Environmental Resources One Ararat Boulevard Harrisburg, PA 17110

- 11. Within five (5) days of the date of this Amendment to Consent Order And Agreement Harrisburg shall withdraw the appeal docketed at EHB Docket No. 89-201-W.
- term or provision in Paragraphs 5, 6 and/or 7 of this Amendment To Consent Order and Agreement, Harrisburg shall be in violation of this Consent Order and Agreement and, in addition to other applicable remedies, shall pay a civil penalty in the amount of \$200 per day for each violation. The penalty shall be due automatically and payable upon demand by the Department. Such penalty payments shall be forwarded as described in Paragraph 10, above. It is understood by the parties hereto that payment of any money hereunder shall neither constitute a waiver of Harrisburg's duty to meet its obligations under this Consent Order and Agreement nor preclude the Department from commencing an action to compel Harrisburg's compliance with the terms and conditions of this Consent Order and Agreement, or any applicable statute, rule, regulation, permit, or order of the Department.
- 13. In the event Harrisburg fails to comply in a timely manner with any term or provision in Paragraphs 2 and/or 4 of this Amendment To Consent Order and Agreement, Harrisburg shall be in violation of this Consent Order and Agreement and, in addition to other applicable remedies, shall pay a civil penalty in the amount of \$500 per day for each violation. The penalty shall be due automatically and payable upon demand by the Department. Such penalty payments shall be forwarded as described in Paragraph 10, above. It is understood by the parties hereto that payment of any money hereunder shall neither constitute a waiver of Harrisburg's duty to meet its obligations under this Consent Order and Agreement nor preclude the Department from commencing an action to compel

Harrisburg's compliance with the terms and conditions of this Consent Order and Agreement, or any applicable statute, rule, regulation, permit, or order of the Department.

- 14. In the event Harrisburg fails to comply in a timely manner with any term or provision in Paragraphs 1, 3 and/or 8 of this Amendment To Consent Order and Agreement, Harrisburg shall be in violation of this Consent Order and Agreement and, in addition to other applicable remedies, shall pay a civil penalty in the amount of \$700 per day for each violation. The penalty shall be due automatically and payable upon demand by the Department. Such penalty payments shall be forwarded as described in Paragraph 10, above. It is understood by the parties hereto that payment of any money hereunder shall neither constitute a waiver of Harrisburg's duty to meet its obligations under this Consent Order and Agreement nor preclude the Department from commencing an action to compel Harrisburg's compliance with the terms and conditions of this Consent Order and Agreement, or any applicable statute, rule, regulation, permit, or order of the Department.
- 15. In the event Harrisburg fails to comply with Paragraph 8, <u>supra</u>, on or before November 1, 1991, Harrisburg shall be in violation of this Amendment To Consent Order and Agreement and, in addition to other applicable remedies, shall pay a civil penalty in the amount of \$1000 per day for each violation. The penalty shall be due automatically and payable upon demand by the Department. Such penalty payments shall be forwarded as described in Paragraph 10, above. It is understood by the parties hereto that payment of any money hereunder shall neither constitute a waiver of Harrisburg's duty to meet its obligations under this Consent Order and Agreement nor preclude the Department from commencing an action to compel Harrisburg's compliance with the terms and conditions of this

Consent Order and Agreement, or any applicable statute, rule, regulation, permit, or order of the Department.

16. In the event that Harrisburg fails to forward any penalty payment required under Paragraph 9 - 12, <u>supra</u>, in a timely manner the Department may suspend Permit No. 100992 until such penalty payment is received.

17. Force majeure

- a. In the event that Harrisburg is prevented from complying in a timely manner with any time limit imposed in this Consent Order and Agreement solely because of a strike, fire, flood, act of God, or other circumstances entirely beyond Harrisburg's control and which Harrisburg, by the exercise of all reasonable diligence, is unable to prevent, or mitigate then Harrisburg may petition the Department for an extension of time. An increase in the cost of performing the obligations set forth in this Consent Order and Agreement shall not constitute circumstances beyond Harrisburg's control. Harrisburg expressly agrees that its economic inability to comply with any of the obligations of this Consent Order and Agreement shall not be grounds for any extension of time otherwise available under this paragraph.
- b. Harrisburg shall only be entitled to the benefits of this paragraph if it notifies the Department within two (2) days by telephone and within ten (10) days in writing of the date it becomes aware or reasonably should have become aware of the event impeding performance. The written submission shall include all related documentation, as well as a notarized affidavit from a responsible official of Harrisburg specifying the reasons for the delay, the expected duration of delay, and the efforts which have been made and are being made by Harrisburg to minimize the length of the delay. Harrisburg's failure to comply with the requirements of this

paragraph specifically and in a timely fashion shall render this paragraph null and of no effect as to the particular incident involved.

- c. Harrisburg shall have the burden of proof as to the justification for an extension and the length of such extension pursuant to this paragraph, both to the Department and in the event the matter results in litigation. Such burden of proof shall be by clear and convincing evidence. The total of all extensions to this paragraph, individually or in addition to previous extensions, shall in no event exceed one hundred twenty (120) days.
- 18. If any time limit in this Consent Order and Agreement is extended pursuant to Paragraph 17, <u>supra</u>, (Force Majure) Harrisburg shall also be granted an extension of time for complying with subsequent time limits, set forth in Paragraphs 1 8, <u>supra</u>, if those compliance dates depend, directly or indirectly, upon timely completion of the activity subject to the force majure event.
- 19. Paragraphs 2 7, 10 and 17 of the 1988 Consent Order are superceded by the this Amended Consent Order and Agreement.
- 20. Paragraphs 1, 8, 11 16, 18 22 of the 1988 Consent Order are incorporated by reference.
- 21. Paragraph 9 of the 1988 Consent Order has been previously satisfied by Harrisburg.

IN WITNESS WHEREOF, the parties hereto have caused this Consent Order and Agreement to be executed by their duly authorized representatives. The undersigned representatives of Harrisburg certify under penalty of law, as provided by 18 Pa.C.S. §4904, that they are authorized to execute this Consent

Order and Agreement on behalf of Harrisburg that Harrisburg consents to the entry of this Consent Order and Agreement and the foregoing Findings as an ORDER of the Department; and that Harrisburg hereby knowingly waives its right to appeal this Consent Order and Agreement and the foregoing Findings, which rights may be available under the Administrative Code, 71 P.S. §510-1 et seq., the Administrative Agency Law, 2 Pa.C.S. §§501-508 and 701-704 or any other provision of law.

FOR	THF	CITY	ΩF	HAR	RISBURG:

Stephen R. Reed Mayor of Harrisburg

James J. McCarthy Controller of Harrisburg

FOR THE COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL RESOURCES:

Hugh V. Archer, Ph.D., P.E.

Assistant Counsel

Regional Director

Michael J.

Approved For Legality And Form:

Bradley C. Bechtel, Esquire

City Solicitor

Howard J. Wein, Esquire

Klett, Lieber, Rooney & Schorling

Attorney for Harrisburg

June 16, 1989

SUBJECT: Harrisburg Incinerator

To:

Francis P. Fair

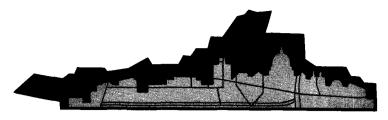
Acting Solid Waste Manager Harrisburg Regional Office

FROM:

Mark S. Embeck **WS** Water Pollution Biologist Harrisburg Regional Office

Between 8:30 and 8:45 of this date Tony Rathfon and I observed a City of Harrisburg truck dump ash on the B-1 ash residue pit in violation of the Department's Order.

Mr. Rathfon cc: File T



The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

CERTIFIED MAIL P-866 669 766 RETURN RECEIPT REQUESTED

March 21, 1989

Mr. John W. Conrad, Hydrogeologist Bureau of Solid Waste Management Harrisburg Regional Office Department of Environmental Resources Commonwealth of Pennsylvania One Ararat Boulevard Harrisburg, PA 17111

Re: Harrisburg Steam Generating Facility
Residue Area B-1 Closure Plan
I.D. No. 100992
Consent Order and Agreement Dated December 20, 1988

Dear Mr. Conrad:

In correspondence dated February 24, 1989, you indicated that the down-gradient monitoring well (MW-3) for Residue Area B-1 indicates elevated chloride, sodium and sulfate values over those measured at the upgradient monitoring well (MW-7). Therefore, you requested that the City of Harrisburg submit to DER groundwater assessment plan for Residue Area B-1 as required and described in Section 273.286 of the Municipal Waste Management Regulations. In response to this letter, a meeting was held on March 14, 1989 at DER's Harrisburg Regional Offices:

Linda Houseal Department of Environmental Resources Jack Conrad Department of Environmental Resources Abdul R. Merchant Department of Environmental Resources Robert Benvin Department of Environmental Resources David A. Brinjac Brinjac, Kambic & Associates, Inc. David O. Eberle Skelly and Loy Ed Egenrieder City of Harrisburg William Strauss City of Harrisburg Gordon Lambert Nassaux-Hemsley Bill Bruck Nassaux-Hemsley John Szajna Nassaux-Hemsley

DER
WASTE MANAGEMENT
MAR 2 3 1989
HARRISBURG REGION

Mr. John W. Conrad Residue Area B-1 March 21, 1989 Page Two

The results of that meeting indicated the following:

- 1. It was concluded that MW-7 is not a background monitoring well with relation to MW-3.
- 2. Samples will be collected at piezometers 87-P-4W and 87-P-5W and monitoring wells MW-3 and MW-4. These samples will be analyzed for the following parameters:

specific conductance and pH at the well head chloride sodium sulfate total dissolved solids (TDS) dissolved potassium iron

3. These samples will be taken on a monthly basis for three consecutive months at which time they will be placed on tally sheets similar to Form 8.

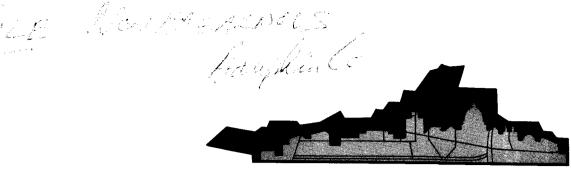
We trust this is an accurate portrayal of the results of this meeting. Should you have any questions regarding this, please feel free to contact me at your convenience.

Sincerely,

William S. Strauss

Director

c: David Brinjac, P.E. David Eberle, P.E. John Szajna, Esquire



WASTE MANAGEMENT

MAR 02 1989

HARRISBURG REGION

The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

March 2, 1989

Mr. John W. Conrad, Hydrogeologist Bureau of Solid Waste Management Harrisburg Regional Office Department of Environmental Resources Commonwealth of Pennsylvania One Ararat Boulevard Harrisburg, PA 17110

Re: Harrisburg Steam Generating Facility
Residue Area B-1 Closure Plan
I.D. No. 100992
Consent Order and Agreement Dated December 20, 1988

Dear Mr. Conrad:

In correspondence dated February 24, 1989 and received in this office on February 27, 1989, you indicate that the downgradient monitoring well (MW-3) for Residue Area B-1 indicates elevated chloride, sodium and sulfate values of over those measured at the upgradient monitoring well (MW-7). Therefore, you have requested that the City submit to DER a Groundwater Assessment Plan for Residue Area B-1 as required and described in Section 273.286 of the Municipal Waste Management Regulations.

Based upon our conference call of March 1, 1989, this letter serves to address your referenced letter and to confirm that a meeting has been scheduled with you to discuss the Assessment Plan formulated on Tuesday, March 14, 1989 at 1:00 p.m. at DER's Harrisburg Regional Offices.

Mr. John W. Conrad March 2, 1989 Page Two (B-1)

I trust that the Assessment Plan presented to you at that time will meet with your approval.

Should you have any questions regarding this, please feel free to contact me at your convenience.

Sincerely,

William S. Strauss, Director

gk

c: David A. Brinjac, P.E.
David O. Eberle
John Szajna

Environmental Resources
Harrisburg Region Office
November 9, 1988

the Frither

SUBJECT: City of I

City of Harrisburg

Proposed Consent Order/Agreement

TO:

Mark M. McClellan Deputy Secretary

Environmental Protection

FROM:

John B. Moyer Director Harrisburg Region

The regional office has a meeting to discuss a potential agreement with the City of Harrisburg relative to the closure of the incinerator residue sites on November 10, 1988 at 9:00 a.m.

A copy of the proposed Consent Order was forwarded to you from Amy Putnam.

The key issues are:

1. The agreement would allow continued placement of residue at presently overfilled Area B-1 until December 31, 1989 as long as the existing maximum elevation is not exceeded (see Paragraph 6, Page 6). Implementation of closure of B-1 could be delayed until December 31, 1989. The logic of the delayed closure is that the City would have time to obtain a permit for a new facility to receive residue from B-1 to allow for transfer of residue from B-1 to the site disposal and continued on premises disposal of the residue provided the City is successful in obtaining a new permit and getting the site constructed by December 31, 1989.

There are two (2) options to the delayed closure:

- a. Immediate cessation of disposal without agreement.
- b. Cessation of disposal in 100 days. This would allow the City time to get the required Module 1 approvals and to allow for disposal at some permitted site in the Commonwealth.

Mark M. McClellan November 9, 1988 Page 2

2. Method of Closure:

The existing permit provides for closure of Site B-1 with a maximum elevation four feet over the berm of the facility. The City is proposing removal of residue from B-1 to provide for closure in compliance with the existing regulations, but with elevations and slopes in excess of the present permit for B-1 (Paragraph 7, Page 7).

3. Penalty:

This proposal provides for a penalty of \$900,000. The calculation is based on interest earned or capable of being earned on money taken from the incinerator account and ut into the City's general fund since 1980. The penalty proposal will be a subject of intense negotiation if we pursue an agreement. Guidance and directing are needed as to the minimum acceptable penalty.

I am requesting your guidance and concurrance with these major issues.

cc: Mr. Steiner
Ms. Putnam

Enforcement

BUREAU OF WASTE MANAGEMENT Harrisburg Regional Office One Ararat Boulevard Harrisburg, PA 17110 (717) 657-4588

October 28, 1988

CERTIFIED MAIL
RETURN RECEIPT, P-942-818-509

Mr. William Strauss Harrisburg Steam Generating Facility 1670 S. 19th Street Harrisburg, PA 17104

Re: Harrisburg Steam
Generating Facility
Permit Nos. 100759
and 100992
Order of August 29, 1988

Dear Mr. Strauss:

The Department of Environmental Resources is granting a supersedeas of Paragraph One of the Department's Order, dated August 29, 1988, issued to the City of Harrisburg. The date of October 28, 1988 in Paragraph One is extended to November 18, 1988.

The supersedeas is granted to allow time for the City and the Department to attempt to negotiate a Consent Order and Agreement to resolve this matter.

Please be advised that the Department will grant no further extensions in this matter.

Sincerely,

Michael R. Steiner Regional Solid Waste Manager

MRS/FPF/baf

cc: Mark M. McClellan John B. Moyer Sandra Roderick Amy Putnam Francis Fair Robert France File

Bub Prance, w.m.

BUREAU OF AIR QUALITY CONTROL

Harrisburg Regional Office

One Ararat Boulevard

Carrisburg, Pennsylvania 17110

(717) 657-4587

October 7, 1988

OCT 1 7 1988

HARRISBURG REGION

NOTICE OF VIOLATION

Mr. William Strauss, Director
Department Of Incineration and Steam Generation
City of Harrisburg
1670 South 19th Street
Harrisburg, PA 17104

Dear Mr. Strauss:

Enclosed is a copy of the results from the emission testing conducted at your facility on August 25, 1988.

The following information was extracted from the test results:

Process Tested:	Municipal Inciner		
Test Number:	01688A	016888	01688C
Pollutant Sampled:	Particulate	Particulate	Reavy Metals
Actual Emissions: (gr./dscf, corrected	0.187 to 12% CO ₂)	0.186	0.8 1bs/hr.
Allowable Emissions: (gr./dscf, corrected		0.10	NA

On August 25, 1988 a violation of Section 123.12 of Chapter 123 of the Rules and Regulations of the Department of Environmental Resources was observed at the Harrisburg Municipal Incinerator, located in the City of Harrisburg, Dauphin County, Pennsylvania.

Mr. William Strauss, Director October 7, 1988 Page 2

A violation of 25 PA Code \$123.12 constitutes unlawful conduct as defined at Section 8 of the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, as amended. Violations of the Department's Rules and Regulations are subject to the penalties of Sections 9 and 9.1 of the above Air Pollution Control Act.

Copies of Chapters 121 (Definitions) and 123, as well as the Air Pollution Control Act, have been enclosed for your information.

In view of the above, it is necessary that appropriate measures be implemented to assure future compliance with the regulations. Please notify this office within ten (10) days of receipt of this letter of Harrisburg Incinerator's abstement plans.

Please be advised that the above violation(s), as well as any previously documented violation and/or any violation observed subsequent to the receipt of this letter, may lead to appropriate enforcement action.

Nothing herein contained shall be construed to grant or imply immunity from criminal or civil prosecution for the actions described above or any other violations of law.

If you have any questions concerning the test, please do not hesitate to contact me.

Very truly yours,

Jon S. Harwick Air Quality Specialist Harrisburg Region

JSH:mjs

Enclosure

Hbg. Region File No. 22-301-052
A & C
Litigation
Rick St. Louis

Rick St. Louis
Harrisburg Case File

cc: Dauphin County Commissioners



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES

Suface will

BUREAU OF WASTE MANAGEMENT
Harrisburg Regional Office
One Ararat Boulevard
Harrisburg, Pennsylvania 17110
(717) 657-4588

August 29, 1988

Hend Polivered 8/29/88
Certified Mail No. P-517 982984

City of Harrisburg Harrisburg Steam Generating Facility 1670 South 19th Street Harrisburg, PA 17104

Re: Municipal Waste Activity
Permit Nos. 100992 and 100795
City of Harrisburg, Dauphin County

Gentlemen:

Attached is a hand delivered Order issued by the Department of Environmental Resources.

Sincerely,

Robert D. France Compliance Specialist Harrisburg Regional Office

RDF:jvl

Attachment

Received by:

Title:

OIVECAY

Date:

8-27-88

BUREAU OF WASTE HANAGEMENT Harrisburg Regional Office One Ararat Boulevard Harrisburg, Pennsylvania 17110 (717) 657-4588 June 27, 1988 DANGENERATION INCINERATION ENT.

NOTICE OF VIOLATION

CERTIFIED MAIL NO. P-649 693 448

Hr. William Strauss, Superintendent Harrisburg Steam Generating Facility 1670 South 19th Street Harrisburg, PA 17104

> Re: Non-Compliance Municipal Waste Activity Residue Disposal Area A I.D. No. 100759 City of Harrisburg, Dauphin County

Dear Mr. Strauss:

As a result of an inspection conducted by the Department on May 16, 1988, it has been determined that the City of Harrisburg is in vielstion of the Solid Waste Hansgement Act of the Commonwealth of Pennsylvania (SWMA), Act of July 7, 1980, P.L. 380, No. 97, 35 P.S. Section 6018.101 at seq., and Chapter 75 of the Rules and Regulations of the Department of Environmental Resources as follows:

- 1. The City has failed to close Residue Disposal Area A in accordance with the approved plans and permit. This is in violation of Section 610(4) and (9) of the SWMA.
- The City has failed to maintain the leachate collection system for Residue Disposal Area A. This is in violation of the approved plans and also in violation of Section 610(4) and (9) of the SWMA.
- 3. The above referenced violations constitute unlawful conduct in violation of Section 601 of the SWMA.

Mr. William Strauss, Superintendent June 27, 1988 Page 2

In order to achieve compliance with the SWMA, the implementation of the following procedures is recommended:

- 1. By July 29, 1968 submit to the Department a closure plan for Residue Disposal Area A, addressing final cover, final slopes and vegetation.
- 2. Repair the leachate collection system to ensure all leachate is being collected and discharged to the City of Harrisburg POW.
- 3. By July 8, 1988, submit to the Department a written report addressing the circumstances under which these violations occurred, and what provisions you have taken to correct these violations and to prevent their reoccurrence.
- 4. Attend a meeting at our office on July 18, 1988, at 10:00 a.m., to discuss these violations, completed and proposed remedial actions, and appropriate panalties.

This Notice of Violation does not waive, either expressly or by implication, the power or authority of the Commonwealth of Pennsylvania to prosecute for any and all violations of law arising prior to or after the issuance of this Notice of Violation or the conditions upon which the Notice of Violation was based, nor shall this Notice of Violation be construed so as to waive or impair any rights of the Department of Environmental Resources heretofore or hereafter existing.

If you have my questions concerning this matter, please feel free to con-

Sincerely,

Anthony L. Rathfon Solid Waste Specialist Harrisburg Regional Office

ALLIBJE

File
Robert France
C & M, Central Office
T

A DER'S Memo is due July 1st HB6 Livemerator Pre-Hearing Memorandum 1) HBb Incinerator Morm S waste List for Beth (a) Cook for august, 8, 1885 ash Reseduc analysis

- sept to item # F. - also any follow-up atters pertaining to the analytical sesults. - Will also answer H. 3 Hem # N. - "Hostory of Phoblems w/ line integrity - New Evidence 4 Itm 0 - 6 W Cordanination - Need Evidence - History of Non Compline 6 W Monttoring - Ned Evidence - Leachate system "failed." - Jusp. Reports to verify Bet ahold of C.O.A. from HQ Refus to CO.A. for A & B-1 (b) T. 8 U. AQ Permit (9) V. AQ map. seports - probably from Stack Han#4 A.1. Get from Veith Cashly

F. #2 Brian Hunt, 8/88 Look for this!

SENDER: Complete items , and 2 when additional	services are desired, and complete items 3 and 4.		
to the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restriction of the restri	will provide you the name of the letton the following services are available. Consult		
1. Show to whom delivered, date, and addresses's a	dress. 2. Restricted Delivery.		
3. Article Addressed to: Mr. William Strauss, Superintendent	4. Article Number P-649 693 448		
Harrisburg Steam Generating Facility	Type of Service:		
1670 South 19th Street	☐ Registered ☐ Insured		
Harrisburg, PA 17104	Certified COD Express Mail		
	Always obtain signature of addressee or agent and DATE DELIVERED.		
5. Signature - Addresses	Addressee's Address (ON requested and fee paid)		
6. Signature - Agent			
X			
7. Data of Delivery 6-29	A4		
PS Form 3811, Feb. 1986	DOMESTIC RETURN RECEIP		

UNITED STATES POSTAL SERVICE OFFICIAL BUSINESS

SENDE SINSTRUCTIONS
Flint your name, address, and ZIP Code
is the space below.

Complete items 1, 2, 3, and 4 on the reverse

 Attach to front of article if space permits, otherwise affix to back of article

 Endorse article "Return Receipt Requested" adjacent to number.





PENALTY FOR PRIVATE USE, \$300



Print Sender's name, address, and ZIP Code in the space below.

Department of Environmental Resources

One Ararat Boulevard

Harrisburg, PA 17110

Enf

BUREAU OF SOLID WASTE MANAGEMENT One Ararat Boulevard Harrisburg, Pennsylvania 17110 (717) 657-4588 July 10, 1985

Mr. Charles King Jr., Director
Department of Incineration and Steam Generation
1670 South 19th Street
Harrisburg, PA 17104

Dear Mr. King:

This letter is a confirmation of our meeting held on July 3, 1985 at the Harrisburg Regional Office of the Department of Environmental Resources.

Our discussion focused on the historical and present non-compliant status of the Harrisburg Incinerator facility with respect to the permit conditions and design criteria of the residue disposal sites. The existing condition of Residue Disposal Sites A and B-1 causes concern for their potential impact on human health and the environment. As a result of our discussion, it was agreed that the City of Harrisburg would take the following steps toward achieving compliance with State Law:

- 1. Remove the unincinerated refuse from Site B-1 by September 1, 1985.
- 2. Grade Site B-1 to meet design specifications by September 9, 1985.
- 3. Remove excess residue, assure proper collection instruments are in service, and grade Site A to meet approved design specifications by October 31, 1985.
- 4. Perform a hazardous waste determination for residues disposed in Site A and B-1 (see attachment for strategy). Results of sample analysis should be forwarded to the Department by August 9, 1985. If the determination classifies the residue from Site A or Site B as hazardous, notify both the Department and the Environmental Protection Agency immediately.
- 5. Reinstitute groundwater monitoring for the facility by no later than July 31, 1985.

Methods used for final electure of Residue Sites A and B-1 are contingent upon the results of the hazardous waste determination. If the residue in either Site A or B-1 is hazardous, the disposal sites containing the hazardous residue will be required to meet RCRA requirements for closure of a hazardous waste disposal facility. If the residue is determined to be non-hazardous, the sites will follow closure according to original design specifications. Following the submittal of all analytical results for the hazardous waste determination, a meeting will be scheduled to discuss pertinent findings, plan for final closure of the residue sites, and to further define future residue disposal needs for the Harrisburg Incinerator.

Your cooperation in this matter is imperative. If you have any further questions, please call.

Sincerely,

Michael R. Steiner Regional Solid Waste Hanager Harrisburg Regional Office

MRS:flw

oc: John B. Moyer
Francis P. Fair
Timothy A. Alexander
File

ER-SWM-58:4/27

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF SOLID WASTE MANAGEMENT

DATE PREPARED

IDENTIFICATION NO.

COMPLIANCE HISTORY MODULE NO. 10

COMPLETION OF THIS MODULE IS REQUIRED AS A PART OF THE APPLICATION FOR ANY TYPE OF SOLID WASTE MANAGEMENT PERMIT OR LICENSE

ATTACH ADDITIONAL SHEETS AS NECESSARY TO ANSWER THE FOLLOWING:

A. Purpose and Applicability:

- 1. The purpose of this application module is to assess the applicant's history of compliance with laws, regulations and standards relating to environmental protection in conformance with Sections 503(c) and (d) of the Pennsylvania Solid Waste Management Act. Failure to provide valid information required may result in the denial, suspension or revocation of your permit [license] as well as the imposition of civil and criminal sanctions.
- 2. Completion of this module is required in order for the Department to process and review the application and/or permit [license] pursuant to the Solid Waste Management Act.
- 3. This module may also be required as part of a facility [transporter's] annual report, when a permit is to be amended, revised or otherwise modified, or when the Department determines such information is necessary to properly monitor a permit [license].
- 4. Unless otherwise noted herein, this module applies to compliance history in regard to the following statutes and regulations promulgated thereunder.
 - Pennsylvania Solid Waste Management Act of July 31, 1968, (P.L. 788, No. 241).
 - b. Pennsylvania Solid Waste Management Act of July 7, 1980. (P.L. 380, No.97).
 - c. Clean Streams Law of June 22, 1937, (P.L. 1987, No. 394).
 - d. The Air Pollution Control Act of January 8, 1960 (1959 P.L. 2119, No. 787).
 - e. The Surface Mining Conservation and Reclamation Act of May 31, 1945 (P.L. 1198, No. 418).
 - f. Dam Safety and Encroachments Act of November 26, 1978 (P.L. 1375, No. 325).
 - g. Other State and Federal statutes relating to environmental protection, air or water quality, solid waste management or surface mining.
- 5. If the Applicant is a corporation, this module shall be signed by two corporate officers authorized to execute this module, or by one corporate officer and one corporate employee in Pennsylvania with sufficient authority over the solid waste management activity being licensed or permitted to be authorized to execute this module. A corporate seal shall be affixed; however, if no seal is required by the state of incorporation of the applicant, the applicant should so state and no seal will be required.

B. Applicant Background:

The following questions are to be completed by the applicant:

1. State the legal name and address of the applicant.

City of Harrisburg City Government Center Harrisburg, Pennsylvania 17101

2. Identify all of the applicant's places of business and terminals where municipal or residual waste processing or disposal or hazardous waste generation (with the exception of small quantity generators), transportation, storage, treatment or disposal facilities or activities are conducted in Pennsylvania.

Harrisburg Steam Generating Facility 1670 South 19th Street Harrisburg, Pennsylvania 17101

3. Identify the form of management under which the applicant conducts its business in Pennsylvania (check appropriate box):

	Individual
X	Municipality
	Proprietorship
	Corporation

	Partnership Limited Partnership Government Agency Other (identify the nature of the business
_	
	relationship)

4. Complete the following where applicable:

If the applicant is a corporation (as indicated in Question B. 3 above), list names and addresses of all principals of the corporation. This shall include the following: corporate officers, members of the board of directors, and principal stockholders who own, hold, or control stock of five percent (5%) or more of a publicly held corporation or ten percent (10%) or more of a privately held corporation. List the social security number* of all individuals identified, and the IRS tax identification number and/or employer identification number of corporations and other businessentities.

Employer I.D. No. - 69-0235025 Other Items Not Applicable

^{*}Supplying individual social security numbers is optional; failure to provide all applicable numbers, however, will make processing of the application more difficult.

b.	applicant, including ultimate parent corporations, and all United States subsidiary corporations of the applicant and of the ultimate parent corporation (if any) and their principal places of business. Include the IRS tax identification number of the
	corporations listed.

N/A

c. If the applicant is a partnership (as indicated in Question B.3 above), list the names, social security numbers * and addresses of all partners, both general and limited.

N/A

d. List the name, social security number*, or IRS tax identification number and/or employer ID number and affiliation of any other person or entity having or exercising control over any Pennsylvania DER-regulated aspect of the proposed facility or activity, such as associates, contractors, subcontractors, agents, or landowners. 5. List all Pennsylvania DER permits or licenses, issued pursuant to the statutes listed in item A(4) (a-e) above, that the applicant, including all persons and organizations identified in this Section B, currently has in effect or has had in effect in the past ten year.(Include type of permit or license, number and location, date issued, expiration date, if any.)

Permits listed below pertain to incinerator

Permit No. 100758 - Issued July 13, 1972 - to operate incinerator. (Solid waste permit)

Permit No. 100759 - Issued May 13, 1973 - <u>Site A</u> to be used as a residue disposal site. (Solid waste permit)

Permit No. 100992 - Issued September 12, 1978 - <u>Site B</u> to be used as a residue disposal site. (Solid waste permit)

Permit No. 22-310-007 - Renewal issued June 30, 1981 expiring June 30, 1986.

To operate incinerator.

(Air quality permit)

6. Identify any solid waste processing or disposal facility, area or activity in Pennsylvania since 1970 or hazardous waste storage, treatment, transportation, or disposal facility, area, or activity in Pennsylvania since 1980 which the applicant, or any person or entity identified anywhere in Section B, currently owns or operates, or previously owned or operated, but which is not listed under any of the above responses to this Module. This shall include any solid waste management activities which are no longer permitted or which were never under permit. Include the locations(s) of all such facilities, areas, or activities, the type of operation, and identify any state or federal permits pursuant to which they operate or have operated.

N/A

- C Compliance Background: Copies of information in Part C are available on request.
 - 1. Identify any "Notice of Violation" sent to the applicant or those persons or entities identified anywhere in response to Section B over the past five year period from Pennsylvania DER. Include the date of the "Notice of Violation", the location of the alleged violation, the nature of the alleged violation and the disposition. (Attach copies or make available upon request.)

Date: December 16, 1982

Location: Residue Disposal Site B-1

Permit Number: 100992

Nature of Alleged Violation: Dumping and storing unincinerated refused in residue disposal Site B-1.

The disposition of this violation is that DER gave the City of Harrisburg an <u>order</u> to stop this dumping on May 13, 1983. The City and DER are working together to rectify this problem.

2. Identify any administrative orders issued by Pennsylvania DER, civil penalties assessed by Pennsylvania DER, bond forfeiture actions brought by Pennsylvania DER, and civil penalties actions adjudicated by the Environmental Hearing Board since January 1, 1970, against the applicant or those entities identified anywhere in Section B. Describe the date, location of the violations, and nature of the violations. (Attach copies of orders, assessments and adjudications or make available upon request.)

ORDERS

- May 17, 1976 Location: Residue Disposal Site A Nature of violations - Use of site after its useful life had expired.
- 2. May 13, 1983 Location: Residue Disposal Site B Nature of violations Dumping unincinerated waste in this residue site.

The following relates to Order No. 1 above:

- 1. Consent Adjudication Docket No: 76-078-C February 22, 1977
- 2. Amended Consent Adjudication Docket No: 76-028-C, March 13, 1979
- 3. Consent Decree dated January 10, 1980.
- 3. Identify any summary, misdemeanor, or felony convictions or pleas of guilty or noto contendere that have been obtained since 1970 in Pennsylvania against the applicant or those persons or entities identified anywhere in Section B pursuant to those statutes identified in Section A.4 or for any acts in Pennsylvania involving the storage, treatment, transportation, processing, or disposal of solid wastes.

N/A

4. Identify any court proceedings in Pennsylvania since January 1, 1970 which relate to those statutes listed in Section A.4 that those persons or entities identified anywhere in Section B have been a party to. State the disposition of those proceedings. Do not include those proceedings listed in Section C.3 above.

Consent Decree issued in the Commonwealth Court of Pennsylvania in relation to the Site A-1 residue site. Decree terminated May 1, 1981.

- 5. Identify any consent order, consent adjudication, consent decree or settlement agreement in Pennsylvania entered into since January 1, 1970 by the applicant, or those persons or entities identified anywhere in Section B, to which either a county health department, the Pennsylvania DER, or the U.S. Environmental Protection Agency was a party and which concerned any facility or activity in Pennsylvania regarding an environmental protection statute or ordinance.
 - 1. Consent Adjudication Docket No: 76-078-C February 22, 1977
 - 2. Amended Consent Adjudication Docket No: 76-028-C, March 13, 1979
 - 3. Consent Decree dated January 10, 1980.

Consent Decree issued in the Commonwealth Court of Pennsylvania in relation to the Site A-1 residue site. Decree terminated May 1, 1981.

6. For all facilities and activities identified in response to Question B.6 above, indicate whether such facility or activity was the subject of an administrative order, consent agreement, consent adjudication, consent order, settlement agreement, court order, consent decree, civil penalties, bond forfeiture proceedings, consent decree, conviction, or permit or license suspension or revocation pursuant to the statutes listed in Section A(4). If any of these facilities or activities were subject to any of the actions identified herein, include the date of the action, the location of the violation, the nature of the violation, and disposition. (Attach copies or make available upon request.)

N/A

7. Where the applicant is a corporation, list all principals who have also been principals of other corporations which have committed past violations of Act 97.

N/A

- 8. Compliance Outside of Pennsylvania
 - a. [Note: For corporate applicants which are publicly traded, are diversified and have done business in Pennsylvania long enough to provide an in-state basis for evaluating compliance history, Item 8 may be answered through the submission of SEC 10K reports for the past five years, a current proxy statement, and any corporate statements or directives which articulate the corporation's policy with regard to compliance with environmental laws in general or solid waste management laws in particular. Any applicant which wishes to make such submission in response to Item 8 questions should ask for further instructions from the Pennsylvania DER office to which the permit or license application is being submitted.]
 - a. Identify any misdemeanor or felony convictions of, or pleas of guilty or *nolo contendere* by, persons or entities listed anywhere in Section B for violations of any state or federal statutes for activities outside of Pennsylvania relating to environmental protection within the past five years. Include convictions and pleas for any acts involving the storage, treatment, transportation, processing or disposal of solid waste. (Describe the date of the convictions and offenses, the location of the offenses, and the nature of the offenses.)

b. Identify any final administrative orders issued to those persons or entities identified anywhere in Section B within the past five years pursuant to any state or federal statutes for activities outside of Pennsylvania relating to environmental protection. (Describe the date of the order(s), the location of the violation(s), and the nature of the violation(s).) (Attach copies or make available upon request.)

N/A

c. Identify any court order, court decree, consent decree, consent adjudication, consent order, final civil penalty adjudication, final action on bond forfeiture, or settlement agreement in the past five years between those persons or entities identified anywhere in Section B and any state or federal agencies responsible for environmental protection. (Describe the date of the order, decree, etc., the location of the violation(s), and the nature of the violation(s).) (Attach copies or make available upon request.)

I (we) hereby certify that I(we) have the authority to respond to the above questions on behalf of the applicant, and that the information provided herein is true and correct to the best of my(our)knowledge, information and belief.

	Amon Close
· ·	(Signature)
	Name: James M. Close
	Title: Director of Public Works
	Social Security No.:
Sworn to and subscribed before me this day of fully,	
Notary Public NOSE ASSESSMENT OF MARKET SANS My Commiss of the tree Market Sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of the sans manufactures as a commission of	(Signature)
	Name:
	Title:
	Social Security No.:
Sworn to and subscribed before me this	
day of,	
19	
Notary Public	
	Affix Corporate Seal:

(For Corporations, see instructions in A(5) regarding seal and signatures.)

Enf.

One Ararat Rogleward Harrisburg, Pennsylvania 17110 (717) 657-4588 July 30, 1985

Hr. Charles King
Department of Incineration and Atoma Generation
City of Marrisburg
1670 South 19th Struct
Herrisburg, PA 17101

Re: Harrisburg Steam Generating Vecility Air Quality Permit No. 22-301-052 (Issued January 1, 1985) Selld Waste Permit No. 100758 Dauphin County

Dear Mr. Kings

Under authority of Section 6.1 of the Air Polistion Act, as amended, 35 2.8. §34006.1, Section 503 of The Solid Waste Management Act, as amended, 35 P.S. §6018.503, and Section 1917-A of The Administrative Code, as amended, 71 P.S. §510-17, the Separtment hereby suspends the City of Sarrisburg's parallel to accept and burn the following waste streams at its Steam Generating Facility:

- Wastewater Treatment Plant residue from the Harrisburg Wastewater Treatment facility - Modification approved Mayomber 21, 1984.
- Savage aludge from the Langueter South Vestewater Treatment Plant

 Hodification approved December 28, 1984.
- 3. Digester and settling tank contents from the Harrisburg Westevater
 Treatment Plant Modification approved December 28, 1984.
- 4. Savage sludge from the Borough of Littlebtown + Modification approved January 22, 1985.
- 5. Wastewater Treatment Plant residue from Penn Dye and Finishing Company, Incorporated Medification approved July 1, 1985.
- Sanbery waste oil siedge from Carliele Tire and Rubber Company -Modification approved July 1, 1985.

The basis for the above action of the Department includes but is not limited to the following reasons:

- 1. On July 24, 1985, an investigation by Prederick J. Heagy of our office revealed that the Harrisburg Municipal Incinerator accepted and burned 75 tons of sawage sludge in Unit No. 2 of the incinerator. This indicates that sawage sludge was burned at a rate exceeding Condition No. 3 contained in Air Quality Operating Permit No. 22-301-052.
- 2. On January 25, 1985, a routine inspection by Timothy Alexander revealed that sewage sludge was being processed outside of the pit of the tipping floor in violation of Condition No. 5 contained in the Modification to Solid Waste Permit No. 198758 dated November 21, 1984.

This action of the Department may be appealed to the Environmental Hearing Board, Third Ploor, 221 North Second Street, Harrisburg, PA 17101 (717-787-3483) by any aggrieved person pursuant to Section 1921-A of the Administrative Code of 1929, as amended, 71 P.S. Section 510-21; and the Administrative Agency Law, 2 Pa. C.S. Chapter 5A. Appeals must be filed with the Environmental Hearing Board within thirty (30) days of receipt of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the regulations governing practice and procedure before the Board may be obtained from the Board. This paragraph does not, is and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

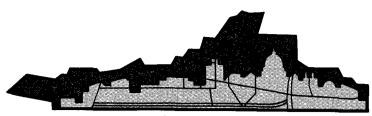
If you have any further questions regarding this matter, please contact this office.

Sincerely,

John B. Moyer Director

cc: Leif Ericson Michael Steiner File (2)

Sile: Dauge 4e



The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

August 26, 1996

Mr. John Spang Environmental Chemist Dept. of Environmental Resources Bureau of Solid Waste Management One Ararat Blvd. Harrisburg, PA 17110

RE: Residue Disposal Area B June 1996 Ash Quality

Dear Mr. Spang:

Enclosed, please find a copy of the certified laboratory results from the analyses performed by Analytical Laboratories of Skelly and Loy, Inc. using the T.C.L.P. procedure for the two monthly composite samples for Lead and Cadmium representing the month of June 1996.

As you can see, the samples for the Lead analytes tested above the respective regulatory thresholds. This notwithstanding, we have continued to evaluate the historic analytical data to determine whether our ash exhibits the toxicity characteristic for the Lead analyte per EPA's Guidance for the Sampling and Analysis of Municipal Waste Combustion Ash for the Toxicity Characteristic (EPA Publication No. EPA530-R-95-036 of June 1995).

In our evaluation, we used the data points which have been generated from the beginning of 1995 (when our revised protocol implemented) through June 1996. Please refer to the enclosed Exhibit 1 for our evaluation. Based on our calculations, using the approved statistical formulas provided in EPA530-R-95-036, Lead is not considered to be present in our ash at a hazardous level. Therefore, the toxicity characteristic for our ash remains non-hazardous.

Mr. John Spang August 26, 1996 Page Two

Should you have any questions and/or comments regarding this information, do not hesitate to contact me at (717) 236-5361.

John A. Lukens Director

Sincerely

JAL/jal enclosures cc:

Stephen R. Reed, Mayor
Napoleon A. Saunders, Business Administrator
Thomas J. Mealy, Executive Director - THA
Daniel R. Lispi, Project Manager
Edward Egenrieder, Water Quality Technician
Howard J. Wein, Esq. - Klett, Lieber, Rooney & Schorling
Robert Benvin - PaDEP
File

EXHIBIT 1 EVALUATION OF ANALYTICAL DATA FOR LEAD ANALYTE

1995/1996 Data for Lead Analyte (mg/l):

			×i	x _i ²	
1.	Jun	_	7.100	50.410	
2.	Jun	-	7.700	59.290	
3.	May	-	6.300	39.690	
4.	May	-	10.800	116.640	
5.	Apr	-	0.870	0.757	
6.	Apr	-	2.800	7.840	
7.	1st	-	0.690	0.476	
8. 9.	Mar Mar	_	0.000	0.000	
10.		_	0.370	0.137	
11.	_ 1	_	6.500	42.250	
12.	Jan	_	4.100	16.810	
13.	Jan	_	4.100	16.810	
14.	4	-	0.790	0.624	
15.	Dec	_	7.800	60.840	
16.	Dec	-	9.100	82.810	
17.	Nov	-	0.410	0.169	
18.	_,	-	1.400	1.960	
19.	Oct	-	0.000	0.000	
20.		-	0.600	0.360	
21.	3rd	-	0.720	0.518	
22.	Sep	_	1.200	1.440	
23.	- *	-	3.000	9.000	
24. 25.	Aug	_	7.100 2.700	50.410 7.290	
26.	Aug Jul	_	3.000	9.000	
27.	Jul	_	5.000	25.000	
28.	2nd	_	1.400	1.960	
29.	Jun	_	1.800	3.240	
30.	Jun		10.900	118.810	
31.	May	-	0.000	0.000	
32.	May	_	0.000	0.000	
33.	Apr	-	0.064	0.004	
34.	Apr	-	0.340	0.116	n = 41
35.	1st	-	2.600	6.760	•
36.	Mar	-	0.220	0.048	
37.	Mar	_	2.100	4.410	
38.	Feb		0.032 0.052	0.001	
39. 40.	Feb Jan	_	0.032	0.003 0.010	
41.	Jan	_	0.008	0.000	
Tota		<u>_</u>	13.766	735.893	
		_			

Calculation of Mean (x):

$$x = \frac{{}^{n}\Sigma x}{{}^{i}} = \frac{113.766}{41} = 2.775$$

EXHIBIT 1 EVALUATION OF ANALYTICAL DATA FOR LEAD ANALYTE (CONTINUED)

Calculation of Standard Deviation (s):

$$s^{2} = \frac{\prod_{i=1}^{n} \sum_{i=1}^{2} - (\prod_{i=1}^{n} \sum_{i=1}^{2})^{2}/n}{n-1} = \frac{735.893 - (113.766)^{2}/41}{41-1} = 10.505$$

$$s = \sqrt{s^{2}} = 3.241$$

Calculation of Standard Error (S_x) :

$$S_{x} = \frac{s}{\sqrt{n}} = \frac{3.241}{\sqrt{41}} = 0.506$$

Calculation of Confidence Interval (CI):

CI =
$$x \pm t_{.20} S_x = 2.775 \pm 1.303(0.506) = 2.775 \pm 0.659$$

Conclusion:

The regulatory threshold (RI) for Lead is 5.0 mg/l. The upper limit of CI is 3.434. CI is less than RI; therefore, the contaminant of concern is not considered to be present in the ash at a hazardous level.

ANALYTICAL LABORATORIES OF SKELLY AND LOY, INC. 2601 N. FRONT STREET HARRISBURG, PA 17110

Phone: 717-257-1335 FAX 257-1341

CITY OF HARRISBURG HARRISBURG WASTE ENERGY 1670 SOUTH 19th STREET HARRISBURG, PA 17104 Attn: ED EGENRIDER

Order #: 96-07-432 Date: 07/30/96 10:37 Work ID: 96-055 AND 96-056 Date Received: 07/19/96

Date Completed: 07/30/96

Purchase Order: 96-09824-00,09825-00

Invoice Number: 30133

Client Code: COH_0160

SAMPLE IDENTIFICATION

Sample	Sample	Sample	Sample
Number	Description	Number	<u>Description</u>
01	96-055	02	96-056

ND = NOT DETECTED

LIMIT = LIMIT OF DETECTION OF LABORATORY INSTRUMENTATION

JULE ASH SAmples

Certified By MICHAEL S. FARLLING

ANALYTICAL LABORATORIES TEST RESULTS BY SAMPLE

Page 2

Sample: 01B 96-055 Collected: 06/30/96 Category: LEACHATE

Test Description	Result	<u>Limit</u>	Units	Analyzed	Вy
CADMIUM, TCLP LEACHATE	0.65	0.01	MG/L	07/25/96	WWS
LEAD, TCLP LEACHATE	7.1	0.1	MG/L	07/25/96	WWS

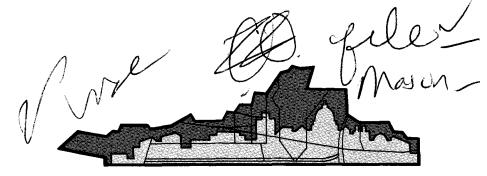
Sample: 02B 96-056 Collected: 06/30/96 Category: LECHATE

Test Description	<u>Result</u>	<u>Limit</u>	Units	Analyzed	<u>By</u>
CADMIUM, TCLP LEACHATE	0.71	0.01	MG/L	07/25/96	WWS
LEAD, TCLP LEACHATE	7.7	0.1	MG/L	07/25/96	WWS

Page 3

EXTRACTION FOR TCLP

SW-846/1311



The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

March 20, 1998

Mr. John Spang
Environmental Chemist
Bureau of Solid Waste Management
Commonwealth of Pennsylvania
Department of Environmental Protection
One Ararat Boulevard
Harrisburg, PA 17110

PECENZED NAR 2 4 1998

RE: Residue Disposal Area B 4th Quarter 1997 Ash Quality

Dear Mr. Spang:

Enclosed, please find copies of the certified laboratory results from the analyses performed by Analytical Laboratories of Skelly and Loy, Inc. using the SW-846, Method 1311, T.C.L.P. procedure, the Form 41, and the sampling logs relative to 4th Quarter 1997 ash quality.

As you can see, all the samples for each of the required analytes tested below the respective regulatory thresholds. However, as you may recall, one of the October 1997 samples for the Lead analyte tested above the regulatory threshold. Therefore, using the twenty-six most recent Lead data points (i.e. to maintain a sample size of 26, for the 4th Quarter 1997 evaluation), I have evaluated the historical data to determine whether our ash exhibits the toxicity characteristic for the Lead analyte per EPA's Guidance for the Sampling and Analysis of Municipal Waste Combustion Ash for the Toxicity Characteristic (EPA Publication No. EPA530-R-95-036 of June 1995).

Using the "Excel" computer program and incorporating the approved statistical formulas provided in EPA530-R-95-036, I developed the enclosed Exhibit 1, "Evaluation of Analytical Data for Lead Analyte" for the 4th Quarter 1997 sample result. Based on this statistical evaluation, the Lead analyte is less than the regulatory limit of 5 mg/l. Therefore, the toxicity characteristic for our ash remains non-hazardous.

Mr. John Spang March 20, 1998 Page Two

Should you have any questions and/or comments regarding the this information, please do not hesitate to contact me at (717) 236-5361.

John A. Lukens Director

JAL/jal enclosures cc:

Stephen R. Reed, Mayor Napoleon A. Saunders, Business Administrator Thomas J. Mealy, Executive Director - THA Daniel R. Lispi, Project Manager Edward Egenrieder, Water Quality Technician Robert Benvin - PaDEP File

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

98-03-10

ID NUMBER 100992

FORM 41 MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

FORM 41 4TH. QUAR	TER 1997				
Part 1. Facility	Name	Harrisbur	g Waste to Energ	ූ ු ු y Facility	98
Location: County			Municipality H	The state of the second separation of	
 Date Sample Collec			**.	** 1 A 1 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Poll direction
Sample Collectors			-		
Sampling Location			ction 283.403) A	SH DISCHAR	GER / BELTS
Part II. Chemical	Analysis 1	Parameters			
A. Total Analysis	s(dry weigh	nt basis)	B. Leaching Anal	ysis (TCLE	Test)
Aluminum	33000	_mg/kg	Aluminum	< 0.33	mg/l
Antimony	46	mg/kg	Antimony	< 0.06	mg/l
Arsenic	29	_mg/kg	Arsenic	< 0.06	mg/l
Barium	370	mg/kg	Barium	< 0.56	mg/l
Cadmium	39	mg/kg	Cadmium	0.54	mg/l
Chromium	78	_mg/kg	Chromium	< 0.02	<u>mg</u> /l
Copper	750	mg/kg	Copper	0.37	$^{\prime}$ mg/l
Lead	1100	_mg/kg	Lead	< 0.11	mg/l
Mercury	0.51	mg/kg	Mercury	< 0.00	06mg/l
Molybdenum	29	mg/kg	Molybdenum	< 0.11	mg/l
Nickel	72	mg/kg	Nickel	0.98	$g_{\underline{\underline{\underline{\underline{\underline{\underline{\underline{\underline{\underline{\underline{\underline{\underline{\underline{\underline{\underline{\underline{\underline{\underline$
Selenium	< 1.1	mg/kg	Selenium	< 0.06	mg/l
Silver	13	mg/kg	Silver	< 0.04	<u>mg/l</u>
Zinc	4700	mg/kg	Zinc	48	mg/l
Total Residue		8 <u>7 </u> %	COD mg/l	50	ASTM Method A
Volatile Resid Total Resid	lue on	11 %	TOC mg/l	19	ASTM Method A
pH 11.49	ide	116	Total Dissolv (Filterable R pH INITIAL	esidue) _	2900mg/]
Additional Par	rameters:		Additional Pa	_ 	
		mg/kg			mg/l
		mg/kg			mg/l
		mg kg			mg/l



Environmental → Industrial Hyglene → Food Science

Page # 1 Sample # C05817-1

ATTN: Mr. Ed Egenrieder City of Harrisburg 1670 South 19th St.

Harrisburg

PA 17104

March 2, 1998

MODIFIED LAB ANALYSIS REPORT

Customer PO#

Job Name : Harrisburg City
Job Number : H6621-EE-MC
Location : 98-05

DETECTION TEST/PARAMETER RESULT UNITS LIMIT

F

Form 41 Parameters						
METALS Mercury, Total	0.44	mg/kg	0.051 7471			
Mercury, Total Mercury, TCLP Leachate	0.51 N.D.	mg/kg mg/l	Dry Weight 0.006 7471			
TOTAL METALS BY ICP						
Aluminum	29000	mq/kg	29 6010A			
Antimony	40	mg/kg	0.96 6010A			
Arsenic	25	mg/kg	0.48 6010A			
Barium	320	mg/kg	0.96 6010A			
Cadmium	34	mg/kg	0.096 6010A			
Chromium	68	mg/kg	0.48 6010A			
Copper	650	mg/kg	0.96 6010A			
Lead	960	mg/kg	0.48 6010A			
Molybdenum	25	mg/kg	9.6 6010A			
Nickel	63	mg/kg	3.8 6010A			
Selenium	N.D.	mg/kg	0.96 6010A			
Silver	11	mg/kg	0.19 6010A			
Zinc	4100	mg/kg	1.9 6010A			
Aluminum	33000	mg/kg	Dry Weight			

**** Continued ****

Page # 2 Sample # C05817-1

March 2, 1998

TEST/PARAMETER	RESULT	UNITS	DETECTION LIMIT	METHOD
Antimony Arsenic Barium Cadmium Chromium Copper Lead Molybdenum Nickel Selenium Silver Zinc	46 29 370 39 78 750 1100 29 72 < 1.1 13 4700	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	Dry Weig Dry Weig Dry Weig Dry Weig Dry Weig Dry Weig Dry Weig Dry Weig Dry Weig Dry Weig	ht ht ht ht ht ht ht ht
METALS BY ICP ON TCLP Aluminum Antimony Arsenic Barium Cadmium Chromium Copper Lead Molybdenum Nickel Selenium Silver Zinc	N.D. N.D. N.D. 0.54 N.D. 0.37 0.11 N.D. 0.98 N.D. N.D.	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l	0.33 0.06 0.06 0.56 0.01 0.02 0.01 0.11 0.11 0.04 0.06 0.04	6010A 6010A 6010A 6010A 6010A 6010A 6010A 6010A 6010A 6010A 6010A
WATER QUALITY Chemical Oxygen Demand, ASTM pH (50% solution) as received pH on ASTM Total Dissolved Solids - ASTM Total Solids	50 See Comment 10.04 2900 87	mg/l mg/l %	15 5 1	410.4 9045C 9045C 2540C 3540B

**** Continued ****

Page # 3 Sample # C05817-1

March 2, 1998

TEST/PARAMETER	RESULT	UNITS	DETECTION LIMIT	METHOD
Total Volatile Solids	11	%	1	160.4
TOX/TOC Total Organic Carbon, ASTM	19	mg/l	1.5	415.1

N.D. - Not Detected

The soil pH measured in water was 11.49 at 16.9 degrees C.

This report relates only to the samples as received by the laboratory, and may only be reproduced in full.

Lab report has been modified on 3/13/98. Antimony results were changed from 0.04 mg/l to N.D. and Selenium results changed from 0.02 mg/l to N.D.

QUALITY ASSURANCE REPORT

RESULT				
 86 11	% %			licate licate
 PRESERVA	ATIVE	TECH		YSIS TIME
	-	BEH BAS BEH	02/12/98	
	-	WWS BAS JLS	02/10/98	
	-	JBH	02/13/98	
See See See	86 11 PRESERVA See Chain of See Chain of See Chain of See Chain of	86 % 11 % PRESERVATIVE See Chain of Custody See Chain of Custody See Chain of Custody See Chain of Custody	PRESERVATIVE TECH PRESERVATIVE TECH See Chain of Custody BEH BAS See Chain of Custody BEH WWS See Chain of Custody BAS JLS See Chain of Custody TAS JBH See Chain of Custody TPL	86 % Dup: 11 % Dup: ANALY PRESERVATIVE TECH DATE See Chain of Custody BEH 02/12/98 BAS 02/12/98 BAS 02/12/98 See Chain of Custody BEH 02/18/98 WWS 02/17/98 See Chain of Custody BAS 02/17/98 JLS 02/10/98 See Chain of Custody TAS 02/16/98 JBH 02/13/98 See Chain of Custody TPL 02/25/98

Page # 4 Sample # C05817-1

March 2, 1998

TEST/PARAMETER	PRESERVATIVE	TECH	ANALYSIS DATE TIME
pH (50% solution) as received pH on ASTM ASTM Leachate	See Chain of Custo See Chain of Custo		02/10/98 02:00 02/27/98 08:00 02/18/98
Total Dissolved Solids - ASTM ASTM Leachate	See Chain of Cust	ody SLP JDW	02/28/98 14:10 02/18/98
Total Solids	See Chain of Custo		02/10/98 11:15
Total Volatile Solids	See Chain of Cust		02/10/98 11:15
Total Organic Carbon, ASTM ASTM Leachate	See Chain of Custo	ody KMW JDW	02/23/98 21:00 02/18/98

Respectfully Submitted,

David W. Lane

Laboratory Manager

Page # 1 Sample # 05817A-1

ATTN: Mr. Ed Egenrieder

City of Harrisburg 1670 South 19th St.

Harrisburg

PA 17104

March 11, 1998

LAB ANALYSIS REPORT

Job Name : Harrisburg City Customer PO#

Job Number : H6621-EE-MC Date Sampled : 02/02/98 11:00 AM

Location : 98-05 Date Received : 02/09/98 Sample State : Solid Waste Composite Date Approved : 03/11/98

Collector : EE Discard Date : 02/27/98

DETECTION
TEST/PARAMETER RESULT UNITS LIMIT METHOD

Water Quality/Prep

TCLP LEACHATE PREPARATION		
Extraction Fluid Used	2	1311
Final pH of TCLP Extract	6.98	1311
Preliminary pH with DI Water	10.98	1311
Preliminary pH with HCl	5.37	1311

This report relates only to the samples as received by the laboratory, and may only be reproduced in full.

ANALYSIS

TEST/PARAMETER PRESERVATIVE TECH DATE TIME

TCLP LEACHATE PREPARATION KLR 02/12/98 12:15

TCLP Leachate KLR 02/11/98

Respectfully Submitted,

David W. Lane Laboratory Manager

ASH SAMPLING LOG

WEEK # 97-40

10/1/97 thru 10/7/97

10/1/9/	CIII U	10,1,51			
DATE	UNIT	TIME	SAMPLER	REC'D BY	OPERATING CONDITIONS/COMMENTS
10-01-97	1	0730			OFF LINE
10-10-97	2	0730	J CARTER	BLACKSTOCK	NORMAL
10-01-97	1	1955			OFF LINE
10-01-97	2	1955	R BONNELL	BLACKSTOCK	NORMAL
10-02-97	1	0840			OFF LINE
10-02-97	2	0840	M LEEPER	DUNSWORTH	NORMAL
10-02-97	1	2035			OFF LINE
10-02-97	2	2035	E ENGLE	W KROVIC	NORMAL
10-03-97	1	A SHIFT			OFF LINE
10-03-97	2	A SHIFT			NORMAL NO SAMPLE
10-03-97	1	2030			COMING UP ON LINE
10-03-97	2	2030	E ENGLE	W KROVIC	NORMAL
10-04-97	1	0800	S MICHAELS	RON S	NORMAL
10-04-97	2	0800	S MICHAELS	RON S	NORMAL
10-04-97	1	1940	R BONNELL	BLACKSTOCK	NORMAL
10-04-97	2	1940	R BONNELL	BLACKSTOCK	NORMAL
10-05-97	1	C SHIFT			NORMAL NO SAMPLE
10-05-97	2	C SHIFT			NORMAL NO SAMPLE
10-05-97	1	1930	R BONNELL	BLACKSTOCK	NORMAL
10-05-97	2	1930	R BONNELL	BLACKSTOCK	NORMAL
10-06-97	1	0730	J CARTER	RON S	NORMAL
10-06-97	2	0730	J CARTER	RON S	NORMAL
10-06-97	1	1940	R BONNELL	BLACKSTOCK	NORMAL
10-06-97	2	1940	R BONNELL	BLACKSTOCK	NORMAL
10-07-97	1	0800			OFF LINE
10-07-97	2	0800	J CARTER	RON S	NORMAL
10-07-97	1	1945			OFF LINE
10-07-97	2	1945	R BONNELL	S ZATEZALO	NORMAL

WEEK # 97-41 10/8/97 thru 10/14/97

10/0/9/		10/14/5/			
DATE	UNIT	TIME	SAMPLER	REC'D BY	OPERATING CONDITIONS/COMMENTS
10-08-97	1	A SHIFT			NORMAL NO SAMPLE
10-08-97	2	A SHIFT			NORMAL NO SAMPLE
10-08-97	1	2130	E ENGLE	W KROVIC	NORMAL
10-08-97	2	2130			OFF LINE
10-09-97	1	0730	J CARTER	E SULLIVAN	NORMAL
10-09-97	2	0730			OFF LINE
10-09-97	1	2010	R BONNELL	BLACKSTOCK	NORMAL
10-09-97	2	2010			COMING UP ON LINE
10-10-97	1	0900	J CARTER	DUNSWORTH	NORMAL
10-10-97	2	0900			OFF LINE
10-10-97	1	2030	R BONNELL	BLACKSTOCK	NORMAL
10-10-97	2	2030	R BONNELL	BLACKSTOCK	NORMAL
10-11-97	1	1640	M LEEPER	DUNSWORTH	NORMAL
10-11-97	2	1640	N LEEPER	DUNSWORTH	NORMAL
10-11-97	1	2320	E ENGLE	W KROVIC	NORMAL
10-11-97	2	2320	E ENGLE	W KROVIC	NORMAL
10-12-97	1	0745	J CARTER	DUNSWORTH	NORMAL
10-12-97	2	0745	J CARTER	DUNSWORTH	NORMAL
10-12-97	1	2030	E ENGLE	W KROVIC	NORMAL
10-12-97	2	2030	E ENGLE	W KROVIC	NORMAL
10-13-97	1	0830	M LEEPER	K BLANDING	NORMAL
10-13-97	2	0830	M LEEPER	K BLANDING	NORMAL
10-13-97	1	2155	E ENGLE	K BLANDING	NORMAL
10-13-97	2	2155	E ENGLE	K BLANDING	NORMAL
10-14-97	1	0955	M LEEPER	DUNSWORTH	NORMAL
10-14-97	2	0955	M LEEPER	DUNSWORTH	NORMAL
10-14-97	1	1930	E ENJLE	W KROVIC	NORMAL
10-14-97	2	1930	E ENGLE	W KROVIC	NORMAL

WEEK # 97-42 10/15/97 thru 10/21/97

10/15/9/	CIII u	10/21/9/			
DATE	UNIT	TIME	SAMPLER	REC'D BY	OPERATING CONDITIONS/COMMENTS
10-15-97	1	1030	J CARTER	RON S	NORMAL
10-15-97	2	1030	J CARTER	RON S	NORMAL
10-15-97	1	1935	R BONNELL	S ZATEZALO	NORMAL
10-15-97	2	1935	R BONNELL	S ZATEZALO	NORMAL
10-16-97	1	0830	M LEEPER	J REINARD	NORMAL
10-16-97	2	0830	M LEEPER	J REINARD	NORMAL
10-16-97	1	2025	E ENGLE	W KROVIC	NORMAL
10-16-97	2	2035	E ENGLE	W KROVIC	NORMAL
10-17-97	1	0830	M LEEPER	K BLANDING	NORMAL
10-17-97	2	0830	M LEEPER	K BLANDING	NORMAL
10-17-97	1	1940	E ENGLE	W KROVIC	NORMAL
10-17-97	2	1940	E ENGLE	W KROVIC	NORMAL
10-18-97	1	0800	S MICHAELS	DUNSWORTH	NORMAL
10-18-97	2	0800	S MICHAELS	DUNSWORTH	NORMAL
10-18-97	1	1900	S MICHAELS		NORMAL
10-18-97	2	1900	S MICHAELS		NORMAL
10-19-97	1	0850	M LEEPER	DUNSWORTH	NORMAL
10-19-97	2	0850	M LEEPER	DUNSWORTH	NORMAL
10-19-97	1	1930	R BONNELL	BLACKSTOCK	NORMAL
10-19-97	2	1930	R BONNELL	BLACKSTOCK	NORMAL
10-20-97	1	0930	E ENGLE	E SULLIVAN	NORMAL
10-20-97	2	0930	E ENGLE	E SULLIVAN	NORMAL
10-20-97	1	2030	R BONNELL	BLACKSTOCK	NORMAL
10-20-97	2	2030			OFF LINE
10-21-97	1	0930	E ENGLE	RON S	NORMAL
10-21-97	2	0930	N		COMING UP ON LINE
10-21-97	1	1950	R BONNELL	BLACKSTOCK	NORMAL
10-21-97	2	1950	R BONNELL	BLACKSTOCK	NORMAL

WEEK # 97-43 10/22/97 thru 10/28/97

DATE	UNIT	TIME	SAMPLER	REC'D BY	OPERATING CONDITIONS/COMMENTS
10-22-97	1	1745	J CARTER	DUNSWORTH	NORMAL
10-22-97	2	1745	J CARTER	DUNSWORTH	NORMAL
10-22-97	1	2130	E ENGLE	W KROVIC	NORMAL
10-22-97	2	2130	E ENGLE	w krovic	NORMAL
10-23-97	1	0830	S MICHAELS	RON S	NORMAL
10-23-97	2	0830	S MICHAELS	RON S	NORMAL
10-23-97	1	1945	R BONNELL	BLACKSTOCK	NORMAL
10-23-97	2	1945	R BONNELL	BLACKSTOCK	NORMAL
10-24-97	1	0730	S MICHAELS		NORMAL
10-24-97	2	0730	S MICHAELS		NORMAL
10-24-97	1	1945	R BONNELL	BLACKSTOCK	NORMAL
10-24-97	2	1945	R BONNELL	BLACKSTOCK	NORMAL
10-25-97	1	0915	M LEEPER	DUNSWORTH	NORMAL
10-25-97	2	0915	N LEEPER	DUNSWORTH	NORMAL
10-25-97	1	2055	E ENGLE	K BLANDING	NORMAL
10-25-97	2	2055	E ENGLE	K BLANDING	NORMAL
10-26-97	1	1030	M LEEPER	DUNSWORTH	NORMAL
10-26-97	2	1030	M LEEPER	DUNSWORTH	NORMAL
10-26-97	1	1930	E ENGLE	W KROVIC	NORMAL
10-26-97	2	1930	E ENGLE	W KROVIC	NORMAL
10-27-97	1	0830	M LEEPER	DUNSWORTH	NORMAL
10-27-97	2	0830	M LEEPER	DUNSWORTH	NORMAL
10-27-97	1	1940	E ENGLE	w KROVIC	NORMAL
10-27-97	2	1940	E ENGLE	W KROVIC	NORMAL
10-28-97	1	0850	M LEEPER	DUNSWORTH	NORMAL
10-28-97	2	0850	M LEEPER	DUNSWORTH	NORMAL
10-28-97	1	1945	E ENJLE	W KROVIC	NORMAL
10-28-97	2	1945	E ENGLE	W KROVIC	NORMAL

ASH SAMPLING LOG

WEEK # 97-44

10/29/97 thru 11/4/97

DATE	UNIT	TIME	SAMPLER	REC'D BY	OPERATING CONDITIONS/COMMENTS
10-29-97	1	0725	J CARTER	E SULLIVAN	NORMAL
10-29-97	2	0725	J CARTER	E SULLIVAN	NORMAL
10-29-97	1	1930	R BONNELL	BLACKSTOCK	NORMAL
10-29-97	2	1930	R BONNELL	BLACKSTOCK	NORMAL
10-30-97	1	0840	M LEEPER	DUNSWORTH	NORMAL
10-30-97	2	0840	M LEEPER	DUNSWORTH	NORMAL
10-30-97	1	1930	E ENGLE	W KROVIC	NORMAL
10-30-97	2	1930	E ENGLE	W KROVIC	NORMAL
10-31-97	1	0830	M LEEPER	DUNSWORTH	NORMAL
10-31-97	2	0830	M LEEPER	DUNSWORTH	NORMAL
10-31-97	1	2025	E ENGLE	O BURNS	NORMAL
10-31-97	2	2025	E ENGLE	O BURNS	NORMAL
11-01-97	1	0945	J CARTER	E SULLIVAN	NORMAL
11-01-97	2	0945	J CARTER	E SULLIVAN	NORMAL
11-01-97	1	1930	R BONNELL	BLACKSTOCK	NORMAL
11-01-97	2	1930	R BONNELL	BLACKSTOCK	NORMAL
11-02-97	1	1030	J CARTER	BLACKSTOCK	NORMAL
11-02-97	2	1030	J CARTER	BLACKSTOCK	NORMAL
11-02-97	1	1945			OFF LINE
11-02-97	2	1945	R BONNELL	S ZATEZALO	NORMAL
11-03-97	1	1400			OFF LINE
11-03-97	2	1400	J CARTER	J REINARD	NORMAL
11-03-97	1	1950			OFF LINE
11-03-97	2	1950	R BONNELL	BLACKSTOCK	NORMAL
11-04-97	1	C SHIFT			OFF LINE
11-04-97	2	C SHIFT			NORMAL NO SAMPLE
11-04-97	1	1950			OFF LINE
11-04-97	2	1950	R BONNELL	BLACKSTOCK	NORMAL

ASH SAMPLING LOG

WEEK # 97-45

11/05/97 thru 11/11/97

11/03/9/	CHILA				
DATE	UNIT	TIME	SAMPLER	REC'D BY	OPERATING CONDITIONS/COMMENTS
11-05-97	1	1030			OFF LINE
11-05-97	2	1030	K BLANDING	DUNSWORTH	NORMAL
11-05-97	1	1940			OFF LINE
11-05-97	2	1940	E ENGLE	W KROVIC	NORMAL
11-06-97	1	0830			OFF LINE
11-06-97	2	0830	J CARTER	E SULLIVAN	NORMAL
11-06-97	1	1930			OFF LINE
11-06-97	2	1930	R BONNELL	BLACKSTOCK	NORMAL
11-07-97	1	1230			OFF LINE
11-07-97	2	1230	J CARTER	E SULLIVAN	NORMAL
11-08-97	1	0015			COMING UP ON LINE
11-08-97	2	0015	R BONNELL	BLACKSTOCK	NORMAL
11-08-97	1	1300	M LEEPER	K BLANDING	NORMAL
11-08-97	2	1300			OFF LINE
11-08-97	1	1930	E ENGLE	W KROVIC	NORMAL
11-08-97	2	1930	E ENGLE	W KROVIC	NORMAL
11-09-97	1	0900	M LEEPER	K BLANDING	NORMAL
11-09-97	2	0900	M LEEPER	K BLANDING	NORMAL
11-09-97	1	1940	E ENGLE	W KROVIC	NORMAL
11-09-97	2	1940	E ENGLE	W KROVIC	NORMAL
11-10-97	1	0730	J CARTER	DUNSWORTH	NORMAL
11-10-97	2	0730	J CARTER	DUNSWORTH	NORMAL
11-10-97	1	1940	E ENGLE	W KROVIC	NORMAL
11-10-97	2	1940	E ENGLE	W KROVIC	NORMAL
11-11-97	1	0845	M LEEPER	DUNSWORTH	NORMAL
11-11-97	2	0845	M LEEPER	DUNSWORTH	NORMAL
11-11-97	1	1930	E ENJLE	O BURNS	NORMAL
11-11-97	2	1930			OFF LINE

ASH SAMPLING LOG

WEEK # 97-46

11/12/97 thru 11/18/97

DATE	UNIT	TIME	SAMPLER	REC'D BY	OPERATING CONDITIONS/COMMENTS
11-12-97	1	0745	J CARTER	E SULLIVAN	NORMAL
11-12-97	2	0745			OFF LINE
11-12-97	1	2015	R BONNELL	BLACKSTOCK	NORMAL
11-12-97	2	2015			OFF LINE
11-13-97	1	1000	J CARTER	DUNSWORTH	NORMAL
11-13-97	2	1000			OFF LINE
11-13-97	1	2140	E ENGLE	W KROVIC	NORMAL
11-13-97	2	2140			OFF LINE
11-14-97	1	A SHIFT			NORMAL NOT SAMPLED
11-14-97	2	A SHIFT			NORMAL NOT SAMPLED
11-14-97	1	1930	E ENGLE	O BURNS	NORMAL
11-14-97	2	1930	E ENGLE	O BURNS	NORMAL
11-15-97	1	0855	J CARTER	RON S	NORMAL
11-15-97	2	0855	J CARTER	RON S	NORMAL
11-15-97	1	1955	R BONNELL	BLACKSTOCK	NORMAL
11-15-97	2	1955	R BONNELL	BLACKSTOCK	NORMAL
11-16-97	1	0730	R BONNELL	RON S	NORMAL
11-16-97	2	0730	R BONNELL	RON S	NORMAL
11-16-97	1	1950	R BONNELL	BLACKSTOCK	NORMAL
11-16-97	2	1950	R BONNELL	BLACKSTOCK	NORMAL
11-17-97	1	1800	J CARTER	RON S	NORMAL
11-17-97	2	1800	J CARTER	RPN S	NORMAL
11-17-97	1	1945	R BONNELL	BLACKSTOCK	NORMAL
11-17-97	2	1945	R BONNELL	BLACKSTOCK	NORMAL
11-18-97	1	0745	J CARTER	RON S	NORMAL
11-18-97	2	0745	J CARTER	RON S	NORMAL
11-18-97	1	1945	R BONNELL	BLACKSTOCK	NORMAL
11-18-97	2	1945	R BONNELL	BLACKSTOCK	NORMAL

ASH SAMPLING LOG

WEEK # 97-47

11/19/97 thru 11/25/97

11-19-97	11/13/31					
11-19-97 2	DATE	UNIT	TIME	SAMPLER	REC'D BY	OPERATING CONDITIONS/COMMENTS
11-19-97 1 2245 E ENGLE W KROVIC NORMAL 11-19-97 2 2245 E ENGLE W KROVIC NORMAL 11-20-97 1 0845 J CARTER RON S NORMAL 11-20-97 2 0845 J CARTER RON S NORMAL 11-20-97 1 2300 R BONNELL S ZATEZALO NORMAL 11-20-97 2 2300 R BONNELL S ZATEZALO NORMAL 11-21-97 1 0830 J CARTER RON S NORMAL 11-21-97 1 2030 R BONNELL S ZATEZALO NORMAL 11-21-97 1 2030 R BONNELL S ZATEZALO NORMAL 11-21-97 1 2030 R BONNELL S ZATEZALO NORMAL 11-22-97 1 0900 K BLANDING DUNSWORTH NORMAL 11-22-97 1 1930 E ENGLE K BLANDING NORMAL 11-22-97 1 1930 E ENGLE K BLANDING NORMAL 11-23-97 1 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 1 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 1 2055 DOFF LINE 11-23-97 2 2055 E ENGLE K BLANDING NORMAL 11-24-97 1 0730 OFF LINE 11-24-97 1 2030 E ENGLE K BLANDING NORMAL 11-24-97 1 2030 OFF LINE 11-24-97 2 2030 E ENGLE W KROVIC NORMAL 11-24-97 1 0742 OFF LINE 11-25-97 2 0742 K BLANDING DUNSWORTH NORMAL 11-25-97 2 0742 K BLA	11-19-97	1	A SHIFT			NO SAMPLE
11-19-97 2 2245 E ENGLE W KROVIC NORMAL 11-20-97 1 0845 J CARTER RON S NORMAL 11-20-97 2 0845 J CARTER RON S NORMAL 11-20-97 1 2300 R BONNELL S ZATEZALO NORMAL 11-20-97 2 2300 R BONNELL S ZATEZALO NORMAL 11-21-97 1 0830 J CARTER RON S NORMAL 11-21-97 2 0830 J CARTER RON S NORMAL 11-21-97 1 2030 R BONNELL S ZATEZALO NORMAL 11-21-97 1 2030 R BONNELL S ZATEZALO NORMAL 11-21-97 2 2030 R BONNELL S ZATEZALO NORMAL 11-22-97 1 0900 K BLANDING DUNSWORTH NORMAL 11-22-97 2 0900 K BLANDING DUNSWORTH NORMAL 11-22-97 1 1930 E ENGLE K BLANDING NORMAL 11-22-97 2 1930 E ENGLE K BLANDING NORMAL 11-23-97 1 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 1 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 1 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 1 0730 C FF LINE 11-23-97 2 0730 J CARTER DUNSWORTH NORMAL 11-24-97 1 0730 OFF LINE 11-24-97 1 2030 FENGLE W KROVIC NORMAL 11-24-97 1 0742 OFF LINE 11-25-97 1 0742 K BLANDING DUNSWORTH NORMAL	11-19-97	2	A SHIFT			NO SAMPLE
11-20-97 1	11-19-97	1	2245	E ENGLE	W KROVIC	NORMAL
11-20-97 2	11-19-97	2	2245	E ENGLE	W KROVIC	NORMAL
11-20-97 1 2300 R BONNELL S ZATEZALO NORMAL 11-21-97 1 0830 J CARTER RON S NORMAL 11-21-97 1 0830 J CARTER RON S NORMAL 11-21-97 1 2030 R BONNELL S ZATEZALO NORMAL 11-21-97 1 2030 R BONNELL S ZATEZALO NORMAL 11-21-97 2 2030 R BONNELL S ZATEZALO NORMAL 11-22-97 1 0900 K BLANDING DUNSWORTH NORMAL 11-22-97 2 0900 K BLANDING DUNSWORTH NORMAL 11-22-97 1 1930 E ENGLE K BLANDING NORMAL 11-22-97 2 1930 E ENGLE K BLANDING NORMAL 11-23-97 1 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 1 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 2 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 1 2055 OFF LINE 11-24-97 1 0730 J CARTER DUNSWORTH NORMAL 11-24-97 1 0730 J CARTER DUNSWORTH NORMAL 11-24-97 1 2030 OFF LINE 11-24-97 1 2030 OFF LINE 11-24-97 1 0742 OFF LINE 11-25-97 1 0742 K BLANDING DUNSWORTH NORMAL	11-20-97	1	0845	J CARTER	RON S	NORMAL
11-20-97 2 2300 R BONNELL S ZATEZALO NORMAL 11-21-97 1 0830 J CARTER RON S NORMAL 11-21-97 2 0830 J CARTER RON S NORMAL 11-21-97 1 2030 R BONNELL S ZATEZALO NORMAL 11-21-97 2 2030 R BONNELL S ZATEZALO NORMAL 11-22-97 1 0900 K BLANDING DUNSWORTH NORMAL 11-22-97 2 0900 K BLANDING DUNSWORTH NORMAL 11-22-97 1 1930 E ENGLE K BLANDING NORMAL 11-22-97 2 1930 E ENGLE K BLANDING NORMAL 11-23-97 1 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 1 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 1 2055 OFF LINE 11-23-97 2 2055 E ENGLE K BLANDING NORMAL 11-24-97 1 0730 OFF LINE 11-24-97 1 0730 J CARTER DUNSWORTH NORMAL 11-24-97 1 2030 OFF LINE 11-24-97 1 2030 OFF LINE 11-24-97 1 0742 OFF LINE 11-25-97 1 0742 OFF LINE	11-20-97	2	0845	J CARTER	RON S	NORMAL
11-21-97 1	11-20-97	1	2300	R BONNELL	S ZATEZALO	NORMAL
11-21-97	11-20-97	2	2300	R BONNELL	S ZATEZALO	NORMAL
11-21-97 1 2030 R BONNELL S ZATEZALO NORMAL 11-21-97 2 2030 R BONNELL S ZATEZALO NORMAL 11-22-97 1 0900 K BLANDING DUNSWORTH NORMAL 11-22-97 2 0900 K BLANDING DUNSWORTH NORMAL 11-22-97 1 1930 E ENGLE K BLANDING NORMAL 11-22-97 2 1930 E ENGLE K BLANDING NORMAL 11-23-97 1 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 2 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 1 2055 OFF LINE 11-23-97 2 2055 E ENGLE K BLANDING NORMAL 11-24-97 1 0730 OFF LINE 11-24-97 1 2030 J CARTER DUNSWORTH NORMAL 11-24-97 1 2030 OFF LINE 11-24-97 2 2030 E ENGLE W KROVIC NORMAL 11-25-97 1 0742 OFF LINE	11-21-97	1	0830	J CARTER	RON S	NORMAL
11-21-97 2 2030 R BONNELL S ZATEZALO NORMAL 11-22-97 1 0900 K BLANDING DUNSWORTH NORMAL 11-22-97 2 0900 K BLANDING DUNSWORTH NORMAL 11-22-97 1 1930 E ENGLE K BLANDING NORMAL 11-22-97 2 1930 E ENGLE K BLANDING NORMAL 11-23-97 1 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 2 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 1 2055 OFF LINE 11-23-97 2 2055 E ENGLE K BLANDING NORMAL 11-24-97 1 0730 OFF LINE 11-24-97 1 2030 OFF LINE 11-24-97 1 2030 OFF LINE 11-24-97 1 2030 OFF LINE 11-24-97 2 2030 E ENGLE W KROVIC NORMAL 11-25-97 1 0742 OFF LINE 11-25-97 2 0742 K BLANDING DUNSWORTH NORMAL	11-21-97	2	0830	J CARTER	RON S	NORMAL
11-22-97 1 0900 K BLANDING DUNSWORTH NORMAL 11-22-97 2 0900 K BLANDING DUNSWORTH NORMAL 11-22-97 1 1930 E ENGLE K BLANDING NORMAL 11-22-97 2 1930 E ENGLE K BLANDING NORMAL 11-23-97 1 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 2 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 1 2055 OFF LINE 11-23-97 2 2055 E ENGLE K BLANDING NORMAL 11-24-97 1 0730 OFF LINE 11-24-97 1 2030 OFF LINE 11-24-97 1 2030 OFF LINE 11-24-97 1 2030 OFF LINE 11-24-97 2 2030 E ENGLE W KROVIC NORMAL 11-25-97 1 0742 OFF LINE 11-25-97 2 0742 K BLANDING DUNSWORTH NORMAL	11-21-97	1	2030	R BONNELL	S ZATEZALO	NORMAL
11-22-97 2 0900 K BLANDING DUNSWORTH NORMAL 11-22-97 1 1930 E ENGLE K BLANDING NORMAL 11-23-97 2 1930 K BLANDING DUNSWORTH NORMAL 11-23-97 1 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 2 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 1 2055 OFF LINE 11-23-97 2 2055 E ENGLE K BLANDING NORMAL 11-24-97 1 0730 OFF LINE 11-24-97 2 0730 J CARTER DUNSWORTH NORMAL 11-24-97 1 2030 OFF LINE 11-24-97 2 2030 E ENGLE W KROVIC NORMAL 11-25-97 1 0742 OFF LINE 11-25-97 2 0742 K BLANDING DUNSWORTH NORMAL	11-21-97	2	2030	R BONNELL	S ZATEZALO	NORMAL
11-22-97 1 1930 E ENGLE K BLANDING NORMAL 11-23-97 2 1930 E ENGLE K BLANDING NORMAL 11-23-97 1 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 2 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 1 2055 OFF LINE 11-23-97 2 2055 E ENGLE K BLANDING NORMAL 11-24-97 1 0730 OFF LINE 11-24-97 2 0730 J CARTER DUNSWORTH NORMAL 11-24-97 1 2030 OFF LINE 11-24-97 1 0742 OFF LINE 11-25-97 1 0742 FENGLE W KROVIC NORMAL 11-25-97 2 0742 K BLANDING DUNSWORTH NORMAL	11-22-97	1	0900	K BLANDING	DUNSWORTH	NORMAL
11-22-97 2 1930 E ENGLE K BLANDING NORMAL 11-23-97 1 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 2 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 1 2055 OFF LINE 11-23-97 2 2055 E ENGLE K BLANDING NORMAL 11-24-97 1 0730 OFF LINE 11-24-97 2 0730 J CARTER DUNSWORTH NORMAL 11-24-97 1 2030 OFF LINE 11-24-97 2 2030 E ENGLE W KROVIC NORMAL 11-25-97 1 0742 OFF LINE 11-25-97 2 0742 K BLANDING DUNSWORTH NORMAL	11-22-97	2	0900	K BLANDING	DUNSWORTH	NORMAL
11-23-97 1 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 2 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 1 2055 OFF LINE 11-23-97 2 2055 E ENGLE K BLANDING NORMAL 11-24-97 1 0730 OFF LINE 11-24-97 2 0730 J CARTER DUNSWORTH NORMAL 11-24-97 1 2030 OFF LINE 11-24-97 2 2030 E ENGLE W KROVIC NORMAL 11-25-97 1 0742 OFF LINE 11-25-97 2 0742 K BLANDING DUNSWORTH NORMAL	11-22-97	1	1930	E ENGLE	K BLANDING	NORMAL
11-23-97 2 0830 K BLANDING DUNSWORTH NORMAL 11-23-97 1 2055 E ENGLE K BLANDING NORMAL 11-24-97 1 0730 OFF LINE 11-24-97 2 0730 J CARTER DUNSWORTH NORMAL 11-24-97 1 2030 OFF LINE 11-24-97 2 2030 E ENGLE W KROVIC NORMAL 11-25-97 1 0742 OFF LINE 11-25-97 2 0742 K BLANDING DUNSWORTH NORMAL	11-22-97	2	1930	E ENGLE	K BLANDING	NORMAL
11-23-97 1 2055 E ENGLE K BLANDING NORMAL 11-24-97 1 0730 OFF LINE 11-24-97 2 0730 J CARTER DUNSWORTH NORMAL 11-24-97 1 2030 OFF LINE 11-24-97 2 2030 E ENGLE W KROVIC NORMAL 11-25-97 1 0742 OFF LINE 11-25-97 2 0742 K BLANDING DUNSWORTH NORMAL	11-23-97	1	0830	K BLANDING	DUNSWORTH	NORMAL
11-23-97 2 2055 E ENGLE K BLANDING NORMAL 11-24-97 1 0730 OFF LINE 11-24-97 2 0730 J CARTER DUNSWORTH NORMAL 11-24-97 1 2030 OFF LINE 11-24-97 2 2030 E ENGLE W KROVIC NORMAL 11-25-97 1 0742 OFF LINE 11-25-97 2 0742 K BLANDING DUNSWORTH NORMAL	11-23-97	2	0830	K BLANDING	DUNSWORTH	NORMAL
11-24-97 1 0730 OFF LINE 11-24-97 2 0730 J CARTER DUNSWORTH NORMAL 11-24-97 1 2030 OFF LINE 11-24-97 2 2030 E ENGLE W KROVIC NORMAL 11-25-97 1 0742 OFF LINE 11-25-97 2 0742 K BLANDING DUNSWORTH NORMAL	11-23-97	1	2055			OFF LINE
11-24-97 2 0730 J CARTER DUNSWORTH NORMAL 11-24-97 1 2030 OFF LINE 11-24-97 2 2030 E ENGLE W KROVIC NORMAL 11-25-97 1 0742 OFF LINE 11-25-97 2 0742 K BLANDING DUNSWORTH NORMAL	11-23-97	2	2055	E ENGLE	K BLANDING	NORMAL
11-24-97 1 2030 OFF LINE 11-24-97 2 2030 E ENGLE W KROVIC NORMAL 11-25-97 1 0742 OFF LINE 11-25-97 2 0742 K BLANDING DUNSWORTH NORMAL	11-24-97	1	0730			OFF LINE
11-24-97 2 2030 E ENGLE W KROVIC NORMAL 11-25-97 1 0742 OFF LINE 11-25-97 2 0742 K BLANDING DUNSWORTH NORMAL	11-24-97	2	0730	J CARTER	DUNSWORTH	NORMAL
11-25-97 1 0742 OFF LINE 11-25-97 2 0742 K BLANDING DUNSWORTH NORMAL	11-24-97	1	2030			OFF LINE
11-25-97 2 0742 K BLANDING DUNSWORTH NORMAL	11-24-97	2	2030	E ENGLE	W KROVIC	NORMAL
	11-25-97	1	0742			OFF LINE
11-25-97 1 2055 COMING UP ON LINE	11-25-97	2	0742	K BLANDING	DUNSWORTH	NORMAL
COMING OF ON LINE	11-25-97	1	2055			COMING UP ON LINE
11-25-97 2 2055 E ENGLE W KROVIC NORMAL	11-25-97	2	2055	E ENGLE	W KROVIC	NORMAL

WEEK # 97-48 11/26/97 thru 12/02/97

		12/02/31			
DATE	TINU	TIME	SAMPLER	REC'D BY	OPERATING CONDITIONS/COMMENTS
11-26-97	1	1700	R BONNELL	RON S	NORMAL
11-26-97	2	1700	R BONNELL	RON S	NORMAL
11-26-97	1	1910	R BONNELL	S ZATEZALO	NORMAL
11-26-97	2	1910	R BONNELL	S ZATEZALO	NORMAL
11-27-97	1	1345	M LEEPER	K BLANDING	NORMAL
11-27-97	2	1345	M LEEPER	K BLANDING	NORMAL
11-27-97	1	2030	E ENGLE	O BURNS	NORMAL
11-27-97	2	2030	E ENGLE	O BURNS	NORMAL
11-28-97	1	0840	M LEEPER	K BLANDING	NORMAL
11-28-97	2	0840	M LEEPER	K BLANDING	NORMAL
11-28-97	1	2025	E ENGLE	O BURNS	NORMAL
11-28-97	2	2025	E ENGLE	O BURNS	NORMAL
11-29-97	1	0745	J CARTER	RON S	NORMAL
11-29-97	2	0745	J CARTER	RON S	NORMAL
11-29-97	1	1945	R BONNELL	S ZATEZALO	NORMAL
11-29-97	2	1945	R BONNELL	S ZATEZALO	NORMAL
11-30-97	1	C SHIFT			NO SAMPLE
11-30-97	2	C SHIFT			NO SAMPLE
11-30-97	1	1945	R BONNELL	S ZATEZALO	NORMAL
11-30-97	2	1945	R BONNELL	S ZATEZALO	NORMAL
12-01-97	1	0735	J CARTER	RON S	NORMAL
12-01-97	2	0735	J CARTER	RPN S	NORMAL
12-01-97	1	2000	R BONNELL	BLACKSTOCK	NORMAL
12-01-97	2	2000	R BONNELL	BLACKSTOCK	NORMAL
12-02-97	1	0740	J CARTER	RON S	NORMAL
12-02-97	2	0740	J CARTER	RON S	NORMAL
12-02-97	1	2140	E ENGLE	BLACKSTOCK	NORMAL
12-02-97	2	2140	E ENGLE	BLACKSTOCK	NORMAL

ASH SAMPLING LOG

WEEK # 97-49

12/03/97 thru 12/09/97

12/03/91		12/03/31	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
DATE	UNIT	TIME	SAMPLER	REC'D BY	OPERATING CONDITIONS/COMMENTS
12-03-97	1	A SHIFT			NO SAMPLE
12-03-97	2	A SHIFT			NO SAMPLE
12-03-97	1	2030	E ENGLE	O BURNS	NORMAL
12-03-97	2	2030	E ENGLE	O BURNS	NORMAL
12-04-97	1	1045	J CARTER	RON S	NORMAL
12-04-97	2	1045	J CARTER	RON S	NORMAL
12-04-97	1	1945	R BONNELL	BLACKSTOCK	NORMAL
12-04-97	2	1945	R BONNELL	BLACKSTOCK	NORMAL
12-05-97	1	1235	J CARTER	RON S	NORMAL
12-05-97	2	1235	J CARTER	RON S	NORMAL
12-05-97	1	1945	R BONNELL	BLACKSTOCK	NORMAL
12-05-97	2	1945	R BONNELL	BLACKSTOCK	NORMAL
12-06-97	1	1105	K BLANDING	DUNSWORTH	NORMAL
12-06-97	2	1105	K BLANDING	DUNSWORTH	NORMAL
12-06-97	1	2345	E ENGLE	O BURNS	NORMAL
12-06-97	2	2345			NO SAMPLE DISCHARGER DRY
12-07-97	1	1000	M LEEPER	DUNSWORTH	NORMAL
12-07-97	2	1000	M LEEPER	DUNSWORTH	NORMAL
12-07-97	1	1935	E ENGLE	O BURNS	NORMAL
12-07-97	2	1935	E ENGLE	O BURNS	NORMAL
12-08-97	1	1000	M LEEPER	DUNSWORTH	NORMAL
12-08-97	2	1000	M LEEPER	DUNSWORTH	NORMAL
12-08-97	1	1945	E ENGLE	O BURNS	NORMAL
12-08-97	2	1945	E ENGLE	O BURNS	NORMAL
12-09-97	1	1100	M LEEPER	DUNSWORTH	NORMAL
12-09-97	2	1100	M LEEPER	DUNSWORTH	NORMAL
12-09-97	1	1940	E ENGLE	O BURNS	NORMAL
12-09-97	2	1940	E ENGLE	O BURNS	NORMAL

ASH SAMPLING LOG

WEEK # 97-50

12/10/97 thru 12/16/97

DATE	UNIT	TIME	SAMPLER	REC'D BY	OPERATING CONDITIONS/COMMENTS
12-10-97	1	0750	J CARTER	RON S	NORMAL
12-10-97	2	0750	J CARTER	RON S	NORMAL
12-10-97	1	1945	R BONNELL	BLACKSTOCK	NORMAL
12-10-97	2	1945	R BONNELL	BLACKSTOCK	NORMAL
12-11-97	1	1135	M LEEPER	DUNSWORTH	NORMAL
12-11-97	2	1135	M LEEPER	DUNSWORTH	NORMAL
12-11-97	1	1945	E ENGLE	O BURNS	NORMAL
12-11-97	2	1945	E ENGLE	O BURNS	NORMAL
12-12-97	1	0900	M LEEPER	DUNSWORTH	NORMAL
12-12-97	2	0900	M LEEPER	DUNSWORTH	NORMAL
12-12-97	1	1930	E ENGLE	O BURNS	NORMAL
12-12-97	2	1930	E ENGLE	O BURNS	NORMAL
12-13-97	1	0800	J CARTER	E SULLIVAN	NORMAL
12-13-97	2	0800	J CARTER	E SULLIVAN	NORMAL
12-13-97	1	1950	R BONNELL	BLACKSTOCK	NORMAL
12-13-97	2	1950	R BONNELL	BLACKSTOCK	NORMAL
12-14-97	1	1415	J CARTER	E SULLIVAN	NORMAL
12-14-97	2	1415	J CARTER	E SULLIVAN	NORMAL
12-14-97	1	1930	R BONNELL	BLACKSTOCK	NORMAL
12-14-97	2	1930	R BONNELL	BLACKSTOCK	NORMAL
12-15-97	1	0755	J CARTER	RON S	NORMAL
12-15-97	2	0755	J CARTER	RON S	NORMAL
12-15-97	1	1945	R BONNELL	BLACKSTOCK	NORMAL
12-15-97	2	1945	R BONNELL	BLACKSTOCK	NORMAL
12-16-97	1	1815	E SULLIVAN	E SULLIVAN	NORMAL
12-16-97	2	1815	E SULLIVAN	E SULLIVAN	NORMAL
12-16-97	1	1930	R BONNELL	S ZATEZALO	NORMAL
12-16-97	2	1930	R BONNELL	S ZATEZALO	NORMAL

ASH SAMPLING LOG

WEEK # 97-51 12/17/97 thru 12/23/97

DATE	UNIT	TIME	SAMPLER	REC'D BY	OPERATING CONDITIONS/COMMENTS
12-17-97	1	1100	K BLANDING	K BLANDING	NORMAL
12-17-97	2	1100	K BLANDING	K BLANDING	NORMAL
12-17-97	1	1935	E ENGLE	W KROVIC	NORMAL
12-17-97	2	1935	E ENGLE	W KROVIC	NORMAL
12-18-97	1	0745	J CARTER	K BLANDING	NORMAL
12-18-97	2	0745	J CARTER	K BLANDING	NORMAL
12-18-97	1	1945	R BONNELL	BLACKSTOCK	NORMAL
12-18-97	2	1945	R BONNELL	BLACKSTOCK	NORMAL
12-19-97	1	0725	J CARTER	E SULLIVAN	NORMAL
12-19-97	2	0725			OFF LINE
12-19-97	1	1930	R BONNELL	BLACKSTOCK	NORMAL
12-19-97	2	1930			OFF LINE
12-20-97	1	1000	M LEEPER	DUNSWORTH	NORMAL
12-20-97	2	1000	M LEEPER	DUNSWORTH	NORMAL
12-20-97	1	1930	E ENGLE	W KROVIC	NORMAL
12-20-97	2	1930	E ENGLE	W KROVIC	NORMAL
12-21-97	1	0930	M LEEPER	DUNSWORTH	NORMAL
12-21-97	2	0930	M LEEPER	DUNSWORTH	NORMAL
12-21-97	1	2015	E ENGLE	W KROVIC	NORMAL
12-21-97	2	2015	E ENGLE	W KROVIC	NORMAL
12-22-97	1	1045			OFF LINE
12-22-97	2	1045	M LEEPER	K BLANDING	NORMAL
12-22-97	1	2030			OFF LINE
12-22-97	2	2030	E ENGLE	W KROVIC	NORMAL
12-23-97	1	0830	M LEEPER	K BLANDING	NORMAL
12-23-97	2	0830	M LEEPER	K BLANDING	NORMAL
12-23-97	1	D SHIFT			NO SAMPLE
12-23-97	2	D SHIFT			NO SAMPLE

ASH SAMPLING LOG

WEEK # 97-52 12/24/97 thru 12/30/97

12/24/97	thru	12/30/97			
DATE	UNIT	TIME	SAMPLER	REC'D BY	OPERATING CONDITIONS/COMMENTS
12-24-97	1	1400	J CARTER	RON S	NORMAL
12-24-97	2	1400	J CARTER	RON S	NORMAL
12-24-97	1	1945	R BONNELL	BLACKSTOCK	NORMAL
12-24-97	2	1945	R BONNELL	BLACKSTOCK	NORMAL
12-25-97	1	1100	M LEEPER	K BLANDING	NORMAL
12-25-97	2	1100	M LEEPER	K BLANDING	NORMAL
12-25-97	1	1940	E ENGLE	O BURNS	NORMAL
12-25-97	2	1940	E ENGLE	O BURNS	NORMAL
12-26-97	1	1000	M LEEPER	K BLANDING	NORMAL
12-26-97	2	1000	M LEEPER	K BLANDING	NORMAL
12-26-97	1	1930	E ENGLE	O BURNS	NORMAL
12-26-97	2	1930	E ENGLE	O BURNS	NORMAL
12-27-97	1	0745	J CARTER	RON S	NORMAL
12-27-97	2	0745	J CARTER	RON S	NORMAL
12-28-97	1	0330	R BONNELL	BLACKSTOCK	NORMAL
12-28-97	2	0330	R BONNELL	BLACKSTOCK	NORMAL
12-28-97	1	1215	RON S	RON S	NORMAL
12-28-97	2	1215	RON S	RON S	NORMAL
12-28-97	1	1930	R BONNELL	BLACKSTOCK	NORMAL
12-28-97	2	1930	R BONNELL	BLACKSTOCK	NORMAL
12-29-97	1	1145	J CARTER	RON S	NORMAL
12-29-97	2	1145	J CARTER	RON S	NORMAL
12-29-97	1	1950	R BONNELL	BLACKSTOCK	NORMAL
12-29-97	2	1950	R BONNELL	BLACKSTOCK	NORMAL
12-30-97	1	0735	J CARTER	RON S	NORMAL
12-30-97	2	0735	J CARTER	RON S	NORMAL
12-30-97	1	1930	R BONNELL	BLACKSTOCK	NORMAL
12-30-97	2	1930	R BONNELL	BLACKSTOCK	NORMAL
12-31-97	2	0930	M LEEPER	K BLANDING	NORMAL
12-31-97	1	0930	M LEEPER	K BLANDING	NORMAL
12-31-97	2	2035	E ENGLE	E SULLIVAN	NORMAL
12-31-97	1	2035	E ENGLER	E SULLIVAN	NORMAL

EXHIBIT 1 EVALUATION OF ANALYTICAL DATA FOR LEAD ANALYTE

December 1997

	X	
	Lead	Xi^2
Sample	Analyte	
Date	Result	
Feb.	0.00	0.000
Feb.	0.00	0.000
Mar.	0.00	0.000
Mar.	0.00	0.000
1st.	0.00	0.000
Apr.	0.11	0.012
Apr.	0.02	0.000
May	0.03	0.001
May	0.02	0.000
Jun.	0.01	0.000
Jun.	0.03	0.001
2nd.	0.12	0.014
Jul.	0.33	0.109
Jul.	0.31	0.096
Aug.	0.36	0.130
Aug.	0.12	0.014
Sep	0.00	0.000
Sep	0.20	0.040
3rd.	0.11	0.012
Oct. Oct.	6.60 0.26	43.560
Nov.	0.20	0.068 0.000
Nov.	0.41	0.000
Dec.	0.00	0.000
Dec.	0.00	0.000
4th Qtr.	0.11	0.012
	9.16	44.24
n =	26	
Mean of X	=	0.352
Sample Var	iance	1.641
STD. DEV.	=	1.281
STD ERR.	=	0.251
Confidence	Interval	0.322
Regulatory	Threshold =	5.00 mg/L
Sample Re	sults	0.674 mg/L

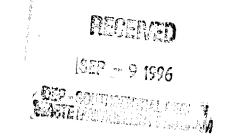
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The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

September 6, 1996

Mr. John Spang Environmental Chemist Dept. of Environmental Resources Bureau of Solid Waste Management One Ararat Blvd. Harrisburg, PA 17110



RE: Residue Disposal Area B Second Quarter 1996 Ash Quality Form 41

Dear Mr. Spang:

Enclosed, please find the above-referenced Form 41 and corresponding "Ash Sampling Logs".

The analyses were performed by Analytical Laboratories of Skelly and Loy, Inc. using the T.C.L.P. procedure. I have also enclosed a copy of Skelly and Loy's certified laboratory results which were transposed to the aforementioned Form 41. As you can see, the samples for all of the required analytes tested below the respective regulatory thresholds.

As you can see, the sample for Lead tested above the regulatory limit. Therefore, we have continued to evaluate the historic analytical data to determine whether our ash exhibits the toxicity characteristic for the Lead analyte per EPA's <u>Guidance for the Sampling and Analysis of Municipal Waste Combustion Ash for the Toxicity Characteristic</u> (EPA Publication No. EPA530-R-95-036 of June 1995).

In our evaluation, we used the data points which have been generated from the beginning of 1995 (when our revised protocol implemented) through the second quarter of 1996. Please refer to the enclosed Exhibit 1 for our evaluation. Based on our calculations, using the approved statistical formulas provided in EPA530-R-95-036, Lead is not considered to be present in our ash at a hazardous level. Therefore, the toxicity characteristic for our ash remains non-hazardous.

Mr. John Spang September 6, 1996 Page Two

Should you have any questions and/or comments regarding this information, do not hesitate to contact me at (717) 236-5361.

John A. Lukens Director

JAL/jal enclosures cc:

Stephen R. Reed, Mayor
Napoleon A. Saunders, Business Administrator
Thomas J. Mealy, Executive Director - THA
Daniel R. Lispi, Project Manager
Edward Egenrieder, Water Quality Technician
Howard J. Wein, Esq. - Klett, Lieber, Rooney & Schorling
Robert Benvin - PaDER
File

EXHIBIT 1 EVALUATION OF ANALYTICAL DATA FOR LEAD ANALYTE

1995/1996 Data for Lead Analyte (mg/l):

			×i	x _i ²	
1.	2nd	_	7.300	53.290	
2.	_	-	7.100	50.410	
3.	Jun	-	7.700	59.290	
4.			6.300	39.690	
5.	May			116.640	
6.			0.870	0.757	
7.	Apr		2.800	7.840	
8.			0.690	0.476	
9. 10.		-	0.000	0.000	
11.	Feb		0.370	0.137	
12.	Feb		6.500	42.250	
13.	_	_	4.100	16.810	
14.	_	_	4.100	16.810	
15.		-	0.790	0.624	
16.	Dec	-	7.800	60.840	
17.		-	9.100	82.810	
18.		-	0.410	0.169	
19.		-	1.400	1.960	
20.	Oct	-	0.000	0.000	
21.		-	0.600	0.360	n = 42
22. 23.	3rd Sep		0.720 1.200	0.518 1.440	
24.	Sep		3.000	9.000	
25.	Aug			50.410	
26.	Aug		2.700	7.290	
27.	Juĺ		3.000	9.000	
28.	Jul	-	5.000	25.000	
29.	2nd	-	1.400	1.960	
30.	Jun	-	1.800	3.240	
31.	Jun		10.900	118.810	
32.	May	_	0.000	0.000	
33.	May	_	0.000	0.000	
34. 35.	Apr Apr		0.064 0.340	0.004 0.116	
36.	1st	_	2.600	6.760	
37.	Mar	_	0.220	0.048	
38.	Mar	_	2.100	4.410	
39.	Feb	_	0.032	0.001	
40.	Feb	_	0.052	0.003	
41.	Jan	-	0.100	0.010	
<u>42.</u>	Jan	_	0.008	0.000	
Tota	ls		121.066	789.183	

Calculation of Mean (x):

$$\bar{x} = \frac{n_{\Sigma x}}{n} = \frac{121.066}{42} = 2.882$$

EXHIBIT 1 EVALUATION OF ANALYTICAL DATA FOR LEAD ANALYTE (CONTINUED)

Calculation of Standard Deviation (s):

$$s^{2} = \frac{\overset{n}{\sum}x_{i}^{2} - (\overset{n}{\sum}x_{i})^{2}/n}{i=1} = \frac{789.183 - (121.066)^{2}/42}{42 - 1} = 10.737$$

$$s = \sqrt{s^{2}} = 3.276$$

Calculation of Standard Error $(S_{\overline{X}})$:

$$S_{\overline{x}} = \frac{s}{\sqrt{n}} = \frac{3.276}{\sqrt{42}} = 0.505$$

Calculation of Confidence Interval (CI):

CI =
$$\bar{x} \pm t_{.20} S_{\bar{x}} = 2.882 \pm 1.303(0.505) = 2.882 \pm 0.658$$

Conclusion:

The regulatory threshold (RI) for Lead is 5.0 mg/l. The upper limit of CI is 3.540. CI is less than RI; therefore, the contaminant of concern is not considered to be present in the ash at a hazardous level.

ANALYTICAL LABORATORIES OF SKELLY AND LOY, INC. 2601 N. FRONT STREET HARRISBURG, PA 17110

Phone: 717-257-1335 FAX 257-1341

CITY OF HARRISBURG HARRISBURG WASTE ENERGY 1670 SOUTH 19th STREET HARRISBURG, PA 17104 Attn: ED EGENRIDER

Order #: 96-07-433 Date: 08/12/96 14:01 Work ID: 96-057

Date Received: 07/19/96 Date Completed: 08/09/96

Purchase Order: 96-09824-00,09825-00

Invoice Number: 30480

Client Code: COH_0160

SAMPLE IDENTIFICATION

Sample Sample Sample Sample Description Number _ Number Description 01 96-057

ND = NOT DETECTED

LIMIT = LIMIT OF DETECTION OF LABORATORY INSTRUMENTATION

tified By

MICHAEL S. FARLLING

TEST RESULTS BY SAMPLE

Sample: 01A 96-057 Collected: 06/30/96 Category: S

Job: FM41T FORM 41 TOTAL

Test Description	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
ALUMINUM, TOTAL	64200	0.005	MG/KG	08/06/96	WWS
ANTIMONY, TOTAL	82.9	0.1	MG/KG	08/06/96	WWS
ARSENIC, TOTAL	21.8	0.1	MG/KG	08/06/96	WWS
BARIUM, TOTAL	151	0.1	MG/KG	08/06/96	WWS
CADMIUM, TOTAL	32.1	0.1	MG/KG	08/06/96	WWS
CHROMIUM, TOTAL	161	0.01	MG/KG	08/06/96	WWS
COPPER, TOTAL	7460	0.1	MG/KG	08/06/96	WWS
LEAD, TOTAL	642	5.0	MG/KG	08/06/96	WWS
MERCURY, TOTAL	0.17	0.005	MG/KG	08/06/96	WWS
MOLYBDENUM, TOTAL	142	0.01	MG/KG	08/06/96	WWS
NICKEL, TOTAL	1220	0.01	MG/KG	08/06/96	WWS
SELENIUM, TOTAL	ND	5.0	MG/KG	08/06/96	wws
SILVER, TOTAL	2.6	0.01	MG/KG	08/06/96	WWS
TOTAL RESIDUAL PERCENT	88.6	1.0	%	08/08/96	GMM
TOTAL VOLATILE RESIDUE	2.03	1.0	%	08/08/96	GMM
ZINC, TOTAL	2070	0.01	MG/KG	08/06/96	WWS
pH, laboratory	10.89	-	pH UNITS	07/30/96	KMW

Sample: 01B 96-057 Collected: 06/30/96 Category: LEACHATE

Test Description	<u>Result</u>	<u>Limit</u>	<u>Units</u>	Analyzed	<u>By</u>
ALUMINUM, TOTAL	78.9	0.1	MG/L	08/06/96	WWS
AMMONIA NITROGEN	0.291	0.1	MG/L	07/29/96	TMP
ANTIMONY, TOTAL	0.14	0.001	MG/L	08/06/96	WWS
ARSENIC, TOTAL	ND	0.1	MG/L	08/06/96	WWS
BARIUM, TOTAL	0.24	0.001	MG/L	08/06/96	WWS
CADMIUM, TOTAL	0.73	0.01	MG/L	08/06/96	WWS
CHROMIUM, TOTAL	0.18	0.01	MG/L	08/06/96	WWS
COPPER, TOTAL	2.8	0.01	MG/L	08/06/96	WWS
LEAD, TOTAL	7.3	0.1	MG/L	08/06/96	WWS
MERCURY, TOTAL	ND	0.0002	MG/L	08/06/96	WWS
MOLYBDENUM, TOTAL	0.14	0.01	MG/L	08/06/96	WWS
NICKEL, TOTAL	0.23	0.01	MG/L	08/06/96	WWS
SELENIUM, TOTAL	ND	0.1	MG/L	08/06/96	WWS
SILVER, TOTAL	ND	0.01	MG/L	08/06/96	WWS
ZINC, TOTAL	60.8	0.01	MG/L	08/06/96	WWS

Sample: 01C 96-057 Collected: 06/30/96 Category: ASTM_LEACH

Test Description	Result	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
CHEMICAL OXYGEN DEMAND	29.4	5.0	MG/L	08/06/96	GMM
TOTAL DISSOLVED SOLIDS	859	1.0	MG/L	08/02/96	GMM
TOTAL ORGANIC CARBON	5.5	1.00	MG/L	08/02/96	KMW
pH, laboratory	10.98	-	pH UNITS	07/30/96	KMW

SELENIUM, TOTAL

MERCURY, TOTAL	EPA 245.1
SILVER, TOTAL	EPA 272.2
SILVER, TOTAL	SW-846/6010
ALUMINUM, TOTAL	EPA 200.7
ALUMINIUM, TOTAL	SW-846/6010
ARSENIC, TOTAL	EPA 206.2
ARSENIC, TOTAL	SW-846 6010
BARIUM, TOTAL	EPA 200.7
BARIUM, TOTAL	SW-846 6010
CADMIUM, TOTAL	EPA 213.2
CADMIUM, TOTAL	SW-846/6010
CHROMIUM, TOTAL	EPA 200.7
CHROMIUM, TOTAL	SW-846/6010
COPPER, TOTAL	EPA 220.2
COPPER, TOTAL	SW-846/6010
MOLYBDENUM, TOTAL	EPA 200.7
MOLYBDENUM, TOTAL	SW-846 6010
NICKEL, TOTAL	EPA 200.7
NICKEL, TOTAL	SW-846/6010
LEAD, TOTAL	EPA 200.7/SW846-6010
LEAD, TOTAL	SW-846/6010
LEAD, LOW LEVEL (SOIL)	EPA 3050A/7421
ANTIMONY, TOTAL	EPA 200.7
ANTIMONY	EPA 200.7
SELENIUM, TOTAL	EPA 270.2

SW-846 6010

TEST METHODOLOGIES

ZINC, TOTAL

EPA 200.7

ZINC, TOTAL

EPA 200.7

SW-846-6010

MERCURY, TOTAL

EPA 245.2

EASTM

ASTM LEACHATE PREPARATION

PROCEDURE

ASTM 398785

EXTRACTION FOR TCLP

SW-846/1311

pH, LABORATORY

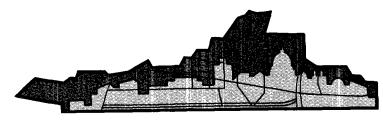
EPA 150.1

Total Organic Carbon......EPA 415.1

CHEMICAL OXYGEN DEMAND EPA 410.2

TOTAL DISSOLVED SOLIDS EPA 160.1

AMMONIA-NITROGEN - ELECTRODE EPA 350.3



The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

January 16, 1991

Mr. Anthony C. Kar Environmental Chemist Dept. of Environmental Resources Bureau of Solid Waste Management One Ararat Blvd. Harrisburg, PA 17110 DER
WASTE MANAGEMENT
JAN 2 3 1991
HARRISBURG REGION

Dear Mr. Kar:

Enclosed, please find the results from weeks #90-39 through #90-48 ash composites which were sent to Skelly and Loy to test for T.C.L.P. levels for Cadmium, Chromium, Mercury and Lead, and the PH values. I have included Skelly and Loy's Laboratory Analysis Reports, as well as the corresponding Form 41 Reports.

As you can see, all levels are within the allowable limits for toxicity in each element's respective category for each respective week's composite.

If you have any questions and/or comments regarding this information, do not hesitate to contact me at (717) 236-5361.

John A. Lukens Director

JAL/jal cc:

Stephen R. Reed, Mayor
Napoleon Saunders, Business Administrator
Daniel R. Lispi, Project Manager
Leslie D. Davies, Director for Nassaux-Hemsley
Howard J. Wein, Esq. - Klett, Lieber, Rooney & Schorling
Michael Steiner, Regional Solid Waste Manager - PaDER
Enclosures
File

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES

91-01-15

BUREAU OF WASTE MANAGEMENT

100759 100992

ID NUMBER

WEEK 90-39

FORM 41 MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

Part	t 1. Facility	Name	Harrisbur	g Waste to Energy	Facility
Loca	ation: County _	Dauphi	.n	Municipality <u>Ha</u>	rrisburg/Swatara twp
Date	e Sample Collec	ted <u>90/10/</u>	01-90/10/08	Time of Samplin	g 4 HOUR INTERVALS
Samj	ple Collectors	Name SHIF	T PERSONNEL		
Samj	oling Location	(in accord	lance with Se	ction 283.403) AS	H DISCHARGER / BELTS
	t II. Chemical				
Α.	Total Analysis Aluminum	dry weigh	nt basis) _mg/kg	B. Leaching Analy Aluminum	rsis (EP-Toxicity Test)
	Antimony		_mg/kg	Antimony	mg/kg
	Arsenic		_mg/kg	Arsenic	mg/kg
	Barium		_mg/kg	Barium	mg/kg
	Cadmium	8.8	_mg/kg	Cadmium	< 0.01 mg/kg
	Chromium	13.0	_mg/kg	Chromium	< 0.01mg/kg
	Copper		_mg/kg	Copper	mg/kg
	Lead	230	_mg/kg	Lead _	< 0.1 mg/kg
	Mercury	2.0	_mg/kg	Mercury	<u> </u>
	Molybdenum		_mg/kg	Molybdenum	mg/kg
	Nickel		_mg/kg	Nickel	mg/kg
	Selenium		_mg/kg	Selenium	mg/kg
	Silver		_mg/kg	Silver	mg/kg
	Zinc		_mg/kg	Zinc	mg/kg
	Total Residue		_	COD mg/l	ASTM Method A
	Volatile Resid		mg/kg	TOC mg/l	ASTM Method A
	рн8.74				ed Solids ASTM Method A esidue)mg/l
	Additional Par	ameters:	mg/kg	Additional Par	rameters: mg/kg
			mg/kg mg/kg mg kg		mg/kg mg/kg
			—''''A <i>v</i> A		

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES

91-01-15

BUREAU OF WASTE MANAGEMENT

100759 100992

ID NUMBER

FORM 41 MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

rt 1. Facility	Name Harrisburg	g Waste to Energy	Facility
cation: County			rrisburg/Swatara twp
te Sample Collec	ted 90/10/08-90/10/15	Time of Sampling	g 4 HOUR INTERVALS
	Name SHIFT PERSONNEL	-	
_	(in accordance with Sec	ution 283 403) AG	H DISCHARGER / BELTS
	Analysis Parameters	CION 203.403) ADI	I DISCHARGER / DEDIS
	-		
. Total Analysis Aluminum	s(dry weight basis) E mg/kg	Aluminum	sis (EP-Toxicity Test mg/kg
Antimony	mg/kg	Antimony	mg/kg
Arsenic	mg/kg	Arsenic	mg/kg
Barium	mg/kg	Barium	mg/kg
Cadmium	12.0mg/kg	Cadmium	0.40 mg/kg
Chromium		Chromium	< 0.01 mg/kg
Copper	mg/kg	Copper	mg/kg
Lead	860mg/kg	Lead	3.6mg/kg
Mercury	< 0.1mg/kg	Mercury	< 0.1 mg/kg
Molybdenum	mg/kg	Molybdenum	mg/kg
Nickel	mg/kg	Nickel	mg/kg
Selenium	mg/kg	Selenium	mg/kg
Silver	mg/kg	Silver	mg/kg
Zinc	mg/kg	Zinc	mg/kg
Total Residue		COD mg/l	ASTM Method A
Volatile Resid			ASTM Method A
pH <u>10.98</u>			d Solids ASTM Method Asidue)mg/1
Additional Par	rameters: mg/kg	Additional Para	ameters:
	mg/kg mg/kg		mg/kg mg/kg

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES

91-01-15

BUREAU OF WASTE MANAGEMENT

100759 100992

ID NUMBER

FORM 41 MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

Par	t 1. Facility	Name	Harrisbu	rg Waste to Energy	Y Facility
Loca	ation: County _	Dauph:	in	Municipality <u>Ha</u>	arrisburg/Swatara twp
Date	e Sample Collec	ted <u>90/10,</u>	/15-90/10/22	Time of Samplin	ng 4 HOUR INTERVALS
Sam	ple Collectors	Name _SHII	FT PERSONNEL		
Sam	pling Location	(in accord	dance with Se	ection 283.403) AS	SH DISCHARGER / BELTS
Par	t II. Chemical	Analysis 1	Parameters		
Α.	Total Analysis Aluminum	(dry weigh	nt basis) mg/kg	B. Leaching Analy Aluminum	rsis (EP-Toxicity Test)
,	Antimony		_mg/kg	Antimony	mg/kg
	Arsenic		_mg/kg	Arsenic	mg/kg
	Barium		_mg/kg	Barium	mg/kg
	Cadmium	11.0	_mg/kg	Cadmium	0.27mg/kg
	Chromium	43.0	_mg/kg	Chromium	< 0.01 mg/kg
	Copper		mg/kg	Copper	mg/kg
	Lead	300	_mg/kg	Lead	0.8mg/kg
	Mercury	< 0.1	_mg/kg	Mercury	< 0.1 mg/kg
	Molybdenum		_mg/kg	Molybdenum	mg/kg
	Nickel		_mg/kg	Nickel	mg/kg
	Selenium		_mg/kg	Selenium	mg/kg
	Silver		_mg/kg	Silver	mg/kg
J.	Zinc		_mg/kg	Zinc	mg/kg
	Total Residue			COD mg/l	ASTM Method A
	Volatile Resid		mg/kg		ASTM Method A
	pH <u>10.49</u>			(Filterable Re	ed Solids ASTM Method A esidue)mg/l
	Additional Par	cameters:	/1	pH <u>5.0</u> Additional Par	cameters:
					mg/kg mg/kg
			mg kg		mg/kg

91-01-15

FORM 41

100759 100992

ID NUMBER

WEEK 90-44

MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

art 1. Facility	Name Harrisburg	g Waste to Energy I	Facility
ocation: County _	Dauphin	Municipality Har	risburg/Swatara twp
ate Sample Collec	eted 90/11/05-90/11/12	Time of Sampling	4 HOUR INTERVALS
ample Collectors	Name SHIFT PERSONNEL		
ampling Location	(in accordance with Sec	ction 283.403) ASH	DISCHARGER / BELTS
art II. Chemical	Analysis Parameters		
A. Total Analysis Aluminum	s(dry weight basis) I	B. Leaching Analys: Aluminum	is (EP-Toxicity Test) mg/kg
Antimony	mg/kg	Antimony	mg/kg
Arsenic	mg/kg	Arsenic	mg/kg
Barium	mg/kg	Barium	mg/kg
Cadmium	9.9mg/kg	Cadmium	0.27 mg/kg
Chromium	15.0mg/kg	Chromium	0.02mg/kg
Copper	mg/kg	Copper	mg/kg
Lead	190mg/kg	Lead	2.9 mg/kg
Mercury	< 0.1 _mg/kg	Mercury	< 0.1 mg/kg
Molybdenum	mg/kg	Molybdenum	mg/kg
Nickel	mg/kg	Nickel	mg/kg
Selenium	mg/kg	Selenium	mg/kg
Silver	mg/kg	Silver	mg/kg
Zinc	mg/kg	Zinc	mg/kg
Total Residue		COD mg/l	ASTM Method A
Volatile Resid		TOC mg/l	ASTM Method A
рн <u>11.59</u>			Solids ASTM Method A idue)mg/l
Additional Par	ma/ka	Additional Parar	mg/kg
	ma ka		mg/kg

DEPARTMENT OF ENVIRONMENTAL RESOURCES

91-01-15

BUREAU OF WASTE MANAGEMENT

100759 100992

ID NUMBER

FORM 41 MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

Part 1. Facility	Name Ha	arrisburg	Waste to Energy	y Facility	
Location: County _	Dauphin		Municipality Ha	arrisburg/Sw	atara twp
Date Sample Collec	ted <u>90/10/22-90</u>	0/10/29	Time of Samplir	ng 4 HOUR I	NTERVALS
Sample Collectors	Name SHIFT PE	RSONNEL			
Sampling Location	(in accordance	with Sect	tion 283.403) AS	SH DISCHARGE	R / BELTS
Part II. Chemical	Analysis Paramo	eters			
A. Total Analysis Aluminum	(dry weight bas		. Leaching Analy Aluminum	ysis (EP-Tox	icity Test) mg/kg
Antimony	mg/l	kg	Antimony		mg/kg
Arsenic	mg/l	kg	Arsenic		mg/kg
Barium	mg/l	kg	Barium		mg/kg
Cadmium	16.0mg/]	kg	Cadmium	< 0.01	mg/kg
Chromium	36.0 mg/l	kg	Chromium	< 0.01	_mg/kg
Copper	mg/l	kg	Copper		mg/kg
Lead	670 mg/l	kg	Lead	< 0.1	_mg/kg
Mercury	< 0.1 mg/l	kg	Mercury	< 0.1	mg/kg
Molybdenum	mg/l	kg	Molybdenum		mg/kg
Nickel	mg/l	kg	Nickel		mg/kg
Selenium	mg/l	kg	Selenium		mg/kg
Silver	mg/]	kg	Silver		mg/kg
Zinc	mg/]	kg	Zinc		mg/kg
Total Residue			COD mg/l	AS	TM Method A
Volatile Resid Total Resid		mg/kg	TOC mg/l		
pH <u>10.83</u>			Total Dissolve (Filterable Reph 5.0	esidue)	
Additional Par	ma /1	ka	Additional Par	rameters:	mg/kg
	mg/]	kg			mg/kg mg/kg
	mg]	A.G			

91-01-15

BUREAU OF WASTE MANAGEMENT

100759 100992

ID NUMBER

FORM 41 MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

Part	1. F	acility	Name _	Harrisb	urg	Waste to Energy	Facility	У
Locat	ion:	County	Da	uphin		Municipality Ha	rrisburg	/Swatara twp
Date	Samp]	le Collec	cted <u>90</u>	/10/29-90/11/0	<u>5</u>	Time of Samplin	g 4 HOU	R INTERVALS
Sampl	e Col	llectors	Name _	SHIFT PERSONNE	<u>L</u>			
Sampl	ing I	Cocation	(in ac	cordance with	Sect	ion 283.403) AS	H DISCHA	RGER / BELTS
Part	II. (Chemical	Analys	is Parameters				
	otal lumir		s(dry w	eight basis) mg/kg	В.	Leaching Analy	sis (EP-	Toxicity Test) mg/kg
A	ntimo	ony		mg/kg		Antimony		mg/kg
A	rseni	LC		mg/kg		Arsenic		mg/kg
В	arium	n		mg/kg		Barium		mg/kg
С	admiu	ım	6.	2mg/kg		Cadmium	0.1	5mg/kg
С	hromi	Lum	1.	0_mg/kg		Chromium	< 0.0	<u>01</u> mg/kg
С	opper	<u>-</u>		mg/kg		Copper		mg/kg
L	ead		3.	0_mg/kg		Lead	0.4	mg/kg
М	lercur	ΞY	< 0	.1 mg/kg		Mercury	< 0.	1mg/kg
М	olybo	denum		mg/kg		Molybdenum		mg/kg
N	ickel	L		mg/kg		Nickel		mg/kg
S	eleni	Lum		mg/kg		Selenium		mg/kg
s	Silver	<u>-</u>		mg/kg		Silver		mg/kg
Z	inc			mg/kg		Zinc		mg/kg
Т	otal	Residue				COD mg/l		ASTM Method A
V		le Resid		mg/kg		TOC mg/l		
р	н	1.01				Total Dissolve (Filterable Re	sidue) _	
A -		lonal Pa		mg/kg		pH 5.0 Additional Par	ameters:	mg/kg mg/kg
_	·····			mg/kg mg kg				mg/kg

91-01-15

BUREAU OF WASTE MANAGEMENT

100759 100992

ID NUMBER

FORM 41 MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

ab 1 - Danilli	Mana	17	77 - m 2 7 2 4 5 m
rt 1. Facility	Name Harrisbu	irg Waste to Energy	Facility
cation: County _	Dauphin	Municipality <u>Ha</u>	rrisburg/Swatara twp
te Sample Collec	cted <u>90/11/12-90/11/19</u>	Time of Samplin	g 4 HOUR INTERVALS
mple Collectors	Name SHIFT PERSONNEL		
mpling Location	(in accordance with S	Section 283.403) AS	H DISCHARGER / BELTS_
rt II. Chemical	Analysis Parameters		
. Total Analysis Aluminum	s(dry weight basis) mg/kg	B. Leaching Analy Aluminum	sis (EP-Toxicity Test mg/kg
Antimony	mg/kg	Antimony	mg/kg
Arsenic	mg/kg	Arsenic	mg/kg
Barium	mg/kg	Barium	mg/kg
Cadmium	2.0mg/kg	Cadmium	0.28 _mg/kg
Chromium	<u> </u>	Chromium	< 0.01 mg/kg
Copper	mg/kg	Copper	mg/kg
Lead	120mg/kg	Lead	3.0 mg/kg
Mercury	1.0mg/kg	Mercury	< 0.1 mg/kg
Molybdenum	mg/kg	Molybdenum	mg/kg
Nickel	mg/kg	Nickel	mg/kg
Selenium	mg/kg	Selenium	mg/kg
Silver	mg/kg	Silver	mg/kg
Zinc	mg/kg	Zinc	mg/kg
Total Residue		COD mg/l	ASTM Method
Volatile Resid	lue on luemg/kg	TOC mg/l	ASTM Method
рн <u>11.39</u>		(Filterable Re	d Solids ASTM Method . sidue)mg/
Additional Par	mg/kg	pH 5.1 Additional Par	ameters: mg/kg
	mg/kg mg kg		mg/kg mg/kg

RESIDUE MONITORING REPORT

91-01-15

FORM 41 MUNICIPAL INCINERATOR ASH

100759 100992

ID NUMBER

Part 1. Facility	Name Harrisb	urg Waste to Energy	Facility
Location: County	Dauphin	Municipality Ha	rrisburg/Swatara twp
Date Sample Colle	cted 90/11/19-90/11/2	6 Time of Samplin	g 4 HOUR INTERVALS
Sample Collectors	Name SHIFT PERSONNE	L	
Sampling Location	(in accordance with	Section 283.403) AS	H DISCHARGER / BELTS
Part II. Chemical	Analysis Parameters		
A. Total Analysi Aluminum	s(dry weight basis) mg/kg	B. Leaching Analys	sis (EP-Toxicity Test) mg/kg
Antimony	mg/kg	Antimony	mg/kg
Arsenic	mg/kg	Arsenic	mg/kg
Barium	mg/kg	Barium	mg/kg
Cadmium	5.2mg/kg	Cadmium	0.22 mg/kg
Chromium	43.0 mg/kg	Chromium	0.03_mg/kg
Copper	mg/kg	Copper	mg/kg
Lead	150mg/kg	Lead	2.9 mg/kg
Mercury	< 0.1 mg/kg	Mercury	< 0.1 mg/kg
Molybdenum	mg/kg	Molybdenum	mg/kg
Nickel	mg/kg	Nickel	mg/kg
Selenium	mg/kg	Selenium	mg/kg
Silver	mg/kg	Silver	mg/kg
Zinc	mg/kg	Zinc	mg/kg
Total Residue		COD mg/l	ASTM Method A
Volatile Resi Total Resi	due on duemg/kg		ASTM Method A
pH <u>11.33</u>	-	(Filterable Re	d Solids ASTM Method A sidue)mg/l
Additional Pa	—	pH 5.1 Additional Par	ameters:
	mg/kg mg/kg mg kg		mg/kg mg/kg mg/kg

91-01-15

FORM 41

100759 100992

ID NUMBER

FORM 41 MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

rt 1 Facility	Name Harrisb	ira Waste to Freray	Facility
- -	Dauphin	<u> </u>	rrisburg/Swatara twp
te Sample Collec	ted 90/11/26-90/12/03	Time of Sampline	g 4 HOUR INTERVALS
mple Collectors	Name <u>SHIFT PERSONNE</u>	- 	
mpling Location	(in accordance with	Section 283.403) AS	H DISCHARGER / BELTS
rt II. Chemical	Analysis Parameters		
. Total Analysis Aluminum	(dry weight basis) mg/kg	B. Leaching Analys	sis (EP-Toxicity Test mg/kg
Antimony	mg/kg	Antimony	mg/kg
Arsenic	mg/kg	Arsenic	mg/kg
Barium	mg/kg	Barium	mg/kg
Cadmium	12.0mg/kg	Cadmium	< 0.01 mg/kg
Chromium	13.0mg/kg	Chromium	< 0.01 mg/kg
Copper	mg/kg	Copper	mg/kg
Lead	220mg/kg	Lead	0.1 mg/kg
Mercury	<u> < 0.1</u> mg/kg	Mercury	< 0.1 mg/kg
Molybdenum	mg/kg	Molybdenum	mg/kg
Nickel	mg/kg	Nickel	mg/kg
Selenium	mg/kg	Selenium	mg/kg
Silver	mg/kg	Silver	mg/kg
Zinc	mg/kg	Zinc	mg/kg
Total Residue		COD mg/l	ASTM Method 2
Volatile Resid Total Resid	ue on uemg/kg		ASTM Method A
рн <u>10.82</u>		(Filterable Re	d Solids ASTM Method Asidue)mg/
Additional Par	ameters:	pH <u>5.1</u> Additional Par	
	mg/kg		mg/kg
	mg/kg mg kg		mg/kg mg/kg

91-01-15

BUREAU OF WASTE MANAGEMENT

FORM 41

100759 100992

ID NUMBER

FORM 41 MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

Part 1. Facility	Name Harrisbu	arg Waste to Energy	Facility
Location: County _	Dauphin	Municipality <u>Ha</u>	rrisburg/Swatara twp
Date Sample Collec	cted 90/12/03-90/12/10	Time of Samplin	g 4 HOUR INTERVALS
Sample Collectors	Name SHIFT PERSONNEL		
Sampling Location	(in accordance with S	Section 283.403) AS	H DISCHARGER / BELTS
Part II. Chemical	Analysis Parameters		
A. Total Analysis Aluminum	s(dry weight basis) mg/kg	B. Leaching Analy Aluminum	sis (EP-Toxicity Test) mg/kg
Antimony	mg/kg	Antimony	mg/kg
Arsenic	mg/kg	Arsenic	mg/kg
Barium	mg/kg	Barium	mg/kg
Cadmium	7.4mg/kg	Cadmium	< 0.01 mg/kg
Chromium	3.0mg/kg	Chromium	< 0.01 mg/kg
Copper	mg/kg	Copper	mg/kg
Lead	230mg/kg	Lead	< 0.1 mg/kg
Mercury	<u>< 0.1</u> mg/kg	Mercury	< 0.1 mg/kg
Molybdenum	mg/kg	Molybdenum	mg/kg
Nickel	mg/kg	Nickel	mg/kg
Selenium	mg/kg	Selenium	mg/kg
Silver	mg/kg	Silver	mg/kg
Zinc	mg/kg	Zinc	mg/kg
Total Residue		COD mg/l	ASTM Method A
Volatile Resid	due on duemg/kg		ASTM Method A
pH7.67		(Filterable Re	d Solids ASTM Method A sidue)mg/l
Additional Par		pH 5.0 Additional Par	ameters:
	mg/kg mg/kg mg kg		ma/ka

ANALYTICAL LABORATORIES OF SKELLY AND LOY, INC. 2601 N. FRONT STREET HARRISBURG, PA 17110

Attn: MICHAEL S. FARLLING

Phone: 717-232-0593 FAX 232-1799

City of Harrisburg
Harrisburg Waste Energy
1670 South 19th Street
Harrisburg, PA 17104
Attn: John A. Lukens
Invoice Number: 76

Order #: 90-12-067 Date: 01/09/91 14:23

Work ID: -

Date Received: 12/21/90 Date Completed: 01/08/91

SAMPLE IDENTIFICATION

Sample	Sample	Sample	Sample
Number	<u>Description</u>	<u>Number</u>	Description
01	ASH SAMPLE 90-39		

Certified By

MICHAEL S. FARLLING

TEST RESULTS BY SAMPLE

Collected: 10/08/90

Sample: 01A ASH SAMPLE 90-39
Job: HWE ANALYSIS AS REQUESTED

Test Description CADMIUM, TOTAL	Result <0.01	<u>Limit</u>	<u>Units</u> MG/L	<u>Analyzed</u>	<u>By</u>
CADMIUM, TOTAL	8.8		MG/KG		
CHROMIUM, TOTAL	<0.01		$\mathtt{MG/L}$		
CHROMIUM, TOTAL	13.0		MG/KG		
LEAD, TOTAL	<0.1		MG/L		
LEAD, TOTAL	230		MG/KG		
MERCURY, TOTAL	<0.1	2	MG/L		
MERCURY, TOTAL	2.0		MG/KG		
рН	8.74	p	H UNITS		
PH LEACHATE	5.0	p	H UNITS		

A DIVISION OF SKELLY AND LOY

2601 North Front Street

Harrisburg, PA 17110

(717) 232-0593

LABORATORY ANALYSIS REPORT

NAME:

CITY OF HARRISBURG

FROJECT NO:

14973

ADDRESS:

HARRISBURG WASTE EWERGY

CLIENT NO:

160

1670 SOUTH 19TH STREET

SAMPLE NO:

53912

HARRISBURG, FA 17104

JOHN A. LUKENS

DATE RECVD:

11/ 8/90

FTENTION: REF. NO:

MON, DEC 10 1990

SAMPLE IDENTIFICATION: 90-40ASH

DATE: 10/15/90

-TEST-		RESULTS	UNITS
CD	CADMIUM, TOTAL	0.40	MG/L
CDDWS	CADMIUM, DRY WEIGHT	12. 0	MG/KG
CR	CHROMIUM, TOTAL	<0. 01	MG/L
CRDWS	CHROMIUM, DRY WEIGHT	2. 1	MG/KG
HG	MERCURY, TOTAL	<0.1 · · ·	MG/L
HCDWS	MERCURY, DRY WEIGHT	<0. 1	MG/KG
PB	LEAD, TOTAL	3. 6	MG/L
PBDWS	LEAD, DRY WEIGHT	860	MG/KG
PH	PH, LAB	10. 98	PH UNITS
PHL	LEACHATE PH	5. Q	

Respectfully Submitted,

Analytical Laboratorigg

of SKELLY, and, LOY

MICHAEL S. FAPLLIN Laboratory Mak

A DIVISION OF SKELLY AND LOY **2601 North Front Street** Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME:

CITY OF HARRISBURG

PROJECT NO:

15108

ADDRESS:

HARRISBURG WASTE EMERGY

CLIENT NO:

160

1670 SOUTH 19TH STREET HARRISBURG, PA 17104

SAMPLE NO:

54320

ATTENTION:

JOHN A. LUKENS

DATE RECVO:

11/21/90

REF. NO:

WED, DEC 12 1990

SAMPLE IDENTIFICATION: 90-41

DATE: 10/22/90

-TEST-	DETERMINATION	RESULTS	UNITS
CD	CADMIUM, TOTAL	0. 27	MG/L
CDDWS	CADMIUM, DRY WEIGHT	11. O	MG/KG
CR	CHROMIUM, TOTAL	<0. Q1	MG/L
CRDWS	CHROMIUM, DRY WEIGHT	43. Q	MG/KG
HG	MERCURY, TOTAL	<0.1	MG/L
HGDWS	MERCURY, DRY WEIGHT	<0.1	MG/KG
PB	LEAD, TOTAL	0.8	MG/L
PBDWS	LEAD, DRY WEIGHT	300	MG/KG
PH	PH, LAB	10.49	PH UNITS
PHL	LEACHATE PH	5 0	

Respectfully Submitted.

Analytical Laboratories

Laboratory Mad

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, FA 17110

(717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: ADDRESS:

CITY OF HARRISBURG

HARRISBURG WASTE EMERGY

1670 SOUTH 19TH STREET

HARRISBURG, PA 17104

ATTENTION:

JOHN A. LUKENS

PROJECT NO:

15108

CLIENT NO:

160 54321

SAMPLE NO:

DATE RECVD: 11/21/90

REF. NO:

WED, DEC 12 1990

SAMPLE IDENTIFICATION: 90-42

DATE: 10/29/90

-TEST-	DETERMINATION	RESULTS	UNITS
CD	CADMIUM, TOTAL	<0. 01	MG/L /
CDDWS	CADMIUM, DRY WEIGHT	16.0	MG/KG
CR	CHROMIUM, TOTAL	<0. 01	MG/L
CRDWS	CHROMIUM, DRY WEIGHT	36. O	MG/KG
HG	MERCURY, TOTAL	<0.1	MG/L
HGDWS	MERCURY, DRY WEIGHT	CO. 1	MG/KG
PB	LEAD, TOTAL	<0. i	MG/L
PBDWS	LEAD, DRY UEIGHT	670	MG/KG
PH	FH. LAB	10.83	PH UNITS
PHL	LEACHATE FH	5.0	

Respectfully Submitted, Analytical Laboratories of SKELLY and LOY

Laboratoru Manage

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110

(717) 232-0593

LABORATORY ANALYSIS REPORT

NAME:

CITY OF HARRISBURG

PROJECT NO:

1510B

ADDRESS:

HARRISBURG WASTE ENERGY

CLIENT NO:

160

1670 SOUTH 19TH STREET

SAMPLE NO:

54322

ATTENTION:

HARRISBURG, PA 17104 JOHN A. LUKENS

DATE RECVD:

11/21/90

REF. NO:

VED, DEC 12 1990

SAMPLE IDENTIFICATION: 90-43

DATE: 11/15/90

-TEST-	DETERMINATION	RESULTS	UNITS
CD	CADMIUM, TOTAL	0.15	MG/L /
CDDWS	CADMIUM, DRY WEIGHT	5. Z	MG/KG
CR	CHROMIUM, TOTAL	<0. 01	MG/L
CRDWS	CHROMIUM, DRY WEIGHT	1.0	MG/KG
HG	MERCURY, TOTAL	<0. 1	MG/L
HGDWS	MERCURY, DRY WEIGHT	CO. 1	MG/KG
PB	LEAD, TOTAL	0.4	MG/L
PBDWS	LEAD, DRY WEIGHT	3. 0	MG/KG
PH	PH, LAB	11.01	PH UNITS
PHL	LEACHATE PH	5. O	

Respectfully Submitted. Analytical Laboratories of SKELLY and LOY

Laboratory Mahager

ANALYTICAL LABORATORIES OF SKELLY AND LOY, INC. 2601 N. FRONT STREET HARRISBURG, PA 17110

Attn: MICHAEL S. FARLLING

Phone: 717-232-0593 FAX 232-1799

City of Harrisburg
Harrisburg Waste Energy
1670 South 19th Street
Harrisburg, PA 17104
Attn: John A. Lukens
Invoice Number: 51

Order #: 90-12-020 Date: 01/03/91 11:11 Work ID: SEDIMENT

Date Received: 12/14/90
Date Completed: 01/03/91

SAMPLE IDENTIFICATION

Sample	Sample	Sample	Sample
<u>Number</u>	Description	Number	Description
01	ASH 90-44	02	ASH 90-45
03	ASH 90-46		

Page 2

TEST RESULTS BY SAMPLE

Sample: 01A ASH 90-44 Collected: 11/12/90

Job: HWE ANALYSIS AS REQUESTED

Test Description	Result	<u>Limit</u>	<u>Units</u>	Analyzed	<u>By</u>
CADMIUM, TOTAL	0.27		${ t MG/L}$		
CADMIUM, TOTAL	9.9	•	MG/KG		
CHROMIUM, TOTAL	0.02		MG/L		
CHROMIUM, TOTAL	15.0	•	MG/KG		
LEAD, TOTAL	2.9	•	$\mathtt{MG/L}$		
LEAD, TOTAL	190		MG/KG		
MERCURY, TOTAL	<0.1		MG/L		
MERCURY, TOTAL	<0.1		MG/KG		
рН	11.59		pH UNITS		
ph LEACHATE	5.1		pH UNITS		

Sample: 02A ASH 90-45 Collected: 11/19/90

Job: HWE ANALYSIS AS REQUESTED

Test Description	<u>Result</u>	<u>Limit</u>	<u>Units</u>	Analyzed	<u>By</u>
CADMIUM, TOTAL	0.28		MG/L		
CADMIUM, TOTAL	2.0		MG/KG		
CHROMIUM, TOTAL	<0.01		MG/L		
CHROMIUM, TOTAL	<0.1		MG/KG		
LEAD, TOTAL	3.0		MG/L		
LEAD, TOTAL	120		MG/KG		
MERCURY, TOTAL	<0.1		MG/L		
MERCURY, TOTAL	1.0		MG/KG		
рн	11.39		PH UNITS		
ph LEACHATE	5.1		pH UNITS		

Sample: 03A ASH 90-46 Collected: 11/26/90

Job: HWE ANALYSIS AS REQUESTED

Test Description	Result	<u>Limit</u>	Units	Analyzed	Ву
CADMIUM, TOTAL	0.22	HIWTO	MG/L	imary sea	±1 .
CADMIUM, TOTAL	5.2		MG/KG		
CHROMIUM, TOTAL	0.03		MG/L		
CHROMIUM, TOTAL	43.0		MG/KG		
LEAD, TOTAL	2.9		MG/L		
LEAD, TOTAL	150		MG/KG		
MERCURY, TOTAL	<0.1		MG/L		
MERCURY, TOTAL	<0.1		MG/KG		
pH	11.33	p	H UNITS		

Order # 90-12-020 01/03/91 11:11

ANALYTICAL LABORATORIES

Page 3

Test Description PH LEACHATE

Result 5.1

<u>Limit</u>

Units Analyzed By

pH UNITS

ANALYTICAL LABORATORIES OF SKELLY AND LOY, INC. 2601 N. FRONT STREET HARRISBURG, PA 17110

Attn: MICHAEL S. FARLLING

Phone: 717-232-0593 FAX 232-1799

City of Harrisburg
Harrisburg Waste Energy
1670 South 19th Street
Harrisburg, PA 17104
Attn: John A. Lukens
Invoice Number: 75

Order #: 90-12-066
Date: 01/08/91 11:15
Work ID: ASH COMPOSITE
Date Received: 12/20/90
Date Completed: 01/08/91

SAMPLE IDENTIFICATION

SampleSampleSampleSampleNumberDescriptionNumberDescription01ASH SAMPLE 90-4702ASH SAMPLE 909-48

Certified By

MICHAEL S. FARLLING

TEST RESULTS BY SAMPLE

Sample: 01A ASH SAMPLE 90-47 Collected: 12/03/90

Job: HWE ANALYSIS AS REQUESTED

Test Description	Result	<u>Limit</u>	<u> Units</u>	Analyzed	By
CADMIUM, TOTAL	<0.01		$\mathtt{MG/L}$		
CADMIUM, TOTAL	12.0		MG/KG		
CHROMIUM, TOTAL	<0.01	0	MG/L		
CHROMIUM, TOTAL	13.0		MG/KG		
LEAD, TOTAL	0.1		MG/L		
LEAD, TOTAL	220		MG/KG		
MERCURY, TOTAL	<0.1		MG/L		
MERCURY, TOTAL	<0.1		MG/KG		
рН	10.82		pH UNITS		
PH LEACHATE	5.1		pH UNITS		

Collected: 12/10/90

Sample: 02A ASH SAMPLE 909-48

Job: HWE ANALYSIS AS REQUESTED

<u>Test Description</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
CADMIUM, TOTAL	<0.01		MG/L		
CADMIUM, TOTAL	7.4		MG/KG		
CHROMIUM, TOTAL	<0.01		$\mathtt{MG/L}$		
CHROMIUM, TOTAL	3.0		MG/KG		
LEAD, TOTAL	<0.1		$\mathtt{MG/L}$		
LEAD, TOTAL	230		MG/KG		
MERCURY, TOTAL	<0.1		${\tt MG/L}$		
MERCURY, TOTAL	<0.1		MG/KG		
pН	7.67		pH UNITS		
ph LEACHATE	5.0		pH UNITS		

ATTACHMENT 4 REVISED QA/QC PLAN

CITY OF HARRISBURG Department of Incinerator and Steam Generation

Quality Assurance/Quality Control Plan

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PREFACE

The following Quality Assurance and Quality Control (QA/QC) Plan has been prepared specifically to comply with the requirements of the Pennsylvania Department of Environmental Resources and is intended to be utilized during the proposed landfill construction related activities which are to be undertaken by the City of Harrisburg for Residue Disposal Areas A, B-1 and B-2, of their Steam Generating Incinerator. Therefore it will be included as a portion of the proposed Contract Documents, which will also include the Drawings and Specifications, as prepared by the Design Engineer for each particular Residue Disposal Area. instances of conflict between the requirements of the Contract Documents including the Drawings and Specifications, and the requirements of the QA/QC Plan, the provisions contained in the General Conditions of the Contract Documents regarding such will govern.

It should also be noted that certain particular aspects of this QA/QC Plan are directed solely at work to be undertaken during the construction of site B-2 and the QA/QC procedures at Site A and B-1 will relate solely to the closure of those sites.

I. INTRODUCTION

This document will serve to provide the Quality Assurance Engineer with the minimum inspection requirements necessary to assure that the design criteria for the landfill components relative to Sites A, B-l and B-2 of the Harrisburg Steam Generating Facility are met during construction.

The scope of this document includes a system of documentation for all reports and data necessary in assuring compliance with design and landfill component requirements for Sites A, B-l and B-2. Testing methods and frequencies, as well as procedures for the distribution of test results, are provided. Documentation and correction procedures for construction and material deficiencies are also provided.

CITY OF HARRISBURG - QA/QC MANUAL

VIII. FIELD TESTING

A. Soils

Prior to construction, sources for each soil component will be sampled and tested for compliance with design specifications. One (1) sample per source will be taken, at a minimum. The QA Engineer will determine testing frequency based on variability of the source as determined by the QA Engineer. At a minimum each sample will be tested for particle size (ASTM D422) and maximum density (ASTM D698).

Soils will be stored in a manner which minimizes wind and water erosion, compaction and settling, contamination which could affect performance characteristics and drainage to contiguous areas. Stockpiles will be equipped with erosion control devices to prevent soil-laden runoff and will be constructed in a manner to prevent slope failure.

1. Subgrade and Subbase

a. Cut Area

All topsoil and organic surface soil shall be completely removed to the top of the underlying virgin soil and taken to the designated topsoil storage area.

Miscellaneous fill deposits encountered within the designated cut area shall be completely removed and disposed of in the proper manner.

If the removal of miscellaneous fill results in excavation to elevations below the design subgrade, the over excavated area shall be brought back to grade using acceptable soils, placed and compacted in accordance with the requirements for Compacted Fill Construction (Page 14).

Lab permeability tests (EPA 1983 SW-870 Fixed Wall) shall be conducted to correlate moisture/density relationships to permeability prior to field compactions.

On Jose Jewisty

Particle size analysis testing (ASTM D422) shall be done in a 100 square foot grid system to determine changes in soil properties and thus the compactive effort required to achieve 95% maximum dry density across the site.

Acres de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la co

The subgrade of the cut area shall be completely proof-rolled to reveal any weak soil and to stabilize the area.

If areas do not meet 95%, they will be wetted/dried and recompacted until they are within +/- 2% of the 95% proctor density. The last for compaction will be on a grid basis - 100' on center at intersections.

Samples of the soil to a depth of one foot below the design subgrade shall be secured and submittedto an independent soils laboratory to determine the dry density moisture content relationship in accordance with ASTM D698. At least four representative samples shall be submitted to the Soils Testing Laboratory.

Four undisturbed samples of the compacted subgrade shall be reserved for laboratory permeability testing. In-place permeability tests shall be performed under the direction of the supervising registered professional soils engineer.

b. Compacted Fill Construction

1

who emban ments portion of the B-2 Site shall be constructed with earth available from the excavation area.

The embankment shall be constructed on the proofrolled subgrade. Prior to beginning the embankment construction, the subgrade surface shall be lightly scarified to assure a good bond between the soil layers.

- The soil shall be placed in loose layers such that the thickness after compaction does not exceed six inches.
- Visual observation and hand-raking will be used to eliminate any boulders/cobbles greater than 6" in diameter.

CITY OF HARRISBURG -QA/QC MANUAL

The soil shall be compacted to 95 percent of the maximum dry density as determined by ASTM D698, at plus or minus 2 percent of the optimum moisture content.

Compaction effort will be verified with a nuclear densitometer. Areas which do not meet the 95% requirement due to high moisture content will be removed and replaced with dryer material. Areas that fail the compaction test due to lack of moisture or due to lack of compaction effort will be wetted and recompacted.

The final surface of each compacted lift of soil shall be lightly scarified prior to placing the succeeding lift of soil.

In-place density tests shall be performed at a rate of one test per 500 cubic yards of material placed or on each 6" lift.

Additional testing shall be performed whenever there is a suspicion of the quality of moisture control or effectiveness of compaction.

In-place density tests shall be performed in conformance with ASTM D698.

Four undisturbed soil samples of the berm construction shall be secured for laboratory permeability testing. In addition, four in-place permeability tests shall be performed.

For those embankments that will be cut, four undisturbed samples from each face shall be collected for laboratory permeability testing. In addition, four in-place permeability tests shall be performed on each face.

Precipitation may result in cessation of construction activities if warranted in the judgment of the QA Engineer.

c. Subbase: When the excavation of the subgrade has been completed and verified, the subbase material shall be tested for in-place moisture and in-place density. Laboratory proctor density tests (ASTM D698) shall be performed on the subbase materials before emplacement and compaction.

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Areas of the subbase which do not meet the requirements in the plans and specifications, based upon laboratory proctor analysis and permeability tests, may be removed and/or reworked (recompacted) and retested, if it will not jeopardize bottom stability and such is authorized by the City of Harrisburg. The 2A modified stone will be compacted to 95% of the maximum dry density as determined by ASTM D698 at #2% of the optimum moisture content. Following the placement of two - 6 inch lifts of 2A modified stone at the bottom of the B-2 site, six (6) inches of earth (shale) available from the excavated site shall be placed in layers 6 inches thick after compaction. This soil will be compacted to 95% of the maximum dry density as determined by ASTM D698 at + 2% of the optimum moisture content. Any material larger than six (6) inches in any dimension will be removed prior to compaction. Four (4) undisturbed samples of the compacted subbase will be laboratory tested for permeability. Density testing will be done on a grid basis, (1) one test per 2,500 square feet and verified with a nuclear densitometer. 150,50

All tests holes bored or otherwise made shall be backfilled with bentonite or select clay fill. Professional certification and support documentation for the subbase shall be submitted by the laboratory conducting the tests to the City of Harrisburg.

When the excavation is completed, the entire area shall be proof rolled with a steel drum vibratory roller, Cat 815 or equivalent. Should certain conditions mandate, other compaction equipment may be used, but only with prior approval of QA Engineer. Wide track dozers will not be acceptable. Areas that exhibit excessive rutting, heaving, or softening shall be excavated, and replaced.

A geotextile will be laid on the subbase. In addition to the protective properties of the geotextile, the bedding layer surface will be visually inspected to confirm that it is free from clods of soil, rocks, roots, sudden changes of grade and standing water. Hand raking will be the final procedure in preparation of the subbase to remove rock fragments or stones greater than one inch (1") in diameter.

Leachate Detection/Collection System: Samples of the gravel pipe cover and sand blanket shall be collected. Sample frequency shall be at least one sample for every 1000 cubic yards of gravel pipe cover and one sample for every 1000 cubic yards of sand blanket. size shall be not less than 12 pounds for gravel samples, and not less than I pound for sand blanket samples. Samples shall be tested for grain size distribution. The leachate detection collection material will meet the specifications as shown in PennDOT Form 408, for fine aggregate. In addition, one constant head lab permeability test shall be performed on a sample from the stockpile before the sand is placed. Testing shall provide certification by a registered professional soils engineer that the sand exceeds a permeability coefficient of 1 x 10-2 cm/sec.

Bed book of some

The sand shall then be sampled and provided to the liner manufacturer to determine the accurate coefficient of friction between the sand and the liner material to be provided. One petrographic analysis shall also be performed on the material prior to placement. Test methods are presented in Table 5. Testing to determine grain size distribution, permeability of leachate collection system soils and to demonstrate non-reactivity shall be accomplished to permit certification of material compliance with the construction plans and specifications before geotextile is placed over the leachate collection system in preparation of cell to receive waste. Documentation of testing shall be submitted with the certification as support data, by the Registered Professional Soils Engineer.

Transition Berm: The compacted clay shall be tested to verify that the requirements in the plans and specifications are satisfied. Water content before compaction shall be tested at a frequency not less than one test for every 100 cu. yd. of transition berm placed. The transition berm shall be tested to determine compacted density and water content before subsequent lifts are placed. These tests may be accomplished using a nuclear densitometer.

Whenever the transition berm is disturbed for testing or sampling, such damage (holes, primarily shall be backfilled by hand-tamping alternating layers of clay material and bentonite pellets.

Jania Fulla The berm material will be a soil-bentonite mixture one (1) foot thick composed of sodium bentonite treated with polymers, unless otherwise approved, 25% clay by weight, less than .002 mm particle size. Soil material used in the mixture will contain no more than 50% sand by weight with a particle size of .5 to 2 mm. The coefficient of permeability will be less than or equal to 1 x 10⁻⁷ cm/sec. Permeability will be tested using a constant head lab permeability test and/or a large diameter, single ring, infiltrometer. Testing shall be done per 500 cu. yd. placed.

To verify the correct clay materials are used, one sample of transition berm shall be obtained for every 500 cubic yards placed or for every three working days, whichever is less. This sample shall be in the order of 10 pounds, and shall be in standard Proctor mold using Standard Proctor compactive effort at the existing clay water content. Grain size distribution shall also be determined, and with the water contentdry density value (from the Proctor mold), be used to verify that the full specification has been achieved.

- 4. Intermediate Cover: The foundation layer for the geomembrane cap will be composed of soil in the USDA textural classes of sandy loam, loam, sandy clay loam, silty clay loam, loamy sand and silt loam. At least 40% by weight of the soil fragments must pass through a No. 10 sieve. The combustible or coal content of the soil will not exceed 12% by weight. Rock fragments greater than six inches in diameter will be eliminated. The soil will be spread and compacted using a bulldozer and steel drum vibratory roller to 95% proctor density and a depth of 6 inches. One compaction test for every 5,000 square feet and one sieve analysis for every 20,000 square feet of soil placed will be performed.
- 5. Trench Backfill: The trench backfill shall be thoroughly compacted with appropriate equipment which will result in a minimum relative compaction of 95 percent of the maximum dry density as determined by ASTM D698.

When placed, the soil shall have a moisture content which is plus or minus 2 percent of the optimum moisture content.

In-place defisity tests shall be performed at a rate of one test for every 100 cubic yards of backfill in trenches.



final Cover: During construction of the soil layer, the soil borrow source will be tested in accordance with Table 5 or as required by the QA Engineer. If additional borrow sources are needed they will be tested in accordance with Table 5.

The QA Engineer will verify that equipment and methods used by the contractor will not alter or damage underlying landfill components. The daily work area shall extend a distance so as to maintain continuous operations and optimum moisture content in the soil; desiccation and crusting of the lift surface will be avoided as much as possible.

The QA Engineer will observe and document all soil layer construction activities daily.

The soil layer will be constructed in three (3) compacted lifts, six (6) inches thick then covered with six (6) inches of topsoil. Testing will be done as the work progresses. Samples of the granular blanket above the synthetic cap system shall be collected at a frequency of one (1) sample for every 1,000 cubic yards of soil blanket placed. Minimum sample size will be one (1) pound. Samples shall be tested for grain size distribution; one (1) constant head permeability test shall be performed on a composite sample of all soil samples obtained. Test methods are presented in Table 5.

Topsoil will be tested every 20,000 square feet for the following:

Organic Material 2% min. - 10% max.

Sand 5% min. - 70% max.

Silt 10% min. 70% max.

Clay 5% min. 30% max.

7. Nutrient Level

Topsoil will be initially tested for its nutrient level by Penn State Markel Soils Laboratory. Any recommendations from the testing will be implemented by the Contractor at no cost to the applicant.

The QA Organization will document the soil sampling made during construction.

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8. Nonconforming Test Results: If a defect is discovered in the soil layer by testing, the extent of the defect will be determined by further testing. After the extent of the defect has been determined, the defect will be repaired and retested to the satisfaction of the QA Engineer.

B. Synthetics

1. General: All synthetic material delivered to the site will be visually inspected by the liner vendor QC representative and a QA Technician for damage in transit, and checked for agreement with the Bill of Lading. A signed copy of the Bill of Lading accepting synthetic materials as shipped will be kept by the QA Engineer.

Any non-conforming material will immediately be segregated and tagged "Do Not Use." The Liner vendor QC representative will contact the QA Engineer concerning any non-conforming materials. Disposition will be noted on a Non-Conformance Report.

2. Geomembranes: The QA Technicians will inspect incoming geomembrane liner as it is unrolled. Holes, tears, or blemishes will be noted and clearly marked on the liner for the identification of necessary repairs, then documented in accordance with Section VIII B.6 - Non-Conforming Items.

Trial seam welds will be inspected before each shift by liner manufacturer's site personnel to allow for determination of the optimum welding process parameters based on the prevailing ambient conditions. The quality of trial seam welds will be evaluated by using a small hand operated tensile testing device by the QC representative field technicians. Three peel tests will be performed daily on these trail seam welds. The results will be documented and filed.

The entire length of each seam weld will be visually inspected immediately after production by the Field QA Technician and/or liner vendor QC representative. In addition, the entire length of each seam weld will be nondestructively tested and certified for continuity and water tightness using vacuum box methods by the QC representative. The results will be documented daily. Both machine welds and handwelds will be manually point-stressed or impact tested for continuity by the QC representative. The results will be documented by a QA technician.

CITY OF HARRISBURG - QA/QC MANUAL

Samples of the welds will be obtained at least once per shift per machine. A sample of weld will be cut sufficiently large for peel testing in the laboratory. The results will be fully documented. Any samples or in-place destructive testing of membrane will require that the area affected be repaired or replaced with material of equal or better quality. Such repair or replacement is subject to the same non-destructive testing as other membrane liner. Any weld found to be suspect during final inspection will be vacuum tested. In this test, the weld is placed under suction using a clear plastic suction cup attached to a vacuum pump. A foaming agent indicates the exact position of any leaks encountered. The results will be fully documented by a QA technician. No glues or adhesives will be used to hold the liner edges together prior to seaming. Attachment 1 for geomembrane installation procedures.

Geotextiles: QA Technicians will inspect all incoming geotextile as it is unrolled. Holes, tears, or other visible defects will be documented and clearly marked on the geotextile for identification of necessary repairs, then documented in accordance with Section VIII B.6. QC Technicians shall verify that fabric placement conforms to the construction plans and specifications, and that overlaps are at least 8 inches. At least one sample of geotextile 5 feet by 4 feet shall be saved for each 10,000 square feet installed.

Polyethylene Drainage Nets: QA Technicians will inspect all incoming geonet as it is unrolled. or other visible defects will be documented and clearly marked on the geonet for identification of necessary vill B.6. and ties at edges are in accordance with Section construction plans and specifications. At least one sample of geonet 5 feet by 4 feet shall be saved for each 10,000 square feet of geonet installed.

5. Polyethylene and But

shall verify that drainage pipes are installed to the lines and grades noted in the construction plans and specifications, and that no glues are used in joining pipe sections. At least one sample of pipe 4 feet long shall be saved for every 400 lineal feet of pipe installed. .*

or modified to meet the construction plans and specifications shall be removed and replaced. All non-conforming situations will be reported to the QA Engineer or QA Technicians for initiation of non-conformance reports. All non-conforming conditions will be brought immediately to the attention of the QA Engineer by means of the Non-Conformance Report. A written disposition will be provided for each non-conforming condition, those actions required to bring the item into conformance, and any appropriate documentation required.

C. Test Equipment Calibration

All field test equipment will be kept under control of the QA Engineer. The QA Engineer will be fully trained in the use of equipment, test procedures, and interpretation of results for each piece of test equipment. A copy of the calibration certificate will be kept by the QA Engineer. Calibration of nuclear density gauges shall conform to the frequencies and methods outlined in ASTM D 2922-78. Unstable or erratic gauges shall not be used in landfill components density testing and shall be immediately removed from the site.

D. Pipe and Manhole Installation

1. Storage

The Contractor shall ensure, and the QA Engineer verify, that:

- a. All pipe is stored in such a way so that the surfaces to be joined are protected from damage and are kept as clean as possible.
- b. The pipe is stored by providing support at each end and intermediate support at 5-foot intervals along the length of the pipe. The pipe is stored in such a way as to prevent sagging or bending.
- c. Precast concrete sections are stored in a way such that the precast sections are protected from damage.
 - d. Pumps and other equipment are stored in a way such that it is protected from damage.

HARRISBURG STEAM GENERATING FACILITY B RESIDUE AREAS SUMMARY OF SUBSURFACE INVESTIGATIONS

Prepared By:

SKELLY and LOY Engineers-Consultants 2601 North Front Street Harrisburg, Pennsylvania 17110

March, 1988

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INTRODUCTION/ GEOLOGY

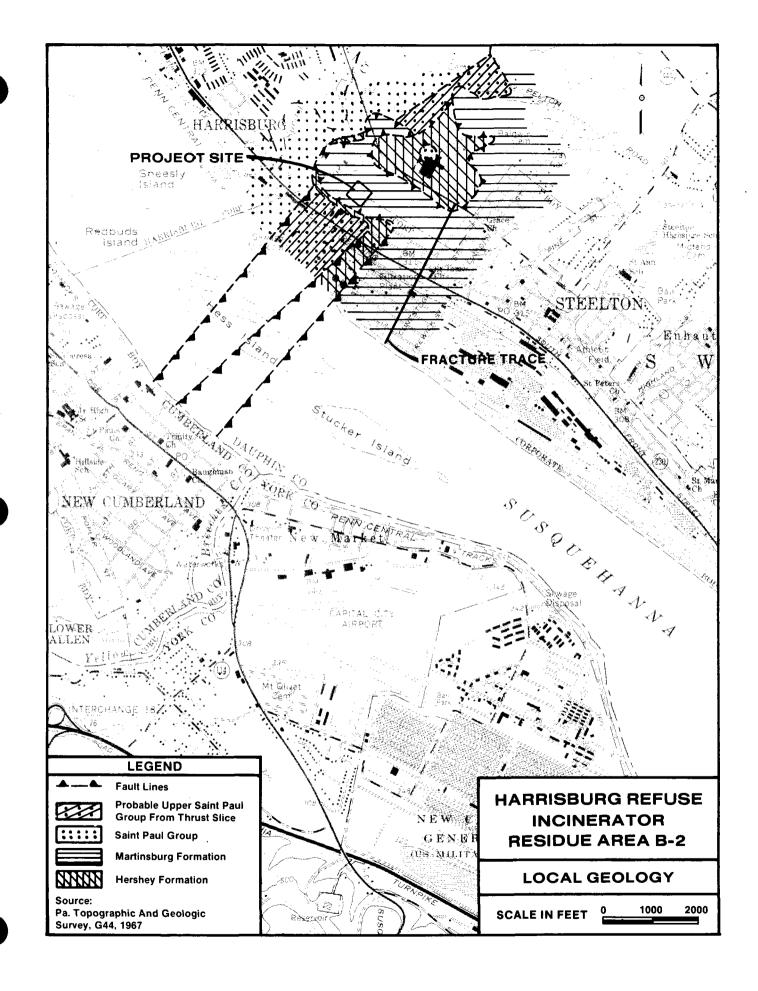
INTRODUCTION

Between 1972 and 1986, numerous subsurface investigations were conducted at the Harrisburg Steam Generating Facility (SGF) Site. The primary purpose for the majority of this work was for foundation design analyses. During 1987, a hydrogeologic investigation was conducted for the purpose of more accurately defining the hydrogeologic regime beneath the SGF Site. This investigation consisted of a site geologic reconnaissance, the installation of thirteen piezometers, and water level measurements in the piezometers. Boring logs are available from both the early investigations and the recent piezometer installations. This summary consists of a compilation of the available boring logs, as well as a general overview of the compiled information. In addition, an interpretation of site geology and a specific description of the subsurface conditions under Residue Area B2 is included. Groundwater conditions are summarized in the Hydrogeologic Investigation Section. A chronological listing of the subsurface investigations from which data is compiled in this summary follows.

- 1. Monitoring Well Installation (1972),
- 2. Subsurface Investigation for Foundation Analysis for Sewage Treatment Plant Buildings (1973 and 1974),
- 3. Top of Rock Determination for Residue Areas B2 and B3 (1974).
- 4. Top of Rock Determination for Residue Area B1 (1975),
- 5. Subsurface Investigation for Foundation Analysis for Cogeneration Building (1985)
- 6. Subsurface Investigation for Residue Area B2 (1986), and
- 7. Hydrogeologic Investigation of the Harrisburg Steam Generating Facility (1987).

GEOLOGY

The Local Geology map partially illustrates the complex geologic conditions existing at the Harrisburg Steam Generating Facility Site. At least three distinctly different geologic formations, separated by a regional thrust zone, occur under the area within the facility boundaries. The most prominent geologic feature in this area is the Yellow Breeches Thrust. This is a fault zone generally trending in a west-southwest to



east-northeast direction which transported an allochthonous (i.e.; transported) sequence of rocks from the southeast over autochthonous (i.e.; non-transported) carbonate rocks.

The allocthonous sequence is composed of the Martinsburg Formation (Om), the Hershey Formation (Oh) and, possibly, a transported slice of the Upper St. Paul Group (Osp?). The autochonous rocks are composed of the St. Paul Group (Osp).

The Martinsburg Formation occurs predominantly as a saprolite, (i.e., a thoroughly decomposed rock formed in place by chemical weathering). This formation is a tan to olive gray, highly weathered phyllitic shale. Upon sampling, it resembles a clayey silt to silty clay, sandy in places, with many shale fragments. When viewed in outcrop or as split spoon samples, the original shale structure is distinctively apparent.

Underlying these allocthonous shales is a highly sheared limestone identified as the Hershey Formation by D.B. Maclachlan (1967). (In W.G. McGlade and A.R. Geyer (1976), it is identified as the Myerstown Formation (Omy).) At the facility, this rock displays a distinctive shally appearance which is a result of shearing associated with the thrust. The rock is generally dark gray with white calcite streaks, sometimes weathered brown, consisting of impure limestone; hereinafter referred to as shally limestone. Slickensides and carbonaceous seams are common. Because of its impurity, solution activity is minimal. This limestone is believed to represent a wedge of bedrock transported by the thrust some distance from the southeast with the Martinsburg Formation.

In addition to the Hershey limestone, D.B. Maclachlan (1967) proposed that another wedge of limestone was transported a shorter distance. He tentatively identified these rocks as the upper St. Paul Group of the thrust plate (Osp?). This rock is described as a dark, strongly sheared limestone also with a shaly appearance. Although these rocks are similar in appearance (dark, shaly) to the Hershey Formation, Maclachlan concluded upon review of insoluble residue data that they represent distinctly different formations. This limestone was not specifically identified at the facility.

Underlying these rocks and exposed near the southwest corner of the facility is heavy bedded, light to medium gray, fine-grained limestone of the St. Paul Group. Although sometimes dolomitic, this limestone is pinnacle forming and solution prone.

References

Maclachlan, D.B., 1967, Second Printing 1974. Structure and Stratigraphy of the Limestones and Dolomites of Dauphin County, Pennsylvania, PA Geol. Survey, 4th Series, Gen. Geol. Rpt. 44.

McGlade, W.G. and Geyer, A.R., 1976. Environmental Geology of the Greater Harrisburg Metropolitan Area, PA Geol. Survey, 4th Series, Envir. Geol. Rpt. 4.

B2 RESIDUE AREA SUBSURFACE CONDITIONS

B2 RESIDUE AREA SUBSURFACE CONDITIONS

The B2 Residue Area is predominantly underlain by saprolitic shale of the Martinsburg Formation and shally limestone of the Hershey Formation. Based on boring logs and a site geologic reconnaissance, only the southern corner, less than 1/11 of the B2 area is underlain by solution prone limestone of the St. Paul Group. The following Boring Summary for the B Residue Areas presents a synopsis of the boring log data and shows the locations of bedrock outcrop in the vicinity of the B areas.

An examination of historic aerial photographs (1949) was undertaken to determine original slopes at the site and to identify any surficial Karst features in the area. Although vegetation obscures a small portion of the facility, those areas designated for residue disposal are clearly visible. No sinkhole features were identified on-site. The southern corner of the B2 area appears to be at original grade, whereas the rest of the area has been covered with fill material. The limit of fill is well depicted by the steep topographic break existing within the B2 area.

The Hershey Formation has been identified in an outcrop located approximately 120 feet downslope (southwest) of 88-DGB1-MW4. Approximately 26 feet of this formation was identified overlying limestone of the St. Paul Group between elevations 343 feet and 317 feet in 88-DGB1-MW4. The Hershey Formation has also been identified in the following borings:

87-P-4W from elevation 357.5 feet to end of boring at elevation 315.0 feet;

C-5 from elevation 360 feet to end of boring at 355.0 feet;

C-6 from elevation 339 feet to end of boring at 334.0 feet;

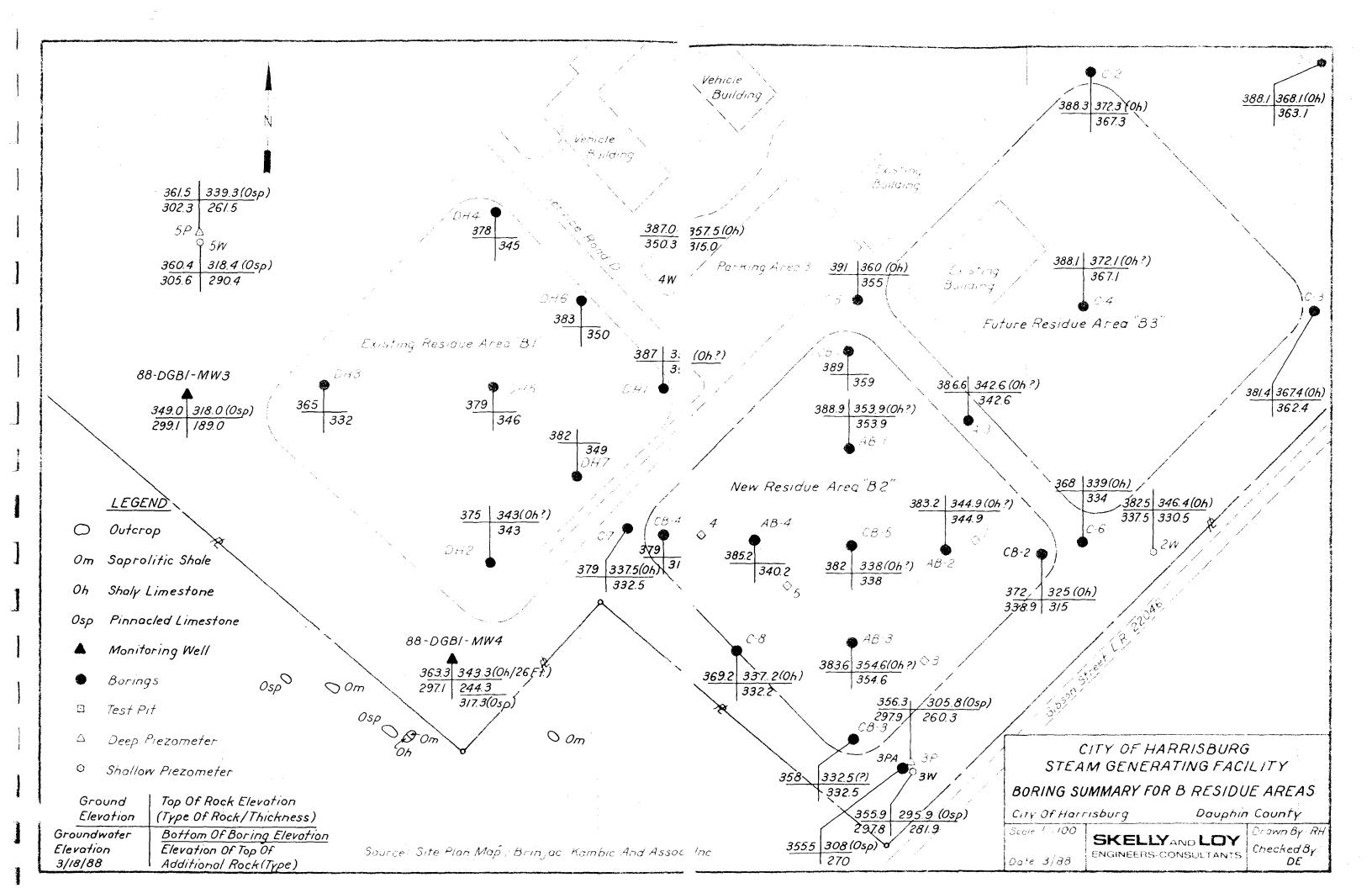
87-P-2W from elevation 346.4 feet to end of boring at 330.5 feet;

CB-2 from elevation 325 feet to end of boring at 315 feet;

C-8 from elevation 337.2 feet to end of boring at 332.2 feet; and

C-7 from elevation 337.5 feet to end of boring at 332.5 feet.

It has been tentatively identified in the following borings:



DH2 at elevation 343 feet; DH1 at elevation 356 feet; A-3 at elevation 342.6 feet; and C-5 at elevation 338 feet.

Further, it is believed to be the bedrock represented by refusal in the following borings:

AB-1 at elevation 353.9 feet;

AB-2 at elevation 344.9 feet; and

AB-3 at elevation 354.6 feet.

Piezometers 87-PC-3W and 87-PC-3P, as well as abandoned boring 87-PC-3PA, penetrated the St. Paul limestone without encountering the Hershey Formation. Bedrock was encountered at elevations 295.9 feet, 305.8 feet, and 308 feet, respectively. However, an open void between elevations 302.5 and 297.5 in 87-PC-3PA, and a partially open void between elevations 300.5 and 297.7 in 87-PC-3P correspond closely with saturated clay overlying bedrock in 3W. This zone in 3W appears to represent a low area between pinnacles with the rock above the voids in 3P and 3PA possibly representing a limestone ledge or boulder. Therefore, solid bedrock in the vicinity of these borings range between elevations 297.7 and 295.9.

In boring CB-3, refusal was encountered at elevation 332.5 feet. Bedrock was not identified in this boring. Therefore, it is not known whether refusal represents a pinnacle of St. Paul limestone or the top of a thin wedge of Hershey Formation. As a conservative approach, the contact between the shally limestone and the pinnacled limestone will be considered to be located between borings AB-3 and CB-3 trending east-northeast to west-southwest.

In conclusion, all but the extreme southern corner of the B2 Residue Area appears to be underlain by a varying thickness of shally limestone of the Hershey Formation. This rock is not considered solution prone or pinnacle forming. Approximately 13,000 square feet is considered a conservative estimate of the portion of the B2 area underlain by the St. Paul limestone.

ORIGINAL MONITORING WELLS

ORIGINAL MONITORING WELLS

Originally four wells were constructed for groundwater monitoring purposes at the SGF Site. Two wells, MW2 and MW3, allegedly representing background and downgradient wells for Residue Area A, respectively, were drilled in August and September, 1972. Well Logs and Records of Pump Tests for these two wells are presented on the following page. No documentation exists for the other two wells, MW1 and MW4, representing background and downgradient wells for Residue Area B1, respectively. These four wells were replaced in March, 1988, and abandoned by filling the entire length of open hole with hydrated Volplug, a bentonite based well abandonment material. Their locations are shown on the Boring and Groundwater Monitoring Point Locations plan.

A review of the log for MW2 suggests up to 42 feet of highly weathered shale is underlain by shally limestone to a depth of 80 to 95 feet. The relatively pure limestone of the St. Paul Group occurs between 95 and 105 feet, the bottom of the well. It is not known whether the "gray sandstone" between 80 to 95 feet represents the Hershey Formation or allocthonous St. Paul of Maclachlan (1967). A similar review of the log of MW3 indicates the St. Paul limestone directly underlying 15 feet of clayey overburden.

Although no log exists for MW1, an examination of drill cuttings found at the well and a review of logs of nearby borings indicate this well was constructed in the shally limestone underlying up to 20 feet of highly weathered shale. A review of subsurface conditions in the vicinity of MW4 indicate a probable pinnacled bedrock surface of the St. Paul limestone.

METTE, EVANS & WOODSI

A PROFESSIONAL CORPORATION

ATTORNEYS AT LAW

1801 NORTH FRONT STREET

PO. BOX 729

HARRISBURG, PA 17108-0729

September 17, 1992

ROBERT E WOODSIDE

TELEPHONE (717) 232-5000

TELECOPIER. (7)7) 236-1816

IRS NO 23-1985005

CHRISTOPHER C CONNER

GLEN R GRELL

HOWELL C. METTE

JAMES W. EVANS

CHARLES B. ZWALLY

ROBERT MOORE

PETER J. RESSLER

LLOYD R. PERSUN

CRAIG A. STONE

MARIA P. COCNETTI

DANIEL L SULLIVAN

STEVEN D SNYDER

JAMES A ULSH

VIA TELECOPY

HARD COPY TO FOLLOW

Jon S. Harwick Air Quality Specialist Air Quality Control Program South Central Region l Ararat Blvd. Harrisburg, PA 17110

ANDREW H. DOWLING

ROBERT P HAYNES III

MICHAEL D. REED

PAULA J. LEICHT

MICHAEL D. PIPA

STEVEN C. PARMER

DAVID A FITZSIMONS

GUY P. BENEVENTANO

KAREN N. CONNELLY

ROBYN J KATZMAN

SCOTT D. MOORE

JAYSON R. WOLFGANG

Anthony L. Rathfon Solid Waste Specialist Bureau of Waste Management Harrisburg Regional Office l Ararat Blvd. Harrisburg, PA 17110

AMPHIN CO

NON HAZ

In re:

DER Permits - Harrisburg Waste Disposal/ 3276.1

Processing Facility

Gentlemen:

I write as a follow-up to our meeting of Monday, September 14th concerning the issuance of various DER permits to the Harrisburg Waste Disposal/Processing Facility.

Based upon my review of the public documents, I have compiled the following chronology with respect to DER Permits issued to the facility:

- July 13, 1972 Permit No. 100758 is issued which permits the City to operate the incinerator.
- May 13, 1973 Permit No. 100759 issued for disposal 2. site A.
- May 17, 1976 Permit No. 100759 is revoked due to the fact that site A was filled beyond capacity.
- 4. September 12, 1978 - Permit No. 100992 is issued for disposal site B.

Jon S. Harwick Anthony Rathfon September 17, 1992 Page 2

- 5. June 30, 1981 Air Quality Permit No. 22-310-007 is "renewed".
- 6. November 21, 1984 Permit No. 100758 is modified to allow the City to burn sewage sludge.
- 7. January 1, 1985 Air Quality Permit No. 22-301-052 is issued which permits the City to burn sewage sludge.
- 8. November 1, 1986 Air Quality Permit No. 22-301-052 is "renewed".
- 9. December 7, 1988 Air Quality Permit No. 22-301-052, renewed on December 1, 1986, is revoked.
- 10. December 20, 1988 Permit No. 100992 is amended in order to preclude the disposal of solid waste at disposal site B-l after June 15, 1989.
- 11. August 11, 989 Bureau of Waste Management issues a minor permit modification to Permit No. 100992 (site B) in order to provide for a temporary storage area for incinerator ash.
- 12. January 29, 1990 Permit No. 100992 is modified in order to allow the construction and operation of disposal site B-2.

Please carefully examine this chronology and verify the various permit numbers and the nature of the respective permits.

I am puzzled by the appearance of Air Quality Permit No. 22-310-007 which was supposedly "renewed" on June 30, 1981. This entry appears on two separate compliance histories compiled by the City: one prepared on July 5, 1983; the other prepared on January 7, 1987. Copies of the appropriate pages from these compliance histories are enclosed with this correspondence in order to facilitate your review. I have been operating under the assumption that the City did not obtain an Air Quality Permit until January 1, 1985 - the date on which DER issued Permit No. 22-301-052 which permitted the City to burn sewage sludge. Until that date, I assumed that the City had no need to obtain an Air Quality Permit due to its "grandfathered" status under the Pennsylvania Air Pollution Control Law. The basis for my assumption dates back to a telephone conversation with Frederick J. Heagy on November 22, 1991. My notes of that telephone conversation read as follows:

Jon S. Harwick Anthony Rathfon September 17, 1992 Page 3

Mr. Heagy reported that the incinerator operated without an Air Quality Permit from 1972 until January 1, 1985. Such operations were legal because of the grandfathered nature of the City's facility. On January 1, 1985, DER issued Air Quality Permit 22-301-052 to the Harrisburg Steam Generating Facility. This permit allowed the City to burn sewage sludge in the incinerator. The City's facility was not grandfathered for purposes of burning sludge and a permit to burn such sludge was required. Thus, this Permit was the first one issued to the facility for purposes of air quality.

If the foregoing serves as an accurate summary of the facts that gave rise to DER's issuance of Permit No. 22-301-052, please explain the City's reference to Air Quality Permit No. 22-310-007 which was supposedly "renewed" in 1981. I have not been able to locate any other reference to this permit and I am uncertain if the permit is still valid.

Except for Permit No. 100759, the minor permit modification issued on August 11, 1989 and the January 29, 1990 modification to Permit No. 100992, I have not been able to obtain copies of the various DER permits granted the City with respect to the incinerator. If at all possible, please review your files and furnish me with copies of the various permits referenced in the above chronology. Additionally, please provide me with a copy of the December 16, 1982 NOV that was discussed at our meeting on Monday.

Thank you for your attention to this letter. Your advice and counsel are most welcome as the Board of Commissioners of Dauphin County and the Dauphin County Intermunicipal Solid Waste Authority continue to prepare for the upcoming hearing on Act 101.

Very truly yours,

Guy P. Beneventano

GPB:pat enclosures

cc: Charles B. Zwally, Esq. (w/o enclosure)
David H. Wersan, Esq. (w/enclosure)

Compliance History Medita #10

5 List all Pennsylvania DER permits or licenses, issued pursuant to the statutes listed in tem A(4) (a-e) above, that the applicant, including all persons and organizations identified in this Section B, currently has in effect or has had in effect in the past ten year. (Include type of permit or license, number and location, date issued, expiration date, if any.) Permits listed below pertain to incinerator

Permit No. 100758 - Issued July 13, 1972 - to operate incinerator. (Solid waste permit)

Permit No. 100759 - Issued May 13, 1973 - Site A to be used as a residue disposal site. (Solid waste permit)

Permit No. 100992 - Issued September 12, 1978 - Site B to be used as a

Permit No. 22-310-007 - Renewal ssued June 30, 1981 expiring June 30, 1986.

To operate incinerator.

(Air quality permit)

6. Identify any solid waste processing or disposal facility, area or activity in Pennsylvania since 1970 or hazardous waste storage, treatment, transportation, or disposal facility, area, or activity in Pennsylvania since 1980 which the applicant, or any person or entity identified anywhere in Section B, currently owns or operates, or previously owned or operated, but which is not listed under any of the above responses to this Module. This shall include any solid waste management activities which are no longer permitted or which were never under permit. Include the locations(s) of all such facilities, areas, or activities, the type of operation, and identify any state or federal permits pursuant to which they operate or have operated.

N/A

- C. Compliance Background: Copies of information in Part C are available on request.
 - 1. Identify any "Notice of Violation" sent to the applicant or those persons or entities identified anywhere in response to Section B over the past five year period from Pennsylvania DER. Include the date of the "Notice of Violation", the location of the alleged violation, the nature of the alleged violation and the disposition. (Attach copies or make available upon request.)

Date: December 16, 1982

Location: Residue Disposal Site B-1

Permit Number: 100992

Nature of Alleged Violation: Dumping and storing unincinerated refused in residue disposal Site B-1.

The disposition of this violation is that DER gave the City of Harrisburg an <u>order</u> to stop this dumping on May 13, 1983. The City and DER are working together to rectify this problem.

· Compliance History Muddle #11

5. List all Pennsylvania DER permits or licenses, issued pursuant to the statutes listed in item A(4) (a-e) above, that the applicant, including all persons and organizations identified in this Section B, currently has in effect or has had in effect in the past ten year.(Include type of permit or license, number and location, date issued, expiration date, if any.)

Permit #100758 - Issued July 13, 1972 - to operate incinerator. (Solid Waste Permit)

Permit #100759 - Issued May 13, 1973 - Site A to be used as a residue disposal site. (Solid Waste Permit)

Permit #100992 - Issued September 12, 1978 - Site B to be used as a residue disposal site. (Solid Waste Permit)

Permit #22-310-007 (Renewal issued June 30, 1981 expiring June 30, 1986.

To operate incinerator. (Air Quality Permit)

Permit #22-301-052 - Renewal Issued December 1, 1986 expiring November 30, 1988. To operate incinerator. (Air Quality Permit)

6. Identify any solid waste processing or disposal facility, area or activity in Pennsylvania since 1970 or hazardous waste storage, treatment, transportation, or disposal facility, area, or activity in Pennsylvania since 1980 which the applicant, or any person or entity identified anywhere in Section B, currently owns or operates, or previously owned or operated, but which is not listed under any of the above responses to this Module. This shall include any solid waste management activities which are no longer permitted or which were never under permit. Include the locations(s) of all such facilities, areas, or activities, the type of operation, and identify any state or federal permits pursuant to which they operate or have operated.

N/A

C. Compliance Background:

 Identify any "Notice of Violation" sent to the applicant or those persons or entities identified anywhere in response to Section B over the past five year period from Pennsylvania DER. Include the date of the "Notice of Violation", the location of the alleged violation, the nature of the alleged violation and the disposition. (Attach copies or make available upon request.)

Date: November 4, 1986

Location: Residue Site A, Residue Site B

Permit Number: 100992 & 100759

Nature of Alleged Violation: Groundwater monitoring reports for the third quarter were not submitted.

A written report was submitted to DER addressing the circumstances of the violation, and what provisions the City of Harrisburg is taking to correct the violation, and measures put in place to prevent said violations from reoccurring.

See attached sheet for further "Notice of Violation" orders.

METTE, EVANS & WOODSI A PROFESSIONAL CORPORATION ATTORNEYS ATLLAW 1801 NORTH FRONT STREET PO. BOX 729 HARRISBURG, PA 17108-0729

HOWELL C METTE JAMES W. EVANS ROBERT MOORE CHARLES B. ZWALLY PETER J. RESSLER LLOYD R. PERSUN CRAIG A. STONE

JAMES A. ULSH MARIA P. COGNETTI DANIEL L SULLIVAN STEVEN D. SNYDER GLEN R. CRELL CHRISTOPHER C. CONNER ANDREW H. DOWLING MICHAEL D. REED ROBERT P. HAYNES III PAULA J. LEICHT STEVEN C. PARMER DAVID A. FITZSIMONS GUY P. BENEVENTANO MICHAEL D. PIPA KAREN N. CONNELLY ROBYN J. KATZMAN JAYSON R. WOLFGANG SCOTT D. MOORE

September 17, 1992

RETIRED ROBERT E WOODSIDE TELEPHONE (717) 232-5000 TELECOPIER (717) 236-1816

> IRS NO. 23-1985005

ELYSE E. ROGERS VIA TELECOPY HARD COPY TO FOLLOW

Jon S. Harwick Air Quality Specialist Air Quality Control Program South Central Region l Ararat Blvd. Harrisburg, PA 17110

Anthony L. Rathfon Solid Waste Specialist Bureau of Waste Management Harrisburg Regional Office 1 Ararat Blvd. Harrisburg, PA 17110

DER Permits - Harrisburg Waste Disposal/ Processing Facility 3276.1

Gentlemen:

I write as a follow-up to our meeting of Monday, September 14th concerning the issuance of various DER permits to the Harrisburg Waste Disposal/Processing Facility.

Based upon my review of the public documents, I have compiled the following chronology with respect to DER Permits issued to the facility:

- 1. July 13, 1972 - Permit No. 100758 is issued which permits the City to operate the incinerator.
- May 13, 1973 Permit No. 100759 issued for disposal 2. site A.
- May 17, 1976 Permit No. 100759 is revoked due to the fact that site A was filled beyond capacity.
- September 12, 1978 Permit No. 100992 is issued for disposal site B.

Jon S. Harwick
Anthony Rathfon
September 17, 1992
Page 2

- June 30, 1981 Air Quality Permit No. 22-310-007 is "renewed".
- 6. November 21, 1984 Permit No. 100758 is modified to allow the City to burn sewage sludge.
- 7. January 1, 1985 Air Quality Permit No. 22-301-052 is issued which permits the City to burn sewage sludge.
- 8. November 1, 1986 Air Quality Permit No. 22-301-052 is "renewed".
- 9. December 7, 1988 Air Quality Permit No. 22-301-052, renewed on December 1, 1986, is revoked.
- 10. December 20, 1988 Permit No. 100992 is amended in order to preclude the disposal of solid waste at disposal site B-l after June 15, 1989.
- 11. August 11, 989 Bureau of Waste Management issues a minor permit modification to Permit No. 100992 (site B) in order to provide for a temporary storage area for incinerator ash.
- 12. January 29, 1990 Permit No. 100992 is modified in order to allow the construction and operation of disposal site B-2.

Please carefully examine this chronology and verify the various permit numbers and the nature of the respective permits.

I am puzzled by the appearance of Air Quality Permit No. 22-310-007 which was supposedly "renewed" on June 30, 1981. This entry appears on two separate compliance histories compiled by the City: one prepared on July 5, 1983; the other prepared on January 7, 1987. Copies of the appropriate pages from these compliance histories are enclosed with this correspondence in order to facilitate your review. I have been operating under the assumption that the City did not obtain an Air Quality Permit until January 1, 1985 - the date on which DER issued Permit No. 22-301-052 which permitted the City to burn sewage sludge. Until that date, I assumed that the City had no need to obtain an Air Quality Permit due to its "grandfathered" status under the Pennsylvania Air Pollution Control Law. The basis for my assumption dates back to a telephone conversation with Frederick J. Heagy on November 22, 1991. My notes of that telephone conversation read as follows:

Jon S. Harwick
Anthony Rathfon
September 17, 1992
Page 3

Mr. Heagy reported that the incinerator operated without an Air Quality Permit from 1972 until January 1, 1985. Such operations were legal because of the grandfathered nature of the City's facility. On January 1, 1985, DER issued Air Quality Permit 22-301-052 to the Harrisburg Steam Generating Facility. This permit allowed the City to burn sewage sludge in the incinerator. The City's facility was not grandfathered for purposes of burning sludge and a permit to burn such sludge was required. Thus, this Permit was the first one issued to the facility for purposes of air quality.

If the foregoing serves as an accurate summary of the facts that gave rise to DER's issuance of Permit No. 22-301-052, please explain the City's reference to Air Quality Permit No. 22-310-007 which was supposedly "renewed" in 1981. I have not been able to locate any other reference to this permit and I am uncertain if the permit is still valid.

Except for Permit No. 100759, the minor permit modification issued on August 11, 1989 and the January 29, 1990 modification to Permit No. 100992, I have not been able to obtain copies of the various DER permits granted the City with respect to the incinerator. If at all possible, please review your files and furnish me with copies of the various permits referenced in the above chronology. Additionally, please provide me with a copy of the December 16, 1982 NOV that was discussed at our meeting on Monday.

Thank you for your attention to this letter. Your advice and counsel are most welcome as the Board of Commissioners of Dauphin County and the Dauphin County Intermunicipal Solid Waste Authority continue to prepare for the upcoming hearing on Act 101.

Very truly yours,

Guy P. Beneventano

GPB:pat enclosures

cc: Charles B. Zwally, Esq. (w/o enclosure)
 David H. Wersan, Esq. (w/enclosure)

List all Pennsylvania DER permit: or licenses, issued pursuant to the statutes listed in item A(4) (a-e) above, that the applicant, including all persons and organizations identified in this Section B, currently has in effect or has had in effect in the past ten year. (Include type of permit or license, number and location, date issued, expiration date, if any.)

Permits listed below pertain to incinerator

Permit No. 100758 - Issued July 13, 1972 - to operate incinerator. (Solid waste permit)

Permit No. 100759 - Issued May 13, 1973 - Site A to be used as a residue disposal site. (Solid waste permit)

Permit No. 100992 - Issued September 12, 1978 - Site B to be used as a

residue disposal site. (Solid waste permit)

Permit No. 22-310-007 - Renewal ssued June 30, 1981 expiring June 30, 1986.

To operate incinerator.

(Air quality permit)

6 Identify any solid waste processing or disposal facility, area or activity in Pennsylvania since 1970 or hazardous waste storage, treatment, transportation, or disposal facility, area, or activity in Pennsylvania since 1980 which the applicant, or any person or entity identified anywhere in Section B, currently owns or operates, or previously owned or operated, but which is not listed under any of the above responses to this Module. This shall include any solid waste management activities which are no longer permitted or which were never under permit. Include the locations(s) of all such facilities, areas, or activities, the type of operation, and identify any state or federal permits pursuant to which they operate or have operated.

N/A

- C. Compliance Background: Copies of information in Part C are available on request.
 - Identify any "Notice of Violation" sent to the applicant or those persons or entities identified anywhere in response to Section B over the past five year period from Pennsylvania DER. Include the date of the "Notice of Violation", the location of the alleged violation, the nature of the alleged violation and the disposition. (Attach copies or make available upon request.)

Date: December 16, 1982

Location: Residue Disposal Site B-1

Permit Number: 100992

Nature of Alleged Violation: Dumping and storing unincinerated refused in residue disposal Site B-1.

The disposition of this violation is that DER gave the City of Harrisburg an <u>order</u> to stop this dumping on May 13, 1983. The City and DER are working together to rectify this problem.

Compliance History module #111

5. List all Pennsylvania DER permits or licenses, issued pursuant to the statutes listed in item A(4) (a-e) above, that the applicant, including all persons and organizations identified in this Section B, currently has in effect or has had in effect in the past ten year. (Include type of permit or license, number and location, date issued, expiration date, if any.)

Permit #100758 - Issued July 13, 1972 - to operate incinerator. (Solid Waste Permit)

Permit #100759 - Issued May 13, 1973 - Site A to be used as a residue disposal site. (Solid Waste Permit)

Permit #100992 - Issued September 12, 1978 - Site B to be used as a residue disposal site. (Solid Waste Permit)

Permit #22-310-007 Renewal ssued June 30, 1981 expiring June 30, 1986.

To operate incinerator. (Air Quality Permit)

Permit #22-301-052 - Renewal Issued December 1, 1986 expiring November 30,

1988. To operate incinerator. (Air Quality Permit)

6. Identify any solid waste processing or disposal facility, area or activity in Pennsylvania since 1970 or hazardous waste storage, treatment, transportation, or disposal facility, area, or activity in Pennsylvania since 1980 which the applicant, or any person or entity identified anywhere in Section B, currently owns or operates, or previously owned or operated, but which is not listed under any of the above responses to this Module. This shall include any solid waste management activities which are no longer permitted or which were never under permit. Include the locations(s) of all such facilities, areas, or activities, the type of operation, and identify any state or federal permits pursuant to which they operate or have operated.

N/A

C. Compliance Background:

 Identify any "Notice of Violation" sent to the applicant or those persons or entities identified anywhere in response to Section B over the past five year period from Pennsylvania DER. Include the date of the "Notice of Violation", the location of the alleged violation, the nature of the alleged violation and the disposition. (Attach copies or make available upon request.)

Date: November 4, 1986

Location: Residue Site A, Residue Site B

Permit Number: 100992 & 100759

Nature of Alleged Violation: Groundwater monitoring reports for the third quarter were not submitted.

A written report was submitted to DER addressing the circumstances of the violation, and what provisions the City of Harrisburg is taking to correct the violation, and measures put in place to prevent said violations from . reoccurring.

See attached sheet for further "Notice of Violation" orders.

- FILE CO.

JANPAIN CO.

MBG.

STENTING

GENERATING

GENERATING

A SUMMARY OF THE OPERATING HISTORY

OF THE
HARRISBURG WASTE-TO-ENERGY FACILITY,
FORMERLY KNOWN AS
THE HARRISBURG STEAM GENERATING FACILITY,
AS CULLED FROM THE PUBLIC DOCUMENTS
MADE AVAILABLE FOR INSPECTION ^
BY DER'S OFFICE OF PUBLIC REVIEWS
DATE OF INSPECTION: AUGUST 30, 1991

1972

July 13 - DER issues Permit No. 100758 to the City of Harrisburg (the "City") in order to operate the incinerator.

1973

May 13 - DER issues Permit No. 100759 to the City for the solid waste disposal and/or processing facility named the Harrisburg Incinerator Residue Disposal Area, otherwise known as Site A. (According to the approved plan of operations for Site A, operation is limited to the deposit of residue up to a final contour elevation of 354 feet.)

1974

March 11 - DER notifies the City that Site A is filled beyond capacity. DER instructs the City to develop a new residue disposal area (Site B) by August, 1974.

August - The City fails to develop Site B.

1975

October - The City begins to use Site A as a storage area for unburned flood debris despite the fact that such use violates the approved plan of operations.

October 27 - Mayor Harold Swenson agrees in writing to submit a plan to DER within 30 days which would: (1) propose corrections for the existing violation(s); (2) identify a new residue disposal area (Site B).

November 27 - The City fails to submit the plan.

1976

May 17 - DER issues an order to the City revoking Permit No. 100759. (This is the permit for Site A.)DER orders the City to: (1) utilize an alternate approved site (Site B) for the disposal of residue beginning no later than 45 days from receipt of the order; (2) stop depositing residue on Site A; and (3) terminate operation of Site A in accordance with DER regulations.

1977

February 14 - The Environmental Hearing Board ("EHB") approves Consent Adjudication between DER and the City in which both parties agree to a schedule for correcting the violation caused by the City having filled Site A beyond the contour elevation of 354 feet. The City therein agrees to cease using Site A for the deposit of refuse by December 1, 1977, and to complete revegetation of the Site by June 1, 1978.

1978

September 12 - DER issues Permit No. 100992 to the City for Site B.

1979

March 13 - EHB approves Amended Consent Adjudication between DER and the City which acknowledges that the City has applied for and received a permit for Site B and which commits the City to having Site B ready for the acceptance of residue by May 15, 1979. Also, the City agrees to remove excess residue from Site A and to undertake stabilization and revegetation of the Site by May 15, 1980.

1980

January 10 - The Office of Attorney General files an Equity Complaint with the Commonwealth Court seeking an injunction against the City for allegedly violating the terms of the Amended Consent Adjudication by, inter alia: (1) continuing to deposit incinerator residue at Site A; and (2) failing to have Site B ready for the acceptance of residue.

January 10 - Commonwealth Court approves Consent Decree between DER and the City whereby the City agrees: (1) to have Site B constructed and ready for acceptance of residue by August 31, 1980; (2) to cease disposing of residue at Site A upon completion of Site B, or - in the event that Site B is not timely constructed - to cease disposing of residue at Site A by August 31, 1980; (3) to remove excess residue from Site A and to either (a) stabilize and revegetate the site or (b) cover it

with asphalt and use it as a processing and staging area by May 1, 1981.

1981

June 30 - DER renews the City's Air Quality Permit for the incinerator (Permit No. 22-310-007).

1982

January 21 - The City begins to violate the provisions of Permit No. 100992 (i.e., permit for Site B) by illegally operating Site B as a storage area for unincineratored solid waste.

December 16 - DER issues a Notice of Violation to the City re: its unpermitted use of Site B as a storage area for unincinerated refuse.

December 22 - At a meeting held with DER at its Harrisburg Regional Office, the City agrees to remove the unincinerated refuse from Site B.

1983

January 11 - The City informs DER by letter that all unincinerated refuse will be removed from Site B by March 7, 1983.

January 27 - A DER investigation of Site B reveals that the City continues to deposit new loads of unincinerated municipal refuse at Site B.

May 13 - DER issues an Order to the City requiring it to: (1) cease and desist from depositing new unincinerated solid waste at Site B; (2) remove all unincinerated refuse from Site B on or before May 27, 1983.

1985

January 1 — DER issues Air Quality Permit No. 22-301-052 to the Harrisburg Steam Generating Facility. This permit allows the City to burn sewage sludge in the incinerator.

January 25 - A DER inspection reveals that the City is processing sewage sludge in violation of the modification to Solid Waste Permit No. 100758, dated November 21, 1984. (I have not located a copy of DER's 1984 modification to the 1972 permit for the incinerator.)

July 3 - DER holds a meeting at its Harrisburg Regional Office with the City re: the operating history of the incinerator and the status of the residue disposal sites vis-a-vis compliance with their respective permits.

July 10 - DER writes to the City in order to confirm the terms of the July 3rd meeting. DER states: "The existing condition of residue disposal Sites A and B-1 causes concern for their potential impact on human health and the environment." (Emphasis added.) The City agrees to: (1) remove the unincinerated refuse from Site B-1 by September 1, 1985; (2) grade Site B-1 to meet design specifications by September 9, 1985; (3) remove excess residue and grade Site A to meet approved design specifications by October 31, 1985; (4) perform a hazardous waste determination for residues disposed at Sites A and B-1; and (5) reinstitute groundwater monitoring no later than July 31, 1985.

July 24 - A DER inspection reveals that the City burned sewage sludge at a rate exceeding the permissible level established in Air Quality Operating Permit No. 22-301-052.

July 30 - As a result of the violations uncovered during inspections on January 25, 1985, and July 24, 1985, DER suspends the City's permits to accept and burn six separate waste streams. (The record does not disclose the applicable permit numbers.)

August 5 - DER reinstates the City's above-mentioned permits pending a reevaluation of the on-site conditions at the incinerator scheduled for September 30, 1985.

1986 -

February 4 - Swatara Township writes to DER concerning the severity of rodent infestation at the incinerator as a result of the storage of incinerated refuse.

November 4 - DER sends a Notice of Violation to the City re: the City's failure to submit groundwater monitoring reports for the third quarter of 1986.

The reference to Site B-1 is curious. Evidently, DER divided Site B into 3 components (B-1, B-2 and B-3) when it issued Permit No. 100992 to the City.

December 1 - DER issues Permit No. 22-301-052 to the City for municipal waste incinerator units 1 and 2.

December 17 - The City submits a Phase I Permit Application for the disposal of solid waste at Site B-2.

December 23 - The City submits a Phase I Permit Application for the disposal of ash in the area identified as Site B-1.

1987

July 21 - The City submits a Phase II Permit Application for the disposal of ash in the area identified as Site B-2.

1988

April 21 - DER performs a stack test on incinerator unit no. 2 and determines that the particulate emissions exceed allowable limits.

June 27 - As the result of an inspection conducted on May 16, 1988, DER issues a Notice of Violation to the City re: its failure to close Site A and its failure to maintain the leachate collection system for Site A.

June 27 - As the result of an inspection conducted on May 16, 1988, DER issues a Notice of Violation to the City re: (1) the filling of Site B-l beyond its permitted capacity; (2) the failure to maintain Site B-l in such a manner as to collect the leachate for treatment; and (3) the failure to maintain a diversion channel around the site.

July 18 - DER holds a meeting with the City in order to discuss the two Notices of Violation issued on June 27th. The City agrees to submit a closure plan for both sites within 30 days of the date of the meeting.

August 11 - Incinerator ash escapes and falls upon private property in Harrisburg and Steelton. The City pleads guilty to a summary criminal charge filed as a result of this violation.

August 17 - Incinerator ash again escapes and falls upon private property in Harrisburg and Steelton. The City again pleads guilty to a summary criminal charge filed as a result of this violation.

August 17 - The City submits a closure plan for both sites which calls for closure elevations that exceed the originally permitted levels. ("The reality and economics of the situation

are such that it will be virtually impossible to remove all the ash from both sites to the originally permitted levels."

August 25 - DER performs a stack test on incinerator unit no. 1 and determines that the particulate emissions exceed allowable limits.

August 29 - DER issues an Order to the City requiring the following: (1) effective immediately, no solid waste shall be disposed at Site A; (2) no solid waste shall be disposed at Site B-1 after October 28, 1988; and (3) revised closure plans, with implementation schedules, must be submitted by September 28, 1988, and the plans must comply with the respective permits and all DER regulations.

August 31 - Incinerator ash again escapes and falls upon private property in Harrisburg and Steelton. The City again pleads guilty to a summary criminal charge filed as a result of this violation.

September 12 - Incinerator ash again escapes and fall upon private property in Harrisburg and Steelton. The City again pleads guilty to a summary criminal charge filed as a result of this violation.

September 20 - DER's Bureau of Air Quality Control notifies the City of various violations of the Air Pollution Control Act and gives the City 30 days to submit an abatement plan.

September 26 - DER's Bureau of Air Quality Control notifies the City of the conditions that must be met prior to renewing operating Permit No. 22-301-052. (This permit allows the City to burn sewage sludge in the incinerator.)

September 28 - The City submits a revised closure plan for Site B-1 and an application for a major permit modification in order to construct and operate Site B-2. (Supposedly, the major permit modification is needed in order to remove solid waste from Site B-1 and dispose of it at Site B-2.)

September 29 - The City files a Notice of Appeal with EHB re: DER's August 29, 1988, Order.

October 7 - DER's Bureau of Air Quality Control issues a Notice of Violation to the City as a result of emission testing conducted on August 25, 1988.

October 7 - Incinerator ash again escapes and falls upon private property in Harrisburg and Steelton. The City again

pleads guilty to a summary criminal charge filed as a result of this violation.

October 11 - The City submits a closure plan for Site A.

October 19 — DER observes visible emissions in excess of allowable limits. The City pleads guilty to a summary criminal charge as a result of this violation.

October 26 - DER again observes visible emissions in excess of allowable limits. The City again pleads guilty to a summary criminal charge filed as a result of this violation.

November 9 - DER performs stack tests on units 1 and 2 and determines that particulate levels for both units exceed allowable limits.

November 16 - DER again observes visible emissions in excess of allowable limits. The City again pleads guilty to a summary criminal charge filed as a result of this violation.

December 7 - DER's Bureau of Air Quality Control revokes Permit No. 22-301-052, issued to the City on December 1, 1986.

December 20 - A Consent Order and Agreement is executed between the City and DER which, inter alia, results in the following: (1) The City agrees to correct any deficiencies in the closure plans for Sites A and B-1 within the time frame established by DER; (2) the City agrees to commence implementation of DER's approved and/or modified closure plan for Site A within 45 days of written approval, or by March 15, 1989, whichever is later; (3) the closure of Site A shall be completed within 90 days of the date of commencement; (4) Solid Water Permit No. 100992 is amended to preclude the disposal of solid waste at Site B-1 after June 15, 1989; (5) the City shall initiate the implementation of the closure plan for Site B-1 on or before July 15, 1989; and (6) the City agrees to pay a \$25,000 civil penalty for the violations uncovered by DER during its inspection on May 16, 1988.

1989

March 17 - As a result of repeated violations of air pollution regulations throughout the months of August, September, October and November, 1988, DER issues an Order to the City requiring: (1) the submission of a plan for the rehabilitation, upgrading, repairing, improving and/or replacing of the air pollution control equipment at the incinerator within 60 days of the order; (2) implementation of the plan within 30 days of DER's approval; (3) full

implementation of the plan within 180 days of DER's approval; (4) a demonstration that the incinerator complies with all relevant laws within 270 days of DER's approval; and (5) the cessation of all operations in the event that the City cannot demonstrate compliance within 270 days of DER's approval.

June 15 - DER's Bureau of Litigation refuses to grant the City's request to modify the 1988 Consent Order and Agreement so as to:

- (1) Extend the closure schedule; and
- (2) Delay the deadline for stopping disposal of newly generated ash at Site B-1.

(The City's request was evidently made by letter on June 1, 1989.)

June 15 - The City begins to violate the December 20, 1988, Consent Order and Agreement by depositing ash at site B-1. The violations continue until October 1, 1989.

June 16 - Statement of Mark Embeck, DER - Water Pollution Biologist, re his observation of the City's violation of DER's Order by dumping ash at Site B-1.

June 19 - Statement of Anthony Rathfon, DER - Solid Waste Specialist, re his observation of the City's violation of DER's Order by dumping ash at Site B-1.

June 21 - Statement of Anthony Rathfon, DER - Solid Waste Specialist, re his observation of the City's violation of DER's Order by dumping ash at Site B-1.

June 22 - Statement of Anthony Rathfon, DER - Solid Waste Specialist, re his observation of the City's violation of DER's Order by dumping ash at Site B-1.

June 23 - Statement of Anthony Rathfon, DER - Solid Waste Specialist, re his observation of the City's violation of DER's Order by dumping ash at Site B-1.

²These "statements" are not repetitious. They represent the personal observation of five separate instances of dumping.

August 11 - DER issues the City a minor modification to Permit No. 100922 for Site B in order to allow the construction and operation of a temporary ash storage area.

October 1 - The City begins to utilize the temporary ash storage area.

October 4 - The City submits a plan for recycling and waste reduction to DER.

October 12 - DER indicates that it has "no adverse comments at this time" to the City's plan for recycling and waste reduction.

October 23 - The City submits revised closure plans to DER re closure of sites A and B-1.

1990

January 29 - DER issues a modification to Permit No. 100992 in order to allow the construction and operation of site B-2.

January 30 - DER issues approval of the City's revised closure plans for sites A and B-1.

February 28 - The City files a Notice of Appeal with EHB charging that some of the conditions included by DER in its modification to Permit No. 100992 are unfair, unreasonable, burdensome, etc.

February 28 - The City files a Notice of Appeal with EHB charging that some of the conditions included by DER in its approval of the City's revised closure plans for sites A and B-1 are unreasonable, unfair, etc.

April 23 - The City and DER execute a letter agreement in which the City acknowledges that the incinerator has been "in continuous violation of 25 Pa. Code \$123.12 [DER regulation concerning the limits for particulate emissions] throughout the period...April 21, 1988, to May 25, 1990." Furthermore, the City concedes that the incinerator has not been "operated in a manner...consistent with good operating practices" and agrees to pay a civil penalty of \$140,000 in settlement of all claims under the Air Pollution Control Act.

May 23 - By letter to DER, the City proposes a revised schedule for the construction of Site B-2, the closure of sites A and B-1, and the permanent disposal of ash deposited in the temporary ash storage area.

May 28 - DER's Office of Chief Counsel writes to counsel for the City in order to "memorialize" a settlement of an EHB appeal re the City's alleged violations of the December 20, 1988 Consent Order and Agreement. The City agrees to:

- (1) pay a civil penalty of \$5,000; and
- (2) withdraw its appeal to the EHB re DER's June 15, 1989, denial of the City's request to continue to deposit incincerator ash at site B-1 after the agreed upon deadline. (I have not been able to locate a copy of the actual appeal.)

August 29 - The City and DER execute an amendment to the December 20, 1988, Consent Order and Agreement in which revised schedules are agreed to concerning construction of Site B-2, the closure of Sites A and B-1, and the permanent disposal of ash deposited in the temporary ash storage area. The City agrees to pay \$5,000 civil penalty for its delay.

September 12 - Nassaux - Hemsley, Inc. - Consultants, writes to DER for clarification re the possibility of refurbishing and/or increasing the processing capacity of the incinerator.

September 17 - EHB orders that the docket be closed and discontinued on the City's appeal from DER's June 15, 1989, denial of the City's request to continue to deposit incinerator ash at site B-1 after the agreed upon deadline.

October 19 - Howard Wein, Esquire, counsel to City of Harrisburg, writes to DER's Bureau of Waste Management re DER's characterization of the City's ash as "hazardous waste" under state law.

November 16 - Interoffice memo from John Lukens, Director - Department of Incineration and Steam Generation, to Mayor Reed re the October, 1990, production report for electricity and steam.

1991

January 31 - Interoffice memo from Director Lukens to Mayor Reed re December, 1990, production report for electricity and steam.

February 21 - Interoffice memo from Director Lukens to Mayor Reed re January, 1991, production report for electricity and steam.

March 15 - Interoffice memo from Director Lukens to Mayor Reed re February, 1991, production report for electricity and steam.

April 5 — DER provides notice to James Close of the City's Steam Generating Plant that a preliminary review of the 1990 4th quarter report for the resource recovery facility indicates that the City is impermissibly receiving and disposing of municipal waste from municipalities located in the Counties of Lancaster and York. According to DER's notice, the approved solid waste management plans for Lancaster and York do not designate the City's facility as the processing/disposal site for the municipalities in question. DER asks the City for an explanation. (I was not able to locate a written explanation amongst DER's public documents.)

July 1 - Director Lukens writes to DER in order to alert the Department that the City may not be able to meet the deadline for closure of Site B-1, as established in the August 29, 1990, amendment to the Consent Order and Agreement, as a result of certain problems uncovered by the City's contractor. File Bendin Dough Apreisting 13-2 Lond(1)

10 N. SECOND STREET, P.O. BOX 2857, HARRISBURG, PA 17105-2857 (717) 233-4502			JOB NO	5992	
			DATE 8/23/90 ATTENTION Don Korzen		'.
то	Department o	f Environmental Resources	BE	on of B-2 Residu	
	Bureau of Wa	ste Management	Constructi	OII OI B-2 RESIG	Te Area
	One Ararat B	oulevard		WA	DER ISTE MANAGEME
	Harrisburg,	PA 17110			AUG2 3 1990
			B & K PROJECT	NO: 86019-01	HARRISBURG REGIO
WE A	ARE SENDING YOU	∪ XXX Attached □ Under separate vi			ing items:
□ SI	hop drawings	☐ Prints	□ Plans	☐ Samples	☐ Specification
□С	opy of letter	☐ Change order	o		
[co	PIES DATE	NO.	DESCRI	PTION	
	· · · · · · · · · · · · · · · · · · ·	Bonding Require		,	
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THE	SE ARE TRANSMI	TTED as checked below:			
	or approval	☐ Approved as submitted	d □ Resubmit _	copies for app	roval
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	AL	STON PURPOSES FOR	A PUTTINE	D MEETING	<u>: 6</u>
	NEXT W	bet. I will come	YOU TO MA	navac.	
		TILE (1)			

LANDFILLS B-1 and B-2 BONDING WORKSHEET A DISPOSING OF INVENTORY



Reference Source

\$440,000

PRELIMINARY

1.	Maximum volume of waste to be placed		
	in disposal area as part of closure.	- 0 -	· :
			· .
2.	Estimated volume of contaminated residues		,
	and soils to be disposed of as part of closure.	110,000 CY	
3.	Total volume of waste and residues	•	
•	to be disposed of (Line 1 + 2).	110,000 CY	:
			Equipment Costs To
4.	Unit Cost of disposing of waste and residues.	\$4/cy	On-Site Landfill
			·
5.	Total cost to dispose of waste and residues		

(Line 3×4).

B-1 and B-2

LANDFILLS

BONDING WORKSHEET B

EET B N/A

DECONTAMINATING THE PACILITY

1.	PRELIMINARY Total volume of contaminated soils and		Reference Source
	materials to be removed and disposed of off-site.	-	•
2.	Unit cost to dispose of contaminated materials (includes transportation).		:
3.	Cost to dispose of soil and contaminated materials (Line 1 x 2).	*************************************	-
4.	Landfill equipment to be decontaminated based on surface area.		
5.	Unit cost to decontaminate.		
6.	Cost to decontaminate (Line 4 x 5).		
7.	Volume of liquid generated during decontamination (base on gallons per foot ² required for decontamination, e.g. gals/ft ² x ft ² =		

- 8. Unit cost to dispose of liquid (includes transportation)
- 9. Cost to dispose (Line 7 x 8)
- 10. Total cost to decontaminate (Line 3 + 6 + 9)

PRELIMINARY

LANDFILLS

B-1 and B-2

BONDING WORKSHEET C

Reference Source

1.	Maximum area to be capped and covered (includes	
	only areas that will be open at any one time).	387,500 sq. ft.
2.	Unit cost of placing one foot of stable	2
	intermediate cover material for base of cap.	\$0.15/ft ²
3.	Total cost of base for cap (Line 1 x 2)	\$58,125
4.	Membrane, Geonet & Unit cost of Geofabric materials to be	i e
•	used as cap (includes transportation and installation cost)	\$1.25 ft ² Manufacturer
5.	Cost to cap (Line 1 x 4).	\$484,375
6.	Unit cost of drainage layer (if applicable) (installed cost).	Included in Item 5 Above
7.	Cost to place drainage layer (Line 1 x 6).	Included in Item 5 Above
8.	Unit cost to install 2' final cover	\$0. 30/ft ²
	(installed east)	Ψ U•JU / L L

9. Cost to install 2' final cover (Line 1 x 8).

\$116,250

10. Total cost of cap and final cover (Lines 3 + 5 + 7 + 9).

\$658,750

PRELIMINANI

LANDFILLS B-1 and B-2

BONDING WORKSHEET D REVEGETATION OF FINAL COVER, DISTURBED AREAS AND DRAINAGE WAYS

Reference

	DDCI	MAINIAN		Source
1.	Total area to be revegetated (acres)	-IMINARY	8	
2.	Type of vegetationGrass/Seed per 1b (including labor).	_ price	\$10/1b	Means Cost Estimating Guide
3.	Seeding rate per acre.		175/1bs/Ac	Spec Manual
4.	Cost of seed (Line 1 x 2 x 3).		\$14,000	
5.	Recommended fertilizer requirements.	Nitrogen (N) 20 lbs/Ac	Phosphate 180 lbs/Ac	(P ₂ 0 ₃) Potash (K ₂ 140 1bs/Ac
6.	Quantity of fertilizer per acre.		340 1b/Ac	Penn State Soils Test
7.	Unit cost of fertilizer (includes labor).	•	\$2.50/1b	Means Cost Estimating Guide
8.	Cost of fertilizer (Line 1 x 6 x 7).		\$6,800	
9.	Agricultural Grass Type of mulch (Straw) unit pric	e (includes labor).	\$110/ton	

PRELIMINARY

Reference

Source

10. Mulching rate.

2 tons/ac 2" thickness Soil Conservation Manual

11. Cost of mulch (Line 1 x 9 x 10).

\$1,760

12. Total Cost of vegetation (Line 4 + 8 + 11).

\$22,560

14,000,00 6,800,00 1,760,00

LANDFILLS B-1 and B-2

BONDING WORKSHEET E GROUNDWATER MONITORING

PRELIMINARY

Reference Source

1.	Number of wells monitored.	8
2.	Samples per well.	4
3.	Total number of samples (Line 1 x 2).	32
4.	Number of analyses per sample.	
5.	Total number of analyses (Line 3 x 4).	
6.	Unit cost to collect sample (includes shipping).	
7.	Cost to collect samples (Line 3 x 6).	
8.	Average cost of single analysis.	
9.	Cost of analyses (Line 5 X 8).	
10.	Evaluation of data (manhours).	

PRELIMINARY

Reference

11.	Unit cost per manhour.	** ** ** ***		
12.	Cost of evaluation (Line 10 X 11).			
13.	Total number of samplings per year.			
14.	Cost of sampling per year [(Line 7 + 9 + 12) X	13)].	\$13,500	Vendor
15.	Years of sampling		10	
16.	Total cost of groundwater monitoring (Line 14 X 15).		\$135,000	

LANDFILLS

B-1 and B-2

Bonding Worksheet F Maintenance Costs



Reference Source

1.	Repair of cap and final cover.	\$10,000	·
2.	Repair of surface water run-on and runoff structures	\$10,000	
3.	Repair of fence.	- 0 -	
4.	Repair of leachate conveyance and collection structures (not including surface impoundment or tanks).	- 0 -	·
5.	Well maintainence and repair.	\$2,000	
6.	Other costs.	- 0 -	<u></u>
7.	Total maintenance costs (Line 1 + 2 + 3 + 4 + 5 + 6).	\$22,000	

Reference

LANDFILLS BONDING WORKSHEET G

Gas Monitoring

1.	Mor	nitoring	PRELIMINARY	Source
	a.	Number of gas monitoring wells		
	b.	Time required to monitor well (hrs/well)		
	c.	Contract lab technician unit labor cost (\$/hr)		
	d.	Number of times gas monitoring is done during closure		
	e.	Gas monitoring cost Line 1a x Line 1b x Line 1c x Lin	e 1d	.,
2.	Adn	ninistrative (Reporting)		
•	a.	Contract lab technician time required (hrs/well)		
	b.	Technician unit labor cost (\$/hr)		
	c.	Technician cost Line 1a x line 1d x Line 2a x Line 2b		
	d.	Clerical time required (hrs/well)		
ē	e.	Clerical unit labor cost (\$/hr)	<u></u>	
	f.	Clerical cost Line 1a x Line 1d x Line 2d x Lin	ne 2e	
	g.	Administrative subtotal Line 2c + Line 2f		
3.	Mai	intenance of Gas Collection System	i	
	a.	Maintenance time required (hrs)		
	b.	Unit labor cost (\$/hr)		
	c.	Maintenance cost Line 3a x Line 3b		
4.		Monitoring total	,	

B-1 and B-2

\$1,278,310

LANDFILLS

BONDING WORKSHEET F SUMMARY OF COSTS

1.	Total from Line 5, Worksheet A	PRELIMINARY	\$440,000
2.	Total from Line 10, Worksheet B	PRELIMINATION	- 0 -
3.	Total from Line 10, Worksheet C		\$658,750
4.	Total from Line 12, Worksheet D	• •	\$ 22,560
5.	Total from Line 16, Worksheet E		\$135,000
6.	Total from Line 7, Worksheet F		\$ 22,000
7.	Total from Line 4, Worksheet G		- 0 -

Total Cost for Bonding

(Line 1+2+3+4+5+6+7)...

8.

Leachate collected at the B-1 and B-2 landfills will flow through the Wastewater · Pretreatment Facility being built for the Harrisburg Steam Generating Facility to assure compliance with effluent quality restrictions. Samples collected from an adjacent site shows no treatment is required for discharge to the Harrisburg Advanced Wastewater Treatment Facility.

LEACHATE MANAGEMENT

BONDING WORKSHEET A

		BONDING WO	MEDUICEI A	Reference
1.	Lea	chate Collection	PRELIMINAR	Source
	a.	Leachate volume collected during closure (gal)	649,500	
	b.	Time required for pumping (hrs) Line la > 8000 (round up to nearest integer)	82	Means Site Wor
	c.	Pumping unit cost (\$/hr)	\$35.50	Cost Data 1990
	d.	Pump re. 1-1 cost, optional (\$/hr)	_ 0 -	·
	e.	Pumping cost (\$) Line 1b x (Line 1c + Line 1d)	<u>\$2,911.0</u> 0)
2.	On-	Site Treatment of Leachate		
•	a.	Quantity of leachate to be treated (gal)	N/A	
	b.	Chemicals required for treatment (lb/gal leachate or gal/gal leachate)	_ 0 -	
	c.	Chemical unit cost (\$/lb or \$/gal)	N/A	
	d.	Chemical costs (\$) Line 2a x Line 2b x Line 2c	_ 0 _	
	e.	Electricity required for treatment (kwh/gal leachate/run-off)	- 0 -	
	f.	Electricity unit cost (\$/kwh)	N/A	
	g.	Electricity cost (\$) Line 2a x Line 2e x Line 2f	_ 0 -	
	h.	Water required for treatment (gal/gal leachate/run-off)	_ 0 _	
	i.	Water unit cost (\$/1000 gal)	0`	
:	j.	Water cost (\$) [(Line 2a x Line 2h) : 1000] x Line 2i	- 0 -	-

PRELIMINARY

Reference

	k.	Fuel required for treatment (MMBtu/gal leachate/run-off)	- 0, -	500.00
	1.	Fuel unit cost (\$MMBtu)	N/A	
	m.	Fuel cost (\$) Line 2a x Line 2k x Line 2l	- 0 -	
	n.	Labor required for treatment (hrs/gallon leachate)	_ 0 _	
	0.	Process operator unit labor cost (\$/hr)	N/A	
	p.	Labor cost (\$) Line 2a x Line 2n x Line 2o.	, <u>- 0 -</u>	
	g.	On-site treatment cost (\$) Line 2d + Line 2g + line 2j + Line 2m + Line 2p	_ 0 _	
	r.	Residue generated from treatment (gal)	_ 0 _	
3.	Trea	ited Leachate Discharge to Sewer	•	
	a.	Quantity discharged (gal)	649,500	
	b.	Sewer discharge unit cost (\$/1000 gal)	\$1.665/1000 gallons	
	c.	Sewer discharge cost (\$) (Line 3a > 1000) x Line 3b	\$1,081.42	
4.		site Management of Leachate and/or		,
	a.	Amount to be managed off-site (tons)	- 0 -	
	ъ.	Truck capacity (tons)	N/A	
	c.	Number of loads Line 4a > Line 4b (round up to nearest integer)	- 0 -	
	d.	One-way distance (mi/load)	N/A	:
	e.	Transportation unit cost (\$/mi)	N/A	<u> </u>
	f.	Transportation cost (\$) Line 4c x Line 4d x Line 4e	- 0 -	

PRELIMINARY

Reference Source

	g.	Off-site management unit cost (\$/ton)	N/A		
	h.	Off-site management cost (\$) Line 4a x Line 4g	_ 0 -		2.9
	i.	Off-site management subtotal (\$) Line 4f + Line 4h		- 0 -	13
5.	Leac	hate Collection System Maintenance (if a			
	a.	Maintenance time required (hrs)	_ 0 _		
	b.	Unit labor cost (\$/hr)	N/A		
	c.	Maintenance labor cost (\$) Line 5a x Line 5b	- 0 -		
	d.	Number of pumps needing replacement	- 0 -		
	e.	Pump unit cost (\$/pump)	N/A		
	f.	Pump cost (\$) Line 5d x Line 5e	- 0 -		
	g.	Total maintenance cost (\$) Line 5c + Line 5f		_ 0 _	· ·
6.	Leak	Detection System Maintenance (if applications)	able) N/A		
	a.	Maintenance time required (hrs)	<u>- 0 -</u>		
	b.	Unit labor cost (\$/hr)	N/A		
	c.	Maintenance labor cost (\$) Line 6a x Line 6b	- 0 -		
	d.	Number of pumps needing replacement	- 0 -		
	e.	Pump unit cost (\$/pump)	N/A		
	f.	Pump cost (\$) Line 6d x Line 6e	- 0 -		
	g.	Total maintenance cost (\$) Line 6c + Line 6f		_ 0 -	
7.	Line	chate Management total (\$) 1e + Line 2q + Line 3c + Line 4i + 5g + Line 6g		\$3,991.42	

WHILE YOU WERE AWAY

FOR Aboul M. DATE 8-2 TIME	4:00 A.M.
M Allise	<u> </u>
OF Brinjac + Kambic	PHONED
PHONE 233-450Z	RETURNED YOUR CALL
AREA CODE NUMBER EXTENSION MESSAGE	L PLEASE CALL
RE: Bordong for B.Z	WILL CALL AGAIN
	CAME TO SEE YOU
B	WANTS TO SEE YOU
SIGNED TOPS	FORM 4002

CALL MEMORANDUM

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NAME OF CA	LLER/)		`	\			
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LEACHATE MANAGEMENT

BONDING WORKSHEET A

IEET A

20 yrs Period

Reference
Source

Leachate Collection

a.	closure (gal) Leachate = 1050600 gp Groundwater = 1560000 gpy x 20	y x 20) ⁵ 2,212,000 gal			100
b.	Time required for pumping (hrs) Line 1a = 8000	years			er Santa
	(round up to nearest integer)	NA			
c.	Pumping unit cost (\$/hr)	NA	PUMPS ARE PERME	NANTLY	
d.	Pump rental cost, optional (\$/hr)	NA	NA		1
e.	Pumping cost (\$) Line 1b x (Line 1c + Line 1d)	N	IA		
On-S	iite Treatment of Leachate				
a.	Quantity of leachate to be treated (gal)	52,212,000 GAL		156,000	
b.	Includes groundwater Chemicals required for treatment (lb/gal leachate or gal/gal			432,000	
	leachate)	<u>NA</u>		888,00	
c.	Chemical unit cost (\$/lb or \$/gal)	NA	E	6.31,031	
d.	Chemical costs (\$) Line 2a x Line 2b x Line 2c	\$ 456,000		0	
e.	Electricity required for treatment (kwh/gal leachate/run-off)	NA		1,278,3	11
f.	Electricity unit cost (\$/kwh)	NA	<u> </u>	3,160,3	01
g.	Electricity cost (\$) Line 2a x Line 2e x Line 2f	<u>\$ 432,00</u> 0		The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon	
h.	Water required for treatment (gal/gal leachate/run-off)	FROM ON-SITE WELI	L.		
i.	Water unit cost (\$/1000 gal)	NA	NA		
j.	Water cost (\$) [(Line 2a x Line 2h) = 1000] x Line 2i	NA			

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BUREAU OF WASTE MANAGEMENT
Harrisburg Regional Office
One Ararat Boulevard
Harrisburg, Pennsylvania 17110
(717) 657-4588
July 11, 1990

City Of Harrisburg
Harrisburg Steam Generating Facility
1670 South 19th Street
Harrisburg, PA 17104

Re: Certificate of Insurance for Commercial General Liability

Gentlemen:

Please be advised that the Acord 25/Certificate of Insurance, that is on file with the Department as proof of a commercial policy of liability insurance for your facility, has expired. Proof of such coverage is required by 25 Pa. Code § 271.371 for continued operation under the municipal solid waste permit issued for your facility. A copy of a current insurance certificate, issued by your insurance agent, must be received by the Department within thirty (30) days of receipt of this notice to avoid further action by the Department.

Any questions you may have with regard to this letter should be directed to this office.

For The Department,

Gail C. Jackson Facilities Specialist Harrisburg Regional Office

cc: File



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES

BUREAU OF WASTE MANAGEMENT Harrisburg Regional Office One Ararat Boulevard Harrisburg, Pennsylvania 17110 (717) 657-4588 January 29, 1990

Mr. John Lukens, Acting Director City of Harrisburg Department of Incineration and Steam Generation 1670 South 19th Street Harrisburg, PA 17104

Re: Permit Modification
Permit No. 100992
Residual Disposal Area B-2
City of Harrisburg & Swatara Township
Dauphin County

ed Le

Dear Mr. Lukens:

I am pleased to enclose a permit modification for the construction and operation of the B-2 residual disposal area. It is issued in accordance with the Pennsylvania Solid Waste Management Act, Act 97.

Compliance with the limitations and stipulations that have been set forth on your permit is mandatory. You have the right to appeal any limitation or stipulation as stated on your permit.

This action of the Department may be appealable to the Environmental Hearing Board, 101 South Second Street, Suites 3-5, Harrisburg, Pennsylvania 17101, (717-787-3483) by any aggrieved person pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514; and the Administrative Agency Law, 2 Pa. C.S., Chapter 5A. Appeals must be filed with the Environmental Hearing Board within thirty (30) days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the regulations governing practice and procedure before the Board may be obtained from the Board. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

If you have any questions concerning the enclosed permit and/or the requirements set forth by the Pennsylvania Solid Waste Management Act, please call me at the above number.

Sincerely,

Michael R. Steiner

Regional Solid Waste Manager Harrisburg Regional Office ER-SWM-38: 5/82

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF SOLID WASTE MANAGEMENT HARRISBURG REGIONAL OFFICE

FORM NO. 13-A

MODIFICATION TO SOLID WASTE DISPOSAL AND/OR PROCESSING PERMIT

Under the provisions of Act 97, the Solid Waste Management Act of July 7, 1980, Solid Waste Permit Number 100992 issued on September 12, 1978 to

City of Harrisburg

Department of Incineration and Steam Generation

1670 South 19th Street

Harrisburg, PA 17104

is hereby modified as follows:

This permit modification is issued for the construction and operation of the B-2 residual disposal area, as described in the following submissions:

1. Major permit modification application, Phase I, prepared by Brinjac, Kambic & Associates, Inc., received by this office on September 28, 1988 including:

Form A - Application for Municipal Waste Permit

Form B - Professional Certification

Form C - Compliance History

Form D - Exclusionary Criteria/Environmental Assessment Process

Form E - Contractual Consent of Landowner

Form 1 - Facility Plan

Form 2 - Map Requirements

Form 6 - Geologic Information

Form 7 - Hydrogeologic Information

Form 8 - Initial Ground Water Background Analysis

This modification shall be attached to the existing Solid Waste Permit described above and shall become a part thereof effective on (date) __January 29, 1990____

FOR THE DEPARTMENT OF ENVIRONMENTAL RESOURCES

Form 11 - Mineral Deposits Information

Form 12 - Alternative Water Supply

Form 13 - Soils Information

2. Major permit modification application, Phase II, prepared by Brinjac, Kambic & Associates, Inc., received by this office on September 28, 1988 including:

Form 3 - Map Requirements

Form 14 - Operation Plan

Form 15 - Air Resources Protection

Form 16 - Revegetation

Form 17 - Erosion & Sedimentation Controls

Form 18 - Water Quality Monitoring

Form 19 - Quarterly Ground Water Quality Analyses

Form 23 - Soils Information

Form 24 - Liner System

Form 25 - Leachate Management

Form 26 - Gas Management

Form 27 - Contingency Plan for Emergency Procedures

Form 28 - Closure

Form 36 - Request for Approval to Dispose of Municipal Incinerator Ash Residue

Form 38 - Request for Equivalency Review

Form 41 - Municipal Incinerator Ash Residue Monitoring Report

- 3. City of Harrisburg, Department of Incineration and Steam Generation, construction of B-2 residual area map plans, designed by Brinjac, Kambic & Associates, Inc., received by this office September 28, 1988 consisting of the following:
 - G2 Cross-sectional fence diagrams
 - G3 Potentiometric surface contour map
 - SD1 Existing topography and property line map
 - SD2 Existing topography and property line map
 - SD3 1/4 to 1/2 mile radius map private water supplies
 - SD4 Public water supply intake map
 - SD5 Existing utilities and utility easement map
 - SD6 Grid coordinate system map, revised October 1989
 - SD9 Extension of sanitary sewer for B-2 leachate collection plan
 - SD10 Sewer extension for B-2, leachate collection and other site preparation details
 - SD13 Limits of ash fill B-2 site, revised October 1989
 - SD14 Final closure conditions sectional profile A-A, revised October 1989
 - SD15 Final closure conditions sectional profile C-C, revised October 1989
 - SD16 Final closure conditions sectional profile C-C, revised October 1989
 - SD19 Partial site plan B-2 site drainage, erosion and sedimentation control narrative, revised October 1989
 - SD21 Miscellaneous drainage and erosion control details
 - SD22 Miscellaneous B-2 site closure details, revised October 1989
 - El Electrical site plan and miscellaneous electrical details
- 4. Documents in support of application submission submitted under Brinjac, Kambic & Associates, Inc. cover letter and received by this office October 20, 1988 consisting of the following:
 - a. Receipt of contiguous landowner notifications for the Harrisburg Water and Sewer Authority property.
 - b. Proof of publication from The Patriot News Company for the display advertisement published for this permit application.
 - c. Letter from Swatara Township commenting on notification letter of the B-2 application submission.

- 5. Response to Administrative Completeness Review of October 25, 1988 submitted under Brinjac, Kambic & Associates, Inc. cover letter received by this office January 10, 1989 consisting of the following:
 - a. Completeness review response narrative.
 - b. Groundwater sampling and analysis plan for Harrisburg Steam Generating Facility.
 - c. Contiguous landowner notifications regarding entitlements under Section 1103 of Act 101.
 - Revised Form 28 (Closure).
 - e. Corrected Form 15 (Air Resources Protection).
- 6. Response to April 3, 1989 technical review prepared by Brinjac, Kambic & Associates, Inc. received by this office May 23, 1989 consisting of the following:
 - a. Technical review response.
 - Construction of B-2 residual area map plans revised
 May 1989 designed by Brinjac, Kambic & Associates, Inc. including:
 - G1 Cross-sectional fence diagrams, revised October 1989
 - G3A Potentiometric contour map
 - G4 Cross-sectional fence diagrams
 - G5 Cross-sectional fence diagrams
 - G6 Location of test pits at off-site borrow area, revised October 1989
 - G7 Profiles of unacceptable soils, revised October 1989
 - SD7A Excavation contour plan, revised October 1989
 - SD7 Secondary liner plan, revised October 1989
 - SD8 Primary liner plan, revised October 1989
 - SD11 Miscellaneous site preparation details, revised October 1989
 - SD12 Miscellaneous site preparation details, revised October 1989

- SD17 Erosion control plan, revised October 1989
- SD18 Partial site plan B-2 site drainage, revised October 1989
- SD20 Final closure and landscaping plan B-2 site, revised October 1989
- SD23 B-2 closure plan sectional profile, revised October 1989
- SD24 B-2 site closure plan sectional profiles, revised October 1989
- SD25 Detailed berm section, revised October 1989
- SD26 Sections through residue area for volume calculations, revised October 1989
- SD27 Sections through residue area for volume calculations, revised October 1989
- SD28 Sections through residue area for volume calculations, revised October 1989
- SD29 Profiles between residual area, revised October 1989
- 7. Supplemental April 3, 1989 technical review response submitted under Brinjac, Kambic & Associates, Inc. cover letter received by this office July 7, 1989 consisting of the following:
 - a. Drawing G-6 dated July 3, 1989 and entitled "Location of Test Pits at Off-Site Borrow Area".
 - b. Soil profile descriptions for test pits 1, 2, 3, and 4 performed by John Zarichasky, consultant soil scientist.
 - c. Gradation curves, standard compaction test results and falling head permeability test results for soil samples obtained from test pits 1 and 4.
- 8. Additional review responses submitted under Brinjac, Kambic and Associates, Inc. cover letter, received by this office October 23, 1989.
- 9. Quality Assurance/Quality Control Plan for construction activities related to residual disposal areas and B-1 and B-2 submitted under Nassaux-Hemsley, Inc. cover letter, received by this office on October 23, 1989.

Permit Conditions

- 1. A preconstruction meeting shall be held at the site prior to the start of liner installation. All involved parties and representatives of the Department shall attend to review construction plans, QA/QC plan, and other critical phases of construction.
- 2. All sources of construction materials, other than those specifically proposed in the approved plans, must be approved in writing, by the Department, prior to their use in the B-2 permit area. Construction materials include soils, granular materials, geosynthetics, etc. Similarly, any changes to material specifications must be approved by the Department.
- 3. Prior to completion of the City of Harrisburg's bidding process and their actual awarding of contracts, the City and representatives of the Department shall meet to review the technical suitability of all construction materials to be used in the B-2 site construction.
- 4. The permittee shall notify the Department upon completion of each major phase of landfill construction and shall not proceed with the next phase of construction until Department approval of the QA/QC testing is obtained. Major construction phases shall be defined as:
 - Subbase construction.
 - b. Secondary liner installation.
 - c. Leachate detection zone installation.
 - d. Primary liner installation.
 - e. Leachate collection zone installation.
 - f. Final cover system construction:
 - (1) Cap foundation construction.
 - (2) Cap installation.
 - (3) Drainage layer installation.
 - (4) Final cover construction.

City of Harrisburg Permit No. 100992 Page 7

- 5. The quality assurance firm's personnel qualifications must be submitted to and approved by the Department in writing prior to the start of construction at the B-2 site.
- 6. A revised QAQC Plan shall be submitted to and approved by the Department in writing prior to excavation at the B-2 site.
- 7. The groundwater monitoring program is amended through the addition of monitoring wells MW-5 and MW-6 to the existing set of: MW-1, MW-2, MW-3, MW-4, and MW-7. The groundwater monitoring program consists of these seven (7) wells which will be sampled according to Section 273.284 of the Municipal Waste Management Regulations. Quarterly and annual sampling and analysis will be conducted according to Section 273.284 with the addition of Aluminum to the list of parameters given therein.
- 8. A plan for sealing of all test borings, monitoring wells, piezometers, and other boreholes which will be affected by construction of the B-2 Ash Disposal Facility must be prepared and submitted to the Department for approval. A report of such completed sealing will be submitted once it is complete. The plan is to be submitted within fifteen (15) days of the date of this permit. The report of completed sealing shall be made within thirty (30) days of completion of excavation to subgrade. Pressure grouting is an expected methodology to be followed by over-excavation of boreholes and casings below subgrade elevation by at least five feet. Over-excavated boreholes, etc. will be then backfilled with suitable subgrade material. Pressure grouting is to be conducted prior to the commencement of excavation operations.
- 9. A proposal to enhance the quality of the existing groundwater monitoring system must be submitted to the Department within thirty (30) days of the date of this permit. A proposal to use the existing piezometers on-site as additional monitoring points will be considered by the Department (87-P-1W, 87-P-2W, etc.). The proposal is to include the entire area of the Incineration and Steam Generation Facility as permitted. The proposed additional monitoring points will be incorporated into the groundwater monitoring system for the facility. Protection of existing downgradient water supplies should be a consideration of the proposal.

City of Harrisburg Permit No. 100992 Page 8

- 10. One complete round of samples should be obtained from the piezometers used in the Groundwater Assessment Study already reported and analyzed for semi-volatile and volatile organics. EPA Method 625 and 624 should be employed in analyzing the samples to be obtained from same within sixty (60) days of the date of this permit. Reporting is to be accomplished within fifteen (15) days of receipt of same by the City as an addendum to the Groundwater Assessment.
- 11. Leachate must be sampled in accordance with Section 273.276 of the Municipal Waste Management Regulations. Analysis of the leachate must be performed according to Section 273.276(a)(2) of the Regulations. These analyses are to be reported along with the groundwater monitoring analyses.
- 12. The operator must comply with Section 273.255(c) and Section 273.255(d) of the Municipal Waste Management Regulations. Analysis required under Section 273.255(d)(3) should be performed, however, according to Section 273.276(a)(2).
- 13. Details of the boots to be used where leachate collection and detection pipes will penetrate the liner, plus specifications of the stainless steel clamps and other hardware to be used must be provided for review within 120 days of the issuance date of this permit and prior to the start of construction.
- 14. The granular material to be used in the leachate collection and detection systems may not contain greater than one (1) percent fines (passing the #200 sieve).
- 15. All off-site soil borrow areas must be approved by the Department in writing prior to their excavation as well as their use in the B-2 permit area.
- 16. Documentation of the quality and quantity of all off-site soils must be performed in accordance with, but not limited to, the following procedures. This documentation should be submitted to the Department for review within 120 days of the issuance date of this permit and prior to use on-site.
 - a. The suitability of the proposed borrow area soils shall be documented by a certified professional soil scientist, knowledgeable in both the USDA Soil Conservation Service method and the Unified method of soil classification. Limiting zones such as perched soil water, mottling, and coarse fragment content shall be noted on the test pit logs.

- b. Backhoe test pits shall be performed at a minimum frequency of one (1) test pit per acre and shall be described down to the maximum depth of the proposed excavation, unless otherwise authorized by the Department.
- c. A topographic map of the proposed borrow area must be provided which shows the location and surface elevation of the test pits. Test pits should be located on the grid coordinate system or in a manner that can illustrate the test pits on cross-sections/profiles of the site.
- d. Cross-sections and profiles of the proposed borrow areas must be prepared to document the quantity of soil available at the site. Drawings should include the following information:
 - (1) Existing ground elevation.
 - (2) Locations and elevations of test pits.
 - (3) Elevations and nature of limiting zones.
 - (4) Depth of proposed excavation and depth of test pits.
 - (5) Delineate the extent of soils to be used for specific purposes, such as final cover, intermediate cover, clay cap, etc.
- e. Channel samples from the test pit profiles shall be collected and analyzed for textural classification and coarse fragment content, using ASTM D-422. Discrete samples from specific locations in the pit should be collected and analyzed to provide additional documentation of limiting zones, depending upon the vertical extent of the soils for a particular use.
- f. Soil quantity calculations shall be provided to document the quantity of suitable soils from the borrow area(s).
- g. A narrative with additional calculations should accompany the soil quantity calculations, which describes the proposed uses of the soils and from what area of the borrow site they will be excavated.

- h. The permittee shall provide copies of the contractual agreements which demonstrate the availability of the proposed soil materials to the permit holder.
- i. In preparing the documentation on the borrow areas, the permittee shall address any other requirements in Chapter 273 which deal with documentation of soils and borrow areas, in addition to the above.
- 17. The approved erosion and sedimentation control plan is considered to be a minimum. If, during the life of the landfill, any erosion and sedimentation control problems occur which were not anticipated in the permitting process, the permittee or its representative shall address these problems promptly. Engineering certification of the proper construction of all sedimentation basins must be provided prior to earthmoving.
- 18. Sufficient disposal capacity in B-2 must be dedicated to the disposal of ash from disposal area B-1 and A (if necessary) as described in the approved closure plans, and for the disposal of ash from the temporary storage area.
 - If waste from the closure of A and B-1 and the temporary storage area is removed to a permitted off-site disposal facility or other approved off-site use, this dedicated capacity may be reduced accordingly.
- 19. The City proposes to use a tarp system in place of daily cover as required in Section 273.514(c). The tarp system must be a minimum of six inches in thickness to meet the requirements of Section 273.232(a) and (b)(1-4).
- 20. Before waste can be placed in each phase of the landfill, certification of proper site construction in accordance with the approved plans and specifications and conditions of this permit must be submitted by a registered professional engineer.
- 21. Only ash residue from the Harrisburg Steam Generating Facility may be disposed of in the B-2 disposal area unless otherwise approved in writing by the Department.

- 22. Ash which has been determined to be hazardous may not be disposed of in the B-2 disposal area unless rendered non-hazardous by treatment and approved in writing by the Department. Such treatment may require a hazardous waste permit prior to implementation.
- 23. Ash Quality Control Protocol
 - a. Sample daily across the belt conveyor as per submission -6 times a day at 4-hour intervals to make one daily composite.
 - b. Collect seven days of (a) to make one final composite.
 - c. Using (b) to analyze for: lead, chromium, mercury, pH, and cadmium including both total and leachate analysis.
 - d. If analysis is acceptable, ash can be disposed at a permitted landfill.
 - e. If ash tested out to be hazardous for the above parameters, it has to be managed as hazardous waste.
 - f. On a monthly basis, Harrisburg Incinerator should submit to the Department analysis as required by Form 41 using sample collected according to (b).
 - g. The above protocol should be carried out for the first three months. At the end of the third month, the Department will evaluate the performance of Harrisburg Incinerator based on results obtained from the analysis and will make appropriate modifications based on analytical data established at that time.
- 24. Within 90 days of submission of Form 37, two sets of as-built engineering drawings must be submitted to the Department.
- 25. Any final operation, design or other plan developed subsequent to permit issuance which exhibits changes in the structures, locations, specifications, control measures or other changes of substances shall be submitted to the Department for subsequent permit action. Any deviation of plans herein approved shall not be implemented before first obtaining a permit amendment, or written approval from the Department.

City of Harrisburg Permit No. 100992 Page 12

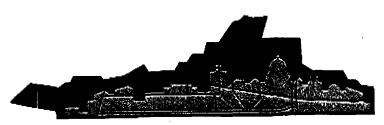
- 26. This permit is, hereby, conditioned to prohibit the facility's receipt and disposal of municipal wastes from any municipality whose Department approved Solid Waste Management Plan designates another facility for the current receipt and disposal of its municipal wastes; provided, however, that such condition shall not apply in those instances in which the plan designated facility is unable to accept such municipal wastes in a manner that is consistent with the rules and regulations of the Department.
- 27. As a condition of this permit, and of the permittee's authority to conduct the activities authorized by this permit, the permittee hereby authorizes and consents to allow authorized employees or agents of the Department, without advance notice or a search warrant, upon presentation of appropriate credentials, and without delay, to have access to and to inspect all areas on which solid waste management activities are being or will be conducted. The authorization and consent shall include consent to collect samples of waste, water or gases, to take photographs, to perform measurements, surveys and other tests, to inspect any monitoring equipment, to inspect the methods of operation, and to inspect and/or copy documents, books or papers required by the Department to be maintained. This permit condition is referenced in accordance with Sections 608 and 610(7) of the Solid Waste Management Act, 35 P.S. Sections 6018.608 and 6018.610(7). This condition in no way limits any other powers granted under the Solid Waste Management Act.
- 28. Prior to disposal of ash in the B-2 residual area, a trust, as required by Section 1109 of the Municipal Waste Planning, Recycling, and Waste Reduction Act, must be established. In lieu of the trust, a bond must be submitted to and approved by the Department.
- 29. Nothing herein shall be construed to supercede, amend or authorize violation of the provisions of any valid and applicable local law, or regulation is not preempted by the Pennsylvania Solid Waste Management Act, the Act of July 7, 1980, Act 97, 35 P.S. 6018.101, et seq.

CITY OF HARRISBURG 10 NORTH MARKET SQUARE HARRISBURG, PA 17101

FACSIMILE TRANSMITTAL

COVER SHEET

Department of Environmental Resources DATE: 10/18/91
ATTENTION: PAGE OF CO
FROM: FAX NO. (717) (25)-4446
BEOWETTO # 55 - "M-1" CLOSURE.
MESSAGE:
WASTE MANUAGEMENT
OCT 2 1 1991
HARRISBURG REGION
THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY O



The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY DEPARTMENT OF INCINERATION AND STEAM GENERATION

October 15, 1991

\$909,655.00 CITY OF HARRISBURG 1990 Escrow Account OCT 21 1991
HARRISBURG REGION

VIA TELEFAX TO: 717-533-6521

Mr. Vincent Capasso Senior Vice-President The Hershey Bank

as agent under an Escrow Agreement dated November 16, 1990, between the City of Harrisburg, and the Department of Environmental Resources, Commonwealth of Pennsylvania and the Hershey Bank (the Escrow Agreement)

9 West Chocolate Avenue Hershey, PA 17033

ESCROW ACCOUNT REQUISITION

Progress Payment No. B-1-5

Dear Mr. Capasso:

You are hereby directed to make payments from the Escrow Account established under Article III of the Escrow Agreement for the purposes and in the amounts set forth below. The City certifies that the expenditures directed herein are in accordance with the conditions of Article III, Section 3.4 of the Escrow Agreement.

Name and Address of Payee	<u>Project</u>	Progress
Payment Amount		
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Handwerk Contractors	Disposal Area	\$ 17,802.00
P.O. Box 326	"B-1" Closure	•
Hummelstown, PA 17036		

CITY OF HARRISBURG

Date: 10-16-91

Stephen R. Reed, Mayor

SGF/BCB-L-4

GORDON P. LAMBER

The Hershey Bank

RE: City of Harrisburg 1990 Escrow Account

Requisition Progress Payment No. B-1-5

October 15, 1991, Page two

Engineers Certification

I/we hereby certify that the Escrow Funds requested to be released are to be used only for performing closure activities at Disposal Area "B-1" and that the work to be paid for has been satisfactorily completed. \(\)

Date: 04 15 1991

cc: Via Telefax to: Francis P. Fair

Regional Solid Waste Manager Harrisburg Regional Office

DEPARTMENT OF ENVIRONMENTAL RESOURCES

Telefax: 717-657-4446

John A. Lukens Jodi L. Townsend

Master File-Incinerator-1990 Escrow Account-Reg. File

FROM:	CONTRACT DESCRIPTION:
HANDWERK CONTRACTORS	CITY OF HARRISBURG
Old Farm Road P.O.Box 326	Closure of Residue Areas
Hummelstown, PA 17036	B-1 Project #1553-90
TO (OWNER): CITY OF HARRISBURG	PAY PERIOD ENDING: 08-25-91
c/o Nassaux-Hemsley, Inc.	TOTAL AMOUNT OF CONTRACT BASED ON ESTIMATED QUANTITIES:
56 North Second Street	× 637.080 -
Chambersburg, PA 17201	421,000
made has been completed in accordance with sured quantities of work shown on the atta to final verification of quantities by the final inspection. The undersigned further ment as of the date of this pay period are of any nature will hereafter be made for w	r which Applications for Payment is hereby the Contract Documents, and that the meached Payment Schedule are correct, subject Engineer upon completion of all work and certifies that any and all claims for payhereby made, and that no additional claim ork completed as of the end of this pay from corrections of quantity measurements.
The undersigned certifies that the Total V total amounts previously paid, constitutes the Contractor against the Owner as of the	the full claim, including retainage, of
CONTRACTOR: HANDWERK CONTRACTORS	,
BY: William H. Rindeman (Signature)	DAYE: 09-04-91
Total Value of Contract Items to Date	\$ 267,740.00
Claims for Additional Payment	\$ 12,101.90
Total Value of All Work to Date	\$ 279,841490
Deduct Previous Payments	\$ 260,061.90
TOTAL CLAIM OF CONFRACTOR	\$ 19,780.00
	gi e e e
ENGINEER'S APPROVAL:	
The undersigned hereby approves this cation for Payment and recommends ret of 10 % of Total Value of All Work	a inage
DEDUCT RETANINGE	\$ 1976.00
TOYAL AMOUNT APPROVED FOR PAYMENT	17 802.00
SIGNED: Ouch Fundent	DATE: 9 50 91

RESIDUE FILE SECLOSURES, CITY OF BARRISBURG BANDUERE CONTRACTORS ESTIMATE SO. 5

PROJ. NO. 1553.90 09-64-91 21GE 2

		110		BID	CURRENT	amourt	to date	ANOUNT
		QUANTITY	!	AMOUNT	COMMITTE	CURRERY	QUANTETY	to date
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2, ~ 2,	ELC-SED BASINS	2, 496 C		3,153,00		8.00	109,001	
3,	BASIN CUTTURES	2 B		2,500.00		8.00	96.901	
4.	SILT FRACE	1,7 0 0 L		1,700.00		0.00	190.001	
6.	LEACHATE COLLECTORS	1 5		1,620.00		0.00	180.001	•
7.	A ASE CUT TO FILL	24,000		27,600.00		9.96	100.004	•
8.	A ASE CUT TO 8-2	2 9894		8,999.96		0.00	199,003	•
10.	REGRADING PILES & ENGR	i k		3,393.00	5.004	163.95	100.004	
11.	TRANSITION SEL CLAY	617 6		31,300.00	*1441	8,66	100.001	-
12.	TRANSITION DRAIN	1,592 to	_	7,800.00	100.001	7,800.00	190.001	
13.	COVER SOIL	14,500 C		116,000.00		40,600.00		115,000.00
14.	LINER	153,734 S		108,093.00		160,729.05		160,729.05
15.	TOPSOIL	2,867 C		34, 180.00		0.89	9.061	
16.	CONVETABLE CHARNELS	2 2		2,500.00	50,001	1,250.00	39.961	
17.	PERM SEEDING	190,000 8		3,500.00		0.00	9,023	
18.	LIMED SWALES	1,187 L		25,790.00		100	0,881	
20.	ACCESS ROADS	1 R		889.99		\$.05	- FOT 665	888.00
						********		***************************************
	topal residue area a base bid			467,3 20.00		210,549.00		366,899-05
,								
	RESIDUB ARRA B-1							
	, , , , , , , , , , , , , , , , , , ,							
i.	CLEAR AND GRUBB	e.1 A	C	499.96		9.00	100,001	
4.	SILT FERCE	· 1,700 L	Ĭ	1,700.00		9.99	100.001	
ş.	e* HDPR SDR 11 PIPE	50 L	j	1,950.00	199.00	1,950.00	169,061	
6.	LEACHATE COLLECTORS	1 8	À	1,620.00	1 00.00 \$	1,520.00	1 00 .601	•
9.	B-1 ASH TO B-2	114,999 C		216,699.00		6.00		216,600.00
10.	regrading file & ench	1 h		5,100. 00	10.004		100.003	5,100,00
11.	Transition SEL CLAY	1,653 C		31,400.00	50. 6 01	15,700.00		15,700.00
12.	TRANSITION DRAID	1,598 L	Z .	7,880.00		9,09	4,001	
13.	COYER SOIL	14,5 00 C		116,000.00		9.00	4,981	
14.	LINER	155,368 S		191,100.00		8.00	100.0	
15.	Topsoil	2,883 C		34,600.00		0,09	8,00%	
16.	CORARATMEE CHVMHETS	2 5		2,500.00		0.00	6,661	
17.	PERK SEEDING	21 0,990 \$		19,500.00		6.60	0.001	
18.	LINED SVALES	593 C		13,350.00		9.00	9.981	
19.	18* CPH	100 L		1,500.00		9.00	100,001	-
20.	access roads	1 2	.	888.00		9.99	190,004	980.00
	TOTAL RESIDUE AREA B-1 BASE BID			637,080.00		19,780.00		245,450.00
	IAIUN KROTTAR ZUNIN D-1 BEGG DIN			Adilanaraa		27,104144		
	11							
	ALTREMATES							
à-1.	MOB AND MAIRTAIN PERROUS PROCESSOR	1 1	å	21,000.00		9,90	188.004	21,000.00
A-2.	SEPARATE AND REMOVE FERROUS	19,000 T	H [35,00)					
A-3.	PERROUS OVER 10,000 TON		N (25.00)			0.00		9.00
4-4.	REMOVE CONSTRUCTION MATERIAL	Ċ	39.6 2			9.00	43	1,299.00
						44 505 00		257,749.90
	TOTAL RESIDUE AREA B-1			658, 889. 99		19,780.00		T011145.40

RESIDUE PILE ENCLOSURES: CITT OF EARRISBURG EARDYSEZ CONTRACTORS 25TTWATT TO. 5

PROJ. NO. 1553,90

43-64-9

PAGE 2

	•	bid Mouny	Bid Angurt	CURRENT QUALITY	amount Current	to date Quantity	AMOURT TO DATE
	CHARGE ORDERS						
CO-#1	CLEAR & TEST LEACHATE DRAIN - SITE A	1 LS	1,100.00			100.001	1,100.00
CO #2	GABION BASKET - SITE BI	1 LS	150.00			100.001	190.00
CO \$3	COVER MATERIAL - B-2 BASIN - SINE BI	1 15	11,911.98			198.981	11,911.90
	TOTAL CHANGE ORDERS		13,201.90		9. 11		13,201.99

Korzeniewsky



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES

Post Office Box 2063 Harrisburg, Pennsylvania 17105-2063

July 23, 1991

Bureau of Waste Management (717) 787-6239

CERTIFIED MAIL # P 097 451 742

MARKON SECTION

NOTICE OF VIOLATION

Sally S. Klein, Chairman
Dauphin County Commissioners
Dauphin County Courthouse
P.O. Box 1295
Harrisburg, PA 17108

RE: Site Specific Post-Closure Trust Agreements
(Section 1108 - Act 101-1988)
City of Harrisburg
(City of Harrisburg - Swatara Township)
Dauphin Meadows, Inc. (Chambers Development Co., Inc.)
(Washington Township)

Dear Ms. Klein:

Section 1108 of the Municipal Waste Planning, Recycling and Waste Reduction Act, The Act of July 28, 1988, P.L. 556, No. 101, 53 P.S. Sections 4000.101 et seq. ("Act 101") requires each county with operating municipal waste landfills to establish a Site-Specific Post Closure Fund.

The City of Harrisburg Landfill (Permit 100992), located in the City of Harrisburg and Swatara Township, was permitted when Act 101 took effect in 1988. Dauphin Meadows, Inc. (Chambers Development Co., Inc.) (Permit 101539), located in Washington Township, was permitted September 27, 1990.

As of this date the required trusts for these two landfills have not been executed by Dauphin County.

Failure to establish a Site-Specific Post Closure Fund for these landfill constitutes unlawful conduct under Section 1701 (a) of Act 101 and Section 610(9) of the Solid Waste Management Act, the Act of July 7, 1980, P.L. 380, No. 97, As Amended, 35 P.S. Section 6018.101 et seq. ("Act 97"). These violations may result in enforcement action including civil or criminal penalties. Chapter 17 of Act 101 (Enforcement and Remedies) outlines the provisions of enforcement for the Department, see Sections 1701 (Unlawful Conduct) and 1708 (Withholding of State Funds).

The County of Dauphin is hereby notified of both the existence of these violations and the necessity to correct them. Therefore, you are requested to submit draft copies of Site-Specific Post Closure Trusts for the City of Harrisburg Landfill and Dauphin Meadows, Inc. within 15 days after receipt of this Notice of Violation. Upon approval by the Department, these trust must then be executed within 15 days.

This Notice of Violation does not waive, either expressly or by implication, the power or authority of the Commonwealth of Pennsylvania to prosecute for any and all violations involved arising prior to or after the issuance of this Notice of Violation or the conditions upon which this Notice of Violation is based, nor shall this Notice of Violation be construed so as to waive or impair any rights of the Department of Environmental Resources heretofore or hereafter existing. This letter shall also not be construed as a final action of the Department of Environmental Resources.

If you have any questions, contact Rebecca Hinderliter of this office at (717) 787-6239.

Sincerely,

Len Marihamela

Leon L. Kuchinski, Chief Division of Enforcement

cc: William D. Boswell, Esq.
Solicitor, Dauphin County
Front & Market Streets, P.O. Box 1295
Harrisburg, PA 17108-1295

Cc: Charles B. Zwally, Esq.
Mette, Evans & Woodside
1807 N. Front Street, P.O. Box 729
Harrisburg, PA 17108-0729

cc: Bradley C. Bechtel, Esq.
 Solicitor, City of Harrisburg
 Suite 402, Martin Luther King Jr.
 City Government Center
 Harrisburg, PA 17101

Cc: Dave Craig
 Dauphin Meadows, Inc.
 Chambers Development Co., Inc.
 RD#1, Route 209
 Millersburg, PA 17061

Final Closure Trust Agreement

FIDUCIARY AGREEMENT FINAL CLOSURE COSTS

WHEREAS, the Settlor is required, under provisions of Section 1109, Act 101 of 1988 and policy guidelines issued by the Department of Environmental Resources ("DER"), to establish a FUND for final closure of a landfill operated by the Settlor solely for municipal waste not classified hazardous, located in Dauphin County and known as the Residue Disposal Area B-2 and operating under Permit No. 100992, and for the taking of such measures as may be necessary for prevention of adverse effects on the environment; and

WHEREAS, the Settlor has established this Fund to provide for its obligations relating to final closure and the prevention of adverse effects on the environment at the aforementioned landfill; and

WHEREAS, the Settlor, acting through its duly authorized officials, has selected the Fiduciary under this Agreement; and

WHEREAS, the Fiduciary has agreed and is willing to perform the duties as are required to be performed pursuant to this Agreement; and

WHEREAS, the Fiduciary is an entity whose banking activities are regulated or examined by a state or federal agency, is located within the Commonwealth of Pennsylvania and who has an office located in the County in which the aforementioned landfill is located.

NOW, THEREFORE, in consideration of the foregoing and of the mutual promises and undertakings of the parties as set forth herein, and with the intention of being legally bound hereby, the parties agree as follows:

ESTABLISHMENT OF THE FUND

The Settlor and the Fiduciary hereby establish this Fund for the benefit of the Settlor and DER ("Co-beneficiaries") to be utilized pursuant to Section 1109 of Act 101 of 1988 for the sole purpose of providing funds for final closure and the prevention of adverse effect on the environment relating to the landfill described herein.

- (a) The Settlor and the Fiduciary intend that the Co-beneficiaries shall have access to the Fund as provided herein.
- (b) Monies and any other property of this Fund shall not be subject to assignment, alienation, pledge, attachment, garnishment, sequestration, other legal process or to the claims of creditors.

- (c) The Fund shall be established by a one time payment of four hundred sixty-nine thousand six hundred fifty-five dollars and no cents (\$469,655.00) by the Settlor.
- (d) Any payments made by the Settlor shall consist of cash, bank checks, bank wire transfers or other means of payment acceptable to the Fiduciary.
- (e) The Fund shall be held by the Bank as Fiduciary, as hereinafter provided.

PAYMENTS

The Fiduciary shall make payments from the Fund to the Settlor on the written order and direction of the Settlor. The Fiduciary shall discharge this duty and responsibility subject to the following conditions:

- (a) Except for purposes of investing and reinvesting the monies in the Fund, no payments shall be made by the Fiduciary prior to the notification by DER to the Fiduciary of the cessation of waste acceptance at the landfill.
- (b) After receipt of the notification of such cessation, the Fiduciary shall make payments only upon the written request of the Settlor and which written request shall be accompanied by the written approval of DER.
- (c) Written requests for payment shall include the following:
 - (i) the amount of the payment to be made, and
 - (ii) the purpose of the payment.

- (ii) Short-term obligations of the United States
 Government or any of it agencies or instrumentations.
- (iii) Obligations of the United States of America or any of its agencies or instrumentations backed by the full faith and credit of the United States of America.
- (iv) Obligations of the Commonwealth of Pennsylvania or any of its agencies or instrumentalities backed by the full faith and credit of the Commonwealth.
- (v) Obligations of any political subdivisions of the Commonwealth of Pennsylvania or any of their agencies or instrumentalities backed by the full faith and credit of the political subdivision.
- (vi) Shares of an investment company registered under the investment Company Act of 1940 (U.S.C. §80-1 et seq.), whose shares are registered under the Securities Act of 1933 (15 U.S.C. §77a et seq.) provided the only investments of the investment company are those described in (i), (ii), (iii), (iv), (v) above.
- (vii) Interest-bearing accounts maintained by the Fiduciary to the extent such are insured by an agency of the Federal or State government or otherwise secured as provided under the laws of the Commonwealth of Pennsylvania.
- (b) The Fiducary hereby acknowledges receipt of a true and correct copy of the City of Harrisburg's Ordinance No. 17 of 1987 and Ordinance No. 22 of 1987 and by execution of this document does conclusively demonstrate its intention to be

- bound by the conditions, restrictions and limitations contained therein.
- (c) The Fiduciary may hold cash awaiting investment or distribution for a reasonable period of time without liability for the payment of interest thereon.
- (d) The Fiduciary shall not be responsible for any losses incurred hereunder, whether due to market fluctuations of otherwise, except in the case of its negligence or misconduct or that of its agents.

EXPRESS POWERS OF FIDUCIARY

Without in any way limiting the powers and discretion conferred upon the Fiduciary by the other provisions of this Agreement or by law, the Fiduciary is expressly authorized and empowered:

- (a) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted.
- (b) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or book entry, or to combine certificates representing such securities with certificates of the same issue held by the Fiduciary in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so

deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve Bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund.

ADVICE OF COUNSEL

The Fiduciary may, from time to time, consult with counsel with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Fiduciary shall be fully protected, to the extent permitted by law, in acting on the advice of counsel, subject to the following conditions:

- (a) The Fiduciary shall not compromise or otherwise adjust claims in favor of or against the Fund without the written consent of the Settlor and DER, which consent shall not be unreasonably withheld.
- (b) The Fiduciary shall give prompt written notice to the Settlor and DER of each claim in favor or against the Fund, specifying the amount and nature of such claim.

 The Fiduciary shall also give prompt written notice to the Settlor and DER of any controversies, demands, actions,

- losses, damages, costs, expenses or any matter which is likely to give rise to a claim.
- duty, to participate in the prosecution of or defense against, any claim in favor or against the Fund, provided however, DER shall have the option, to be exercised in DER's sole discretion, to participate in such prosecution or defense singly. The Settlor and DER, to the extent they wish, may assume such prosecution or defense with counsel of their own choosing. Upon notice to the Fiduciary that the Settlor or DER or both will assume prosecution or defense, neither the Fund nor the Settlor nor DER will be liable to the Fiduciary for any subsequent costs of prosecution or defense which the Fiduciary may incur.

VALUATION

The Fiduciary shall annually, at least thirty (30) days prior to each anniversary date of establishment of the Fund, furnish to the Settlor and DER a statement confirming the value of the Fund. The Fiduciary shall value any securities in the Fund at the lesser of market or par value as of no more that sixty (60) days prior to such anniversary date.

EXPENSES, TAXES AND FIDUCIARY COMPENSATION

The Fiduciary shall be entitled to all reasonable and customary expenses incurred by the Fiduciary in connection with the administration

of this Fund, as agreed upon in writing from time to time with the Settlor, including fees for legal services rendered to the Fiduciary, and all taxes of any kind that may be assessed or levied against or in respect of the Fund. All such reasonable and customary expenses, fees and taxes shall be paid from the Fund. Any and all questions concerning the tax status of the Fund (whether the income or the principal thereof) shall be resolved by the Settlor and payable, if applicable, from the Fund.

SUCCESSOR FIDUCIARY

The Fiduciary may resign only after giving ninety (90) days written notice to the Settlor and DER, by certified mail, of its intention to resign. Such resignation shall not be effective until a successor trustee has been appointed by the Settlor and the successor Fiduciary accepts the appointment. The successor fiduciary shall have the same powers and duties as those conferred upon the Fiduciary hereunder. The successor fiduciary shall specify the date on which it assumes administration of the Fund, in writing, sent to the Settlor and DER, by certified mail, ten (10) days before such assumption takes effect. Upon the successor fiduciary's acceptance of the appointment, the Fiduciary hereunder shall assign, transfer, convey and pay-over to the successor Fiduciary the funds and properties then constituting the Fund. If for any reason the Settlor cannot or does not act in the event of the resignation of the Fiduciary, or

a successor fiduciary cannot or does not accept the appointment by the expiration of the ninety (90) day period, the Fiduciary may apply to a court of competent jurisdiction for the appointment of a successor fiduciary or for instructions.

INSTRUCTIONS TO FIDUCIARY

All orders, requests and instructions by the Settlor and DER to the Fiduciary shall be in writing, signed by such persons as are designated by the Settlor in the attached Schedule A and by DER in the attached Schedule B. The Fiduciary shall not have the right to assume, in the absence of written notice to the contrary, that an event constituting a change or termination of the authority of any person to act on the behalf of the Settlor or DER hereunder has occurred. The Fiduciary, upon receipt of orders, requests or instructions by the Settlor or DER which are signed by persons purporting to be designated by the Settlor or DER, shall with due diligence ascertain if such persons are designated by the Settlor or DER, and have the authority to act on behalf of the Settlor or DER hereunder.

AMENDMENT OF AGREEMENT

This Agreement may be amended by an instrument in writing executed by the Settlor, the Fiduciary, and with the written consent of DER, or by the Fiduciary and DER if the Settlor ceases to exist, becomes insolvent or

enters into liquidation, receivership or bankruptcy, or is legally incompetent.

IRREVOCABILITY AND TERMINATION

Subject to the rights of the parties to amend this Agreement as provided herein, this Fund established under this Agreement shall be irrevocable and shall continue until terminated by the occurrence of any of the following:

- (a) The written agreement of the Settlor, DER and the Fiduciary. In the event the Settlor does not act to terminate the Fund established under this Agreement, DER shall have the power to act singly to terminate the Fund.
- (b) The completion of the purposes of the Fund defined as

 DER's notification, in writing, to the Fiduciary of DER's

 certification of final closure of the landfill. Upon

 receipt of DER's notice of certification of final closure,

 the Fiduciary shall terminate the Fund and return to the

 Settlor all remaining fund property, less final fund

 administration expenses of the Fiduciary.
- (c) A written adjudication by the Environmental Hearing

 Board ("EHB") wherein EHB upholds the certification by DER

 to the Fiduciary that the Settlor has abandoned the landfill

 or has failed or refused to comply with the requirements of

 the Solid Waste Management Act of 1980, any amendments

thereto or the regulations promulgated thereunder. shall provide the Fiduciary and the Settlor thirty (30) days notice of its intention to make such a certification. Upon receipt of the certification, Settlor may appeal such action of DER to the EHB pursuant to 35 P.S. §7511 et seq. No appeal shall act as an automatic supersedeas. If the EHB upholds DER's certification, the Fiduciary shall take such steps as are necessary to vest in DER all rights, title and interest in the property of the Fund. DER may, in its sole discretion, direct the Fiduciary to maintain the Fund and make such disbursements from the Fund as may be necessary to complete final closure of the landfill and prevent adverse effects on the environment, or direct the Fiduciary to terminate the Fund and pay over to DER any monies remaining in the Fund together with any other property of the Fund, less final fund administration expenses of the Fiduciary.

CHOICE OF LAW

This Agreement shall be administered, construed, and enforced according to the laws of the Commonwealth of Pennsylvania.

INTERPRETATION

As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The description headings for each Section of this Agreement shall not affect the interpretation or the

legal efficacy of this Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written.

ATTEST:	SETTLOR:
	THE CITY OF HARRISBURG
(Seal)	By Stephen R. Reed Mayor
APPROVED AS TO FORM AND LEGALITY:	1
(Seal) (Seal)	James J. McCarthy, Jr. City Controller
ATTEST:	FIDUCIARY:
	THE HERSHEY BANK
By (Seal) (Seal)	By Vincent Capasso Senior Vice President
Ву	Бу

SCHEDULE A CO-BENEFICIARY INSTRUCTIONS TO FIDUCIARY

The City of Harrisburg hereby provides the names and signatures of those individuals designated by it to sign all orders, requests and instructions by it to the Fiduciary of the attached Fiduciary Agreement between the City of Harrisburg (Settlor) and The Hershey Bank (Fiduciary).

Stephen R. Reed

Mayor

/Data

James J. McCartl City Controller

SCHEDULE B CO-BENEFICIARY INSTRUCTIONS TO FIDUCIARY

The Pennsylvania Department of Environmental Resources (DER) hereby provides the names and signatures of those individuals designated by it to sign all orders, requests and instructions by it to the Fiduciary of the attached Fiduciary Agreement between the City of Harrisburg (Settlor) and the Hershey Bank (Fiduciary).

George H. Knoll, Manager Financial Responsibility

Office of Environmental Protection

Leon L. Kuchinski, Chief

Division of Enforcement

Bureau of Waste Management

COMMONWEALTH OF PENNSYLVANIA	}	
	3	
	}	SS
COUNTY OF DAUPHIN	}	
	}	

On this, the <u>Jobbs</u> day of November, 1990, personally appeared Stephen R. Reed and James J. McCarthy, Jr., who acknowledge themselves to be the Mayor and City Controller respectively of the City of Harrisburg, a Pennsylvania municipal corporation, and that as such being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the names of Stephen R. Reed, Mayor, and James J. McCarthy, Jr., City Controller, by themselves as the CITY OF HARRISBURG.

IN WITNESS WHEREOF, I hereto set my hand and official seal.

Notary Public

Notatel Seal Colland W. Kins, Reduce Public Hamelung, Quigon County

Member, Pennsylventh I speciation of Nataries

COMMONWEALTH OF PENNSYLVANIA	}
	}
	} SS
COUNTY OF DAUPHIN	}
	}

On this, the // day of November, 1990, personally appeared Wintert apassi and William A. Hill who acknowledged themselves to be the Sinin Vice frisidant and Sinin Wintertung Muin respectively of The Hershey Bank, a state banking association, and that as such bank officers being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the names of Wintert Capassa and William K. Hill by themselves as THE HERSHEY BANK.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Notary Public

Notariol Seal Colloch M. Filne, Nelbury Public Harrishung, Douglin County My Communication of piper 2017 4, 1894

Memoar, Pennsylvania Association of Netaries

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BUREAU OF WASTE MANAGEMENT Harrisburg Steam Yen Facility
Harrisburg Regional Office # 100758

One Ararat Boulevard # 100758

Harrisburg, Pennsylvania 17110 City of Harrisburg, Dauphin 6.

(717) 657-4588

May 9, 1989 Mourance notification

THIS LETTER WAS SENT TO THE ATTACHED LIST.

Re:	Public Liability	Insurance	Requirements
	Facility:		
	I.D. #:		
	Twp/Co:		

Gentlemen:

The Department has reviewed the financial assurance records for the above referenced facility to satisfy the requirements of 25 Pa. Code §§271.371-271.376.

To bring this facility into compliance with the Regulations, we are requesting that you send the following information to this office by June 12, 1989.

- ER-WM-183 -- Municipal Waste Insurance -- Certificate of Liability Insurance -- This is a general information sheet concerning your coverage.
- 2. Accord 25 or equivalent.
- 3. An authenticated copy of your public liability insurance policy It is necessary to receive a copy of the policy for the review of compliance standards, the Accord 25 alone does not give enough information.

Enclosed are copies of 25 Pa. Code §§271.371-271.376 and the form ER-WM-183. Should you have any questions regarding your public liability insurance responsibility, please feel free to contact this office.

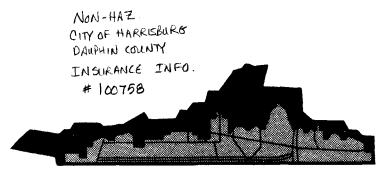
Sincerely,

Gail C. Jackson Facilities Specialist Harrisburg Regional Office

GCJ: jsm

Enclosures

Regional Spicialist R. Hinderliter, Central Office Trile



The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

DEPARTMENT OF ADMINISTRATION

October 12, 1988

Mr. Donald E. Korzeniewski Bureau of Waste Management Department of Environmental Resources One Ararat Boulevard Harrisburg, PA 17110 WASTE MANAGEMENT

OCT 13 1988

HARRISBURG REGION

Dear Mr. Korzeniewski:

RE: Public Liability Insurance Municipal Waste Facilities

Pursuant to our conversation today, attached please find a copy of an insurance binder representing coverage for city-wide general liability, automobile liability, and property insurance.

As you will note, the effective and expiration dates indicate that the policies are now in effect. Additionally, it is important to note that the City's general liability policy is an occurrence form covering all city operations and locations without exception.

I believe the attached Certificate of Insurance represents insurance levels and a policy form far superior to the average municipality insurance program currently in effect state-wide.

If the attached does not completely satisfy the insurance requirements under the Solid Waste Management Act of the Commonwealth of Pennsylvania, please contact me at once so that any necessary adjustments can be made.

Sincerely yours,

Corey R. Stein Risk Manager

CRS:mas/A/der

cc: Judith B. Schimmel, Esq. William S. Strauss
File - DER Insurance

GCOID CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY) 8/4/88

Ρ	ROD	UCE	R

MARSH & MCLENNAN, INC. 600 Grant Street Suite 5500 Pittsburgh, PA 15219

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

COMPANY Commerce and Industry Ins. Co.

COMPANY LETTER

COMPANY LETTER

COMPANY LETTER

COMPANY **LETTER**

INSURED

City of Harrisburg, Etal Rev. Dr. Martin Luther King, Jr. City Government Center Room 305A Harrisburg, PA 17101

COVERAGES

THIS IS TO CERTIFY THAT POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS, AND CONDITIONS OF OUR HEREIN IS SUBJECT. TIONS OF SUCH POLICIES.

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DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

Certificate Holder is Named Insured with respect to Electric Power Plant, 1670 S. 19th Street, Harrisburg, PA 17104

CERTIFICATE HOLDER CONTROL CANCELLATION

Corey R. Stein, Risk Manager Rev. Dr. Martin Luther King, Jr. City Government Center 10 North Second Street Harrisburg, PA 17101

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EX-PIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UNON THE COMPANY, ITS AGENTS OR REPRESENTATIVES

AUTHORIZED REPRESENTATIVE



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES

BUREAU OF WASTE MANAGEMENT Harrisburg Regional Office One Ararat Boulevard Harrisburg, Pennsylvania 17110 (717) 657-4588 October 4, 1988

Please
Call Covery Stein NOTICE OF VIOLATION

and have him all Bob Benuis at 657-4588

Who p 649696553

about 1915 notice

CERTIFIED MAIL NO. P 649696553

Harrisburg Steam Generator Facility 1670 South 19th Street Harrisburg, PA 17104

> Re: Public Liability Insurance Municipal Waste Facilities

Gentlemen:

A review of our records indicate that you have failed to submit proof of liability insurance covering third party claims for property damage and personal injury in violation of the Solid Waste Management Act of the Commonwealth of Pennsylvania (SWMA), Act of July 7, 1980, P.L. 380, No. 97, 35 P.S. Section 6018.101 et seq., and Chapter 271 of the Rules and Regulations of the Department of Environmental Resources as follows:

- Facility owners or operators of municipal waste disposal and/or processing facilities (including sludge sites, landfills, transfer stations, and resource recovery facilities) are required to submit proof of a commercial policy of liability insurance covering third party claims for property damage and personal injury by July 8, 1988 pursuant to 25 Pa. Code §271.371.
- 2. Failure to meet the criteria described in Paragraph 1 above constitutes unlawful conduct pursuant to §610(2), (4) and (9) of the SWMA, 35 P.S. §6018.610(2), (4) and (9) and constitutes a public nuisance pursuant to Section 601 of the SWMA, 35 P.S. §6018.601.

3. Enforcement actions can include, but are not limited to, requiring facility owners or operators to cease operations. Permit modifications, including Module 1's for land disposal facilities that are received after July 8, 1988 will be denied until proof of insurance is submitted and approved by the Department.

In order to achieve compliance with the SWMA, the implementation of the following is recommended:

- Submit to the Department, at the above address, on or before November 4, 1988, proof of your commercial policy of liability insurance.
- 2. By November 14, 1988, contact this office to make arrangements to attend a meeting for the purpose of discussing these violations and appropriate penalties.

This Notice of Violation does not waive, either expressly or by implication, the power or authority of the Commonwealth of Pennsylvania to prosecute for any and all violations of law arising prior to or after the issuance of this Notice of Violation or the conditions upon which the Notice of Violation was based, nor shall this Notice of Violation be construed so as to waive or impair any rights of the Department of Environmental Resources heretofore or hereafter existing.

If you have any questions concerning this matter, please feel free to contact this office.

Sincerely,

Donald E. Korzeniewski
Facilities Specialist

Harrisburg Regional Office

DEK:jsm

Marsh & McLennan, Incorporated 600 Grant Street, Suite 5500 Pittsburgh, Pennsylvania 15219-2885

Telephone: 412 288-8800 Telecopier: 412 288-8884

Telex: 825880

December 13, 1988

DER Waste hanagement

DEC1 6 1988

HARRISBURG REGION

Department of Environmental Services Bureau of Waste Management 1 Ararap Blvd. Harrisburg, PA 17110

RE: CITY OF HARRISBURG

Certificate of Insurance

Gentlemen:

In accordance with your request, enclosed please find a Certificate of Insurance issued on the above captioned.

We trust that you will find the enclosure to be in order. Should you have any questions regarding this certificate, please do not hesitate to contact our office.

Yours truly,

Richard E. Scheib

Marketing Representative

RES/scm

Enclosure

cc: Mr. C. W. Smith, Jr.

doid

CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY) 12/13/88

		ER

Marsh & McLennan, Inc. 600 Grant Street Suite 5500 Pittsburgh, PA 15219

INSURED

City of Harrisburg City Government Center 10 N. Market Street Harrisburg, PA 17101

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY A	ND CONFERS
NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES	NOT AMEND,
EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELO	JW.

COMPANIES	AFFORDING	COVERAGE
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COMPANY A	Old Republic Insurance Company
COMPANY B	
COMPANY C	
COMPANY D	
COMPANY E	

COVERAGES

THIS IS TO CERTIFY THAT POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS, AND CONDITIONS OF THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS, AND CONDITIONS OF THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS, AND CONDITIONS OF THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS, AND CONDITIONS OF THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS, AND CONDITIONS OF THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS, AND CONDITIONS OF THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS, AND CONDITIONS OF THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS, AND CONDITIONS OF THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS, AND CONDITIONS OF THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS, AND CONDITIONS OF THE POLICIES DESCRIBED HEREIN IS SUBJECT. TIONS OF SUCH POLICIES.

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DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/RESTRICTIONS/SPECIAL ITEMS

CERTIFICATE HOLDER

Department of Environmental Services Bureau of Waste Management 1 Ararap Blvd. Harrisburg, PA 17110

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EX-PIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, PUT, FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS ON REPRESENTATIVES.

Uhlas

AUTHORIZED REPRESENTATIVE

IIF/ACCRD CORPORATION 1985

MARSH & MCLENNAN, INC.	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.
600 Grant Street Suite 5500	COMPANIES AFFORDING COVERAGE
Pittsburgh, PA 15219	COMPANY A Commerce and Industry Ins. Co.
INSURED	COMPANY B
City of Harrisburg, Etal Rev. Dr. Martin Luther King, Jr.	COMPANY C
City Government Center Room 305A	COMPANY D
Harrisburg, PA 17101	COMPANY E
OVERAGES	

THIS IS TO CERTIFY THAT POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS, AND CONDITIONS OF SIGN AND INCIDENCE. TIONS OF SUCH POLICIES.

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DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

Location: Electric Power Plant, 1670 S. 19th Street, Harrisburg, PA 17104

ERTIFICATE HOLDER

Dept. of Environmental Resources Bureau of Waste Management 1 Ararap Blvd. Harrisburg, PA 17110

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FALURE TO MAIL SUCHNOPICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

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SENDER: Complete items 1 and 2 when additional s and 4. Put your address in the "RETURN TO" Space on the reversation that the post of the state of delivery. For additional fees to postmaster for fees and check box(es) for additional services 1. Show to whom delivered, date, and addressee's address of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of	rse side. Failure to do this will prevent this will provide you the name the person he following services are and able. Consult a) requested.
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Harrisburg Steam Generator Facility 1670 South 19th Street Harrisburg, PA 17104	Type of Service: ☐ Registered ☐ Insured ☐ COD ☐ Express Mail
	Always obtain signature of addressee or agent and DATE SELIVERED.
5. Signature - Addressee X	WASTE MANY GENEN
6. Signature - Agent	OCT 1 1 1988
7. Date of Delivery	HARRISBURG REGION

UNITED STATES POSTAL SERVICE OFFICIAL BUSINESS SENDER INSTRUCTIONS Print your name, address, and ZiP Code in the space below.
Complete items 1, 2, 3, and 4 on

permits, otherwise affix to back PENALTY FOR PRIVATE Endorse article "Return Receipt USE. \$300 Requested" adjacent to number.

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RETURN TO

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RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED NOT FOR INTERNATIONAL MAIL (See Reverse)

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Sent to James Jenes de	or Lau	
Street and No.		
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Postage	S	
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Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt showing to whom and Date Delivered		
Return Receipt showing to whom, Date, and Address of Delivery		
TOTAL Postage and Fees	S	
Postmark or Date		

S Form 3800, June 1985

BUREAU OF WASTE MANAGEMENT Harrisburg Regional Office One Ararat Boulevard Harrisburg, Pennsylvania 17110 (717) 657-4588 October 4, 1988

NOTICE OF VIOLATION

CERTIFIED MAIL NO.

THIS LETTER WAS SENT TO THE ATTACHED LIST.

Re: Public Liability Insurance
Municipal Waste Facilities

Gentlemen:

A review of our records indicate that you have failed to submit proof of liability insurance covering third party claims for property damage and personal injury in violation of the Solid Waste Management Act of the Commonwealth of Pennsylvania (SWMA), Act of July 7, 1980, P.L. 380, No. 97, 35 P.S. Section 6018.101 et seq., and Chapter 271 of the Rules and Regulations of the Department of Environmental Resources as follows:

- Facility owners or operators of municipal waste disposal and/or processing facilities (including sludge sites, landfills, transfer stations, and resource recovery facilities) are required to submit proof of a commercial policy of liability insurance covering third party claims for property damage and personal injury by July 8, 1988 pursuant to 25 Pa. Code §271.371.
- Failure to meet the criteria described in Paragraph 1 above constitutes unlawful conduct pursuant to §610(2), (4) and (9) of the SWMA, 35 P.S. §6018.610(2), (4) and (9) and constitutes a public nuisance pursuant to Section 601 of the SWMA, 35 P.S. §6018.601.

3. Enforcement actions can include, but are not limited to, requiring facility owners or operators to cease operations. Permit modifications, including Module 1's for land disposal facilities that are received after July 8, 1988 will be denied until proof of insurance is submitted and approved by the Department.

In order to achieve compliance with the SWMA, the implementation of the following is recommended:

- Submit to the Department, at the above address, on or before November 4, 1988, proof of your commercial policy of liability insurance.
- 2. By November 14, 1988, contact this office to make arrangements to attend a meeting for the purpose of discussing these violations and appropriate penalties.

This Notice of Violation does not waive, either expressly or by implication, the power or authority of the Commonwealth of Pennsylvania to prosecute for any and all violations of law arising prior to or after the issuance of this Notice of Violation or the conditions upon which the Notice of Violation was based, nor shall this Notice of Violation be construed so as to waive or impair any rights of the Department of Environmental Resources heretofore or hereafter existing.

If you have any questions concerning this matter, please feel free to contact this office.

Sincerely,

Donald E. Korzeniewski Facilities Specialist Harrisburg Regional Office

DEK:jsm

May 7, 2007

Mr. Ron Oren
Permitting Section Chief
Pennsylvania Department of Environmental Protection
South Central Region
909 Elmerton Avenue
Harrisburg, PA 17110-8200

DAMPAIN CU.

Subject: Harrisburg Materials, Energy, Recycling and Recovery Facility (HMERRF)

Metals Recovery Project

Dear Mr. Oren:

The Harrisburg Authority (the Authority) has completed its successful investigation of the feasibility of recovering ferrous and non-ferrous metal from ash at the HMERRF. At this time, the Authority would now like to move forward with actual landfill recovery operations. As such, we are forwarding the attached scope of work providing a general summary of the operation to facilitate the DEP's determination of what additional information you may need from us in order to the commence work.

As you know, the on-site ash disposal landfill is nearing its permitted capacity. One of the benefits of the project therefore is to be able to increase the existing capacity at the disposal facility by removing the ferrous and non-ferrous material from the ash. Additionally, this will be a resource recovery project by reclaiming the metals from the ash and marketing this material for beneficial reuse.

Timing is a very important factor with this reclamation project. At present, the price of ferrous and non-ferrous metal makes this economically feasible to perform. As metal pricing nears historical highs, the Contractor we intend to utilize to perform the work now has the ability to mobilize the personnel and equipment resources without cost to our Client, thus making it an economically feasible project.

Please contact me at (484-574-7778) if you have any comments or questions. Our mailing address is:

Covanta Energy Services, Inc. 1670 South 19th Street Harrisburg, PA 17104

Best Regards,

Daniel J. Caraccio

Facility Business Manager

c: M. Laudenslager – DEP

B. Ambrose - THA

J. Moffitt - Covanta

S. Robinson - Covanta

S. Jenness - Covanta

Harrisburg Materials, Energy, Recycling and Recovery Facility (HMERRF) Landfill Metals Recovery Project

Project Summary

This project will involve the mining of HMERRF landfill cells B-2 and B-3 to facilitate recovery of ferrous and non-ferrous metal. Work efforts will be focused in two areas: the current working face at the top of the landfill where actual mining and truck loading will occur, and a screening area which will be located within close proximity to the mining areas within the permitted landfill footprint of cells B-2 and B-3. The portable screening equipment to be utilized will involve a truck mounted unit. A suitable and separate area will be maintained at the top of the landfill for daily disposal of the ash generated by the waste-to-energy plant. This area will allow ash tipping while keeping the ash plant vehicles separate from the mining operation. The Contractor will monitor this tipping area and remove material on a daily basis to allow ample space for dumping. Mobile equipment at the landfill site will include a crawler dozer, excavator, off-road hauler, front end loader, and a skid steer loader.

Operations will begin at the southwest end of the cell. The earthen cap will be stripped from the initial work area. This will ensure the least amount of wind erosion thereby controlling the dust. The excavator will be used to remove the fill and load the off-road hauler to transport the ash to the screening area. The screening area will be set up with a water spray system to dampen the ash again to reduce any airborne emissions.

To complete the process the screened ash will be returned to the top of the landfill. This material will be spread and compacted using a bulldozer and the cell walls will be replaced as the fill depth increases. The cells will be capped using the material stripped to begin the project.

The Contractor will be required to complete Covanta health and safety training prior to project initiation. All operations will adhere to appropriate OSHA requirements for workplace safety. A weekly on-site operations review will be completed assessing health and safety, environmental impact and project efficiency. Operations will be monitored by Covanta staff to ensure compliance with applicable health, safety, and environmental requirements.

Projected Start and Completion Dates

The contractor, Poscor Mining Inc., has a projected start date of May 31, 2007. The project completion date to process cell B-2 and B-3 is October 31, 2007. Heavy mining, truck loading and traffic operations at the top of the landfill will be restricted to 40 hours per week. However, the screening operation will continue during available daylight hours. This separation process naturally produces less noise pollution because it is completed below grade level, thereby, blocking sound waves from travelling into the surrounding area. Secondly, the majority of the equipment utilized in this process is powered primarily by electric motors which produce a lower decibel level.

Anticipated Recovery Rates

Based on results of the initial testing phase performed in April 2007, it is anticipated that the metals recovery rate should approach 15%. Initial estimates project that approximately 600,000 cubic yards of ash will be processed during this project.

Trucking and Projected Destination of Recovered Metals

Recovered product will be shipped from the HMERRF by 45 foot dump trailers with tarp systems. Loads will not exceed 44,000 pounds per load. There is a possibility that 48 foot containers will be loaded on site for potential off-shore customers. A percentage of the material will be exported to the Poscor Inc. Hamilton facility located in Canada. The remaining product will be sold to local markets and potentially off-shore customers. All outbound loads of recovered ferrous and non-ferrous metals will first be weighed at the facility scales to comply with DOT weigh restrictions and to maintain accurate records on the exact quantity of materials that are recovered from this project.

Covanta Harrisburg

A Covanta Company 1670 South 19th St Harrisburg, PA 17104 Tel 717 939 7560 Fax 717 939 7670

RECEIVED JUL 18 7007

July 11, 2007

Mr. Berr Oren

Permitting Section Chief Pennsylvania Department of Environmental Protection Southcentral Region 909 Elmerton Avenue Harrisburg, PA 17110-8200

Subject: Harrisburg Materials, Energy, Recycling and Recovery Facility (HMERRF) Ferrous Recovery Project

Dear Mr. Oren:

The Harrisburg Authority and Covanta Harrisburg, Inc. are proposing to proceed with ferrous metal recovery operations of landfill cells B-2 and B-3. Based on our meeting on 6/8/07, the PADEP requested additional information to allow for a determination of the solid waste and air quality permit implications. As you requested, please find attached the general project and operational descriptions, schedule, projected emissions, a map of project location, and dust suppressant material safety data sheets (MSDSs). We will be contacting you next week to determine if any additional information is needed for your review.

Please contact me at (484) 574-7778 if you have any comments or questions. Thank you again for meeting with us last month and we greatly appreciate your willingness to help us, the Harrisburg Authority, and the City of Harrisburg with the important project.

Best Regards,

Dan Caraccio Business Manager

cc: R.

R. Davis - DEP

M. Laudenslager - DEP

B. Ambrose - THA

J. Moffitt - Covanta

S. Robinson - Covanta

T. Whitman - Covanta

S. Jenness - Covanta

Harrisburg Materials, Energy, Recycling and Recovery Facility (HMERRF) Landfill Metals Recovery Project

Project Summary

This project will involve the mining of HMERRF landfill cells B-2 and B-3 to permit recovery of ferrous and non-ferrous metal. Work efforts will be focused in two areas: The current working face at the top of the landfill where actual mining and truck loading will occur, and a screening plant to be located approximately half way down the western side of cells B-2 and B-3. A depiction of the locations of the proposed project is presented in the attached aerial map. The portable screening plant will involve truck mounted equipment. A suitable area will be maintained at the top of the landfill for daily disposable of the ash generated by the incinerator. This area will allow continuing ash tipping while keeping the ash plant vehicles separate from the mining operation. The contractor will monitor this tipping area and remove material on a daily basis to allow ample space for dumping. Mobile equipment at the landfill site will include a crawler dozer, excavator, off-road hauler, front end loader, and a skid steer loader.

Operations will begin at the southwest end of the cell. The cap will be stripped from the initial work area. This will ensure the least amount of wind erosion thereby controlling the dust. The excavator will be used to remove the fill and load the hauler to transport the ash to the screening plant. The screening plant will be set up with a water spray system to dampen the ash again to reduce any airborne emissions.

To complete the process the screened ash will be returned to the top of the landfill. This material will be spread and compacted using a bulldozer and the cell walls will be replaced as the fill depth increases. The cells will be capped using the material stripped to begin the project.

The contractor will be required to complete Covanta health and safety training prior to project initiation. All operations will adhere to appropriate OSHA requirements for workplace safety and all contractor employee standards, health and safety and insurance requirements. A weekly on-site operations review will be completed assessing health and safety, environmental impact and project efficiency. Operations will be monitored by Covanta staff to ensure compliance with applicable health, safety, and environmental requirements.

Operational Description

1.) Landfill excavation will occur at the top of the hill. The excavator will cut a 15 foot wide path the width of the cell (approximately 200-400 feet) to a depth of six (6) feet. This pattern will be repeated to the half way point of the cell. The clean ash will be stored on the undisturbed area of the cell. Soil Sement, supplied by Midwest Industrial Supply, Inc. (see attached product description and MSDS) will be applied as needed to control fugitive dust emissions. Additional detail on Midwest products (to include case histories) can be found at

www.midwestind.com. All work will be contained within the liner area of the cell. A landfill hauler will carry the excavated ash to the trommel plant to be located halfway down the western side of cell B-2. The integrity of the liner will be maintained by shooting levels to ensure a consistent depth across the width of the cell. An eight (8) foot buffer between work zone activities and the liner will be maintained at all times. Shooting levels will be determined with the use of site drawings and manual test holes.

2.) Screening/trommel operations will take place half way up the western side of the landfill cell B-2. A picture of a typical processing operation is included as an attachment. A loader will take the raw ash and place into the mouth of the trommel where a foaming dust suppression system (see attached product description). Will be installed to ensure maximum dust control. SDC-7000 dust suppressant, supplied by Midwest Industrial Supply, Inc. (see attached product description and MSDS) will be used to control fugitive dust. The excavated ash will be processed through the trommel where the ash will be separated from the ferrous and non ferrous metals. There will be three conveyor belts piling the processed ash to a height of 15 feet and a circumference of 20 feet. The ferrous and non ferrous metals will be further separated through the use of additional conveyor systems equipped with a magnetic drum and an eddy current system. The screening, trommelling and loading area will have a loader and skid steer to maintain a clean and safe work environment.

Projected Schedule

The contractor, Poscor Mining Inc. has a projected start date of August 1, 2007. The project completion date to process cell B-2 and B-31 is January 31, 2008. Heavy mining, truck loading and traffic operations at the top of the landfill will be restricted to approximately 50 hours per week during daylight hours. However, the screening operation will continue 24 hours per day. This separation process naturally produces less noise because it is completed below grade level, thereby, blocking sound waves from travelling into the surrounding area. Secondly, the majority of the equipment utilized in this segment of the process is powered primarily by electric motors which produce a lower decibel level.

Anticipated Recovery Rates

Based on results of the initial testing phase performed in April 2007, it is anticipated that the metals recovery rate should approach 15%. Initial estimates project that approximately 600,000 cubic yards of ash will be processed during this project.

Trucking and Projected Destination of Recovered Metals

Recovered product will be shipped from the HMERRF by 45 foot dump trailers with tarp systems. Loads will not exceed 44,000 pounds per load. There is a possibility that 48 foot containers will be loaded on site for potential off-shore customers. A percentage of

the material will be exported to the Poscor Inc. Hamilton facility located in Canada. The remaining product will be sold to local markets and potentially off-shore customers

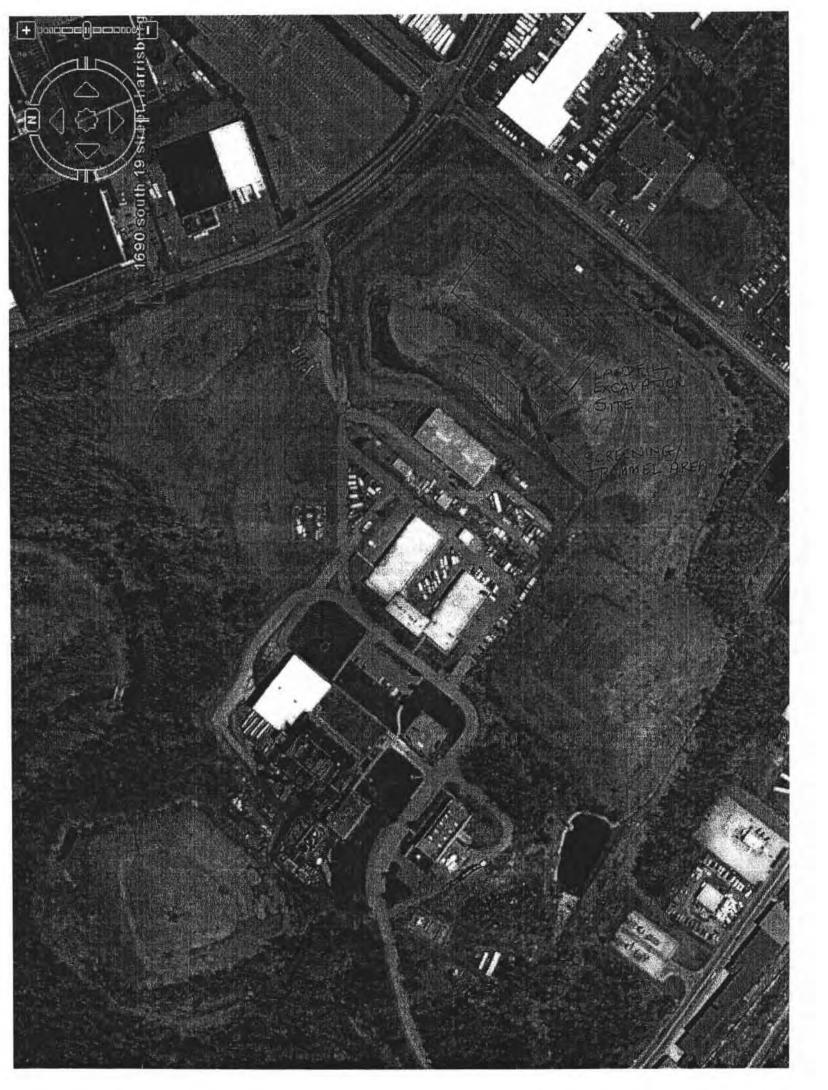
Projected Emission Rates

Projected emissions from this project will generally involve three (3) sources: 1.)

Combustion emissions from a Caterpillar 3056E diesel engine (175 hp) used for electrical generation, 2.) Fugitive dust emissions generated from truck traffic on the unpaved landfill, and 3.) Dust emissions from excavation and ash processing operations.

- Caterpillar 3056E diesel engine emissions Information obtained from Caterpillar indicate that the trommel screen uses a USEPA Tier 2 compliant engine rated at 175 hp. Assuming a trommel operation of 24-hr/day, 6 day/week, over six months results in 0.15 tons of particulate matter, 2.5 tons of carbon monoxide (CO), and 2.0 tons of nonmethane hydrocarbon (NMHC)/nitrogen oxides (NO_x).
- 2.) Unpaved road dust emissions Unpaved road dust emission estimates were developed using EPA AP-42 factors (Section 13.2.2). Using equation (1a) for vehicles traveling on unpaved surfaces at industrial sites and PM₁₀ factors from table 13.2.2-2, a silt factor of 10%, a mean vehicle weight of 30 tons, 10 miles of vehicular travel/day, particulate emissions over the six-month project (24 working days/month) is 3,300 pounds. Assuming a conservative control efficiency of 80% with the use of the Midwest Soil-Sement dust suppressant, project PM₁₀ emissions would approximate 660 pounds.
- 3.) Excavation and ash processing operations Emissions from processing and excavation operations over the six month projected project period were estimated using Section 13.2.4 of AP-42. Using equation (1), appropriate PM₁₀ factors, an average mean wind speed of 5 mph, a moisture content of 10%, an ash volume of 600,000 cubic yards, and an ash specific gravity of 2, estimated particulate emissions would be 120 pounds for the project. Assuming a control efficiency of 80% for the Midwest SDC-7000 dust suppressant, emissions would be 24 pounds.

Therefore, projected particulate PM₁₀ emissions for the project would be approximately 984 pounds, or 0.5 tons over the six-month project period.



SOIL SEMENT®

Dust and Erosion Control Agent

MATERIAL SAFETY DATA SHEET

Emergency Phone Number: 330-456-3121

SECTION I -- IDENTIFICATION OF SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

TRADE NAME:

SOIL-SEMENT®

CHEMICAL NAME:

POLYMER EMULSION

SYNONYMS:

DUST RETARDANT

CHEMICAL FAMILY:

N/A

MOLECULAR WEIGHT:

N/A

FORMULA:

AQUEOUS ACRYLIC VINYL ACETATE POLYMER EMULSION

CAS REGISTRY NO.:

PRODUCT A BLEND - NO NUMBER ASSIGNED

SECTION II -- COMPOSITION/INFORMATION ON INGREDIENTS

NAME

CAS REG NO.

WT. %

Acrylic & Vinyl

Acetate Polymer

Non-hazardous

5-50

Water

7732-18-5

95-50

SECTION III - HAZARDS IDENTIFICATION

Acrylic & Polyvinyl Acetate Polymer

Non-hazardous

Water

Non-hazardous

SECTION IV -- FIRST AID MEASURES

EYES:

Flush eyes with flowing water at least 15 minutes, get medical attention.

INHALATION:

Move subject to fresh air.

SKIN:

Flush with large amount of water or wash with soap and water.

INGESTION:

Give water to drink. Call a physician

NEVER GIVE FLUIDS OR INDUCE VOMITING. IF PATIENT IS UNCONSCIOUS OR HAVING CONVULSIONS.

SECTION V - FIRE FIGHTING MEASURES

FLASH POINT (TEST METHOD):

Non-Combustible

AUTOIGNITION TEMPERATURE:

N/A

EXTINGUISHING MEDIUM:

N/A

SPECIAL FIREFIGHTING PROCEDURES:

N/A

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Material can splatter above 212°F. Dried polymer film can

burn but will not support combustion.

SECTION VI - ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK PROCEDURES:

Dike and control spill. Transfer liquid to containers for recovery or disposal.

Keep spills out of sewers and open bodies of water.

SOIL SEMENT®

MATERIAL SAFETY DATA SHEET

Emergency Phone Number: 330-456-3121

SECTION VII - HANDLING AND STORAGE

STORAGE: Keep in a cool, dry, ventilated storage area and in closed containers. Minimize contact with the air to prevent microorganism contamination and reduce the formation of skins on the surface.

KEEP FROM FREEZING

HANDLING: Handle in a well-ventilated workspace.

SECTION VIII - EXPOSURE CONTROL/PERSONAL PROTECTION

None required if good ventilation is maintained.

1.01 to 1.15

Characteristic Acrylic odor

VENTILATION: Mechanical exhaust at point of contaminant.

EYE PROTECTION: Chemical splash goggles recommended. PROTECTIVE CLOTHING: Impervious gloves recommended.

Under normal handling conditions, the risk of exposure to residual monomer OTHER:

is negligible.

SECTION IX -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING/MELTING POINT @ 760 mm Hg: 212°F VAPOR PRESSURE mm Hg @ 20°C: 17

SPECIFIC GRAVITY OR BULK DENSITY:

SOLUBILITY IN WATER:

RESPIRATORY PROTECTION:

APPEARANCE:

ODOR:

pH:

4.0 to 9.5

SECTION X - STABILITY AND REACTIVITY

Dilutable

Milky White Liquid

STABILITY: Stable

CHEMICAL INCOMPATIBILITY: No hazardous reactions are expected to occur under

normal industrial conditions.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition in the presence of air may yield

carbon monoxide and/or carbon dioxide and water.

HAZARDOUS POLYMERIZATION: Does not occur

CONDITIONS TO AVOID: N/A CORROSIVE TO METAL: No OXIDIZER: No

SECTION XI - TOX ICOLOGICAL INFORMATION

EFFECTS OF OVEREXPOSURE

INHALATION: Vapor from stored, undiluted product can cause headache and nausea.

Stored, undiluted product is slightly irritating to skin. SKIN:

EYES: Slightly irritating to eyes.

INGESTION: May be irritating to digestive tract.

SOIL SEMENT®

Dust and Erosion Control Agent

MATERIAL SAFETY DATA SHEET

Emergency Phone Number: 330-456-3121

SECTION XII - ECOLOGICAL INFORMATION

Toxicological evaluation of Soil Sement® utilized EPA methods for both acute and chronic toxicity determination for aquatic organisms, LC₅₀ values were determined for each of the species. The table below contains a synopsis of the results.

Soil Sement Aquatic Toxicity Test Results

- *Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms, EPA/600/4-90/027F.
- *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, EPA/600/4-91/002.
- *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Marine and Estuarine Organisms, EPA/600/4-91/003.

	Ceriodaphnia dubia	Fathead minnow	Americamysis bahia	Rainbow trout
ACUTE/SUR	VIVAL (mg/L)			
LC50	>1000	>1000	>1000	320
NOEC	1000	1000	1000	
LOEC	>1000	>1000	>1000	
CHRONIC/SI	JRVIVAL (mg/L)			
LC50	>1000	>1000	>1000	510
NOEC	1000	1000	1000	340
LOEC	>1000	>1000	>1000	700
CHRONIC/G	ROWTH/ REPRODUCTION	N (mg/L)		
LC50	>1000	>1000	>1000	540
NOEC	1000	1000	1000	340
LOEC	>1000	>1000	>1000	700

See attached test results:

- 1. ABC Laboratories, Inc. Americamysis bahia, Fathead minnow, Ceriodaphnia dubia.
- 2. BAR Invironmental, Inc. Rainbow trout
- 3. EnviroScience Inc. Rainbow Trout, Chronic (New Data)

LC50 - Lethal Concentration, 50%

NOEC - No Observable Effects Concentration

LOEC - Lowest Observable Effects Concentration

Comparison of the EPA guidelines to the LC₅₀ levels of all species show that Soil Sement® is practically non-toxic to all species.

SOIL SEMENT®

MATERIAL SAFETY DATA SHEET

Emergency Phone Number: 330-456-3121

SECTION XIII -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Coagulate the emulsion by the stepwise addition of ferric chloride and lime or the addition of sand or other absorbent material. Remove the clear supernatant liquid and flush to a chemical sewer or landfill. Incinerate solids and the contaminated diking material according to local, state and federal regulations.

CONTAINER DISPOSAL:

Do not re-use containers. Do not weld on metal containers.

SECTION XIV - TRANSPORTATION INFORMATION

None

D.O.T. PROPER SHIPPING NAME (49CFR172.101):

HAZARDOUS SUBSTANCE (40CFR116): N/A

REPORTABLE QUANTITY (RQ): N/A

D.O.T. HAZARD CLASSIFICATION (49CFR172.101): Non-regulated

D.O.T. PLACARDS REQUIRED: None

POISON CONSTITUENT (49CFR173.343): N/A

BILL OF LADING DESCRIPTION: Liquid plastic, NOS

C NO .: N/A

UN/NA CODE: N/A

SECTION XV- REGULATORY INFORMATION

SOIL-SEMENT® is not a restricted article according to the Department of Transportation and International Air Transport Association regulations.

EPA SARA Title III hazard class:

Non-OSHA hazardous (29CFR1910.1200) **OSHA HCS hazard class:**

Toxic Chemicals present in quantities greater

than the "de minimus" level are: None

TSCA: All ingredients are on the TSCA (Toxic Substance Control

Act) inventory or are not required to be listed on the TSCA

inventory.

California Proposition 65: This product contains no trace amount of chemical(s) know

to the state of California to cause cancer of birth defects.

All ingredients are in the Canadian DSL (Domestic Canadian DSL:

Substance List) or are not required to be on the list.

This product is not a "controlled product" under the Canadian WHMIS:

Canadian Workplace Hazardous Material Information

System (WHMIS)

SECTION XVI - OTHER INFORMATION

ABBREVIATIONS AND SYMBOLS:

N.D. - Not Determined N.A. - Not Applicable

- MORE THAN - LESS THAN

N.T. - Not Tested



SIMPLEX-1 STEEL PAINTED UNIT



The Simplex-1 Steel Painted Unit includes the following features:

- water pump
- · chemical pump
- · water & air flow meters
- pressure gauges air, water & chemical
- pre-wired control panel
- foam accumulator
- 2 20' lengths of 1" foam hose
- 100' air/solution hose
- · spray manifold with 4 nozzles
- dimensions: 30"L x 18"W x 36"H
- weight: 400 lbs.
- painted steel enclosure

WARRANTY:

This product is for use as a dust suppressant, and the information contained herein is, to the best of our knowledge and belief, accurate. Any recommendations or suggestions made are without warranty or guarantee of results since conditions of handling and use are beyond our control: we, therefore, assume no liability for loss or damage incurred by following these suggestions.

Seller warrants only that this product will meet the specifications set forth. Any other representation or warranty, either express or implied, is specifically disclaimed including warranties of fitness for a particular purpose and of merchantability.

Seller's only obligation shall be to replace such quantity of the product proved to be defective. Before using, user shall determine the suitability of the product for user's intended application and user assumes all risk and liability whatsoever in connection therewith. Seller shall not be liable in tort, contract or under any other theory for any loss or damage, whether incidental, consequential, or punitive, arising out of the use or the inability to use the product.

The Simplex-1 unit is available in capacities up to 23 gpm water, 20 gph chemical.

Electrically, the unit requires 3 phase, 480 VAC, 10 Amp service. Each motor is thermally protected and has a selector switch for start/stop operation. The Simplex-1 is designed for manual or automatic operation. A water supply with a minimum rated capacity of 2 gpm @ 20 psi is required. The compressed air minimum requirement is 20 scfm @ 50 psi.



To place your order or for more information, please call:

1-800-321-0699

MIDWEST INDUSTRIAL SUPPLY, INC.

PO Box 8431 • Canton, OH 44711 330-456-3121 • Fax: 330-456-3247

E-Mail: custserv@midwestind.com · www.midwestind.com



SDC-7000 DUST SUPPRESSANT AND FOAMING AGENT

Appearance......Green to Yellow Tinted Liquid

Density @ 77°F......8.32 lb/gal (Typical)

Specific Gravity @ 77°F	1.00 g/cm³
Viscosity @ 75°F	250 cps
pH (Undiluted)	7.0 - 9.0
Freezing Point	30°F
Typical Application Rate/Dilution	See Below
Packaging	Available in Totes, Drums and Bulk
Handling	Store and Use at

Dust-Buster® SDC-7000 is a multi-component dust control and foaming agent.

SDC-7000 is injected into wet suppression systems to enhance water effectiveness and minimize the effect of hard water.

Typical application dilution range from 500:1 - 2,000:1

SDC-7000 is utilized in foam suppression systems to eliminiate dust, by generating a blanket of foam trapping emissions at the source.

Typical application rate is 0.0025 - 0.01 gpt

SCD-7000 is used in water trucks as a dust suppression additive to extend effectiveness for water used for road wetting.

Typical application dilution is 2000:1



To place your order or for more information, please call:

Temperatures Above 32°F

-800-321-0699

WARRANTY:

This product is for use as a dust suppressant, and the information contained herein is. to the best of our knowledge and belief, accurate. Any recommendations or suggestions made are without warranty or guarantee of results since conditions of handling and use are beyond our control; we, therefore, assume no liability for loss or damage incurred by following these suggestions.

Seller warrants only that this product will meet the specifications set forth. Any other representation or warranty, either express or implied, is specifically disclaimed including warranties of fitness for a particular purpose and of merchantability.

Seller's only obligation shall be to replace such quantity of the product proved to be defective. Before using, user shall determine the suitability of the product for user's intended application and user assumes all risk and liability whatsoever in connection therewith. Seller shall not be liable in tort. contract or under any other theory for any loss or damage, whether incidental, consequential, or punitive, arising out of the use or the inability to use the product.

MIDWEST INDUSTRIAL SUPPLY, INC.

PO Box 8431 · Canton, OH 44711 330-456-3121 · Fax: 330-456-3247

E-Mail: custserv@midwestind.com · www.midwestind.com

Emergency Phone Numbers: 330-456-3121

SDC 7000

MATERIAL SAFETY DATA SHEET

SECTION I - IDENTIFICATION OF SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

TRADE NAME:

SDC 7000

CHEMICAL NAME:

ANIONIC AND NONIONIC SURFACTANT AGENT DUST SUPPRESSANT AND FOAMING AGENT

SYNONYMS: CHEMICAL FAMILY:

SURFACTANTS

MOLECULAR WEIGHT:

N/A N/A

FORMULA: N/A

CAS REGISTRY NO.: MIXTURE - NO NUMBER ASSIGNED

SECTION II -- COMPOSITION/INFORMATION ON INGREDIENTS

NAME

CAS REG NO.

WT. %

Ethyl Alcohol Surfactant blend 64-17-5 Blend <6%

SECTION III -- HAZARDS IDENTIFICATION

Ethyl alcohol

Irritant to mouth, upper digestive system, skin and eyes

SECTION IV -- FIRST AID MEASURES

EYES:

Flush eyes with flowing water at least 15 minutes, get medical attention.

INHALATION:

If irritation occurs move to fresh air and seek medical attention

SKIN:

Flush with large amount of water or wash with soap and water. Seek medical

attention if irritation occurs.

INGESTION:

Give water to drink. Do not induce vomiting. Call a physician.

NEVER GIVE FLUIDS OR INDUCE VOMITING IF PATIENT IS

UNCONSCIOUS OR HAVING CONVULSIONS.

SECTION V - FIRE FIGHTING MEASURES

FLASH POINT (TEST METHOD):

> 135°F (greater than 50% aqueous solutions and does not

sustain combustion)

AUTOIGNITION TEMPERATURE:

N/D

EXTINGUISHING MEDIUM:

Water fog, alcohol foams, Co2, dry chemical

SPECIAL FIREFIGHTING PROCEDURES:

Water or foam may cause frothing, use water to cool containers. Use self contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: N

None

SECTION VI - ACCIDENTAL RELEASE MEASURES

Date Revised: 07/03/2006

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Page 1 of 4

Emergency Phone Numbers: 330-456-3121

SDC 7000

MATERIAL SAFETY DATA SHEET

SPILL AND LEAK PROCEDURES: Dike and control spill. Absorb with sand. Failure to contain release may require reporting to local authority. Floor may be slippery. Wear impervious gloves, overalls and eye protection while cleaning spill. Do not wash into drains. Place in containers for proper disposal in accordance with state, federal, and local regulations.

SECTION VII -- HANDLING AND STORAGE

STORAGE:

Keep in a cool, dry, ventilated storage area and in closed containers.

HANDLING:

Handle in a well ventilated work space.

SECTION VIII -- EXPOSURE CONTROL/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

None required.

VENTILATION:

Local exhaust.

EYE PROTECTION:

Chemical splash goggles recommended.

PROTECTIVE CLOTHING:

Impervious gloves recommended.

OTHER:

None.

Avoid contact with eyes and skin or clothes. All personal protective equipment must comply with appropriate standards and be maintained as indicated.

SECTION IX -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING/MELTING POINT @ 760 mm Hg:N/D

VAPOR PRESSURE mm Hg @ 20°C: N/I

SPECIFIC GRAVITY OR BULK DENSITY:

1.00

SOLUBILITY IN WATER:

complete

SOLUBILITI III WA

green to yellow tinted liquid

APPEARANCE:

Slight Odor

ODOR:

pH:

7.0 - 9.0

SECTION X - STABILITY AND REACTIVITY

STABILITY:

Stable

CHEMICAL INCOMPATIBILITY:

Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS:

None known

HAZARDOUS POLYMERIZATION:

Does not occur

Emergency Phone Numbers: 330-456-3121

SDC 7000

MATERIAL SAFETY DATA SHEET

SECTION XI -- TOXICOLOGICAL INFORMATION

EFFECTS OF OVEREXPOSURE

INHALATION:

Vapors and mists may be irritating to nose, throat and mucous membranes Prolonged contact may cause irritation, local redness and mild discomfort.

SKIN: EYES:

May cause significant eye irritation.

INGESTION:

Not classified as harmful if swallowed, may cause irritation of the mouth and upper

digestive tract.

LD50 (oral rat)

>12 ml/kg

SECTION XII - ECOLOGICAL INFORMATION

Do not release into bodies of water.

SECTION XIII - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Do not wash into drains. Do not mix with other waste materials. Comply

with all federal, state and local laws, regulations and procedures.

CONTAINER DISPOSAL:

Do not re-use containers.

SECTION XIV - TRANSPORTATION INFORMATION

D.O.T. PROPER SHIPPING NAME (49CFR172.101):

None

HAZARDOUS SUBSTANCE (40CFR116):

N/A

REPORTABLE QUANTITY (RQ):

N/A

D.O.T. HAZARD CLASSIFICATION (49CFR172.101):

Non-regulated

D.O.T. PLACARDS REQUIRED:

None

POISON CONSTITUENT (49CFR173.343):

N/A

BILL OF LADING DESCRIPTION:

Liquid dust suppressant

UN No.:

N/A

PACKING GROUP:

N/A

SECTION XV- REGULATORY INFORMATION

SDC 7000 is not a restricted article according to the Department of Transportation and International Air

Transport Association regulations. EPA SARA Title III hazard class:

None

OSHA HCS hazard class:

Irritant (29CFR1910.1200)

TSCA:

All components are listed on US TSCA inventory.

EPA SARA Title III Section 313(40CFR372)

Toxic Chemicals present in quantities greater than the "de minimus" level are:

None

Emergency Phone Numbers: 330-456-3121

SDC 7000

MATERIAL SAFETY DATA SHEET

WHMIS Classification:

The Canadian Workplace Hazardous Material Information System (WHMIS)

Classification: D2B - eye or skin irritant.

SECTION XVI - OTHER INFORMATION

ABBREVIATIONS AND SYMBOLS:

N/D -Not Determined < - Less Than

N/A -Not Applicable > - Greater Than

N/T -Not Tested



Department of Public Works / City Government Center, Suite 212 / Harrisburg, PA 17101 / Telephone (717) 255-6455 Stephen R. Reed, Mayor / Daniel R. Lispi, Project Manager

DATE:

march 10, 1994

TQ:

Linda Houseal, Salid Waste

FROM:

Daniel R. Lispi, Project Director

Telephone (717) 255-6455

SUBJECT:

HSGF Bonding Warhaheet

Modal - Please review +

Comment (for A, B-1, B-2)

(orda

THIS TRANSMISSION CONTAINS 16 PAGES INCLUDING THE GOVER SHEET; IF YOU ENCOUNTER ANY PROBLEMS, PLEASE CALL (717) 255-3036.

LANDPILLS B-1, B-2 AND B-3 BONDING WORKSHEET A DISPOSING OF INVENTORY N/A

R	eference	
	Source	

• ·

- Maximum volume of waste to be placed in disposal area as part of closure.
- Estimated volume of contaminated residues and soils to be disposed of as part of closure.
- 3. Total volume of waste and residues to be disposed of (Line 1 + 2).
 - 4. Unit Cost of disposing of waste and residues.
 - Total cost to dispose of waste and residues
 (Line 3 x 4).

LANDPILLS BONDING WORKSHEET 8 B-1, B-2 AND B-3 DECONTAMINATING THE FACILITY H/A

		Source
1.	Total volume of contaminated solls and	·
	materials to be removed and disposed of off-site.	
2.	Unit cost to dispose of contaminated materials	
	(includes transportation).	
3.	Cost to dispose of soil and contaminated	
	materials (Line 1 x 2).	 •
4.	Landfill equipment to be decontaminated	
	based on surface area.	 -
5.	Unit cost to decontaminate.	 <u> </u>
6.	Cost to decontaminate (Line 4 x 5).	 -
7.	Volume of liquid generated during decontamination (base on gallons per foot ² required for	
	decontamination, e.g. gals/ft ² x ft ² =	
	Total Gallons).	

- 8. Unit cost to dispose of liquid (includes transportation)
- 9. Cost to dispose (Line 7 x 8)
- 10. Total cost to decontaminate (Line 3 + 6 + 9)

LANDFILLS B-1, B-2 AND B-3 BONDING WORKSHEET C CAP AND FINAL COVER PLACEMENT

Reference Source

1.	Maximum area to be capped and covered (includes only areas that will be open at any one time).	568710 PT ²
2.	Unit cost of placing one foot of stable intermediate cover material for base of cap.	\$0,15/FT ²
3.	Total cost of base for cap (Line 1 x 2)	\$85,306.5D
4.	membranes, geoneta Unit cost of geofabric materials to be used as cap (includes transportation and installation cost)	\$1.25/FT ² MANUFACTURER
5.	Cost to cap (Line 1 × 4).	<u>\$710.887.50</u>
6.	additional fill Unit cost of arcinoger by the (installed cost). (67,500 YD ³)	\$4.00/YD
7.	67,5つメA Cost to place drainage layer (Line 1 x 6) .	\$270,000↓ 0 0
8.	Unit cost to install 2' final cover (installed cost)	\$0.30/FT ²

9. Cost to install 2' final cover (Line 1 x 8).

\$170,613

10. Total cost of cap and final cover (Lines 3 + 5 + 7 + 9).

\$1,236,807

LANDPILLS B-1, B-2 AND B-3

BONDING WORKSHEET D REVEGETATION OF FINAL COVER, DISTURBED AREAS AND DRAINAGE WAYS

Reference Source

	· · · · · · · · · · · · · · · · · · ·	pontes
1.	Total area to be revegetated (acres).	<u> </u>
2.	Type of vegetation GRASS/SEED price per 1b (including labor).	MEANS COST \$10/LB ESTIMATING GUIDE
3.	Seeding rate per acre.	175 LB/ACRE SPEC MANUAL
4,	Cost of seed (Line 1 x 2 x 3).	\$14.35 0 :
5.	Recommended fertilizer requirements.NITROGEN (N) 20 LB./ACRE	PHOSPHATE (P ₂ O ₃) Potash (K2 ^c) 180 LB/ ACRE 140 LB/ACRE
6.	Quantity of fertilizer per acre-	340 LB/ACRE PENN STATE SOILS TEST
7.	Unit cost of fertilizer (includes labor).	2.50/LB; MEANS COST ESTIMATING GUIDE
8.	Cost of fertilizer (Line 1 x 6 x 7)-	\$6.970.00
9.	Type of mulch <u>Agricultural</u> unit price (includes labor). Grass (Straw)	\$110/TON

Reference Source

SOIL CONSERVATI

MANUAL

10. Mulching rate.

\$1804

11. Cost of mulch (Line $1 \times 9 \times 10$).

\$23.124

2 TONS/ACER

2" THICKNESS

12. Total Cost of vegetation (Line 4 + 8 + 11).

BONDING WORKSHEET E GROUNDWATER MONITORING

			Reference Source
1.	Number of wells monitored.	8	
2.	Samples per well.	4	
3.	Total number of samples (Line 1 \times 2).	32	
.4 .	Number of analyses per sample.	-	
5.	Total number of analyses (Line 3 x 4).		· ·
6.	Unit cost to collect sample (includes shipping).		
7.	Cost to collect samples (Line 3 x 6).		•
8.	Average cost of single analysis.		:
9.	Cost of analyses (Line 5 X 8).		<u> </u>
10.	Evaluation of data (manhours).	· · · · · · · · · · · · · · · · · · ·	<u>.</u>

1 |

			i
			Reference Source
11.	Unit cost per manhour.		
12.	Cost of evaluation (Line 10 X 11).		
13.	Total number of samplings per year.	***************************************	a.
14.	Cost of sampling per year [(Line 7 + 9 + 12) X 13)].	\$13,500 V	ENDOR
15.	Years of sampling	10	• • • • • • • • • • • • • • • • • • •
16.	Total cost of groundwater monitoring (Line 14 X 15).	\$135,000	+

LANDFILLS B-1, B-2 AND B-3 BONDING WORKSHEET F MAINTENANCE COSTS

			Reference
1.	Repair of cap and final cover.	\$10,000	
2.	Repair of surface water run-on and runoff structures	\$10,000	
3.	Repair of fence.		:
4.	Repair of leachate conveyance and collection structures (not including surface impoundment or tanks).	-0-	·
5.	Well maintainence and repair.	\$2,000	
6.	Other costs.	-0-	
7.	Total maintenance costs (Line 1 + 2 + 3 + 4 + 5 + 6).	\$ <u>22,000</u>	<u>.</u>

LANDFILLS BONDING WORKSHEET G

		Gas	Monitoring	N/A	R	eference Bource
ı.	Mon	itoring				
	a.	Number of gas monitoring well	•			
	b.	Time required to monitor well (hrs/well)				
	ç.	Contract lab technician unit labor cost (\$/hr)			-	
	đ.	Number of times gas monitoring is done during closure)g	gas or pages the same that the same to the same to the same to the same to the same to the same to the same to		
	e.	Gas monitoring cost Line 1a x Line 1b x Line 1c x L	ine 1d			
2.	Adr	ninistrative (Reporting)				
	a.	Contract lab technician time required (hrs/well)				
	٥.	Technician unit labor cost (\$/)	1 r)	NA AND PARTY.		alporto en internacioni della
	c.	Technician cost Line 1a x line 1d x Line 2a x Line 2b				
	d.	Clerical time required (hrs/we	an) 🚅	#		
	e,	Clerical unit labor cost (\$/hr)				
	f.	Clerical cost Line 1s x Line 1d x Line 2d x	Line 2e	-		
	g.	Administrative subtotal Line 2c + Line 2f				
3,	Ma	intenance of Gas Collection Syst	iem			
	a.	Maintenance time required (h	rs)	- January Albania		
	b.	Unit labor cost (\$/hr)				
	c.	Maintenance cost Line 3a x Line 3b		**************************************		
4.	Ģa Li	s Monitoring total ne 1e + Line 2g + Line 3c				

LANDFILLS BONDING WORKSHEET F SUMMARY OF COSTS

1.	Total from Line 5, Worksheet A	-0-
2.	Total from Line 10, Worksheet B	-0-
3.	Total from Line 10, Worksheet C lop and final cover	1,236.807
4.	Total from Line 12, Worksheet D Rengelation fliction	
5.	Total from Line 16, Worksheet E & Wonting	135,000
6.	Total from Line 7, Worksheet F Maintenance cent	22.000
7.	Total from Line 4, Worksheet G	-0- :
8.	Total Cost for Bonding (Line 1 + 2 + 3 + 4 + 5 + 6 + 7)	\$ 1,416.931

Leachate collected at the B-1, B-2 and B-3 landfills will flow to the Harrisburg Advanced Wastewater Treatment Facility. Samples collected from the existing B-2 site show no treatment is required for discharge to the Harrisburg Advanced Wastewater Treatment Facility. B-1 leachate is not pumped, but flows by gravity.

LEACHATE MANAGEMENT

BONDING WORKSHEET A

Reference Source PUMPED TOTAL Leachate Collection 1. Leachate volume collected during 820,939 1,145,687 closure (gal) Time required for pumping (hrs) ante Line 1a - 8000 = 102.6 (round up to nearest integer) Means Site Work \$35.50 Costa Data 1990 Pumping unit cost (\$/hr) +0-Pump re ist cost, optional (\$/hr) đ. Pumping cost (\$) e. \$3.656.50 Line 1b x (Line le + Line 1d) On-Site Treatment of Leachate 2. Quantity of leachate to be a. N/A treated (gal) Chemicals required for treatment b. (lb/gal leachate or gal/gal -0leachate) Chemical unit cost c. N/A (\$/16 or \$/ga)) Chemical costs (\$) d. -0-Line 2a x Line 2b x Line 2c Electricity required for treatment e. -0-(kwh/gal leachate/run-off) Electricity unit cost (\$/kwh) N/A ſ. Electricity cost (\$) g. Line 2a x Line 2e x Line 2f -0-Water required for treatment ħ. -0-(gal/gal leachate/run-off) -0-Water unit cost (\$/1000 gal) i. Water cost (\$) j. [(Line 2a x Line 2h) + 1000] x

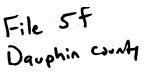
Line 2i

-0-

		Reference
k.	Fue) required for treatment (MMBtu/gal leachate/run-off)	0-
1.	Fuel unit cost (\$MMBtu)	N/A
m.	Fuel cost (\$) Line 2a x Line 2k x Line 21	0
Π,	Labor required for treatment (hrs/gailon leachate)	-0-
9,	Process operator unit labor cost (\$/hr)	N/A
p.	Labor cost (\$) Line 2a x Line 2n x Line 2o	-0-
q.	On-site treatment cost (\$) Line 2d + Line 2g + line 2j + Line 2m + Line 2p	-0-
r.	Residue generated from treatment (gal)	-0-
Tre	sted Leschate Discharge to Sewer	
3.	Quantity discharged (gal)	1,145,687
ъ.	Sewer discharge unit cost (\$/1000 gal)	\$1,665/1000 gallons
c.	Sewer discharge cost (\$) (Line Jar 1000) x Line 3b	₫ <u>1.907.5</u> 7
10 1T	f-site Management of Leachate and/or eatment Residue	
a.	Amount to be managed off-site (tons)	-0-
ь.	Truck capacity (tons)	N/A
c.	Number of loads Line 4a - Line 4b (round up to nearest integer)	0-
d.	One-way distance (mi/load)	N/A
,e.	Transportation unit cost (\$/mi)	N/A
f.	Transportation cost (\$) Line 4c x Line 4d x Line 4e	0-

*

				- • -	ference
		Off-site management unit cost (\$/ton)	<u> N/A</u>	·	Source
		Off-site management cost (\$) Line 4a x Line 4g	0		
	i.	Off-site management subtotel (\$) Line 4f + Line 4h		0	
5.	Leach	nate Collection System Maintenance (if applicable)		
	a.	Maintenance time required (hrs)	0		
	b.	Unit labor cost (\$/hr)	N/A	-	
	e.	Maintenance labor cost (\$) Line 5a x Line 5b	-0-		
	d.	Number of pumps needing replaceme	nt <u>-0-</u>		
	e,	Pump unit cost (\$/pump)	N/A	=	
	f.	Pump cost (\$) Line 5d x Line 5e	0		
	g.	Total maintenance cost (\$) Line 5c + Line Sf		0-	
6.	Leak	Detection System Maintenance (If a	pplicable) N/A		
	8.	Maintenance time required (hrs)	0		
	ь.	Unit labor cost (\$/hr)	N/A		
	c.	Maintenance labor cost (\$) Line 6a x Line 6b	-0-		
	d.	Number of pumps needing replacem	ent0_		
	ė.	Pump unit cost (\$/pump)	N/A		
	f.	Pump cost (\$) Line 6d x Line 6e	0-		
	g.	Total maintenance cost (\$) Line 6c + Line 6f	į	-0-	
7.	Lin	ichate Management total (\$) e 1e + Line 2q + Line 3c + Line 4i + e 5g + Line 6g	3656.50 1907.57 4564.07	\$ <u>5,564.07</u>	
		2	.3		





Pennsylvania Department of Environmental Protection

909 Elmerton Avenue Harrisburg, PA 17110-8200 January 23, 2004

Office: (717) 705-4950 Fax: (717) 705-4930

Southcentral Regional Office

NOTICE OF VIOLATION

CERTIFIED MAIL NO. 7002 2030 0007 9412 3604

John Lukens
Harrisburg Materials, Energy, Recycling, and Recovery Facility
The Harrisburg Authority
1670 North 19th Street
Harrisburg, PA 17104

Re:

Noncompliance Municipal Waste Activity

Disposal Area B Permit No. 100945

City of Harrisburg, Dauphin County

Dear Mr. Lukens:

As the result of a routine monthly inspection at the Harrisburg Materials, Energy, Recycling, and Recovery Facility it has been determined that the Harrisburg Materials, Energy, Recycling, and Recovery Facility is in violation of the Solid Waste Management Act of the Commonwealth of Pennsylvania (SWMA), Act of July 7, 1980, P.L. 380, No. 97, 35 P.S. Section 6018.101 et seq., and the rules and regulations of the Department of Environmental Protection (Department), as follows:

- 1. The Harrisburg Materials, Energy, Recycling, and Recovery Facility has allowed leachate to seep from Disposal Area B and be released to the air, water, or soil of the Commonwealth which could threaten public health or safety, public welfare or the environment in violation of 25 PA Code 273.301.
- 2. The Harrisburg Materials, Energy, Recycling, and Recovery Facility has allowed leachate to seep from Disposal Area B causing a nonpoint source discharge of



pollution to the surface waters of the Commonwealth in violation of 25 PA Code 273.241.

- 3. The Harrisburg Materials, Energy, Recycling, and Recovery Facility has failed to minimize and control conditions harmful to the environment or public health, or which create safety hazards, odors, dirt, noise, unsightliness and other public nuisances through the leachate seep in Disposal Area B in violation of 25 PA Code 273.218(c).
- 4. The Harrisburg Materials, Energy, Recycling, and Recovery Facility has deposited, or permitted the depositing, of solid waste onto the surface of the ground or underground or into the waters of the Commonwealth through the leachate seep in Disposal Area B in violation of the SWMA 6018.610 (1).
- 5. The aforementioned actions and conduct constitute unlawful conduct pursuant to Sections 6018.501(a), and 6018.610 (9) of the Solid Waste Management Act, and subjects the Harrisburg Materials, Energy, Recycling, and Recovery Facility to civil penalty liability pursuant to Section 605 of the SWMA.

In order to achieve compliance with the Department's Regulations and the SWMA, implementation of the following procedure(s) is recommended:

- 1. Prepare a written plan for the cessation of the leachate seep. Submit the plan to the Department within 7 days of receiving this Notice of Violation.
- 2. Within 7 days, contact this office to make arrangements for the purpose of resolving these violations and discussing appropriate penalties.

This Notice of Violation is neither an order nor any other final action of the Department. It neither imposes nor waives any enforcement action available to the Department under any of its statutes. If the Department determines that an enforcement action is appropriate, you will be notified of the action.

If you have any questions concerning this matter, please call me at 717-705-4950.

Sincerely,

Joseph M Mattucci
Solid Waste Specialist
Waste Management Program

organ mmattais

BUREAU OF SOLID WASTE MANAGEMENT One Ararat Boulevard Harriaburg, Pennsylvania 17110 (717) 657-4588

JUL 1 1985

Mr. Charles J. King
Department of Incineration & Steam Generation
1670 South 19th Street
Harrisburg, PA 17014

Re: Module 1 - Permit Modification
Harrisburg Steam Generating Facility
Permit No. 100758

Control Time & Michigan
Banbury Waste Oil Sludge

Dear Mr. King:

I am pleased to enclose a Permit Modification approving incidenation of a previously unpermitted residual waste. It is issued in accordance with the Pennsylvania Solid Waste Management Act, Act 97.

Compliance with the limitations and stipulations that have been set forth on your modification is mandatory. You have the right to appeal any limitation or stipulation as stated on your modification.

This action of the Department may be appealable to the Environmental Rearing Board, Third Floor, 221 North Second Street, Harrisburg, PA 17101, (717-787-3483) by any aggrieved person pursuant to Section 1921-A of the Administrative Code of 1929, 71 P.S. Section 510-21; and the Administrative Agency Law, 2 Pa. C.S. Chapter 5A. Appeals must be filed with the Environmental Hearing Board within thirty (30) days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the regulations governing practice and precedure before the Board may be obtained from the Board. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

If you have any questions concerning the enclosed modification and/or the requirements set forth by the Pennsylvania Solid Waste Management Act, please call me at the above number.

Sincerely,

Michael R. Steiner Regional Solid Waste Manager Harrisburg Regional Office

Enclosure

BUREAU OF SOLID WASTE MANAGEMENT One Ararat Boulevard Harrisburg, Pennsylvania 17110 (717) 657-4588

JUL 1 1985

Mr. Charles J. King
Department of Incineration & Steam Generation
1670 South 19th Street
Harrisburg, PA 17014

Re: Module 1 - Permit Modification
Harrisburg Steam Generating Facility
Permit No. 100758
Carlisle Tire & Rubber Company
Banbury Waste Oil Sludge

Dear Mr. King:

I am pleased to enclose a Permit Modification approving incineration of a previously unpermitted residual waste. It is issued in accordance with the Pennsylvania Solid Waste Management Act, Act 97.

Compliance with the limitations and stipulations that have been set forth on your modification is mandatory. You have the right to appeal any limitation or stipulation as stated on your modification.

This action of the Department may be appealable to the Environmental Hearing Board, Third Floor, 221 North Second Street, Harrisburg, PA 17101, (717-787-3483) by any aggrieved person pursuant to Section 1921-A of the Administrative Code of 1929, 71 P.S. Section 510-21; and the Administrative Agency Law, 2 Pa. C.S. Chapter 5A. Appeals must be filed with the Environmental Hearing Board within thirty (30) days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the regulations governing practice and procedure before the Board may be obtained from the Board. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

If you have any questions concerning the enclosed modification and/or the requirements set forth by the Pennsylvania Solid Waste Management Act, please call me at the above number.

Sincerely,

Michael R. Steiner Regional Solid Waste Manager Harrisburg Regional Office BUREAU OF SOLID WASTE MANAGEMENT
One Ararat Boulevard
Harrisburg, Pennsylvania 17110
(717) 657-4588
JUL. 1 1985

Mr. Charles J. King, Jr., Director Department of Incineration & Steam Generation 1670 South 19th Street Harrisburg, PA 17104

Re: Module 1 - Permit Modification
Harrisburg Steam Generating Facility
Permit No. 100758
Penm Dye & Finishing Company Sludge

Dear Mr. King:

I am pleased to enclose a Permit Modification approving incineration of a previously unpermitted residual waste. It is issued in accordance with the Pennsylvania Solid Waste Management Act, Act 97.

Compliance with the limitations and stipulations that have been set forth on your modification is mandatory. You have the right to appeal any limitation or stipulation as stated on your modification.

This action of the Department may be appealable to the Environmental Hearing Board, Third Floor, 221 North Second Street, Harrisburg, PA 17101, (717-787-3483) by any aggrieved person pursuant to Section 1921-A of the Administrative Code of 1929, 71 P.S. Section 510-21; and the Administrative Agency Law, 2 Pa. C.S. Chapter 5A. Appeals must be filed with the Environmental Hearing Board within thirty (30) days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the regulations governing practice and procedure before the Board may be obtained from the Board. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

If you have any questions concerning the enclosed modification and/or the requirements set forth by the Pennsylvania Solid Waste Management Act, please call me at the above number.

Sincerely,

Michael R. Steiner Regional Solid Waste Manager Harrisburg Regional Office ER-SWM-38: 5/82

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF SOLID WASTE MANAGEMENT

FORM NO. 13-A

MODIFICATION TO SOLID WASTE DISPOSAL AND/OR PROCESSING PERMIT

issued on (date original permit was issued)
City of Harrisburg
1670 South 19th Street
Harrisburg, PA 17104
fied as follows:
e Harrisburg Steam Generating Facility is hereby authorized to accept for ration industrial (textile dyeing) wastewater treatment plant residue characteristics similar to the residue from Penn Dye & Finishing Company, as described in the Module 1 submission to the Department received in two on December 12, 1984 and February 1, 1985. This authorization is subject following conditions:
Nothing herein shall be construed to supercede, amend or authorize violation of the provisions of any valid and applicable local law, ordinance, or regulation, provided that said local law, ordinance or regulation is not preempted by the Pennsylvania Solid Waste Management Act, the Act of July 7, 1980, Act 97, 35 P.S. 6018.101, et seq.
The maximum daily amount of sludge (including any previously approved sewage sludges) accepted at the facility shall not exceed 100 tons on an "as is" basis. Accumulation of sludge on-site at any time (including any previously approved sewage sludges) shall not exceed 100 tons.
The sludge shall contain at least 15% solids. A representative of the facility will obtain a grab sample from each load of sludge. The sample will be analyzed for percent solids prior to acceptance of the sludge at the facility. A record of these results will be kept on-site and will be available for inspection by the Department.
on shall be attached to the existing Selid Waste Permit described above and shall become effective on (date)

- 4. The sludge shall have substantially the same chemical and physical quality as that described in the Module 1 submissions of December 12, 1984 and February 1, 1985.
- 5. The sludge shall be mixed with municipal refuse in the pit of the tipping floor only.
- 6. Any sludge which is to be stored on-site shall be stored only in tanks or containers approved by the Department. Under no circumstances will sludge be stored or placed in any residue pit.
- 7. The sludge shall not contain or be mixed with any other unpermitted residual waste.

P	age	2	of	2
-	age	~	0.1	_

BUREAU OF SOLID WASTE MANAGEMENT One Ararat Boulevard Harrisburg, Pennsylvania 17110 (717) 657-4588 FEB 26 1985 Mr. Charles J. King Dept. of Incineration & Steam Generation 1670 South 19th Street Harrisburg, PA 17014 Permit No. 100758 Dear Mr. King: the Pennsylvania Solid Waste Management Act, Act 97. limitation or stipulation as stated on your modification.

Re: Module 1 - Permit Modification Harrisburg Steam Generating Facility Penn Dye & Finishing Company (Textile Lint)

I am pleased to enclose a Permit Modification approving incineration of a previously unpermitted residual waste. It is issued in accordance with

Compliance with the limitations and stipulations that have been set forth on your modification is mandatory. You have the right to appeal any

This action of the Department may be appealable to the Environmental Hearing Board, Third Floor, 221 North Second Street, Harrisburg, PA 17101, (717-787-3483) by any aggrieved person pursuant to Section 1921-A of the Administrative Code of 1929, 71 P.S. Section 510-21; and the Administrative Agency Law, 2 Pa. C.S. Chapter 5A. Appeals must be filed with the Environmental Hearing Board within thirty (30) days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the regulations governing practice and procedure before the Board may be obtained from the Board. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

If you have any questions concerning the enclosed modification and/or the requirements set forth by the Pennsylvania Solid Waste Management Act, please call me at the above number.

Sincerely,

Edward R. Simmons Regional Solid Waste Manager Harrisburg Regional Office

Enclosure

ER-SWM-38: 5/82

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF SOLID WASTE MANAGEMENT

FORM NO. 13-A

MODIFICATION TO SOLID WASTE DISPOSAL AND/OR PROCESSING PERMIT

(permittee.)_	00758issued on (date original permit was issued)July 13, 1972
(address)	1670 South 19th Street
(auuress/	Harrisburg, PA 17104
is hereby mod	fied as follows:
for inci the wast submissi	Harrisburg Steam Generating Facility is hereby authorized to accept neration synthetic textile lint having characteristics similar to e from Penn Dye & Finishing Company, Inc. as described in the Module 1 on to the Department dated November 9, 1984. This authorization is to the following conditions:
	Nothing herein shall be construed to supercede, amend or authorize violation of the provisions of any valid and applicable local law, ordinance, or regulation, provided that said local law, ordinance or regulation is not preempted by the Pennsylvania Solid Waste Management Act, the Act of July 7, 1980, Act 97, 35 P.S. 6018.101, et seq.
	The waste shall have substantially the same chemical and physical quality as that described in the Module 1 submission dated November 9, 1984.
	The waste shall be mixed with municipal refuse in the pit of the tipping floor immediately upon arrival at the site.
	Under no circumstances will the waste be stored or placed in any residual pit.
	The waste shall be handled in such a way to prevent dusting at the site.
	The waste shall not contain or be mixed with any other unpermitted residual waste.
	,
This modification part thereof o	on shall be attached to the existing Solid Waste Permit described above and shall become feetive on (date)FEB. 2 6 1985
/	$SII_{2} \cap I$.

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF SOLID WASTE MANAGEMENT

DER SOLID WASTE MANAGEMENT

Date Prepared: •

12/11/84

APPLICATION FOR PERMIT FOR SOLID WASTE DISPOSAL 1984

	and/or PROCESSING F.
DEPARTMENT USE ONLY ID #	Form No. 1
	PHASE NO. 1

HARRISBURG REGION

1. Applicant (Name and Address) City of Harrisburg Department of Incineration and Steam Generation 1670 South 19th Street Harrisburg, PA 17104		Application for: New Facility Permit Modification Module 1 Waste Approval Additional Acreage Design/Operational Change New Permittee/Operator	⊠ □ □
Telephone Number: 236-5361		,	
3. Property Owner(s) (Name and Address) Same as Above		1670 South 19th Street	
Telephone Number:	County	Dauphin	
5. U.S.G.S. Map Location of Facility 7.5' Map NameSteelton Map NumberAMS 5664 III NE-Sreies V83	1	6. Type of Operation: Mass Burning Incinerator	•
Center of Facility: LATITUDE		7. General Information: N/A Number of New Acres Proposed for P / / / / / / / / Total Acres of the Property / / / / / / / /	'ermit
8. Documents Prepared By: (Name and Address) Brinjac, Kambic & Associates, Inc. 910 North Second Street Harrisburg, PA 17102 Telephone Number: (717) 233-45 9. AFFIDAVIT: COMMONWEALTH/STATE OF SS: COUNTY OF SS: COUNTY OF Security and Subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to before me this second subscribed to be second subscribed to be se	02 ***	PRINT OR TYPE Name to be Signed: Date: I, Charles J. King, Jr. duly sworn according to law, depose an applicant) or (am an officer or official of that the documents and statements sub application are true and correct to the ledge and belief. Signature Director	nd say that I (am the of the applicant) and mitted as part of this
Partitioner, Par Desphin County			



Pennsylvania Department of Environmental Protection

OFFICE OF CHIEF COUNSEL

909 Elmerton Avenue Harrisburg, Pennsylvania 17110-8200 April 21, 2008

Southcentral Regional Office of Chief Counsel

TELEPHONE: (717) 787-8790

FAX: (717) 772-2400

VIA HAND DELIVERY

Ms. Pamela E. Adens Administrative Assistant The Harrisburg Authority One Keystone Plaza, Suite 104 Front and Market Streets Harrisburg, PA 17101

RE: Trust Agreement, JP Morgan Chase Bank

Dear Ms. Adens:

Please find enclosed the Written Agreement Terminating the September 20, 1994, Trust Agreement, the Written Agreement Concerning Letter of Credit, and the 4/17/08 Trust Agreement letter as executed by the Department.

The only aspect of the executed documents that may require an explanation is my note on the letter. As you can see from my attached March 21, 2008, email to Richard Michaels, I explained to him that I would be placing this note on the letter, so it should not be a problem.

If you have any questions, please call.



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File Dauphin County, E Legal?
Harrisburg Resource Record Facility
SE 1170 S 15 The file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of the file of

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Bohan said OK Ju Hbg. Inc. - 5th.

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10/29 Shld ke

Hey Mad Ener for a Recordance 100992.

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Very truly yours,

James F. Bohan

Assistant Counsel

James F. Bohan

Enclosures (3)

Bohan, James F

From:

Bohan, James F

Sent:

Friday, March 21, 2008 5:56 PM

To:

'RMichael@eckertseamans.com'

Subject:

RE: Harrisburg Authority - Letter of Credit Agreement/Termination Agreement







TerminationAgrmt-FCommerceAgrmt-Fiim4511_20080321_ inal.doc (51... nal.doc (52 KB... 172422.pdf (31...

Dick:

I got your message this morning. Thank you.

One other issue came up this afternoon. My client is uncomfortable signing the Written Agreement Terminating the September 20, 1994 Trust Agreement in the form that document was delivered to the Department. Page 3 of the document had the original date whited-out at paragraph A, and another handwritten in. Furthermore, it was not clear to us that the Authority had in fact requested the wire transfer on or before March 5, as represented at Paragraph A, given that the letter addressed to James Foley at Morgan Chase, which appears to contain the request for the wire transfer, is dated March 14.

I've attached a pdf of the relevant page of the document for your convenience, as well as versions of both documents in Word, so that it will be easy to generate copies of the documents with the correct dates.

Please call if you have any questions.

Thanks for your help.

Jim Bohan Assistant Counsel Department of Environmental Protection 909 Elmerton Avenue Harrisburg, PA 17110-8200 Phone: 717-787-8790

Fax: 717-772-2400

----Original Message----

From: Bohan, James F

Sent: Thursday, March 20, 2008 3:07 PM

To: 'RMichael@eckertseamans.com' Cc: 'Nissly, Nedric'; Socash, Stephen

Subject: Harrisburg Authority - Letter of Credit Agreement/Termination Agreement

Richard,

Yesterday, Michelle Torres of the Harrisburg Authority sent my client two documents for signature: (1) a letter addressed to James Foley at Morgan Chase; and (2) a Written Agreement Terminating the September 20, 1994, Trust Agreement (Written Agreement Terminating the Trust Agreement). The Department has two issues with what the Authority has submitted.

With respect to the letter to Foley, that letter requests that the 9/20/94 trust agreement be terminated, and includes a signature block indicating that the termination has been "Accepted and Approved" by the Department representative signing the letter. However, the letter does not refer in any way to the Written Agreement Terminating the September Trust Agreement. Nevertheless, I believe our signatory on the letter can adequately address this issue by noting when he signs that the letter is Accepted and Approved "subject to the terms of the enclosed Written Agreement Terminating the September 20, 1994 Trust

Agreement."

The bigger issue is the absence of the "Written Agreement Concerning Letter of Credit" between Commerce, the Authority, and DEP (see the file attached entitled CommerceAgrmt-Final.pdf). As you probably remember, we negotiated the terms of this agreement during our communications in January. I am afraid that the Department cannot agree to terminate the trust unless the Department first has in hand either the executed version of this agreement or a letter of credit for the full amount required. (My guess, based on Mr. Nissly's email below, is that Commerce and the Authority executed the Written Agreement Concerning Letter of Credit but simply forgot to include that document with the documents sent to DEP.)

Please call if you have any questions. Thanks.

Jim Bohan
Assistant Counsel
Department of Environmental Protection
909 Elmerton Avenue
Harrisburg, PA 17110-8200
Phone: 717-787-8790
Fax: 717-772-2400

----Original Message----

From: Bohan, James F

Sent: Monday, January 14, 2008 9:55 AM

To: 'Nissly, Nedric'; RMichael@eckertseamans.com

Subject: RE: Harrisburg Authority - Letter of Credit Agreement/Termination Agreement

Here they are.

Jim

----Original Message----

From: Nissly, Nedric [mailto:NNissly@mwn.com]

Sent: Monday, January 14, 2008 9:42 AM

To: Bohan, James F; RMichael@eckertseamans.com Cc: Jamie M Folks; Colleen.Ensinger@commercepc.com

Subject: RE: Harrisburg Authority - Letter of Credit Agreement/Termination Agreement

Thanks. I'll get them to where the docs. are being signed.

Ned

----Original Message----

From: Bohan, James F [mailto:jbohan@state.pa.us]

Sent: Monday, January 14, 2008 9:40 AM

To: Nissly, Nedric; Bohan, James F; RMichael@eckertseamans.com

Cc: Jamie M Folks; Colleen.Ensinger@commercepc.com

Subject: RE: Harrisburg Authority - Letter of Credit Agreement/Termination Agreement

I can make the revisions Richard suggested to both documents and send them to you.

----Original Message----

From: Nissly, Nedric [mailto:NNissly@mwn.com]

Sent: Monday, January 14, 2008 9:36 AM

To: Bohan, James F; RMichael@eckertseamans.com Cc: Jamie M Folks; Colleen.Ensinger@commercepc.com

Subject: RE: Harrisburg Authority - Letter of Credit Agreement/Termination Agreement

Jim-

Can you email me final execution copies of the two agreements now? The Authority members

signing the docs, now and they apparently don't have them.

Thank you.

Ned

Nedric L. Nissly, Esquire Financial Services Group McNees Wallace & Nurick LLC 100 Pine Street P.O. Box 1166 Harrisburg, PA 17108-1166 Direct Dial: 717-237-5357 Direct Fax: 717-260-1731 Mobile: 717-503-3900

nnissly@mwn.com

NOTICE: The foregoing message may be protected by the attorney-client privilege. If you believe that it has been sent to you in error, do not read it. Please reply to the sender that you have received the message in error, then delete it. Thank you.

----Original Message----

From: Bohan, James F [mailto:jbohan@state.pa.us]

Sent: Monday, January 14, 2008 9:08 AM

To: RMichael@eckertseamans.com; Nissly, Nedric

Subject: RE: Harrisburg Authority - Letter of Credit Agreement

The Authority's proposed revisions to the Written Agreement Concerning Letter of Credit are also acceptable to the Department.

----Original Message----

From: RMichael@eckertseamans.com [mailto:RMichael@eckertseamans.com]

Sent: Monday, January 14, 2008 8:51 AM To: jbohan@state.pa.us; nnissly@mwn.com

Cc: thamtorres@aol.com

Subject: Harrisburg Authority - Letter of Credit Agreement

Good morning, Jim and Ned:

Over the weekend I reviewed the revised draft of the Written Agreement Concerning Letter of Credit, and offer the following minor comments. Please contact me with any questions or concerns regarding the comments. Thank you.

(See attached file: SFX560E.pdf)

Richard D. Michael, Esquire ECKERT SEAMANS CHERIN & MELLOTT, LLC 213 Market Street, Eighth Floor P.O. Box 1248

Harrisburg, PA 17108-1248
Telephone: 717.237.6036
Facsimile: 717.237.6019

e-mail: rmichael@eckertseamans.com

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Neither this information block, the typed name of the sender, nor anything else in this message is intended to constitute an electronic signature unless a specific statement to the contrary is included in this message.



The Harrisburg Authority

Letter of Transmittal

One Keystone Plaza, Suite 104 Front and Market Streets Harrisburg, PA 17101

Phone: 717-232-3777 Fax: 717-232-8590

To: Jim Bohan, Esquire

Department of Environmental Protection

909 Elmerton Avenue, 3rd Floor

Harrisburg, PA 17112

Date: April 17, 2008

Re: Trust Agreement - JP Morgan Chase Bank



We are sending the following items:

Date	Description
04/17/08	Original Trust Agreement Letter dated September 20, 1994 (THA and PNC) Attn: James Foley @ JP Morgan Chase Bank
	Written Agreement Terminating the September 20, 1994 Trust Agreement
	Written Agreement Concerning Letter of Credit
	·

				
Thes	e are transmitted as chec	ked belo	ow:	
	Approved Approved and Noted Revise and Resubmit Not Approved		As Requested For Your Use For Approval For Your Files	For Your Information For Review & Comment For Repairs For Signature and Return

Remarks: Please contact Michele T.V. Torres, J.D. should you have any questions.

SIGNED: Yanula & Galens
Pamela E. Adens,
Administrative Assistant

THE HARRISBURG AUTHORITY

ONE KEYSTONE PLAZA, SUITE 104 FRONT AND MARKET STREETS HARRISBURG, PA 17101 (717) 232-3777

FAX: (717) 232-8590

April 17, 2008

Mr. James Foley, Assistant Vice President JP Morgan Chase Bank, N.A. 4 New York Plaza, 21st Floor New York, NY 10004

In re: Trust Agreement dated September 20, 1994 between The Harrisburg Authority and PNC Bank, N.A., Trustee (now JP Morgan Chase Bank, N.A., as Successor Trustee)

Dear Mr. Foley:

In accordance with the terms of Section "Irrevocability and Termination" of the above-referenced agreement, please be advised that The Harrisburg Authority hereby requests that the above-referenced Trust Agreement with JP Morgan Chase Bank, N.A., Trustee (successor to PNC Bank, N.A., as trustee) be terminated.

Upon termination of the Trust Agreement, The Harrisburg Authority hereby requests that JP Morgan Chase Bank, N.A. transfer the funds currently held in the Account E-20316 titled 1109 Trust Closure to:

Wire Instructions to Commerce Bank:

Sharon Ray, Assistant
Commerce Bank/Harrisburg, N.A.
3801 Paxton Street
Harrisburg, PA 17111
ABA #031301846
Account No. 538034000
Account Name: RRF 1109 Trust Closure

Mr. James Foley, Assistant Vice President JP Morgan Chase Bank, N.A. April 17, 2008 Page 2

I understand that DER (now known as the Department of Environmental Protection or "DEP") also needs to sign off on the termination of this Trust Agreement. If you are in agreement with the terms of the Authority's request, we request that you, as the authorized representative from JP Morgan Chase Bank, sign off at the bottom of this letter therefore allowing The Harrisburg Authority to authorize JP Morgan Chase Bank to terminate the September 20, 1994 Trust Agreement. The Harrisburg Authority is simultaneously mailing arrangements for an authorized representative of DEP to execute the acceptance and approval.

In the event you have any questions, please do not hesitate to contact me.

Michele J. V. Jones

Michele T.V. Torres, J.D. Executive Director

Sincerely yours,

ACCEPTED AND APPROVEDSubject to
the terms of the enclosed Written Trust
PA Department of Environmental Protection
4/18/08 Agreement Terminating the September 20,
1994 Trust.

By: Stephen Sicash

Title: Program Manager

Colleen Ensinger, Commerce Bank

Audrey Hanna, Commerce Bank

Carol P. Cocheres, Esq. THA Board Members

MTVT: kmm

cc:

ACCEPTED AND APPROVED:

JP Morgan Chase Bank, N.A.

Name:

James Foley

Title: Assistant Vice President

Dated:

Dated: 4/21/06

Pa DEP Assistant Counsel

April 18, 2008 Karen SFiles\RRF\FoleyLtr.doc

WRITTEN AGREEMENT TERMINATING THE SEPTEMBER 20, 1994, TRUST AGREEMENT

This Written Agreement Terminating the September 20, 1994, Trust
Agreement ("Termination Agreement") is entered into by and among The
Harrisburg Authority ("Authority"), a municipal authority created by the City of
Harrisburg pursuant to the Pennsylvania Authorities Act, 53 Pa. C.S.A. § 5601 et
seq., Act 22 of 2001, effective June 19, 2001, which codifies and amends the
Municipal Authorities Act of 1945, as amended and supplemented, located at
One Keystone Plaza, Suite 104, Front & Market Streets, Harrisburg, PA 17101; the
Commonwealth of Pennsylvania, Department of Environmental Protection
("DEP"); and JP Morgan Chase Bank, N.A. ("Morgan Chase" or "Trustee").

WHEREAS, Section 1109 of Act 101 of 1988, and DEP's Residual Waste Regulations at 25 Pa. Code Chapter 287, Subchapter E (collectively, "Act 101") require that a municipal authority operating a landfill solely for municipal waste must post a bond or establish an interest-bearing trust fund to cover the cost to complete final closure of the landfill.

WHEREAS, Authority, pursuant to the provisions of Act 101, established a trust fund on September 20, 1994, (1994 Trust Fund) for final closure of the municipal waste landfill ("Landfill") which Authority operates at the Harrisburg

Materials, Energy, Recycling, and Recovery Facility, 1670 South Nineteenth Street, Harrisburg, PA 17104.

WHEREAS, the 1994 Trust Fund is currently held at Morgan Chase, in Account E-20316, titled 1109 Trust Closure ("Morgan Chase Account No. E-20316").

WHEREAS, DEP and Authority agreed in a November 6, 2006, Consent

Order and Agreement that: (1) the 1994 Trust Fund was inadequate to cover the
cost of completing final closure of the Landfill; and (2) Authority would
supplement the amount in the 1994 Trust Fund by posting a bond or letter of
credit in the amount of \$1,422,617 by December 31, 2007.

WHEREAS, rather than posting a bond or letter of credit for \$1,422,617 in addition to the 1994 Trust Fund, Authority would prefer to terminate the 1994 Trust Fund at Morgan Chase and have Commerce Bank/Harrisburg, N.A. ("Commerce") issue a letter of credit for the full \$2,355,713.00 needed to meet the Authority's financial assurance requirements under Act 101 concerning the closure of the Landfill.

WHEREAS, the "Irrevocability and Termination" Section of the 1994 Trust
Agreement provides that the Trust Agreement may be terminated upon written
agreement of Authority, the Trustee, and the Commonwealth of Pennsylvania,
Department of Environmental Resources ("DER"); and,

WHEREAS, the Conservation and Natural Resources Act, Act of June 28, 1995, P.L. 89, 71 P.S. §§ 1340.101-1340.1103 (Conservation and Natural Resources Act), split DER into two separate agencies—DEP and the Department of Conservation and Natural Resources—with DEP regulating landfills and other waste disposal and processing facilities.

NOW, THEREFORE, in consideration of the foregoing and of the mutual promises and undertakings of the parties set forth herein, and with the intention of being legally bound hereby, the parties agree as follows:

- A. On or before March 14, 2008, Authority shall request that Morgan Chase wire transfer the funds currently held in Morgan Chase Account No. E-Shayon W(au)

 20316, to Karen A. Maydick, Executive Assistant; Commerce Bank/Harrisburg, N.A.; 3801 Paxton Street, Harrisburg, PA 17111; ABA #031301846; Account No. 538034000; Account Name: RRF 1109 Trust Closure ("Commerce Bank Account No. 538034000").
- B. Authority, DEP, and Morgan Chase agree that the September 20, 1994, Trust Agreement will be terminated effective upon the wire transfer of the funds in Morgan Chase Account No. E-20316 to Commerce Bank Account No. 538034000.

ACCEPTED AND APPROVED

ACCEPTED AND APPROVED

FOR THE HARRISBURG AUTHORITY:

FOR THE COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL PROTECTION:

1 Sam	
The William	Runel Jes
Name Chairman	Kenneth Reisinger Director Bureau of Waste Management
Milule IV. Jones Name Assistant Secretary/Treasurer	Stephen Socash Chief, Division of Municipal and Residual Waste Bureau of Waste Management
Date: <u>April 17, 2008</u>	Date: $\frac{4/21/08}{}$
ACCEPTED AND APPROVED	
FOR JP CHASE MORGAN BANK, N.A.:	
James Foley	
Vice President	
Date:	

WRITTEN AGREEMENT CONCERNING LETTER OF CREDIT

This Agreement is entered into by and between The Harrisburg Authority ("Authority"), a municipal authority created by the City of Harrisburg pursuant to the Pennsylvania Municipal Authorities Act, 53 Pa. C.S.A. § 5601 *et seq.*, Act 22 of 2001, effective June 19, 2001, which codifies and amends the Municipal Authorities Act of 1945, as amended and supplemented, located at One Keystone Plaza, Suite 104, Front & Market Streets, Harrisburg, PA 17101; the Commonwealth of Pennsylvania, Department of Environmental Protection ("the Department"); and Commerce Bank/Harrisburg, N.A. ("Commerce").

WHEREAS, Section 1109 of Act 101 of 1988, and the Department's Residual Waste Regulations at 25 Pa. Code Chapter 287, Subchapter E (collectively, "Act 101") require that a municipal authority operating a landfill solely for municipal waste must post a bond or establish an interest-bearing trust fund to cover the cost to complete final closure of the landfill.

WHEREAS, the Authority, pursuant to the provisions of Act 101, established a trust fund on September 20, 1994, (1994 Trust Fund) for final closure of the municipal waste landfill ("Landfill") the Authority operates at the Harrisburg Materials, Energy, Recycling, and Recovery Facility, 1670 South Nineteenth Street, Harrisburg, PA 17104.

WHEREAS, the 1994 Trust Fund is currently held at JP Morgan Chase Bank, N.A ("Morgan Chase") in Account E-20316, titled 1109 Trust Closure.

WHEREAS, the Department and the Authority agreed in a November 6, 2006, Consent Order and Agreement that (1) the 1994 Trust Fund was inadequate to cover the cost of completing final closure of the Landfill; and (2) the Authority would supplement the amount in the 1994 Trust Fund by posting a bond or letter of credit in the amount of \$1,422,617 by December 31, 2007.

WHEREAS, rather than posting bond or letter of credit for \$1,422,617 in addition to the 1994 Trust Fund, the Authority would prefer to terminate the 1994 Trust Fund at Morgan Chase and have Commerce issue a letter of credit for the full \$2,355,713.00 needed to meet the Authority's financial assurance requirements under Act 101 concerning the closure of the Landfill.

WHEREAS, under the terms of the Trust Agreement for the 1994 Trust Fund, the Authority requires a written agreement with the Department and Morgan Chase to terminate the Trust.

NOW, THEREFORE, in consideration of the foregoing and of the mutual promises and undertakings of the parties set forth herein, and with the intention of being legally bound hereby, the parties agree as follows:

- A. The Department agrees to enter into a "Written Agreement Terminating the September 20, 1994, Trust Agreement," a copy of which is attached hereto as Exhibit A.
- B. On or before March 14, 2008, the Authority will request a wire transfer of the funds in the 1994 Trust Fund at Morgan Chase to Commerce Account No. 538034000.
- C. Upon Commerce's receipt of the wire transfer of the funds from the 1994 Trust Fund to Commerce Account No. 538034000, Commerce shall issue a letter of credit consistent with 25 Pa. Code § 287.323 for \$2,355,713.00, to meet the Authority's financial assurance requirements under Act 101 concerning the closure of the Landfill.

ACCEPTED AND APPROVED

ACCEPTED AND APPROVED

FOR THE HARRISBURG AUTHORITY:

FOR THE COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL PROTECTION:

L. D. M.	Territh Sein
Name	Kenneth Reisinger
Chairman	Director
	Bureau of Waste Management
Michele I. V. Lones	Jufm Josh
Name	Stephen Socash
Assistant Secretary/Treasurer	Chief, Division of Municipal and

Bureau of Waste Management

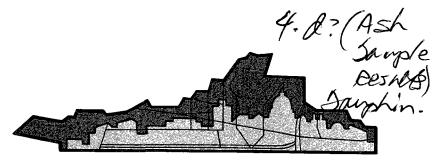
Residual Waste

ACCEPTED AND APPROVED FOR COMMERCE BANK/HARRISBURG, N.A.:

Date: April 17, 2008

Colleen R. Ensinger,
Vice President
Senior Commercial Loan Officer

Date: 4008



The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

"HARRISBURG MATERIALS, ENERGY, RECYCLING AND RECOVERY FACILITY" # 100 99 2

August 18, 2003

Mr. John Spang
Environmental Chemist
Southcentral Region
Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Waste Management
909 Elmerton Avenue
Harrisburg, PA 17110-8200

RE: Residue Disposal Area B June 2003 Ash Quality

Dear Mr. Spang:

Enclosed, please find copies of the certified laboratory results from the analyses performed by Analytical Laboratories of Skelly and Loy, Inc. using the SW-846, Method 1311, T.C.L.P. procedure for the monthly composite samples for Lead and Cadmium representing the month of June 2003.

As you can see, none of analytes for the month of June 2003 tested above the respective regulatory thresholds. However, using the most recent data points for these respective analytes, I have evaluated the historical data to determine whether our ash exhibits the toxicity characteristic for the Lead and/or Cadmium analytes (i.e. maintaining a sample size of 26, respectively for the month of June 2003 per EPA's <u>Guidance for the Sampling and Analysis of Municipal Waste Combustion Ash for the Toxicity Characteristic</u> (EPA Publication No. EPA530-R-95-036 of June 1995).

Using the "Excel" computer program and incorporating the approved statistical formulas provided in EPA530-R-95-036, I developed the enclosed "Evaluation of Analytical Data for Lead Analyte" and "Evaluation of Analytical Data for Cadmium Analyte" for the respective June 2003 sample results. Based on these statistical evaluations, the Lead is less than the regulatory limit of 5 mg/l and Cadmium is less than the regulatory limit of 1.0 mg/l. Therefore, the toxicity characteristic for our ash remains non-hazardous.

Mr. John Spang August 18, 2003 Page Two

If you have any questions and/or comments regarding the aforementioned, please do not hesitate to contact me at (717) 255-7338.

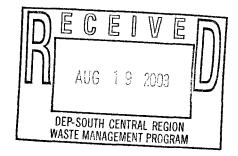
John A. Lukens

Director

Sincerely,

JAL/jal enclosures Copy:

Thomas J. Mealy, Executive Director – THA Edward Egenrieder, Water Quality Technician Robert Benvin - PaDEP File





www.analyticallab.com NELAP Accredited PA 22-293 NJ PA010 NY 11759



34 Dogwood Lane - Middletown, PA 17057 Phone: 717-944-5541 Fax: 717-944-1430

Certificate of Analysis

August 13, 2003

Mr. Ed Egenreider City of Harrisburg 1670 South 19th Street Harrisburg, PA 17104

Lab ID #: **240816001**

Received: 07/23/03 17:15

Discard: 08/27/03

Page: 1 Of 1

Project Name: Routine Sample Submission

PO#: 02000731

Sample ID: 03-30 Matrix: Solid

Date Collected: 07/21/03 00:00 Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	ву
TCLP LEACHATE							
Extraction Fluid Used	1			SW846 1311	07/24/03 12:30	07/24/03	NCG
Final pH	6.8	pH_Units		SW846 1311	07/24/03 12:30	07/24/03	NCG
Preliminary pH after DI water	9.4	pH_Units		SW846 1311	07/24/03 12:30	07/24/03	NCG
Preliminary pH after HCl	3.0	pH_Units		SW846 1311	07/24/03 12:30	07/24/03	NCG
TCLP METALS							
Cadmium, Total	0.701	mg/L	0.110	SW846 6010B	07/28/03 21:31	07/28/03	BCK
Lead, Total	0.264	mg/L	0.110	SW846 6010B	07/28/03 21:31	07/28/03	BCK

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

Raymond J. Martrano Laboratory Manager



www.analyticallab.com
NELAP Accredited
PA 22-293
NJ PA010 NY 11759



34 Dogwood Lane - Middletown, PA 17057 Phone: 717-944-5541 Fax: 717-944-1430

Certificate of Analysis

August 13, 2003

Mr. Ed Egenreider City of Harrisburg 1670 South 19th Street Harrisburg, PA 17104 Lab ID #: **240816002**Received: 07/23/03 17:15

Discard: 08/27/03

Page: 1 Of 1

Project Name: Routine Sample Submission

PO#: 02000731

Sample ID: 03-31 Matrix: Solid

Date Collected: 07/21/03 00:00 Collected by: Collected by Customer

Analysis Parameter	Result	Units	RDL	Method	Completed	Prep Date	By
TCLP LEACHATE							
Extraction Fluid Used	1			SW846 1311	07/24/03 12:30	07/24/03	NCG
Final pH	6.6	pH_Units		SW846 1311	07/24/03 12:30	07/24/03	NCG
Preliminary pH after DI water	9.6	pH_Units		SW846 1311	07/24/03 12:30	07/24/03	NCG
Preliminary pH after HCl	3.1	pH_Units		SW846 1311	07/24/03 12:30	07/24/03	NCG
							•
TCLP METALS							
Cadmium, Total	0.577	mg/L	0.110	SW846 6010B	07/28/03 21:31	07/28/03	BCK
Lead, Total	0.170	mg/L	0.110	SW846 6010B	07/28/03 21:31	07/28/03	BCK

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

Raymond J. Martrano Laboratory Manager



34 Dogwood Lane Middletown, PA 17057 TEL: 717-944-5541 FAX: 717-944-1430

CHAIN OF CUSTODY/ **REQUEST FOR ANALYSIS**

Please print. See back of COC for directions

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COC #:

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* G=Grab: C=Composite **Matrix - S	0=Soil;	SD=So	lid; DW=D	rinking Wa	ater; WW=W	astewater;	GW=Grou	ndwater; SL	=Sludge; 0	L-Oil						N. E. E.		

EXHIBIT 1 EVALUATION OF ANALYTICAL DATA FOR LEAD ANALYTE

June 2003

	X	Vian		
Sample	Lead Analyte	Xi^2		
Date	Result			
Jul.	0.00	0.000		
Aug.	0.17	0.029		
Aug.	0.24	0.058		
Sep.	0.00	0.000		
Sep.	0.00	0.000		
3rd Oct.	0.14 0.48	0.020 0.230		
Oct.	0.48 0.18	0.032		
Nov.	0.13	0.017		
Nov.	0.14	0.020		
Dec.	0.00	0.000		
Dec.	0.00	0.000		
4th	0.11	0.012		
Jan.	0.00	0.000		
Jan. Feb.	0.00 0.00	0.000 0.000		
Feb.	0.00	0.000		
Mar.	0.00	0.000		
Mar.	0.00	0.000		
1st	0.11	0.012		
Apr.	0.00	0.000		
Apr.	0.00	0.000		
May	0.00	0.000		
May	0.00	0.000		
Jun. Jun.	0.26	0.070 0.029		
Jun.	2.13	0.528		
	2.10	0.020		
n =	26			
Mean of X	=	0.082		
Sample Var	iance	0.014		
STD. DEV.	=	0.119		
STD ERR.	=	0.023		
Confidence	Interval	0.030		
Regulatory	Threshold =	5.00		
Sample Res	sults	0.112 mg/L		

EXHIBIT 1 EVALUATION OF ANALYTICAL DATA FOR CADMIUM ANALYTE

June 2003

	X	V:40		
Camania	Cadmium	Xi^2		
Sample Date	Analyte Result			
Jul.	0.130	0.017		
Aug.	0.590	0.348		
Aug.	0.740	0.548		
Sep.	0.590	0.348		
Sep.	0.420	0.176		
3rd	0.570	0.325		
Oct.	0.670	0.449		
Oct.	0.530	0.281		
Nov.	0.560	0.314		
Nov.	0.600	0.360		
Dec.	0.165 0.178	0.027 0.032		
Dec. 4th	0.473	0.032		
Jan.	0.445	0.198		
Jan.	0.347	0.120		
Feb.	0.220	0.048		
Feb.	0.321	0.103		
Mar.	0.262	0.069		
Mar.	0.157	0.025		
1st	0.276	0.076		
Apr.	0.000	0.000		
Apr.	0.000	0.000		
May	0.000	0.000		
May	0.000	0.000		
Jun.	0.701	0.491		
Jun.	0.577	0.333		
	9.52	4.91		
n =	26			
Mean of X	=	0.366		
Sample Va	riance	0.057		
STD. DEV.	=	0.239		
STD ERR.		0.047		
Confidence	e Interval	0.060		
Regulatory	Threshold =	1.00		
Sample Re	sul ts	0.426 mg/L		

COMMONWEALTH OF PENNSYLVAN Raphia Gody DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF LAND RECYCLING AND WASTE MANAGEMENT



	INSPECTION REP	ORI COMMENT	S/A
Type of Inspection	WM Identification Number	Entry Time/Date	Exit Time/Date
Complaint		9:00 AM January 13, 2004	
Facility/Incident Name and Lo			Municipality
Harrisburg Materials, Energy, R	Recycling and Recovery Facility		City of Harrisburg
1670 North 19 th Street			County
Harrisburg, Pa 17104			Dauphin
Name, Address of Responsible	e Official	Title	
Ken Jessick	7	A 4,24,25	Services Director
111 South Front Street			
Harrisburg, PA 17101-2099			
		Telephone	Interviewed
		717-782-5710	⊠ Yes □ No
Materials, Energy, Recycling have been delivered to the Inc Incinerator at 9:00 AM Janua Incinerator was John Lukens. Evertts, Ken Jessick, and Phil OBSERVATIONS: 1. A driver tarping a transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transfer transf	inerator from Pinnacle Health S ary 13, 2004. Present for the Dep Present for the Harrisburg Hos lip Guarneschelli. The following uck full of waste, noticed what app	or). Mr. Lukens told the I ervices (Harrisburg Hospital artment were Joe Mattuce spital were Ray Herbert, Swere noted during the inspectated to be infectious wasted to an IV bag and an empurisburg Hospital.	Department infectious waste may tal). The Department visited the i and Kim Hoover. Present for the cott Gould, Chris Markley, Annoection: The driver pulled some of the city red bag in the waste. The waste
Harrisburg Hospital representat told the Department the sharp for	ives stated the sharp had come from ound in the waste is referred to as a	m the ICU section of the hos	pital. The hospital representatives
stated the "blunt" is considered 3. The waste in the transfer true	ck was dumped on the Incinerator	floor and searched for any m	ore infectious waste. The search
	gauze pads that had either dried blo		
			is waste. The rest of the trailer-load
was allowed to be disposed of a			
5. A Notice of Violation will b	e sent to Pinnacle Health Services	in a separate mailing.	
Samula Callested	Cample North	141	
Sample Collected ☐ Yes ☒ No	Sample Numbers	Analy	ses
Pictures Taken			
⊠ Yes □ No			
	1		
Inspector Name	Inspector Signature	Headquarters	Date: 01/15/2004
Joe Mattucci	۸.	S.C.R.O.	Telephone
	Joseph m mattuco		717-705-4950
Person Interviewed Name	Signature of Person Intervie		Date: 01/15/2004
Ken Jessick	Mailed	Housekeeping Ser	
		Director	717-782-5710

This document is official notification that a representative of the Department of Environmental Protection inspected the above-mentioned facility. The findings of the inspection are shown above and on any attached pages. Violations discovered as a result of this inspection are indicated. Violations may also be discovered upon examination of the results of laboratory analyses, review of pertinent documents and further investigation. Notification will be forthcoming if such violations are discovered.

BUREAU OF WASTE MANAGEMENT
Harrisburg Regional Office
One Ararat Boulevard
Harrisburg, Pennsylvania 17110
(717) 657-4588

March 26, 1990

Mr. Jay Knittel, Administrator Swatara Township 599 Eisenhower Boulevard Harrisburg, PA 17111-2397

Re: Harrisburg Steam Generating Facility
Temporary Ash Storage Area
Permit No. 100992
City of Harrisburg
Swatara Township, Dauphin County

Dear Mr. Knittel:

This letter is in response to your letter dated March 15, 1990 regarding the temporary ash storage pad.

The average height of the ash pile shall not exceed 11 feet. Ash cannot be stored for more than a period of one year and then must be removed at a rate of at least 16,000 cu. yds. per month so that the pile is eliminated within three months. This is referenced in Condition Nos. 2, 8, and 9 of the permit modification issued August 11, 1989.

If you have any other questions regarding this, please do not hesitate to contact this office.

Sincerely,

Donald E. Korzeniewski Facilities Specialist Harrisburg Regional Office

DEK:t1b

File ~

KLETT LIEBER ROONEY & SCHORLING

ATTORNEYS AT LAW

40TH FLOOR, ONE OXFORD CENTRE PITTSBURGH, PENNSYLVANIA 15219-6498 TELEPHONE (412) 392-2000

FACSIMILE (412) 392-2128

Howard J. Weln (412) 392-2160

October 19, 1990

WASTE MARAGEMENT

Michael R. Steiner Assistant Regional Director Bureau of Waste Management Harrisburg Regional Office One Ararat Boulevard Harrisburg, PA 17116 OCT 23 1990 HARRISBURG REGION

Dear Mr. Steiner:

This letter is written in response to your letter of April 20, 1990, affirming the Department's position that certain batches of ash generated by the City's resource recovery facility (the "Facility") can be characterized as hazardous under state law, and thus must be disposed of as a hazardous waste.

Based on its understanding that such letter did not represent a final action by the Department, the City has taken the opportunity to consider fully the Department's position and its impact on the City and the Facility. After careful evaluation of federal and state laws and policies, as well as present, and perhaps future, costs of complying with the Department's interpretation of the law with respect to ash generated by resource recovery facilities, the City must respectfully disagree with the Department's position.

The City believes that the ash from the Facility is exempt under law from regulation as a hazardous waste; that safe disposal should be the main focus and that safety is best served by disposal at the City's B-2 site; that the cost of disposing of the ash as a hazardous waste is exorbitant and a threat to the existence of an environmentally beneficial facility; and that the DER's characterization of the ash as hazardous is in error.

Section 3001(i) of the Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901, 6941(i) ("RCRA"), as interpreted by two recent federal cases, clearly exempts ash generated by resource recovery facilities from regulation as a hazardous waste. Environmental Defense Fund v. Wheelabrator Technologies, Inc., No. 88 Civ. 0560 (S.D.N.Y. Nov. 21, 1989), Environmental Defense Fund v. City of Chicago, 84 C 3045 (N.D.Ill. Nov. 8, 1989). The City believes that the state is bound by this interpretation as well. Section 3001(i) initially exempted household waste from regulation under Subchapter C of RCRA.

KLETT LIEBER ROONEY & SCHORLING

Michael R. Steiner Page 2 October 19, 1990

Pennsylvania adopted this exemption in the Solid Waste Management Act, 35 P.S. § 6018.10, et seq. ("SWMA"), and regulations interpreting it. 25 Pa. Code § 75.261(c)(6). Further, Pennsylvania, pursuant to Section 6926 of RCRA, developed its hazardous waste program to achieve primary authority for hazardous waste management activities within its borders. When Congress clarified that household waste was exempt from regulation as a hazardous waste by specifically acknowledging that ash generated by resource recovery facilities could qualify for this exemption, Pennsylvania, while not specifically adopting the clarification, did not reject it and so is bound by it.

Furthermore, Congress deliberately acted to verify that ash is included in the household waste exemption in accord with its policy to encourage resource recovery facilities. While a state may enact more stringent regulations than the federal government, it cannot act in conflict with clearly stated federal policy. ENSCO, Inc. v. Dumas, 807 F.2d 243 (8th Cir. 1986). By requiring the Facility to incur enormous expense, at a threat to its very existence, to dispose of its ash as a hazardous waste, the state is in direct conflict with a clear federal policy favoring resource recovery facilities. See Wheelabrator; City of Chicago.

Several bills pending before Congress concerning resource recovery facilities focus on the safe disposal of ash generated by such facilities. H.R. 2162, S. 196. The City's ash could be safely disposed of at the B-2 site. The technical specifications for the B-2 ash monofill, designed and constructed in accordance with current municipal waste regulations which went into effect in April, 1988, are more stringent than the specifications currently under consideration by Congress in the abovereferenced bills. Indeed, in nearly every technical aspect, the B-2 site is essentially the equivalent of a hazardous waste landfill under both current and proposed Pennsylvania regulations. Safety concerns will also be served by the elimination of the need to transport the ash great distances to a hazardous waste treatment or disposal facility. Based upon the above, it is the City's belief that the risk to the environment will be minimized if the City is permitted to dispose of the ash at the newly permitted and soon to be completed double-lined B-2 site.

After Congress amended RCRA in 1984 and included this clarification, the Environmental Quality Board amended its hazardous waste regulations, without rejecting the application of this exemption.

KLETT LIEBER ROONEY & SCHORLING

Michael R. Steiner Page 3 October 19, 1990

The financial impact of handling and disposing of the ash as hazardous, however, could be financially devastating to the Facility and its customers, and further, could be harmful to the environment in the long run. The economic consequences caused by substantial additional ash disposal costs, over and above what the City has expended to design and construct the B-2 site, will cause a hardship to Harrisburg, its citizens and to other customers of the Facility including the Commonwealth. In addition, the state may risk the loss of a valuable resource recovery facility which conserves landfill space by reducing the volume needed for disposal, and generates steam and electrical energy as well.

Finally, the City contends that the characterization of the ash as hazardous is improper, in that it relies on the EP toxicity test, which has frequently been criticized as being an inaccurate indicator of the presence of hazardous substances in ash material. The City believes it has adequate safeguards in place at the Facility to prevent the acceptance of hazardous waste. (See attached Rules and Regulations of Facility, which are disseminated to all users of the Facility.) The City contends that the resulting ash, which has occasionally barely exceeded the limitations for lead by virtue of the EP toxicity test, is not hazardous, and may safely be disposed of at the B-2 site.

If you have any questions on the City's position with respect to this issue, please call me.

Very truly yours,

Howard J. Wein

HJW/mts Enclosure

cc: Hon. Stephen R. Reed (w/o encl.)
 John Lukens (w/o encl.)
 Daniel R. Lispi (w/o encl.)
 Michael J. Heilman, Esq. (w/encl.)

DER WASTE MANAGEMENT

OCT 23 1990 Revised

RULES & REGULATIONS FOR REFUSE DELIVERY TO THE HARRISBURG STEAM GENERATING FACILITY

Only authorized refuse collection and/or transport vehicles will be granted entry onto the tipping floor of the Steam Generating Facility (S.G.F.). All such vehicles shall display a valid permit issued by the City for the current year, unless otherwise approved in writing by the Steam Generating Facility Billing Office.

These vehicles are those operated by:

- 1. City of Harrisburg
- 2. Other Municipalities
- 3. Agencies of Federal, State or County Government
- 4. Commercial or Industrial Establishments
- 5. Private Collectors and/or Haulage Contractors
- 6. Steam Plant Residue Haulage Vehicles
- 7. Salvaged Metal Haulage Vehicles
- 2. The S.G.F. will operate on a twenty-four (24) hour daily basis including weekends and holidays.
- 3. All vehicles entering onto the Public Works Center grounds shall be required to obey all traffic directional signs, stop signs, speed limits, etc., as posted, as well as such directives as may be issued by the Director of Public Works and/or Director of Incineration and Steam Generation for traffic control purposes.
- 4. Vehicles shall enter the tipping floor via the truck scale, west end, and exit via the east end truck door.
- Prior to dumping, all vehicles shall be weighed on the truck scale and the required information printed and recorded. The original slip will be issued to the hauler.
- 6. All vehicles shall dump their loads onto the assigned tipping floor area. There will be no dumping directly into the pit unless specifically authorized by S.G.F. personnel.

- 7. All unauthorized dumps and/or spills shall be promptly cleaned up and removed by the violating hauler to the satisfaction of the City.
- All areas of the Steam Plant, other than the tipping floor, Billing Office, Rest Room, water cooler and the public telephone adjacent to the front office, are off limits to truck crews. At no time are truck crews permitted inside the plant or in the employees' lunchroom.
- 9. Vehicles or containers shall not be left unattended nor parked on site except in parking spaces provided, unless specifically approved by the S.G.F. Billing Office or Shift Supervisor.
- 10. No vehicle shall leave the pit area with tail gates open, doors open or dump bodies in a raised position.
- 11. <u>Dumping</u> Unloading operations shall be completed as swiftly as possible to prevent unnecessary delays on the tipping floor.
- 12. Scavenging on the tipping floor, or anywhere on the premises, is strictly prohibited.
- 13. The use of, or dispensing of narcotics, dangerous prohibited substances, alcoholic beverages, etc., or City property is strictly forbidden.
- 14. All open box vehicles, including pickup trucks, shall be covered by a tarpaulin to prevent unnecessary littering of streets and the Public Works Center grounds.
- 15. Any damage to City property or the property of others, including all consequential damages caused by the transporter, collector and/or hauler involved shall be the sole responsibility of the transporter, collector and/or hauler involved. The violating driver shall remain at the S.G.F. until City personnel have completed their investigation and acquired all pertinent information.

- 16. The following shall not neither be delivered to nor accepted at the S.G.F. for disposal:
 - a. Highly flammable and/or explosive materials such as paint and paint thinners, cleaning fluids, waste oils, oil derivatives and oil sludges, hazardous chemicals, fine powders and dust, gun powder, blasting caps, ammunition, wood shavings, crankcase oils, cutting oils, acids, caustics, poisons, or other materials including significant quantities of waste above 5,200 Btu per pound or below 3,800 Btu per pound and the like.
 - b. Non-handleable and non-burnable items such as; motors, pumps, crankshafts, axles, large metal drums, large tree trunks and stumps, motor vehicles, automotive transmissions, rear ends, springs, fenders, other major parts of motor vehicles, trailers, agricultural equipment, marine vessels or similiar items, farm and other large machinery.
 - c. Excessive admixtures (over 10% by weight) of non-burnables such as ashes, glass, ceramics, rigid plastics, concrete, masonry, brick, block, plaster, dirt, non-burnable construction and demolition material and the like.
 - d. Excessive admixtures (over 15% by weight) of abattoir and cannery wastes, canned or bottled food and beverages, unburned coal and the like.
 - e. All animal carcasses, animal remains, cesspool and other human waste, human remains and offal.
 - f. Metal containers or metal barrels and drums.
 - g. Rubber tires.
 - h. Pathological, infectious or chemotheurapeutic waste as defined in 25 Pa. Code §271.1.
 - i. Household hazardous waste as defined in section 1512(k) of the Pennsylvania Municipal Waste Planning, Recycling and Waste Reduction Act, Act 101 of 1988, No. 53 P.S. §4000.101 et seq., 53 P.S. §4000.1512(k).

- j. Hazardous waste as defined in the Pennsylvania Solid Waste Management Act, the Act of July 7, 1980, P.L. 380, No. 97, 35 P.S. §6018.101 et seq. and the rules and regulations promulgated thereunder, including but not limited to 25 Pa. Code §75.261 et seq.
- k. Automobile, marine, other lead acid and other storage batteries.
- 1. Liquid wastes.
- m. Source, special nuclear or by-product material as defined by the U.S. Atomic Energy Act of 1954, as amended, (68 stat. 923), 42 U.S.C.A. §2014.
- n. Any other waste not specifically authorized by the Solid Waste Management Act, or the rules or regulations promulgated thereunder.
- o. Any other waste that would be likely to cause the S.G.F. to violate any air quality standard or water quality effluent limitation or standard or pose a threat to health or safety or which may cause damage to the S.G.F.
- 17. The following oversized wastes may be accepted by the S.G.F. only provided that the wastes have been segregated by the hauler, collector or transporter and have been specifically approved by the S.G.F.:
 - a. Tree limbs and waste lumber under 150 square inches in cross section and under 15 inches in length.
 - b. Wood, large card board boxes, wooden crates and wooden pallets.
 - c. Home and office furnishings such as furniture, refrigerators, washing machines, dryers, stoves, water heaters, plumbing fixtures, mattresses, bed springs, bicycles and the like; provided however, that all appliances must have the motors removed prior to delivery to the Facility.

18. Special Handing Wastes

a. No special handling wastes shall be delivered to the S.G.F. for disposal unless, where required by the applicable rules and

regulations of Department of Environmental Resources ("Department"), the City has applied for and received approval from the Department after the submittal of a module 1 to the Department, and the transporter or hauler has obtained the prior written approval from the City for such delivery.

- b. No other special handling waste shall be delivered to the S.G.F. for disposal unless the transporter or hauler has obtained the prior written approval from the City for such delivery.
- c. Billing for special handling waste materials shall include charges for supervision, equipment used, and/or manpower provided, at the higher rate provided herein. The S.G.F. management reserves the right to determine when these charges are applicable.
- d. Non-Hazardous Industrial Waste and High BUT

 Content Material In addition to the
 foregoing, prior written approval, a minimum
 of twenty-four (24) hours before dumping, must
 be obtained from the S.G.F. management. A one
 (1) gallon sample may be taken from each truck
 and tested at the time of delivery before
 dumping is permitted. In some instances, at
 the discretion of the S.G.F. management, a
 sample may be required for testing before
 delivery and disposal is permitted.
- e. Classified Material Narcotics, materials received from various law enforcement agencies, confidential papers and tapes, and spoiled or surplus foodstuffs, require special handling. All materials of this nature will require prior written approval (a minimum of twenty-four (24) hours) before they will be accepted for disposal. All such materials must be in sealed containers or bags before delivery will be accepted.
- Right of Inspection By delivering waste material to the S.G.F. for disposal, the transporter, collector and/or hauler acknowledges the right of the City, its employees or its authorized agents to inspect all truck loads delivered to the S.G.F. to ascertain whether any violation of the rules and regulations exist.

 Inspection can be made in any manner that the City deems necessary. The City may require that the transporter, collector and/or hauler dump the suspect load on the

east end of the tipping floor for sorting and inspection. The discovery in the delivery of any materials not authorized by the rules or regulations by the City shall entitle the City to require the prompt and thorough removal by the transporter, collector or hauler involved at no expense to the City. The exercise of this remedy hereunder shall not be construed to waive any other remedy under these rules and regulations or at law or in equity for any violation hereunder of these rules and regulations.

- 20. Each truck that delivers waste material to the S.G.F. in violation of these rules and regulations shall be deemed to constitute a separate offense and shall subject to the collector, transporter and/or hauler to the following penalties:
 - 1. First offense \$1,000 fine and/or thirty (30) day suspension of dumping privileges.
 - 2. Second offense \$2,500 fine and/or sixty (60) day suspension of dumping privileges.
 - 3. Third offense \$5,000 fine and permanent revocation of dumping privileges.
- In addition to any other remedy or penalty prescribed herein, or any other remedy at law or in equity, a violation of any of the foregoing rules and regulations shall entitle the City to impose all direct and consequential costs associated with the violation, including but not limited to:
 - a. all costs for the proper disposal of all material delivered to the S.G.F. in violation of these rules and regulations.
 - b. all damage to equipment that is in any way caused by the delivery of material to the S.G.F. in violation of these rules and regulations.
 - c. all costs, damages, claims, fines and penalties imposed upon the City by an administrative agency, administrative tribunal or a court or settlement of any claim, for any action, activity or condition, including but not limited to cliams for personal injury or property damage arising out of or in any way caused either directly or indirectly by the delivery of material to the S.G.F. in violation of these rules and regulations.

- d. all costs, damages, fines and penalties associated with the storage, treatment, or disposal of any ash residue or other waste generated by the S.G.F., which would not have to have been incurred, except as a result of the delivery of material to the S.G.F. in violation of these rules and regulations.
- Rights Unaffected Nothing contained in these rules and regulations shall be construed to affect any right of the City now existing or hereinafter to institute any action to enforce these rules and regulations or any action, activity or condition caused by a violation of these rules and regulations, including but not limited to, an action to terminate a contract with a hauler, collector and/or transporter who has violated these rules and regulations.

23. Violations of these Rules and regulations by City collection crews will be punishable in accordance with the Standard Work Rules for the City of Harrisburg.



The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

December 22, 1989

Mr. Michael Steiner
Regional Solid Waste Manager
Department of Environmental Resources
Bureau of Waste Management
Harrisburg Regional Office
One Ararat Boulevard
Harrisburg, PA 17110

DER
WASTE MANAGEMENT

DEC2 6 1989

HARRISBURG REGION

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RE: Analysis of Ash Residue

Dear Mr. Steiner:

As you are aware, the Department recently required the City of Harrisburg to conduct weekly ash composite testing for Lead, Cadmium, Mercury and Chromium for a period of three months. The City has used and is continuing to use the sampling and compositing protocol established by Anthony Kar, Environmental Chemist for the Department.

Enclosed for your information, please find the results of the analyses performed on the weekly ash composites collected at the Harrisburg Steam Generating Facility during weeks 1 through 10. As you will note, the concentrations of Lead in composites 7, 8, and 9 tested in excess of the standard. The analyses on weekly composites 1, 2, 3, 4, 5, 6 and 10 indicate that all of the elements analyzed (including Lead) are within the allowable limits.

At this time the City is not certain as to why the Lead concentrations for composites 7, 8 and 9 tested in excess of the standard. However, the City does have a record of where each week's ash has been stored on the Temporary Ash Storage Pad. Therefore, the City proposes to perform the following scope of work immediately upon Department approval:

- 1. Using the City's record of where each week's ash is stored, mark off ash piles for weeks 7, 8, and 9.
- 2. Develop a sample protocol to take ash core samples from various locations in the respective weekly ash piles in question which are stored on the Temporary Ash Storage Pad. This will produce three (3) sets of core samples, one (1) set of core samples for each pile.

City of Harrisburg Analysis of Ash Residue 12/21/89 Page 2

- 3. Using the sets of core samples, individually composite each set of core samples. This will produce three (3) composite samples, one (1) for each pile.
- 4. Have the respective composites analyzed for Lead.
- 5. Based on the data obtained from these analyses, develop a plan to resolve the disposition of the respective weekly ash piles in question. The plan will be submitted to the Department for the Department's review and consideration.

The aforementioned scope of work will establish if there is indeed a problem with the respective ash piles in question and, if so, to what extent the problem exists and the acceptable solution(s) that are available for disposition of that ash. The City is also conducting an investigation to determine the possible cause(s) for the results of the analyses for Lead in composites 7, 8, and 9. Notwithstanding, the City continues to composite and analyze weekly ash samples taken from the end of the ash conveyors, as per Mr. Kar's protocol, and forward that information to the Department.

The City would like to meet with the Department at its earliest convenience to discuss this matter. Please contact me so that a meeting can be arranged.

If you have any questions and/or comments regarding the aforementioned, do not hesitate to contact me at 236-5361.

John A. Lukens

Director

JAL/jal

Stephen R. Reed, Mayor

Napoleon A. Saunders, Business Administrator

Daniel R. Lispi, Project Manager

Leslie D. Davies, Director of Engineering

Howard J. Wein, Esquire

Francis P. Fair, Operations Supervisor (PaDER)

Anthony C. Kar, Environmental Chemist (PaDER)

Michael Heilman, Esq., Assistant Counsel (PaDER)

Enclosures

File

Einigun-182:3/88
Date Prepared

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

I.D. Number

100758 100759 100992

89-11-09

FORM 41 MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

ocation: County <u>DAUPHIN</u>	Municipality HARRISBURG/SWATARA TWP
ate Sample Collected 89-09-20 thru 89-09	_27 Time of Sampling 4 HOUR INTERVALS
ample Collectors Name SHIFT PERSONNEL	
ampling Location (in accordance with Section 283	3.403) <u>ASH_DISCHARGERS/BELT_CONVEYOR</u>
art II. Chemical Analysis Parameters	
. Total Analysis (dry weight basis)	B. Leaching Analysis (EP-Toxicity Test)
Aluminum 2400 mg/kg	Aluminum <u>8.1</u> mg/l
Antimony mg/kg	Antimony < 0.1 mg/l
Arsenic < 0.1 mg/kg	Arsenic <0.1 mg/l
Barlum · 320 mg/kg	Barium <u>0.21</u> mg/l
Cadmium 11 mg/kg	Cadmium <u>0.40</u> mg/l
Chromium14 mg/kg	Chromium <u>≤ 0_01</u> mg/l
Copper <u>3200</u> mg/kg	Copper1.4 mg/l
Lead 1700mg/kg	Lead <u>4.4</u> mg/l
Mercury <u>< 0.1</u> mg/kg	Mercury <u>< 0.1</u> mg/l
Molybdenum <u>< 0.1</u> mg/kg	Molybdenum ≤ 0.01 mg/l
Nickel15 mg/kg	Nickel <u>0.8</u> mg/l
, 'Selenium <u>< 0.1</u> mg/kg	Selenium <u>< 0.1</u> mg/l
Silver < 0.1 mg/kg	Silver < 0.01 mg/l
Zinc <u>1300</u> mg/kg	Zinc <u>24</u> mg/l
Total Residue 78% mm/kyqx	COD mg/l1110 ASTM Method
Volatile Residue on 2,49% mg/kgx	TOC mg/l 369 ASTM Method
Total Residue pH	Total Dissolved Solids ASTM Methods (Filterable Residual) mg/l 4036 mg/1
Additional Parameters:	pH <u>4.97</u>
mg/kg	Additional Parameters:
mg/kg	mg
mg/kg	mg

ANALYTICAL LABORATO	visor of Laboratory Performing Chemical Analysis: PRIES	
3601 N FRONT ST.		•
HARRISBURG, PA. 171	10 attn MICHAEL FARLLING	
This is to certify that I have person documents I am aware of the Depart	ER/OR OPERATOR FOR PROCESSING FACILITY nally examined and am familiar with the information submitted in timent of Environmental Resources' permit and operational requirem	
that there are significant penalties t	t the submitted information is true, accurate and complete. I am av	
	t the submitted information is true, accurate and complete. I am av	ware

89/12/19

DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

100759

ID NUMBER

100992

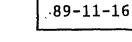
FORM 41 MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

art 1. Facility	Name <u>Harrisb</u>	urg Waste to Energy	Facilityn
ocation: County _	Dauphin	_ Municipality <u>Ha</u>	rrisburg/Swatara twp
ate Sample Collec	ted <u>9/27-10/4/89</u>	Time of Samplin	g SEE ATTACHED
ample Collectors	Name SEE ATT	'ACHED	
ampling Location	(in accordance with	Section 283.403) DI	SCHARGERS/BELTS
art II. Chemical	Analysis Parameters		
A. Total Analysis Aluminum	(dry weight basis) mg/kg	B. Leaching Analy Aluminum	rsis (EP-Toxicity Test)
Antimony	mg/kg	Antimony	mg/kg
Arsenic	mg/kg	Arsenic	mg/kg
Barium	mg/kg	Barium	mg/kg
Cadmium	13.0mg/kg	Cadmium	0.12mg/kg
Chromium	24.0mg/kg	Chromium	< 0.01 mg/kg
್ Copper	mg/kg	Copper	mg/kg
Lead		Lead	mg/kg
Mercury	<u>< 0.1</u> mg/kg	Mercury	< 0.1 mg/kg
Molybdenum	mg/kg	Molybdenum	mg/kg
Nickel	mg/kg	Nickel	mg/kg
Selenium	mg/kg	Selenium	mg/kg
Silver	mg/kg	Silver	mg/kg
Zinc	mg/kg	Zinc	mg/kg
Total Residue	mg/kg	COD mg/1	ASTM Method A
Volatile Resid Total Resid		-	ASTM Method A
pH <u>11.37</u>			d Solids ASTM Method A sidue)mg/l
Additional Par	ameters:	pH 5.01 Additional Par	ma/ka
	ma /ka		ma/ka

DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

ID NUMBER

100759 100992



FORM 41 MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

t 1.	Facility	Name _	Harrisb	urg Wast	te to Ene:	rgy Fac	ilityn	
ation	: County	Da	auphin	Munj	icipality	Harrisl	ourg/Swa	tara twp
e Samp	ple Colle	cted <u>1</u>	10/04/89-10/11/	<u>89</u> Time	e of Samp	ling	4 HOUR I	NTERVALS
ple Co	ollectors	Name _	PLANT PERSONN	EL				
pling	Location	(in ac	ccordance with	Section	283.403)	DISCHA	ARGERS /	BELTS
t II.	Chemica1	Analys	sis Parameters					
		s(dry v	veight basis) mg/kg			alysis	(EP-Toxi	city Test) _mg/kg
Antin	nony		mg/kg	Ant	timony	, <u></u>		_mg/kg
Arsen	nic		mg/kg	Ars	senic			_mg/kg
Bari	ım		mg/kg	Bar	r ium			_mg/kg
Cadmi	Lum	3	mg/kg	Cad	lm iu m		0.29	_m g /kg
Chron	nium	. 2	23 mg/kg	Chr	comium		0.01	_mg/kg
Coppe	er		mg/kg	Cor	pper	 	,	_mg/kg
Lead		88	mg/kg	Lea	ad		1.3	_mg/kg
Mercu	ıry	< ().1mg/kg	Mei	cury		0.1	_m g /kg
Molyb	odenum		mg/kg	Mol	Lybdenum			_mg/kg
Nicke	e1	-	mg/kg	Nic	ckel			_mg/kg
Selen	nium		mg/kg	Se]	lenium	······································		_mg/kg
Silve	er		mg/kg	Sil	lver			_mg/kg
Zinc			mg/kg	Zir	ıc	 _		_mg/kg
Total	. Re s idue		mg/kg	COL) mg/l		AST	M Method A
			mg/kg		,			
pH	11.07			(Fi	llterable	Residue	e)	
Addit		_	mg/kg	рн Add				_mg/kg
			mg/kg mg/kg					_mg/kg mg/kg
	ation e Samp ple Co pling t II. Total Alum Antir Arser Bario Chron Coppe Lead Merco Molyl Nicke Seler Silve Zinc Total Volat Total	e Sample Colle ple Collectors pling Location t II. Chemical Total Analysi Aluminum Antimony Arsenic Barium Cadmium Chromium Copper Lead Mercury Molybdenum Nickel Selenium Silver Zinc Total Residue Volatile Residue Volatile Residue Total Residue	e Sample Collected _1 ple Collectors Name _ pling Location (in act II. Chemical Analys Total Analysis(dry valuminum	### Pauphin	### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium ### Barium	### Aution: County	### Action: County Dauphin Municipality Harrish	Sample Collected

89-11-16

BUREAU OF WASTE MANAGEMENT

100759 100992

1D NUMBER

FORM 41 MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

Dari	t 1. Facility	Name	Harrichura V	Waste to Energy Fa	cilityn
					
Loca	ation: County _	Dauphin	P	Municipality <u>Harri</u>	sburg/Swatara twp
Date	e Sample Collec	ted <u>10/11/8</u>	9-10/18/89	Time of Sampling $_$	4 HOUR INTERVALS
Samj	C.e Collectors	Name PLANT	PERSONNEL		
Samj	pling Location	(in accordan	nce with Secti	ion 283.403) <u>DISCH</u>	ARGERS / BELTS
Par	t II. Chemical	Analysis Pa	rameters		
Α.	Total Analysis Aluminum		basis) B. mg/kg	Leaching Analysis	(EP-Toxicity Test), mg/kg
٠	Antimony	1	mg/kg	Antimony	mg/kg
	Arsenic		mg/kg	Arsenic	mg/kg
	Barium	1	mg/kg	Barium	mg/kg
Trac C 1 SA	Çadmium	181	mg/kg	Cadmium	0.50 mg/kg
	Chromium	140 ı	mg/kg	Chromium	< 0.01 mg/kg
	Copper	1	mg/kg	Copper	mg/kg
	Lead	700 i	mg/kg	Lead	3.2 mg/kg
	Mercury	< 0.1	mg/kg	Mercury	< 0.1 mg/kg
	Molybdenum	1	mg/kg	Molybdenum	mg/kg
	Nickel	1	mg/kg	Nickel	mg/kg
	Selenium	1	mg/kg	Selenium	mg/kg
	Silver	1	mg/kg	Silver	mg/kg
	Zinc	1	mg/kg	Zinc	mg/kg
A	Total Residue	1	mg/kg	COD mg/l	ASTM Method A
	Volatile Resid	•	mg/kg	-	ASTM Method A
	pH <u>11.03</u>			(Filterable Resid	olids ASTM Method A ue)mg/l
29	Additional Par		mg/kg	pH 5.1 Additional Parame	/1
]	mg/kg		mg/kg
		1	mg kg		mg/kg

89-11-16

BUREAU OF WASTE MANAGEMENT

ID NUMBER

100759 100**99**2

FORM 41 MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

			
Part 1. Facility	Name Harrisburg	g Waste to Energy	Facilityn
Location: County _	Dauphin	Municipality Har	risburg/Swatara twp
Date Sample Collec	cted 10/18/89-10-25-89	Time of Sampling	4 HOUR INTERVALS
Sample Collectors	Name PLANT PERSONNEL		
Sampling Location	(in accordance with Sec	ction 283.403) <u>DI</u>	SCHARGERS / BELTS
Part II. Chemical	Analysis Parameters		
A. Total Analysis	s(dry weight basis) 1	B. Leaching Analys Aluminum	is (EP-Toxicity Test), mg/kg
Antimony	mg/kg	Antimony _	mg/kg
Arsenic	mg/kg	Arsenic _	mg/kg
Barium	mg/kg	Barium _	mg/kg
Cadmium	<u>19</u> mg/kg	Cadmium _	0.37 mg/kg
Chromium	25mg/kg	Chromium _	< 0.01 mg/kg
Copper	mg/kg	Copper	mg/kg
Lea d	200mg/kg	Lead	3.5 mg/kg
Mercury	3.5mg/kg	Mercury _	< 0.1 mg/kg
Molybdenum	mg/kg	Molybdenum _	mg/kg
Nickel	mg/kg	Nickel _	_mg/kg
Selenium	mg/kg	Selenium _	mg/kg
Silver	mg/kg	Silver _	mg/kg
Zinc	mg/kg	Zinc _	mg/kg
Total Residue	mg/kg	COD mg/1	ASTM Method A
Volatile Resid			ASTM Method A
pH <u>10.1</u>		(Filterable Res	Solids ASTM Method A idue)mg/l
Aditional Par		pH 5.0 Additional Para	
	mg/kg mg/kg		/1
	mg kg		mg/kg

89-11-16

BUREAU OF WASTE MANAGEMENT

100759 100992

ID NUMBER

FORM 41 MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

		COMPOSI	ITE #6	
Par	t 1. Facility	Name Harrisburg	g Waste to Energy	Facilityn
Loca	ation: County _	Dauphin	Municipality <u>Ha</u>	rrisburg/Swatara twp
Date	Sample Collec	cted <u>10/25/89-11-01-89</u>	Time of Samplin	g 4 HOUR INTERVALS
Samp	ple Collectors	Name PLANT PERSONNEL		
Samp	pling Location	(in accordance with Sec	ction 283.403) <u>D</u>	DISCHARGERS / BELTS
Par	t II. Chemical	Analysis Parameters		
Α.	Total Analysis	s(dry weight basis) mg/kg	B. Leaching Analy Aluminum	rsis (EP-Toxicity Test),
	Antimony	mg/kg	Antimony	mg/kg
	Arsenic	mg/kg	Arsenic	mg/kg
	Edrium	mg/kg	Barium	mg/kg
3.P	Cadmium	16mg/kg	Cadmium	0.45mg/kg
	Chromium	33mg/kg	Chromium	<u> </u>
	Copper	mg/kg	Copper	mg/kg
	Lead	<u>790</u> mg/kg	Lead	4.4mg/kg
	Mercury	< 0.1mg/kg	Mercury	< 0.1mg/kg
	Molybdenum	mg/kg	Molybdenum	mg/kg
	Nickel	mg/kg	Nickel	mg/kg
	Selenium	mg/kg	Selenium	mg/kg
	Silver	mg/kg	Silver	mg/kg
	Zinc	mg/kg	Zinc	mg/kg
Tr.	Total Residue	mg/kg	COD mg/l	ASTM Method A
	Volatile Resid	lue on luemg/kg		ASTM Method A
	pH > 10.3		(Filterable Re	ed Solids ASTM Method A esidue)mg/l
	Additional Par		pH 4.8 Additional Par	cameters:
		mg/kg mg/kg mg kg		mg/kg mg/kg mg/kg

89-12-19

DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

100759 100992

ID NUMBER

FORM 41 MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

	COMPOSI	LIC #/	
rt 1. Facility	Name <u>Harrisbu</u>	rg Waste to Energy	Facilityn
cation: County _	Dauphin	Municipality Ha	arrisburg/Swatara twp
te Sample Collec	cted <u>11/01/89-11-08-89</u>	Time of Samplin	ng 4 HOUR INTERVALS
mple Collectors	Name PLANT PERSONNE	L	
mpling Location	(in accordance with S	ection 283.403) <u>r</u>	DISCHARGERS / BELTS
rt II. Chemical	Analysis Parameters		
. Total Analysis	s(dry weight basis) mg/kg	B. Leaching Analy Aluminum	rsis (EP-Toxicity Test)
Antimony	mg/kg	Antimony	mg/kg
Arsenic	mg/kg	Arsenic	mg/kg
Barium	mg/kg	Barium	mg/kg
Cadmium	19mg/kg	Cadmium	0.78mg/kg
Chromium	<u>26</u> mg/kg	Chromium	0.07mg/kg
Copper	mg/kg	Copper	mg/kg
Lead	720mg/kg	Lead	6.5mg/kg
Mercury	<u> </u>	Mercury	< 0.1mg/kg
Molybdenum	mg/kg	Molybdenum	mg/kg
Nickel	mg/kg	Nickel	mg/kg
Selenium	mg/kg	Selenium	mg/kg
Silver	mg/kg	Silver	mg/kg
Zinc	mg/kg	Zinc	mg/kg
Total Residue	mg/kg	COD mg/l	ASTM Method A
Volatile Resid			ASTM Method A
pH <u>11.13</u>	_	(Filterable F	ed Solids ASTM Method A Residue)mg/l
Additional Par	rameters: mg/kg	pH 5.2 Additional Par	cameters:
	mg/kg		mg/kg
	mg kg		mg/kg

DEPARTMENT OF ENVIRONMENTAL RESOURCES

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BUREAU OF WASTE MANAGEMENT

100759 100992

ID NUMBER

FORM 41 MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

ocation: County	Dauphin	Municipality Ha	rrisburg/Swatara twp
		· —	
ate Sample Collect	ted $\frac{11/08/89-11-15-89}{11/08/89-11-15-89}$	Time of Sampline	g 4 HOUR INTERVALS
ample Collectors N	lame PLANT PERSONNEL	1	
ampling Location (in accordance with Se	ection 283.403) D	ISCHARGERS / BELTS
art II. Chemical A	Analysis Parameters		
A. Total Analysis(Aluminum _	dry weight basis) mg/kg	B. Leaching Analys	sis (EP-Toxicity Test) mg/kg
Antimony _	mg/kg	Antimony	mg/kg
Arsenic _	mg/kg	Arsenic	mg/kg
Barium _	mg/kg	Barium	mg/3g
Cadmium _	20 mg/kg	Cadmium	0.63 mg/kg
Chromium _	15mg/kg	Chromium	0.05 mg/kg
Copper _	mg/kg	Copper	mg/kg
Lead _	850mg/kg	Lead .	7.2 mg/kg
Mercury	< 0.1 mg/kg	Mercury	< 0.1 mg/kg
Molybdenum	mg/kg	Molybdenum	mg/kg
Nickel _	mg/kg	Nickel	mg/kg
Selenium _	mg/kg	Selenium	mg/kg
Silver _	mg/kg	Silver	mg/kg
Zinc _	mg/kg	Zinc	mg/kg
Total Residue _	mg/kg	COD mg/l	ASTM Method A
Volatile Residu Total Residu	ne on nemg/kg		ASTM Method A
pH <u>10.1</u>		(Filterable Re	d Solids ASTM Method A sidue)mg/l
Additional Para		pH 5.0 Additional Par	
	mg/kg mg/kg		mg/kg mg/kg
	mg kg		mg/kg

DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

89-12-19

100759 100992

ID NUMBER

FORM 41 MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

rt 1. Facility	Name Harrisbu	rg Waste to Energy	r Facilityn
ocation: County _	Dauphin	Municipality <u>Ha</u>	rrisburg/Swatara twp
ite Sample Collec	ted <u>11/15/89-11-22-89</u>	Time of Samplin	g 4 HOUR INTERVALS
mple Collectors	Name PLANT PERSONNE	<u>L</u>	
umpling Location	(in accordance with Se	ection 283.403) <u>r</u>	DISCHARGERS / BELTS
art II. Chemical	Analysis Parameters		
A. Total Analysis Aluminum	(dry weight basis) mg/kg	B. Leaching Analy Aluminum	rsis (EP-Toxicity Test)
Antimony	mg/kg	Antimony	mg/kg
Arsenic	mg/kg	Arsenic	mg/kg
Barium	mg/kg	Barium	mg/kg
Cadmium		Cadmium	0.84mg/kg
Chromium	13mg/kg	Chromium	mg/kg
Copper	m g /kg	Copper	mg/kg
Lead	970mg/kg	Lead	6.6mg/kg
Mercury	< 0.1mg/kg	Mercury	< 0.1 mg/kg
Molybdenum	mg/kg	Molybdenum	mg/kg
Nickel	mg/kg	Nickel	mg/kg
Selenium	mg/kg	Selenium	mg/kg
Silver	mg/kg	Silver	mg/kg
Zinc	mg/kg	Zinc	mg/kg
Total Residue	mg/kg	COD mg/1	ASTM Method A
Volatile Resid Total Resid	lue on luemg/kg		ASTM Method A
pH <u>11.06</u>		(Filterable Re	ed Solids ASTM Method A esidue)mg/l
Additional Par	ma/lea	pH 5.2 Additional Par	ameters: mg/kg
	mg/kg mg kg		mg/kg mg/kg

89-12-19

DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

ID NUMBER

100759 100992

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FORM 41 MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

art 1. Facility	Name	Harrisburg	Waste to Energy	Facilityn
ocation: County _	Dauphir	n .	Municipality <u>Ha</u>	rrisburg/Swatara twp
ate Sample Collec	ted <u>11/22/8</u>	89-11-29-89	Time of Samplin	g 4 HOUR INTERVALS
sample Collectors	Name PLAM	NT PERSONNEL		
ampling Location	(in accorda	ance with Sect	ion 283.403) <u>D</u>	ISCHARGERS / BELTS
Part II. Chemical	Analysis Pa	arameters		
A. Total Analysis Aluminum	s(dry weight	t basis) B. _mg/kg	Leaching Analy	sis (EP-Toxicity Test)
Antimony		_mg/kg	Antimony	mg/kg
Arsenic		_mg/kg	Arsenic	mg/kg
Barium		_mg/kg	Barium	mg/kg
Cadmium	14	_mg/kg	Cadmium	0.59 mg/kg
Chromium	< 0.1	_mg/kg	Chromium	< 0.01 mg/kg
Copper		_mg/kg	Copper	mg/ <u>kg</u>
Lead	570	_mg/kg	Lead	2.7 mg/kg
Mercury	< 0.1	_mg/kg	Mercury	<u> </u>
Molybdenum	•	_mg/kg	Molybdenum	mg/kg
Nickel		_mg/kg	Nickel	mg/kg
Selenium		_mg/kg	Selenium	mg/kg
Silver		_mg/kg	Silver	mg/kg
Zinc		_mg/kg	Zinc	mg/kg
Total Residue		_mg/kg	COD mg/l	ASTM Method A
Volatile Resid Total Resid		mg/kg		ASTM Method A
pH <u>11.36</u>			(Filterable Re	d Solids ASTM Method A sidue)mg/l
Additional Par		_mg/kg _mg/kg	pH 5.1 Additional Par	mg/kg mg/kg
		_mg kg		mg/kg



BRINJAC, KAMBIC & ASSOCIATES CONSULTING ENGINEERS

DER WASTE MANAGEMENT

MAY 1 3 1987 HARRISBURG REGION

May 13, 1987

Michael R. Steiner, Regional Solid Waste Manager Bureau of Solid Waste Management Harrisburg Regional Office Pennsylvania Department of Environmental Resources One Ararat Boulevard Harrisburg, PA 17110

RE: City of Harrisburg
Repairs to Tipping Floor Columns and Beams
Floor Slab Repair
BKA No. 83064-0024

Dear Mr. Steiner:

This letter serves to confirm the discussions held over the last several weeks regarding the disposal of concrete and soil on the above referenced project. The following course of events has transpired:

- 1. On April 27, 1987, I was able to contact Mr. Robert Benvin of your staff regarding this subject. During that telephone conversation, it was determined that the concrete from this project could be disposed of at a Class III Demolition Landfill. The soil that appeared to be unaffected, or did not have direct contact with the refuse, could be removed and treated as ordinary excavation material. The soil that was exposed to refuse or appeared affected could be disposed at a Municipal Waste Landfill.
- 2. On April 29, 1987, a meeting was held in your office, again regarding this same subject. I must make one (1) correction and state that I represented Brinjac, Kambic & Associates, Inc. during this meeting and not Brinjac-Chester. However, minutes were compiled, and your office did not indicate a difference of opinion over the content of that meeting.
- 3. On May 11, 1987, a meeting was held at the site with the following representatives of your staff present:
 - A. Tony Rathfon
 - B. Joel Steigman
 - C. Michael Kearns
 - D. Joseph Szebsda

Mr. Michael R. Steiner Page Two May 13, 1987

At that time, it was determined that the contractor was to dispose of the concrete and affected soil in the B-l Residue Pit. The remaining soil that appeared unaffected could remain on the HSGF property to be used on some future project.

- 4. On Tuesday, May 12, 1987, I received a telephone call from Mr. Szebsda who then had me converse with Tony Carr of your staff. He gave me the following directions for sampling and testing of the soil:
 - A. The laboratory doing the analyses must do the sampling and the collector's name must appear on the analyses sheets.
 - B. An analysis must be performed on the sample "As Received" and is to indicate testing for:
 - 1) Metals (Arsenic to Zinc)
 - 2) pH
 - 3) Moisture
 - 4) Total Residue
 - 5) Volatile Residue
 - C. The following analyses are to be performed on a "Dry Weight" basis:
 - 1) Metals (Arsenic to Zinc)
 - 2) Cyanide
 - Sulfide
 - D. The following analyses are to be performed on the "EP Toxicity Leachate As Received":
 - 1) Metals (Arsenic to Zinc)
 - 2) pH
 - 3) NH2-N
 - 4) Oil and Grease
 - 5) Organic Halogens
 - E. The following analysis is to be performed on Distilled Leachate from the EP-Toxicity proceedure.

 1) Total Solids Tot 7 7 2 Solid, Tot Vol Solid, C.O.D, CN, TO.C. Non-purglable and Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Solids Total Sol

As you and I discussed following my conversation with Mr. Carr, the City can continue with this project in the following manner:

- Dispose of concrete and affected soil in the B-1 Residue Pit. However, it is to be kept "Separate and Distinct" from any fly ash or bottom yet to be placed pending the results of the above described tests.
- 2. The unaffected soil can continue to be disposed on site.

Mr. Michael R. Steiner Page Three May 13, 1987

As you know, the City of Harrisburg has cooperated with the requests of your office in the past and will continue. Therefore, you will be apprised of its findings as they become available. We expect to have the results of our analyses performed subsequent to the April 29, 1987 meeting by May 15, 1987 at which time your office will be notified.

I trust that this accurately reflects the results of our recent discussions. Should you have any comments or corrections, please contact me as quickly as possible and no later than May 14, 1987 since the project is continuing on the basis of our discussion of May 12, 1987.

Thank you for your cooepration in thismatter.

Sincerely,

DAB: BAZ

cc: William S. Strauss

David A. Brinjac,

FILE Harrishing Incineration

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BRINJAC, KAMBIC & ASSOCIATES CONSULTING ENGINEERS

January 31, 1989

DER WASTE MANAGEMENT JAN 8 1 1989 WARREDURG REGION

Mr. John W. Conrad
Bureau of Waste Management
Harrisburg Regional Office
Commonwealth of Pennsylvania
Department of Environmental Resources
One Ararat Boulevard
Harrisburg, PA 17110

Re: Harrisburg Steam Generating Facility City of Harrisburg Residue Disposal Area B, Site B-2 BKA No. 86019-01

Dear Mr. Conrad:

In accordance with our discussion of January 30, 1989, enclosed please find one copy of the letter from Francis M. Socha, attorney for Downtown Carwash, which indicates that Downtown Carwash does not wish to have its well sampled as part of the Major Permit Modification Application on the above referenced facility. However, we are scheduled to sample and analyze the existing wells at the other two locations requested in mid-February 1989.

Should you have any questions regarding this, please feel free to contact me at your convenience.

Sincerely,

BRINJAC, KAMBIC & ASSOCIATES, INC.

DAB:gk

David A. Brinjac,

Enclosure

c: William S. Strauss (w/enclosure)

R.E.

RECEIVED

LAW OFFICES OF

SOCHA AND MAFFETT

2201 North Second Street Harrisburg, Pennsylvania 17110 JAN 25 1989

BRINJAC, KANGIC & ASSOCI, INC.

FRANCIS M. SOCHA RICHARD F. MAFFETT, Jr.

January 23, 1989

Telephone (717) 233-4141

David A. Brinjac BRINJAC, KAMBIC & ASSOCIATES 910 N. Second Street Harrisburg, PA 17102

Re: City of Harrisburg

Harrisburg Steam Generating Facility Residue Disposal Area B, Site B-2

BKA No. 86019-01

Dear Mr. Brinjac:

In reference to your correspondence dated January 20, 1989, please be advised that, as attorney for Thomas J. Flynn, I am authorized to inform you that Mr. Flynn does not desire a sample of the Downtown Carwash well for purposes of obtaining certain construction and consumption information.

Please do not hesitate to contact the undersigned if you have any further questions in regard to this matter.

Sincerely,

Francis M. Socha

FMS/spr

pc: Thomas J. Flynn

Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Waste Management

ANTHONY AME CACK FICE H by INC DAULHEN CO WI ON WOOTE

SERVICE REQUEST

	SERVICE	REQUEST		Mias WE
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The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

November 13, 1989

Mr. Anthony L. Rathfon Solid Waste Specialist Dept. of Environmental Resources Bureau of Waste Management One Ararat Blvd. Harrisburg, PA 17110 DER WASTE MANAGEMENT NOV 1 4 1989 HARRISBURG REGION

RE: Spill Report

Dear Mr. Rathfon:

At approximately 2:00pm on Wednesday, November 1, 1989 the Harrisburg Steam Generating Facility experience a sulfuric acid spill. The isolation valve on the supply line from the Sulfuric Acid Storage Tank (capacity 6000 gallons) to the Cooling Towers failed and began to leak into the Containment Moat (capacity 8100 gallons) which was designed for just such an event. To the City's knowledge, the leaking acid neither was spilled outside of the Containment Moat nor did the Containment Moat leak any acid into the ground.

The following is a chronological list of events which was documented through the duration of the spill:

November 1, 1989

1400 hours - The spill was discovered.

1420 hours - Facility personnel telephoned a company called Rem Tech.

1500 hours - A representative from Rem Tech arrived on site to evaluate the situation. Rem Tech was not able to perform the clean-up, because they did not have the equipment to do the job. Rem Tech referred the City to O.H. Materials Corporation.

1530 hours - Facility personnel telephoned:

O.H. Materials Corporation

P.O. Box 551 Findlay, Ohio 419-423-3526

1620 hours - O.H. Materials returned call.

City of Harrisburg Spill Report 11/13/89 Page 2

1830 hours - O.H. Materials arrived on site with clean-up crew.

1915 hours - A Pump/Tanker arrived on site from:

Eldredge, Inc. 898 Fern Hill Road Westcheaster, PA 215-436-4749

2000 hours - Began pumping out the spillage in the Containment Moat (approximately 900 gallons).

2015 hours - Workers opened the vent on the Sulfuric Acid Storage Tank and pumped out the tank (approximately 500 gallons).

2200 hours - Re-pumped the Containment Moat and replaced failed valve.

2230 hours - Workers refilled the Sulfuric Acid Storage Tank and began rinsing the inside of the Containment Moat, and neutralizing the rinse water collecting in the moat with Sodium Hydroxide Flake.

November 2, 1989

0100 hours - The PH of the rinse water was 10.6.

0130 hours - Workers began pumping rinse water from the Containment Moat into the floor drain of the Chemical Addition Building where the rinse water was mixed with the Cooling Tower blowdown water. The PH of the Cooling Tower blowdown water was between 7.6 and 7.8. The PH of the rinse water in the Containment Moat was 10.4. The PH of the water in the manhole at the Cooling Towers was 8.7.

0200 hours - The PH of the Rinse water in the Containment Moat was 10.2. The PH of the water in the manhole at the Cooling Towers was 8.7.

0215 hours - The PH of the Rinse water in the Containment
Moat was 6.6. The PH of the water in the
manhole at the Cooling Towers was 8.5.

0230 hours - The Containment Moat was empty and the pump was secured. Workers filled the Containment Moat 1.5" with City water. The PH of the water in the moat was 8.2.

0900 hours - Was the approximate time that John Lukens reported the spill to Francis P. Fair, Acting Regional Director of the PaDER.

1030 hours - The level in the Containment Moat was found to have remained the same - 1.5". The PH of the water in the moat was 7.4. Pumped the water out of the moat into the floor drain of the Chemical Addition Building.

City of Harrisburg Spill Report 11/13/89 Page 3

1200 hours - Workers filled the Containment Moat 1" with City water. The PH of the water in the moat was 8.2.

November 3, 1989

1200 hours - The level in the Containment Moat was found to have remained the same - 1". The PH of the water in the moat was 6.8.

November 4, 1989

0730 hours - The level in the Containment Moat was found to have dropped to .875". The PH of the water in the moat was 4.2. It is the City's belief that the drop in the water level was due to evaporation.

November 5, 1989

0845 hours - The PH of the water in the moat was 2.4.

November 6, 1989

- 0730 hours The level in the Containment Moat was found to have dropped to .5". The PH of the water in the moat was 1.7. It is the City's belief that the drop in the water level was due to evaporation.
- 1100 hours Neutralized the water in the Containment Moat with Flake Caustic to a PH of 10.6.

November 7, 1989

- 0900 hours The PH of the water in the moat was 10.4.
- 0930 hours Pumped water from Containment Moat into floor drain of Chemical Addition Building. This water mixed with the Cooling Tower blowdown water. The PH of the water in the moat was 10.4. The PH of the water in the manhole at the Cooling Towers was 9.1 (heavy flow was coming from the Steam Plant).
- 0950 hours The Containment Moat was empty and the pump was secured.

City of Harrisburg Spill Report 11/13/89 Page 4

It is the City's belief that the failure of the isolation valve was, at least in part, due to the design of that valve. The valve that failed was a stainless steel ball valve with unions on both ends of the valve. In actuality it was one of the unions which failed. Therefore, the City replaced the failed valve with a stainless steel ball valve that does not have the union-type connections on the ends. I have enclosed pictures of the old valve vs. the new valve. In addition, at the time that the failed valve was replaced, the supply line was inspected and found to be in good order.

Insofar as the abatement of this type of failure happening in the future is concerned, the City has taken the following measures:

- Instructed HSGF Lab Technician, Ed Egenrieder, to inspect the isolation valve and supply lines from the Sulfuric Acid Storage Tank for signs of fatigue on a weekly basis.
- Instructed HSGF Maintenance Supervisor, Rick Snyder, to add an additional stainless steel ball valve to give the supply line double protection.
- 3. Instructed Mr. Snyder to inspect the isolation valves and supply lines every time that the Sulfuric Acid Tank is empty, before the tank is refilled. In addition, this procedure has been added to the preventative maintenance tracking system.
- 4. Ordered and received special protective clothing for HSGF personnel to wear when handling and working with acids

If you have any questions and/or comments regarding the the aforementioned facts, do not hesitate to contact me at (717) 236-5361.

John A. Lukens Director

Sincerely

JAL/jal

Stephen R. Reed, Mayor
Napoleon Saunders, Business Administrator
Daniel R. Lispi, Project Manager
Ricky L. Snyder, Maintenance Supervisor
David A. Brinjac, P.E.
Howard J. Wein, Esq.
Francis P. Fair, Acting Regional Director of PaDER
Enclosures
File

CITY OF HARRISBURG DEPARTMENT OF INCINERATION AND STEAM GENERATION

Pictures of Valves Related to 11/01/89 Acid Spill



Old Union-Type Valve



Valve To Replace Old Union-Type Valve



New Valve on the Sulfuric Acid Storage Tank

Corres

BUREAU OF WASTE MANAGEMENT One Ararat Boulevard Harrisburg, Pennsylvania 17110 (717) 657-4588

February 28, 1986

Ns. Wendy Schaeffer Health Inspector Swatara Township Board of Health 599 Eisenhower Boulevard Harrisburg, PA 17111-2397

Dear Ms. Schaeffer:

Thank you for your recent letter to Secretary DeBenedictis concerning redent control measures at the Harrisburg Incinerator during the planned removal of refuse stored at the residue disposal facility.

I am, by copy of this letter, requesting a notification from Mr. King of the removal date at least ten (10) days prior to removal to discuss redent control measures to be utilized with Department personnel.

If you have any further questions concerning this matter, please feel free to contact this office.

Sincerely,

Francis P. Fair Compliance and Monitoring Manager Harrisburg Regional Office

PPF: flw

cc: Charles King, Jr.
Sec info only (log 2/5/86)
JBM (1)
George Parks

BUREAU OF WASTE MANAGEMENT
Harrisburg Regional Office
One Ararat Bouleward
Harrisburg, Pennsylvania 17110
(717) 657-4588
June 27, 1988

NOTICE OF VIOLATION

CERTIFIED MAIL NO. P-649 693 450

Mr. William Straus, Superintendent Harrisburg Steam Generating Pacility 1670 South 19th Street Harrisburg, PA 17104

> Re: Non-Compliance Municipal Waste Activity Residue Disposel Area B-1 I.D. No. 100992 City of Harrisburg, Dauphin County

Dear Mr. Strauss:

As a result of an inspection conducted by the Department on May 16, 1988, it has been determined that the City of Harrisburg is in violation of the Solid Waste Management Act of the Commonwealth of Pennsylvania (SWMA), Act of July 7, 1980, P.L. 380, No. 97, 35 P.S. Section 6018.101 at seq., and Chapter 75 of the Rules and Regulations of the Department of Environmental Resources as follows:

- 1. The City has filled Residue Disposal Area B-i beyond its permitted capacity. This is in violation of the approved plans and permit and Sections 610(4) and (9) of the SWMA.
- 2. The City has failed to maintain the disposal facility in such a manner as to collect the leachate for treatment. This is in violation of the approved plans and permit and Sections 610(4) and (9) of the SWMA.
- 3. The City has failed to maintain the diversion channel around the site in violation of the approved plans and permit and Sections 610(4) and (9) of the SWMA.

Mr. William Strauss, Superintendent June 27, 1988 Page 2

In order to achieve compliance with the SWMA, the implementation of the ollowing procedures is recommended:

By July 29, 1988 submit to the Department a closure plan and implementation schedule for Residue Disposal Area B-1.

- is the leachate collection system to ensure that all leachate collected and discharged to the City of Harrisburg POTW.
- the circumstances built to the Department a written report addressing provisions you have tak which these violations occurred, and what vent their reoccurrence. correct these violations and to pre-
- 4. Attend a meeting at our office on July discuss these violations completed and pro 1988, at 10:00 a.m., to and appropriate penalties.

This Notice of Violation does not waive, either expressly or by implication, the power or authority of the Commonwealth of Pennsylvania to prosecute for any and all violations of law arising prior to or after the issuance of this Notice of Violation or the conditions upon which the Notice of Violation was based, nor shall this Notice of Violation be construed so as to waive or impair any rights of the Department of Environmental Resources heretofore or hereafter existing.

If you have any questions concerning this matter, please feel free to con-

Sincerely,

Anthony L. Rathfon Solid Waste Specialist Harrisburg Regional Office

ALRimja

File
Robert France
C & M, Central Office

One Arment Beulevard
Herrisburg, Fennsylvania 17110
(717) 657-4588
September 9, 1985

The Henorable Stephen L. Reed Heyer, City of Herrisburg Reem 234, City Government Center Herrisburg, PA 17101-1678

Dear Nayor Reed:

Thank you for your letter of August 2, 1985 to Secretary DeSenseLetts in regard to the Rarrisburg Steam Generating Plant. Secretary DeSenseLetta has asked me to report to your concerns.

As you note in your letter, many problems have accurred since the plant's opening in 1972. In response, a number of enforcement actions were taken by this Department. The recent apparent increase in such actions is a reflection of continued violations and an increase in this Department's recourses and ability to enforce compliance state-wide. I wish to emphasize that this is truly a state-wide phenomenon and that the City of Harrisburg is not being singled out by this Department for special scrutiny.

I agree with your assertion that operations at the plant may have "turned the corner". Recently we have not with a number of Narrieburg City officials and employees to discuss on going problems at the plant in an effect to service at untually agreeable solutions. I believe that these afficials are goadlasly conmitted to establishing an operational status of which the City and be proud. Progress is being made, but problems still exist which will require continued temperation between the Department and the City. In this regard, Secretary Debenodictis has asked as to express his willinghess to most with you so that you can personally exchange ideas, information, and expectations. If you desire such a mosting, please contact as so that I can make the appropriate areasys

If I can be of any further essistance in this matter, please de set best-

Sincerely.

John B. Heyer
Director
SOLID WASTE MANAGEMENT

STO 1 1985

Secretary DeSeastictis (Log 8/12) Mark Lewen Secretary DeSeastictis (Log 8/12) File

HARRISBURG REGION



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES

BUREAU OF AIR QUALITY CONTROL
Harrisburg Regional Office
One Ararat Boulevard
Harrisburg, Pennsylvania 17110
(717) 657-4585
December 7, 1988

RESOURCES DAUPHIN CO.

DAUPHIN HAZ

NON HAZ

10 HARRISBURG REGION

HARRISBURG REGION

Mr. William Strauss, Director City of Harrisburg Department of Incineration and Steam Generation 1670 South 19th Street Harrisburg, PA 17104

Permit No: 22-301-052
Source: Two Municipal Waste Incinerators
Manufacturer: Joseph Martin Company
Location: City of Harrisburg
Dauphin County

Expiration Date: November 30, 1988

Dear Mr. Strauss:

In accordance with provisions of Section 6.1 of the Air Pollution Control Act, the Act of January 8, 1960, P. L. 2119, as amended, the Department hereby revokes the permit to operate the above indicated air contamination source, issued by the Department on December 1, 1986, for the following reasons:

Process Tested: Municipal Municipal Incinerator Incinerator No. 1 No. 2 Pollutant Sampled: Particulate Particulate Actual Emissions 0.219 0.525 Series Average (gr./dscf., corrected to 12% CO₂) Allowable Emissions 0.10 (gr./dscf., corrected to 12% CO2)

Mr. William Strauss, Director December 7, 1988 Page 2

> As a result of the above emission testing conducted at your facility on November 9 and 10, 1988, particulate emissions exceeded the allowable for both units. This is a violation of 25 PA Code §123.12.

This action of the Department may be appealable to the Environmental Hearing Board, 101 South Second Street, Suites Three - Five, Harrisburg, PA 17101, (717-787-3483) by any aggrieved person pursuant to Section 1921-A of the Administrative Code of 1929, 71 P.S. §510-21; and the Administrative Agency Law, 2 Pa. C.S.A. §\$501-508 and 701-704. Appeals must be filed with the Environmental Hearing Board within thirty (30) days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the regulations governing practice and procedure before the Board may be obtained from the Board. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

Should you have any questions regarding this matter, please do not hesitate to contact Mr. Frederick J. Heagy, Harrisburg District Supervisor, or the writer. Both can be contacted at the above address.

Very truly yours,

Leif Ericson Regional Air Pollution Control Engineer Harrisburg Region

LE:mjs

bee: Waste Management

M-297: 7/88 Una Propered 11/28/88

COMMONWEALTH OF PENNSYLVANIA **DEPARTMENT OF ENVIRONMENTAL RESOURCES** BUREAU OF WASTE MANAGEMENT

I.D. Number

FORM 44 INFECTIOUS WASTE INCINERATOR ASHL L Sample# 1322626

400 510

RESIDUE MONITORING REPORT

General Reference: 283.402(c).	
Part I. Facility Name Smith Kline & Fro	ench Laboratories, Bldg. 26
Location: CountyKing of Prussia-Montgomery	Upper Merion Township Municipality
Date Sample Collected 10/26/88	Time of Sampling 10:30 a.m.
Sample Collectors Name Lee Thompson	
Sampling Location (in accordance with Section 283.40	D2) bottom of incinerator, prior to disposal
Part II. Chemical Analysis Parameters	
Total Analysis (dry weight basis)	Instructions:
Aluminum <u>17,000</u> mg/kg	Infectious waste incineration facilities with a rated
Antimony < 5.0 mg/kg	capacity of 500 lbs/hr or less must utilize this form
Arsenic 2.0 mg/kg	in order to satisfy the requirements of 283.402(c).
Barium704. mg/kg	Infectious waste incineration facilities with a rated
Cadmium1.11 mg/kg	capacity of greater than 500 lbs/hr must utilize Form 41 (ER-WM-162) in order to satisfy the re-
Chromium 33.2 mg/kg	quirements of 283.402(c).
Copper 152. mg/kg	
Lead <u>70.4</u> mg/kg	The same testing methodologies as specified in the
Mercury < 0.1 mg/kg	instructions for completing Form 36 (ER-WM-155)
Molybdenum 20. mg/kg	should be utilized for the analyses required by this
Nickel 18.1 mg/kg	form. However, a leaching analysis (EP-Toxicity Test) is not required unless the results of the total
Selenium < 0.5 mg/kg	analysis (in mg/kg) of any metal listed in Table 1 —
Silver < 1.0 mg/kg	Maximum Concentration of Contaminants for
Thallium mg/kg	Characteristic of EP-Toxicity (75.261(g)) exceed 20
Zinc 959. mg/kg	times the value stated in Table 1 (in mg/l) for that
Total Residue 99.5 mg/kg	metal. If any of the total metals exceed 20 times the limits stated in Table 1, an EP-Toxicity leaching
Volatile Residue on4.2mg/kg	analysis must be conducted for all the metals listed
11 6	in Part II of this form.
pn	
Additional Parameters:	
mg/kg	
mg/kg	
mg/kg	

Part III. Name, Address and Su	pervisor of Laboratory Performing Chemi	cal Analysis:
<u>Lancaster Laboratories</u>	•	
2425 New Holland Pike,	Lancaster,PA 17601-5994	and the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second o
Lee Seats, BS.Mgr., Ino	rganic Analysis	
Part IV. Certification of Owner/o	or Operator for Processing Facility	
ment. I am aware of the Departm	nally examined and am familiar with the intent of Environmental Resources' permit at the submitted information is true, accurate submitting false information.	and operational requirements for
Name THOMAS	DI CONCANNON	PUD
Signature Church	afr	Date /2/1/93

File - NOW HAZ W.M. Hbg. INC. DAUPHIN COUNTY

PENNSYLVANIA DER

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES

BUREAU OF AIR QUALITY CONTROL

Harrisburg Regional Office One Ararat Boulevard

Harrisburg, Pennsylvanja 17110 (717) 857-4587

September 26, 1988

DER WASTE MANAGEMENT

SEP 2 6 1988

HARRISBURG REGION

Mr. William Strauss, Director
Department of Incineration and Steam Generation
City of Harrisburg
1670 South 19th Street
Harrisburg, PA 17104

Dear Mr. Strauss:

On November 30, 1988, Operating Permit No. 22-301-052 will expire. The original operating permit was issued on January 1, 1985 and allowed for the burning of sludge by the two Joseph Martin Company municipal waste incinerators, each controlled by a Rothemuhle-Walther electrostatic precipitator (ESP). Prior to renewing the above operating permit the following items must be addressed by the City.

- 1. Results of the April 21, 1988 stack test on the No. 2 Unit indicate that actual particulate emissions exceed the allowable standards found at 25 PA Code \$123.12 by a factor of at least five.
- 2. Preliminary results of the August 25, 1988 stack test on the No. 1 Unit indicate that actual particulate emissions also exceed the allowable standards found at 25 PA Code \$123.12.
- 3. Visible emission violations observed during the August 25, 1988 stack test on the No. 1 Unit indicate that operational problems exist at <u>either</u> the No. 1 or No.2 unit or <u>both</u> the No. 1 and No. 2 Units.
- Sewage sludge was not being burned in either the No. 1 or No. 2 Units during their respective tests conducted on August 25, 1988 and April 21, 1988.
- 5. The auxiliary burners have not been seen in operation during cold start-up of either the No.1 or No. 2 Units, despite various attempts by Department inspectors.

In order to secure renewal of the operating permit it would be appropriate for the City to:

- Demonstrate that the No. 1 and No. 2 units, while burning sludge, can comply with the particulate emission standards found at 25 PA Code \$123.12.
- 2. Demonstrate that the No. 1 and No. 2 units are able to routinely comply with the visible emission standards found at 25 PA Code \$123.41.
- 3. Demonstrate that the auxiliary burners for the No. 1 and No. 2 units operate properly and in accordance with Condition 5 of Operating Permit No. 22-301-052.

An appropriate demonstration of particulate emission compliance is set forth below:

- 1. Particulate testing must be performed on each of the No. 1 and No. 2 incinerator units by October 31, 1988 to verify compliance with PA Code §123.12. The units must be operating at the normal operating conditions and burning sludge under normal operating conditions.
- 2. Testing must be in accordance with procedures outlined in the Department's "Source Testing Manual", January 1983 revision. This booklet can be requested by calling (717) 787-6547 (Harrisburg number).
- 3. At least thirty (30) days prior to actual testing, a pretest procedure containing information as outlined in the Department's "Source Testing Manual" must be submitted to the Department at the letterhead address (2 copies).
- 4. At least two (2) weeks prior to the test, the Department shall be informed of the date and time of the test.
- 5. Within sixty (60) days after completion of the test, two (2) copies of the complete test report including all pertinent operational conditions shall be submitted to the Department for approval.

The above items address operating permit renewal requirements and not our overall concerns regarding the present non-compliance status of the No. 2 incinerator unit (and possibly the No. 1 unit). In that regard, it is necessary that appropriate measures be implemented to assure future compliance with the regulations. We propose to schedule a meeting during the week of October 24, 1988 to discuss your abatement plans.

Please be advised that any violations mentioned above, as well as any previously documented violation and/or any violation observed subsequent to those mentioned above may lead to appropriate enforcement action.

Nothing herein contained shall be construed to grant or imply immunity from criminal or civil prosecution for the actions described above or any other violations of law.

Please call or write me by October 20, 1988, so that we can develop an agenda for the meeting.

Very truly yours,

Frederick J. Heagy Harrisburg District Supervisor Air Quality Control Program

WASTE MANAGEMENT (REGIONAL) V CASE FILE FERMIT FILE 22-301-052 A & C

FICE THE CO. CO. HAY DANIES CO.

BUREAU OF AIR QUALITY CONTROL Harrisburg Regional Office One Ararat Boulevard Harrisburg, Pennsylvania 17110 (717) 657-4587 September 20, 1988

Mr. William Strauss, Director
Department of Steam Generation and Incineration
City of Harrisburg
1670 S. 19th Street
Harrisburg, PA 17104

Dear Mr. Strauss:

On September 1, 1988 at approximately 12:50 am, Mr. John McCurdy of your facility notified the Department's answering service that a silicon based gum was charged into the incinerator and resulted in visible emissions in excess of the Department's standards. Please be advised that the above incident occurring at the Harrisburg Incinerator facility, located in Harrisburg, Dauphin County, Pennsylvania, resulted in violations of Sections 123.41, 127.25 and 121.7 of Chapters 123, 127 and 121 of the Rules and Regulations of the Department of Environmental Resources and Sections 8 and 13 of the Pennsylvania Air Pollution Control Act, Act of January 8, 1960, P.L. 2119, as amended.

These violations arose from the following:

- 1. Incidents resulting in smoke density readings greater than 2.0 Ringleman (about 40% opacity) from about 12:00 Midnight to 4:00 am on the metering devices of both the No. 1 and No. 2 incinerator units resulted in a violation of 25 PA Code \$123.41.
- 2. Ash and soot fallout which was found on the properties of owners and which unreasonably interfered with the comfortable enjoyment of life or property resulted in a violation of 25 PA Code \$121.7.
- 3. Visible emissions, as well as ash and soot fallout, emanating from the common stack which exhausts emissions from the No. 1 and No. 2 incinerator units and associated air cleaning devices indicated the City of Harrisburg, Department of Steam Generation and Incineration, has failed to maintain and operate the above source in compliance with the conditions set forth in Plan Approval No. 22-301-052 and as required by Conditions of the Operating Permit issued on December 1, 1986. This is a violation of 25 PA Code \$127.25.

Mr. William Strauss, Director September 20, 1988 Page 2

4. Violations of 25 PA Code \$\$123.41, 121.7 and 127.25 constitute unlawful conduct and public nuisance as defined at Sections 8 and 13 of the Air Pollution Control Act. Act of January 8, 1960, P.L. 2119, as amended. Violations of the Department's Rules and Regulations are subject to the penalties of Sections 9 and 9.1 of the above Air Pollution Control Act.

Copies of Chapters 121, 123 and 127 of the Department's Rules and Regulations and the Air Pollution Control Act were sent to you previously with the September 13, 1988 dated Notice of Violation.

In view of the above, it is necessary that appropriate measures be implemented to assure future compliance with the regulations. Please notify this office within thirty (30) days of the receipt of this letter of the Department of Steam Generation and Incineration's abstement plans.

Please be advised that the above violations, as well as any previously documented violation and/or any violation observed subsequent to the receipt of this letter, may lead to appropriate enforcement action.

Nothing herein contained shall be construed to grant or imply immunity from criminal or civil prosecution for the actions described above or any other violations of law.

If you have any further questions regarding this matter, please do not hesitate to contact Mr. Jon S. Harwick, Air Quality Specialist, or me.

Very truly yours,

Frederick J. Heagy Harrisburg District Supervisor Air Quality Control Program

FJH: jvl

hcc: Harrisburg Region - Waste Management -Harrisburg Regional Case File O. P. File 22-301-052

A & C

Dauphen Co



DER WASTE MANAGEMENT

August 16, 1988

AUG2 2 1988

HARRISBURG REGION

Mr. Robert G. Benvin, Facilities Chief Pennsylvania Department of Environmental Resources Bureau of Waste Management One Ararat Boulevard Harrisburg, Pennsylvania 17110

Re: Sediment Disposal from Wastewater Settling Basin

Dear Mr. Benvin:

On Thursday August 4, 1988, approximately 7,378 gallons of steam generating plant process sediment were removed from the wastewater settling basin at Harrisburg Steam Works, Ltd., by Envirite.

This sediment was removed without the necessity of bypassing the waste treatment process.

Sincerely,

James D. Conte

Engineering Assistant

JDC/pam

cc: Mr. Leon Oberdick, PA D.E.R.

Jan Sockel, V.P. Operations & Engineering

Jim Floyd, Plant Manager, HSW, Ltd.

Serena DiMagno, DiMagno Associates, Inc.

File: 105

JANIAHIN HOTE

BUREAU OF WASTE MANAGEMENT Harrisburg Regional Office One Ararat Boulevard Harrisburg, Pennsylvania 17110 (717) 657-4588

June 22, 1988

Mr. William Strauss, Supt. City of Harrisburg Steam Generating Plant 1670 South 19th Street Harrisburg, PA 17104

Dear Mr. Strauss:

Enclosed are the reporting forms required for municipal ash residue monitoring in accordance with section 283.403 of the Municipal Waste Management Regulations. The sample gathering procedure as outlined in the January 27, 1988, correspondence from Mr. David A. Brinjac to Mr. Robert G. Benvin is acceptable for gathering a representative sample.

If you have any questions, please do not hesitate to call at the above number.

Very truly yours,

David J. Richard Resource Recovery and Planning Coodinator Harrisburg Regional Office

DJR:tlk

Enclosure

cc: Robert Benvin
Anthony Rathfon
Sharon Svitek
File



BRINJAC, KAMBIC & ASSOCIATES CONSULTING ENGINEERS

- Non Har - Daughin Co. - Uby Incin. - B2 - Mod 8

June 3, 1988

Mr. Michael R. Steiner
Regional Solid Waste Manager
Bureau of Waste Management
Harrisburg Regional Office
Department of Environmental Resources
Commonwealth of Pennsylvania
One Ararat Boulevard
Harrisburg, PA 17110

DER
WASTE MANJUN 6 1988
HARRISBURG REGION

Re: Harrisburg Steam Generating Facility Groundwater Monitoring Project Groundwater Monitoring Module No. 8-Phase II BKA No. 86019-0005

Dear Mr. Steiner:

In correspondence dated May 11, 1988, you were forwarded five (5) copies of the Groundwater Monitoring Module No. 8-Phase II for the Harrisburg Steam Generating Facility. This Module detailed the results of the initial set of groundwater samples taken from the five (5) wells drilled at the Harrisburg Steam Generating Facility during the month of March 1988. You were advised at that time that the radiological parameters and the TOX testing had not yet been completed. This testing has now been completed and the results have been included in this new submission. This submission is complete and entirely replaces the May 11, 1988 submission.

Should you have any questions regarding this, please feel free to contact me at your convenience.

Sincerely,

BRINJAC, KAMBIC & ASSOCIATES, INC.

DAB:gk

Enclosure

c: William S. Strauss Alan L. Zeigler

David A. Briniac.



BRINJAC, KAMBIC & ASSOCIATES CONSULTING ENGINEERS

May 20, 1988

DER WASTE MANAGEMENT MAY 2 0 1988 HARRISBURG REGION

Mr. Anthony Kar
Environmental Chemist
Harrisburg Regional Office
Bureau of Waste Management
Department of Environmental Resources
Commonwealth of Pennsylvania
One Ararat Boulevard
Harrisburg, PA 17110

Re: Module I Application Nashua Corporation Waste Toner and Acrylic Polymer Harrisburg Steam Generating Facility BKA No. 86019

Dear Mr. Kar:

The undersigned has been directed by William S. Strauss, Director, Department of Incineration and Steam Generation, City of Harrisburg, to inform you that the Module I application for the above referenced material is being withdrawn at this time. This permit withdrawal is in response to your April 15, 1988 letter to this office on this subject.

Should you have any questions regarding this, please feel free to contact me at your convenience.

Sincerely,

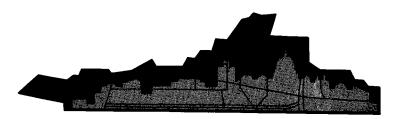
BRINJAC, KAMBIC & ASSOCIATES, INC.

DAB:gk

c: William S. Strawss

David A. Brinjac, P.E.

File under itarishung Incurenter NON-Hoj-Daulphin



The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY DEPARTMENT OF INCINERATION AND STEAM GENERATION

Department of Environmental Resources
Bureau of Waste Management
One Ararat Blvd.

February 8, 1988

Harrisburg, PA 17110
ATTN: Mr. Frank Fair

Dear Sir:

As you requested, following is our planned approach to accepting and disposing of the oil soaked sorbants from Ashland Petroleum Company.

We plan to accept only one load per 6 hours. The maximum weight of a load will be 18 tons. This facility consumes about 180 tons in 6 hours; thus the deliveries of oil soaked waste will be consumed within about 40 minutes of delivery. The material will not be stored in the pit during this time or at any other time. There will be an area on the tipping floor isolated and designated for the handling of this waste.

The fire fighting systems will be ready and deployed for instant response to any problem. Our fire fighting system is newly installed and provides deluge foam coverage of the tipping floor and pit area as well as providing four foam hose stations. This is addition to our regular water hose stations.

A planning meeting was held last Friday morning with all four Shift Supervisors and the Operations Supervisor to discuss handling and disposal strategies. All shifts are up to speed in these regards.

I hope that this information is sufficient. Please contact me at any time for additional information.

WS/hm

cc: Corey Stein John Lukens

FILE

DER WASTE MANAGEMENT

FEB 9 1988

Strauss, Director

HARRISBURG REGION

attachment

U.S.

APPROVAL

T. Concannon

DATE revised

1/25/88

SECTION ENV. ENG.

R&D OPERATIONS

PROCEDURE

AUTHOR

T. Concannon

CODE XV-B-1

ENVIRONMENTAL ENGINEERING

STANDARD OPERATING PROCEDURE

COLLECTION AND DISPOSAL OF HAZARDOUS WASTE

1.0 General

This procedure specifies the chemical or hazardous waste collection and disposal process.

2.0 Responsibility

- 2.1 It is the Manager, Environmental Engineering, or designee's, responsibility to schedule waste collections.
- 2.2 It is the laboratory supervisor or designee's responsibility to initiate waste collection requests.

3.0 Waste Disposal Requests

- Emergency requests for immediate pick-up, i.e. chemical spill, are initiated by telephoning Health, Safety & Environmental Affairs (HS&EA) Ext. 7810.
- 3.2 Routine waste pick-up is requested by using the Waste Disposal Request - see Attachment A. This form should be placed on the laboratory door in the service corridor prior to the day for scheduled pick-ups.
- 3.3 Non-routine Radioactive waste pick-up requests are initiated by telephoning HS&EA, Ext. 7810, or by using the Waste Disposal Request (Attachment A).

4.0 Waste Laboratory Chemicals

Laboratory chemicals for disposal must be clearly labeled as waste assuring that each container has the proper chemical name of the contents. Attachment B is a copy of the label which should be attached to the waste chemical container. These labels are available in the Stockroom.

5.0 <u>Liquid Chemical Waste</u>

5.1 Solvent Waste - All solvent waste must be placed in a red solvent waste can appropriately labeled as either "Non-Chlorinated Solvent" or "Chlorinated Solvent." The solvent waste cans can be emptied into an appropriate 55-gallon drum in the Solvent Stockroom pouring areas located in Building 4, Room 317; Building 24, Room 0039; and Building 28, Room 1031.

5.2 Aqueous Waste - All solvent wastes with greater than 70% H₂O and other aqueous waste from reactions are to be placed in red solvent waste cans labeled "Aqueous Wastes." These waste cans can be emptied into the appropriate 55-gallon drum located in the Solvent Stockroom pouring areas.

5.3 Pouring Procedure

- Laboratory safety glasses, lab coats and rubber gloves should be worn while pouring solvents or aqueous waste.
- Ventilation snorkels should be placed at the pouring location to assure vapor capture.
- Assure that drums are grounded before pouring.
- Waste drums are labeled according to waste class: Chlorinated Solvents, Non-Chlorinated Solvents, Aqueous mixtures.
- Drums are fitted with special funnels into which the safety cans should be emptied.
- GREAT CARE MUST BE TAKEN NOT TO OVERFILL DRUMS. A puddle of solvent on top of drum is an unnecessary safety and health hazard. Discontinue filling drums when the liquid level is within six (6) inches of the top. This can be determined by looking into the funnel or the small hole in the opposite side of the drum (a dip stick is also kept in the area).
- Back-up drums are kept in the solvent pouring area in case a drum becomes full. Funnels are easily transferred to a new drum; a special tool to help remove the caps on the drums is normally available in the pouring areas. Be sure to re-label the new drum appropriately and tighten the caps on the full drum.
- 5.4 An alternative to emptying your own solvent waste cans is to follow procedure 3.2. In that case, the cans must be labeled with the appropriate laboratory room number, scientist's name, and contents (Chlorinated Solvent, Non-Chlorinated Solvent, Aqueous Waste). However, following procedure 3.2 means that the cans will be emptied only once a week and will require that you have a sufficient supply of solvent cans and an appropriate storage area should you generate a great deal of waste.

COLLECTION AND DISPOSAL OF HAZARDOUS WASTE

3

6.0 Radioactive materials will be routinely picked up from laboratory areas on a weekly basis. Non-routine pickups are scheduled after the Waste Disposal Form (Attachment A) is completed and sent to HS&EA or the information required by this form is telephoned to HS&EA.

IMPORTANT:

SOLVENTS, CYANIDES, ORGANICS, CARCINOGENS, HIGHLY TOXIC COMPOUNDS, RADIOACTIVE MATERIALS, CONCENTRATED INORGANIC ACIDS, BASES OR CAUSTICS MAY NOT BE POURED INTO THE SANITARY SEWER SYSTEM.

TJC/ss 1459X 1/25/88

WASTE DISPOSAL REQUEST

Building No.:		Dept. No.:				
Lab No.:	Lab No.: Floor No.:					
Contact Person:		Extension:				
Chemical Waste 1		Radioacti	ive Waste			
			FO	AVE BLANK R ENV. ENG. JSE ONLY		
Identification of Material	Physical Form /Hazard 1	Quantity	W Class	D Code	W#	
•						
		<u> </u>				
	<u> </u>					
	 					
······································			<u> </u>			
I certify that the above listed m		able for dispo	osal.			
Laboratory Superv	isor					
Indicate chemical name and physic	cal form of chemical as solid, liqu	uid, gas, provide	hazard inform	nation flam	nable,	

ATTACHMENT B

	ZARD		3 N H		15
	(CHEN	IICAL		

	· VV	A	ST	S.	
) —				भागा हा भिन्दी	

RADIOACTIVE AND CHEMICAL WASTE PICK UP SCHEDULE

<u>Date</u>	<u>Building</u>		Floor	• •	
Monday:	Bldg. 25 (Pha Bldg. 24 (Med	armacology) dicinal Chemistry)		2nd, 2nd,	
Tuesday:		ug Metabolism) Bldg. 2, 3, 4	lst,	2nd,	3rd
Wednesday:	Bldg. 21 (Mol Bldg. 30 (AP8	ecular Biology) &S Chemistry)	2nd 1st,	2nd,	3rd
Thursday:	Bldg. 28 (Syr Bldg. 29 (Pha	nthetic Chemistry) Armaceutics)		2nd, 2nd,	
Friday:	B1dg. 21 (Mo1	ecular Biology)	lst,	3rd	

All other areas will be assigned waste pick-ups in response to requests through the Safety Office (Ext. 7810).

RC/sm 2013X



DIMAGNO ASSOCIATES, INC.

Environmental and Engineering Consultants

227 STATE STREET
HARRISBURG, PENNSYLVANIA 17101
TELEPHONE (717) 238-6249

DER WASTE MANAGEMENT

January 20, 1988

HARRISBURG REGION

JAN 2 2 1988

Mr. Robert G. Benvin, Facilities Chief Pennsylvania Department of Environmental Resources Bureau of Waste Management One Ararat Boulevard Harrisburg, Pennsylvania 17110

RE: HARRISBURG STEAM WORKS, LTD.

100 North Tenth Street, Harrisburg, Pennsylvania

Sediment Disposal From the Wastewater Settling Basin and From the Sedimentation-Neutralization Basin

Dear Mr. Benvin:

Per our telephone discussion today, I am submitting on behalf of Harrisburg Steam Works, Ltd. a copy of the letter received from Envirite Corporation indicating that the Envirite treatment process will delist the above referenced sediments. The maximum quantity of sediment to be removed and processed is approximately 15,000 gallons.

As I indicated, the settling basin sediment is comprised of boiler blow-downs, softener backwash and regeneration and steam piping condensate drainage. The sediment from the sedimentation-neutralization basin is comprised of boiler fireside washes, refractory ablation materials and corrosion products from boiler firesides. The source of water for steam production is potable water supplied by the City of Harrisburg.

As we discussed, it is imperative to remove these sediments for disposal as soon as possible to preclude a serious loss of detention time in the basins which could result in violations of the NPDES Permit. To confirm our discussion, you have agreed to notify Envirite Corporation in writing (with a copy to us) that the DER will waive the Module I process in this case in order to expedite the removal and treatment of the wastes by Envirite Corporation.

DA1

DIMAGNO ASSOCIATES, INC.

Page 2 of 2

Mr. Robert G. Benvin, Facilities Chief

PA DER, Bureau of Waste Management

RE: HARRISBURG STEAM WORKS, LTD. - SEDIMENT DISPOSAL

January 20, 1988

Your prompt cooperation in this matter is greatly appreciated. If you have any questions regarding the information contained herein, please do not hesitate to contact me.

Very truly yours,

Serena A. DiMagno, President

DIMAGNO ASSOCIATES, INC.

SAD:sdm

Enclosure (1)

cc: Jan Sockel, Vice-President of Operations - HSW, Ltd.

Jim Floyd, Plant Manager - HSW, Ltd.

Jim Conte, Engineering Assistant - HSW, Ltd.

File



JAN 2 2 1988 HARRISBURG REGION

Envirite corporation

TECHNOLOGY FOR THE ENVIRONMENT

January 13, 1988

Ms. Serena A. DiMagno DiMAGNO ASSOCIATES, INC. 227 State Street Harrisburg, PA 17101

RE: Harrisburg Steam Works

Dear Serena:

Thank you for the opportunity to analyze the samples of sludge from the Harrisburg Steam Works. Enclosed please find our service proposals to handle the sludges from the steam process.

Our analyses have shown that these wastes can be delisted by our ENVIRITE treatment service. Treatment to delist removes your RCRA liabilities because your waste will no longer be chemically or legally recognized as hazardous. After our laboratory has verified our after-treatment results, we will provide written certification to document this successful delisting. No other waste disposal option provides this unique benefit.

Enclosed are two "Module I" forms which must be approved by the PA D.E.R. prior to our acceptance of your waste. Waste generators are responsible for completing sections II, V and VI. ENVIRITE can perform the organic and inorganic analysis usually necessary to complete the "Module I" for a one-time fee of \$600.00 each. If you have any questions, please call. We will be happy to assist you with any part of your portion.

Thank you for your interest in ENVIRITE. We look forward to future business together.

Sincerely,

ENVIRITE CORPORATION

Matthew C. Kichman

Technical Service Representative

Matthew C Kichmen

MCK:11 enclosure

BASED ON THE ANDLYTICOL RESULTS HEREIN, NO CONCLUSIONS CAN BE MADE REGARDING POTENTIAL HEALTH EFFECT OF THE INCIMERATOR ASH. AS STATED BY MR. ZEY, IF THE MATERIAL WOULD BECOME AIRBORNE, THERE MAY BE POTENTIAL HEALTH RISK TO WORKERS VIA INHALATION. THE LEVELS OF METALS IN THE ASH CANNOT BE DIRECTLY OR EVEN INDIRECTLY CORRELATED TO LEACHATE LEVELS AND THEREFORE NO CONCLUSION CAN BE DROWN WITH RESPECT TO BE POTENTIAL GROUND WOTER CONTOMINATION CAUSED BY THE ASH.

THE INCINERATOR RESIDUE IS NOT SPECIFICALLY

AS

EXCLUDED HAZARDOUS WOSTE, AN ANDLYTICAL

VERIFICATION WOULD BE NECESSARY TO EXCLUDE IT AS

HAZARDOUS WOSTER

Dan 5/15/85 Date of Inspection

Company/Facility/Site Name

Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Waste Management

Inspection Report Comments

Identification Number

9AM-11:00 AM

at least

Thru Bob Benvin, Abdul Merch

- The HAT
- Hogincinerative
- Magg-2 construit
0972 110
2 Construction
ert, NHI Dave Brhjac
1HI Johnlukens
COA DanLispie
COA Mark Burkous
QA
it
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construction
ong Rethfor
ay provide only a brief version of ter citations listed on this inspec-
Environmental Resources, Bureau shown in this report. This inspec-
e inspection. Violations may also
ment records. Additional notifica- onal violations.
Nothing contained herein shall be
findings on this report, but does on.
_ Date
0 1 7 1 7 7 1

In the "Requirement" Section of this inspection report, each listed its corresponding obligation as described in the body of the regulations. tion report as a reference to obtain a detailed description of compliant. This inspection report is official notification that a representative of of Waste Management, inspected the above installation. The findings of tion report shall serve a formal notification of any violations which were be discovered upon examination of the results of laboratory analyses at tion may be forthcoming, concerning any violations indicated herein at This report does not constitute an order or other appealable action deemed to grant or imply immunity from legal action for any violation. Signature by the person interviewed does not necessarily imply coacknowledge that the person was shown the report or that a copy was	Please use the Chapter citations listed on this inspec- ce requirements. If the Department of Environmental Resources, Bureau of this inspection are shown in this report. This inspec- te observed during the inspection. Violations may also and review of Department records. Additional notifica- and listing any additional violations. Of the Department. Nothing contained herein shall be noted herein.
Person Interviewed (signature) Inspector (signature) Anacol	Date

dof 6

9Am Meeting:

i) LH-leachate sand (Island source) appears to be acceptable based on verbal results we've been given:

a) by Dave Brinjac re: factor of Safety on till table

test results of 1.3 FS

b) by deff-Barnes (goden he: gradation being acceptable - Penn DOT tests over past year averaging 0.9% fines passing #200 Siever minimal, if any blun 3/8" + 1/4."

a) by seff Barnes re: permeability at 50% R.D. + up to 68% R.D. meeting 1.0 × 10-2 cm/sec., even under consolodated load conditions.

Requested a hard copy of all lest data of If liveryone class is satisfied witheres of Joland and, we'll approve its use.

2) LH- problem of how gradation tests will be taken if Island sand is not first stockpiled. How will failing tests be handled if its already on the liner?

Jeff Barnes / Bob G. agreed that adams Co. asphalt will have enough send stockpiled up front, that CG will be able to sample 1/1000 CX (1CY=1.5T => 1000 CY=1500T=20 T/truch= 75100ds), before it is deployed on the liner. So, testing will be done on Stockpiled material US. in-place material.

3) Re: "in-place" permeability test results on Subbase material. All lests passed the first time except 1 on the last close (trailer slope) failed — backup sample barely passed 1×10-5cm/sec. Criteria. Verbal results from telf-Barnes to date: (teleproned 8/7/90)

• •			
SIDESLOPE !	AKEA	TOP/BOTTOM	PERM. RESULTS PASS/FAIL
NORTH (trailer)	NS1	B	1.2 × 10-4 cm/sec F
(trailer)	NS2	T	4.0×10-7cm/sec P
	N53	(extra)	1.4 × 10-5 cm/sec p(bovely)
EAST	€51	В	1.5 × 10-6 cm/sec Bass
(Gibson St)	ES 2	T	6.5 × 10-7 cm/sec P
	ES3	*	
SOUTH	SS 1	B	4.1 × 10-7 em/sec P
(Riverside)	<i>5</i> 52	T	8.6 × 10-6 cm/sec P
	<i>5</i> S 3	. The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second sec	
WEST (Ash Pila)	WS1	B	6.9 × 10-6 cm/sec P
(Ash Pile)	W52	u T	1.0 × 10-6 cm/sec P
	W53		
Bottom	B1		5.9 × 10 to com/sec P
(Broken 4 ouads.)	B2		6.7 × 10 % cm/sec P
4 out	B3		3.0 × 10-6 cm/sec P
rdicated	64		5.4 × 10-6 cm/sec P
verall text	me was	coarser-	mare a not the

NSI was also remolded to tabe density + rerun: 1.1x10-5 cm/sec vs. orig. NS1 value 1.2×10-4 cm/sec.; again, barely passing permeability requirements.

4) LH agreed to several changes in germembrane + seam testing:
a) re: acceptable values for destructive testing

on seams for peel + Sheav:

٠.	QAQC Nassaux Plan	(PM) E	mil HI gundle	PE from -{mike_ sitemagr.	Proposed previsions	
Shear Peel	offerent molen 100% ~140psi 75% ~105psi	140/51	909.	126 psi 70 psi	(~86%) (~56%)	120psi 78psi

LH agreed to accept Gundle Specs, if NHT + COA were in agreement, which they indicated they

b) re: NHI QAQC plan pg.2(Table 6) "Geomembrane

Strength Yield

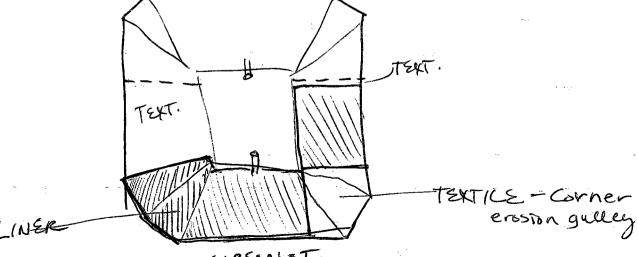
1/500 ft. of seam length 1500 ft. of seam length"

Because strongth + yield tests are usually done on sheet is seam, we and 1/500 Pt. of seam cld be Said to equate to apx. I test/ Gundle rolly we

all agreed to substitute the regular sheet conformance dests Counich include strength + yield) for this requirement - at the frequency of 1 conformance test/50,000 ft2, or apx. one per every 5 rolls ... (asper DER checklist) which is apx. how many conformance tests CGS had planned to take anyway.

Inspection after inseting:

1) Reviewed the SE corner, which we had marked for corrections on 8/8/90, due to a small crosion gulley under gestertile. Small roller had been passed over dextibe to try + smooth it out. Smoothed out rough edges, but did not flatten it. When Gordon son this, he recommended/directed ACA/Gundle to open up seams, fill in gulley + tampit. It was a border-line enough to cause deflection of gistextile. Whether it wilded hort liner is boderine call. Apx 12 long.



- 2) reviewed spot checked temaining gestexfile for stones, which BM Bruck (NHI) had marked, followed up up tamper. Looked good. Then it started to rain, which necessitates having to redo the exposed gestexfile.
- 3) At the request of Bob Galardini, and prior to NHT giving their approval of Subbase, we walked the remaining subbase on the north (Ash side) slope + west slope. As they were still in the process of raking + rolling these areas, w/ loose stones on slopes + top + anchor trench not dua along N-slope, we didn't give any approved.

They were still patching w/ "subbase" material us. screened typsoil they said was to be delivered by the landscaper, which in my apinion is part of the problem - Gordon agreed.

Left it that G.L. would call us today / tomorrow, if they needed us to approve subbase.

It shortly started to lightly rain & we left the site.

rec: 8/9/90 at Thurs. const.

GEOMEMBRANE BONDED SEAM PEEL AND SHEAR TEST RESULTS

ASTM D-413, NSF Modified (Peel) ASTM D-3083, NSF Modified (Shear)

Material: 60 mil HDPE Manufacturer: Gundle

Installer: Gundle Specimen Size: 1" x 10"

Weld Type: Hot Wedge Test Machine: Instron 1000

Sheet Thickness: Upper: 60 mil FTB - Film Tear Bond

Lower: 60 mil

SAMPLE NO. TEST WELD

Peel Adhesion Test Data

Replicate No.	P	eak Load (lb/in)	Fai	lure	Туре
1		99		FTB	
1 2 3 4 5		91		FTB	
3		96		FTB	
4		89		FTB	
5		95		FTB	
	Average:	94	Minimum Value: (lb/in)	70	
<u>hear Test Data</u>					
1		149		FTB	
2		153		FTB	
3		148		FTB	
4		147		FTB	
1 2 3 4 5		149		FTB	
	Average:	149	Minimum Value: (1b/in)	126	

TEST SUMMARY: Sample Passes Peel/Shear Test

PROJECT NO. 9011

PROJECT Residue Area B-2, Harrisburg Incinerator

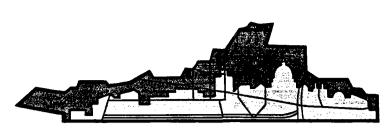
LOCATION Harrisburg, Pennsylvania

DATE 08-08-90

CUMBERLAND GEOTECHNICAL CONSULTANTS, INC. Carlisle, Pennsylvania

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- FILE
DAUPHINI CU.
XUON HAR
HBG. STEAM
GENERARNG
FACILITY



The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

June 10, 1991

Mr. Anthony M. Kar
Environmental Chemist
Commonwealth of Pennsylvania
Department of Environmental Resources
Harrisburg Regional Office
Solid Waste Management Bureau
One Ararat Boulevard
Harrisburg, Pennsylvania 17110

DER
WASTE MANAGEMENT
JUN 1 3 1991
HARRISBURG REGION

Re: Ash Testing and

Analysis Revised Protocol

Dear Mr. Kar:

This letter is to formally request the Departments' approval for a change in the Sampling and Analysis Protocol of the Harrisburg Steam Generation and Incineration Facility approved January 12, 1990.

The following is the revised protocol which will be implemented upon receipt of your written approval:

- Ash will be sampled one gallon container size, once per shift at the ash discharge conveyor belt. This will yield two (2) one gallon individual samples.
- Mix samples from Item 1 above in a five (5) gallon stainless steel bucket to provide a daily composite sample.
- 3. Sample this daily composited sample into a one (1) quart container.
- 4. Mix, in a five (5) gallon stainless steel bucket the previous seven (7) daily composited quart samples.

Mr. Anthony M. Kar Environmental Chemist Commonwealth of Pennsylvania Department of Environmental Resources Solid Waste Management Bureau Page Two June 10, 1991

- 5. Sample Item 4 above into a one (1) quart container. This is the weekly composited sample.
- 6. For quarterly sampling (4 composite samples/year), thirteen (13) weekly one (1) quart composited samples are to be mixed in a five (5) gallon stainless steel bucket to provide the quarterly composite sample.
- 7. The quarterly composited sample will be analyzed for Form 41 parameters plus reserve alkalinity per Departmental policy.
- 8. EP TCLP analytical data generated for lead and cadmium will be analyzed statistically, per EPA SW-846, for a 90% confidence level per stated Departmental policy. Should any other parameter exceed regulatory characteristic levels, they will also be analyzed for the 90% confidence limit. It is understood that all parameters are subject to this limit, however, to reduce the required statistics the above stated methodology will be used.

The total number of samples in the statistical population data base will be thirty-one (31) consecutive samples. This number will remain constant for the statistical mathematical calculations. The "degrees of freedom" will be 30 (@N=31, N-1=30) with a Students "t" equal to 1.697.

9. The UCL (Upper Confidence Level), for each quarterly report will be calculated (recalculated) using a moving sample data base, i.e., the earliest sample data will be dropped from the data base and replaced with the latest sample data.

I trust that the above sampling and analysis protocol will meet with your concurrence. Please return a signed and dated copy of this protocol for our records. Should you have additional questions and/or comments, please do not hesitate to contact me at 236-5361.

Mr. Anthony M. Kar
Environmental Chemist
Commonwealth of Pennsylvania
Department of Environmental Resources
Solid Waste Management Bureau
Page Three
June 10, 1991

WASTE MANAGEMENT JUN 1 3 1991 HARRISGUNG REGION

Very truly yours

John A. Lukens Director

JAL/nba

cc: Mr. Frank Fair, DER

Mr. Donald Korzeniewski, DER

Mr. Daniel Lispi, Department of Public Works

File

Concurrence:			
Signature	 		
Date	 		

BUREAU OF WASTE MANAGEMENT
Harrisburg Regional Office
One Ararat Boulevard
Harrisburg, Pennsylvania 17110
(717) 657-4588
April 18, 1991

Mr. John Lukens, Director Harrisburg Steam Generating Facility 1670 South 19th Street Harrisburg, PA 17104

Re: Ash Sample Analyses
Recrishery Stoom Seminating Sactifity
City of Harrisburg

Dear Mr. Lukens:

This letter is in regard to the status of ash generated during weeks 7, 8, and 9 at the Harrisburg Steam Generating Facility. Ash representing weeks 7, 8, and 9 are currently stored on the temporary ash storage pad.

The initial analytical procedure conducted on the ash was the E.P. Toxicity procedure. The analytical results characterized the ash during weeks 7, 8, and 9 to be hazardous due to the lead content. The City of Harrisburg and the Department conducted further testing by using the new Toxicity Characteristic Leaching Procedure (TCLP) that replaced the E.P. Toxicity procedure. The analytical results of the TCLP analyses indicate that the ash is not hazardous waste. The Department therefore has determined that ash generated during weeks 7, 8, and 9 to be non-hazardous.

If you have any questions concerning this matter, please feel free to contact this office.

Sincerely,

Francis P. Fair Regional Environmental Protection Manager Harrisburg Regional Office

PPF:jds

Anthony Rathfon Roger Kluck





VASTE MANAGEMENT PROGRAM
Southcentral Region
One Ararat Boulevard
Harrisburg, Pennsylvania 17110
(717) 657-4588
October 3, 1991

Mr. John Lukens, Director

Department of Incineration and
Steam Generation
1670 South 19th Street
Harrisburg, PA 17104

Re: Hydrogeologic Site Characterization Proposed B-3 Ash Disposal Area City of Harrisburg

Dear Mr. Lukens:

I am writing to remind you of the requirement for an approved plan prior to performing hydrogeologic site characterisation on waste disposal sites proposed for permitting under the Municipal Waste Management Regulations.

Meetings were held in our offices earlier this year and verbal plans were made with your consultant. After that, test drilling was initiated and water level measuring of the new wells began.

In order to insure that the City of Harrisburg has an approved plan, you should do the following, knowing that your consultant intends to file an application for permitting of proposed B-3 by spring of 1992:

- 1. Make a written proposal with supporting maps to the Department detailing the following:
 - a. Location of aquifer hydrologic characterization wells and piezometers and proposed methods of performing same.
 - b. Monitoring well locations and depths of aquifers which will characterize aquifer water quality at the site.

Mr. John Lukens, Director October 3, 1991 Page 2

- c. Location and details of construction of water level monitoring points.
- d. Spreadsheet detailing water level elevations as measured from end of summer into the current more rainy season.

Please note that the regulations do require that applicants go through this procedure. I am interested in ensuring that a correct measurement under an approved plan is made so that your 1992 submission can be accepted by the Department.

As an aside, it would be helpful to the study of the detection zone water at B-2 to have a water table map for August of 1991. Therefore, I suggest that you have your consultant submit data for August plus that for current conditions. This will not only help with the B-2 problem, but will indicate if your water level monitoring system is reacting to the change in precipitation conditions.

Should you have any questions regarding these matters, please feel free to contact me at the above number.

Sincerely,

John W. Conrad Hydrogeologist

JWC:tlb

Francis Fair Robert Benvin Anthony Rathfon

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File

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VASTE MANAGEMENT PROGRAM
Southcentral Region
One Ararat Boulevard
Harrisburg, Pennsylvania 17110
(717) 657-4588
October 3, 1991

Mr. John Lukens, Director

Department of Incineration and
Steam Generation
1670 South 19th Street
Harrisburg, PA 17104

Re: Hydrogeologic Site Characterization Proposed B-3 Ash Disposal Area City of Harrisburg, Dauphin County

Dear Mr. Lukens:

I am writing to remind you of the requirement for an approved plan prior to performing hydrogeologic site characterization on waste disposal sites proposed for permitting under the Municipal Waste Management Regulations.

Meetings were held in our offices earlier this year and verbal plans were made with your consultant. After that, test drilling was initiated and water level measuring of the new wells began.

In order to insure that the City of Harrisburg has an approved plan, you should do the following, knowing that your consultant intends to file an application for permitting of proposed B-3 by spring of 1992:

- Make a written proposal with supporting maps to the Department detailing the following:
 - a. Location of aquifer hydrologic characterization wells and piezometers and proposed methods of performing same.
 - b. Monitoring well locations and depths of aquifers which will characterize aquifer water quality at the site.

Mr. John Lukens, Director October 3, 1991 Page 2

- c. Location and details of construction of water level monitoring points.
- d. Spreadsheet detailing water level elevations as measured from end of summer into the current more rainy season.

Please note that the regulations do require that applicants go through this procedure. I am interested in ensuring that a correct measurement under an approved plan is made so that your 1992 submission can be accepted by the Department.

As an aside, it would be helpful to the study of the detection zone water at B-2 to have a water table map for August of 1991. Therefore, I suggest that you have your consultant submit data for August plus that for current conditions. This will not only help with the B-2 problem, but will indicate if your water level monitoring system is reacting to the change in precipitation conditions.

Should you have any questions regarding these matters, please feel free to contact me at the above number.

Sincerely,

John W. Conrad Hydrogeologist

JWC:tlb

Francis Fair Robert Benvin Anthony Rathfon

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Free mon hang

SOUTHCENTRAL REGION - FIELD OPERATIONS
WASTE MANAGEMENT PROGRAM
One Ararat Boulevard
Harrisburg, Pennsylvania 17110
(717) 657-4588
November 18, 1991

Mr. David Brinjac Brinjac, Kambic & Associates 910 North Second Street Harrisburg, PA 17102

Re: Harrisburg Steam Generation Coulding
Ash Residue Area B-3
Groundwater Level Data
City of Harrisburg, Daniel Coulding

Dear Mr. Brinjac:

The Department has reviewed the information which you submitted October 3, 1991 regarding groundwater level data for the proposed Ash Residue Area B-3. Our comments are listed below as pertains to the adequacy of this system:

- Please install a shallow piezometer in the area of #14W and MW-7.
 This piezometer should be no deeper than twenty (20) feet and should be screened from fifteen (15) to twenty (20) feet following the construction methods used in the May and June efforts.
- 2. Noting the loss of data acquisition at #1W, please either correct that situation or install a new piezometer at that location.
- 3. Please install shallow piezometers adjacent to #11W and #12W which are twenty-five (25) feet and thirty-five (35) feet in depth respectively. These piezometers can be constructed as in May-June of 1991 but should have five foot screened intervals.
- 4. Continue weekly water level measurements in order to obtain the high fluctuation level of the regional water table over a period of record of one year. Ideally this should be, as previously explained to you on April 23, 1991 at our offices, during the March-April-Hay time period unless it can be demonstrated that the high fluctuation of the water table occurred at some other time of the year.

Mr. David Brinjac November 18, 1991 Page 2

The requirements for groundwater level monitoring at this site will be fulfilled when the above work is completed.

Please feel free to contact us here should you have questions regarding this matter.

Sincerely,

John W. Comrad Hydrogeologist

JWC:tlb

cc: Dave Eberle, Skelly & Loy

Robert Benvin Anthony Rathfon File BUREAU OF WASTE MANAGEMENT
Harrisburg Regionsl Office
One Ararat Boulevard
Harrisburg, Pennsylvania 17110
(717) 657-4588
January 12, 1990

Mr. John Lukens, Director Harrisburg Steam Generating Facility 1670 South 19th Street Harrisburg, PA 17104

Re: Ash Sampling
Temporary Ash Storage Pad
Permit No. 100992
City of Harrisburg, Dauphin County

Dear Mr. Lukens:

This letter is to confirm our meeting on January 4, 1990 regarding the City of Harrisburg's proposed ash sampling protocol. The Department approves the sampling protocol with the following conditions:

- The City of Harrisburg has eight weeks from January 5, 1990 to complete the sampling, analyses, and submittal of results to the Department.
- 2. The Department will conduct split sampling with the City. Therefore, the Department requests sufficient advance notice from the City to insure that the Department's samples can be scheduled with the laboratory.
- 3. If one or both results of each split sample analysis indicate that the waste is E.P. Toxic, then the ash pile will be deemed hazardous waste. The City will then need to manage the ash as hazardous waste and to meet the requirements of all applicable hazardous waste regulations, specifically Section 75.262 of the Pennsylvania Razardous Waste Regulations.
- 4. The ash will be analyzed for pH and total and leachable lead, mercury, cadmium, and chromium.

es to be tested do not have to be covered with the HDPE intil the samples have been collected. The Department tre the City to cover the ash before the samples have been cited, however, if wind dispersal of ash from the temporary ash corage pad takes place.

If you have any questions concerning this matter, please feel free to contact this office.

Sincerely,

Francis P. Fair Compliance & Monitoring Manager Harrisburg Regional Office

FPF:tlb

Mr. Kar Mr. Rathfon Ms. Roderick BAQC File T



State of Ohio Environmental Protection Agency

Northeast District Office 2110 E. Aurora Road Twinsburg, Ohio 44087

(216) 425-9171

Richard F. Celeste Governor

September 20, 1989

Certified Return Receipt

Ironics, Inc.
P. O. Box 292 750 South Main St.
Niles, Ohio 44446

Dear Sir:

DER
WASTE MANAGEMENT
OCT 04 1989
HARRISBURG REGION

FILE HARRESSURG DUCTON DAMPHING.

This office has advised you, by certified mail dated July 21, 1989, that the storage of incinerator ash is in violation of the Ohio Administrative Code and that you should dispose of the material stored on your property in compliance with the interim policy "Conditions for Municipal Incinerator Ash Disposal", which was sent to you. Basically, that policy stated that incinerator ash could be disposed of in a licensed sanitary landfill if it met the criteria for a solid waste. A re-inspection on August 29, 1989, shows that this ash is still being stored on your property. Please have this material removed to an appropriate facility immediately or this office will initiate futher enforcement action. OAC 3745-28-02 relating to State Disposal Fees must be complied with.

Thank you for your consideration during our inspection.

Sincerely,

William L. Black
Environmental Scientist
Division of Solid and Hazardous
Waste Management

cc: Nancy Moore, CO

City of Niles Health Dept.

Frank Fair, Pa. DER

John Lukens, City of Harrisburg



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES

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Office of Chief Counsel Central Region City Towers, Third Floor 301 Chestnut Street Harrisburg, PA 17101-2702 (717) 787-8790

February 14, 1990

DER WASTE MANAGEMENT

FEB 1 4 1990

HARRISBURG REGION

VIA FAX

Howard J. Wein, Esquire Klett, Lieber, Rooney & Schorling One Oxford Center, 40th Floor Pittsburgh, PA 15219-6498

Re: Department Letter of January 12, 1990

Dear Mr. Wein:

Following our meeting of February 12, 1990 I read the Department's January 12, 1990 letter and discussed it with Mr. Fair. Mr. Fair wrote the letter to summarize a January 4, 1990 meeting between the Department and Harrisburg and memorialize the procedures that <u>all parties</u> at the meeting agreed should be followed. Apparently, the City does not concur with the contents of the letter, and specifically asserts that it did not agree to treat the ash as a hazardous waste if it any of the next samples do not pass the E.P. Toxicity test.

The letter was not intended to be an "action of the Department" as that term is used in the Administrative Code, Department Rules and Regulations or case law. As I understand the law, a letter which summarizes a meeting is not an appealable action. If the ash tests positive the Department will review its options and may choose to take an appealable action at that time. If the Department takes an appealable action at that time Harrisburg could appeal it. Furthermore, assuming arguendo, that the January 14, 1990 letter is considered to be an appealable action the Department will not assert collateral estoppel, res judicata or administrative finality against the City in the appeal of the subsequent action due to its failure to appeal the January 12, 1990 letter.

H. Wein Page 2.

I hope that this addresses your concerns. Please feel free to contact me if you have any comments or questions.

Sincerely,

Michael J. Heilman Assistant Counsel

cc: M. Steiner, Asst. H'burg Regional Dir. E. Fair, H'burg S.W.

BUREAU OF WASTE MANAGEMENT Harrisburg Regional Office One Ararat Boulevard Harrisburg, Pennsylvania 17110 (717) 657-4588 February 20, 1990

Mr. John Lukens, Director Harrisburg Steam Generating Facility 1670 South 19th Street Harrisburg, PA 17104

> Re: Repair Plans for Pavement Failure Cell 5A Temporary Ash Storage Pad City of Harrisburg, Dauphin County

Dear Mr. Lukens:

The Department has reviewed the above referenced plan and hereby grants approval for the repair to commence.

As a result of an inspection of the temporary ash storage pad by Abdul Merchant and Ajaz Uddin, Engineers, and I on February 13, 1990, it was discovered that there is another area that appears in need of repair. The area that we discovered is approximately 5 to 10 feet in the northwest direction from the reinforced concrete delivery pad. This area should be repaired in the same manner as in the case of the pavement failure in Cell 5A.

If you have any questions concerning this matter, please feel free to contact this office.

Sincerely.

Anthony L. Rathfon Solid Waste Specialist Harrisburg Regional Office



Speak out! Help shut down the Harrisburg Incinerator NOW!

DIOXINS - LEAD - ARSENIC - MERCURY - SULFUR DIOXIDE

If we continue to tolerate these poisons, our backyards will never be the same. Alternatives will be found, if we demand it.

> CALL THE MAYOR tell him **NO** 717-255-3040

CALL the CAI, Coalition Against the Incinerator to find out more information

717-564-6032 www.stoptheburn.org



CDALITION AGAINST the INCINERATOR

PRINTED ON RECYCLED PAPER

Some facts about the Incinerator

- Out-of-town trash. Most of the trash burned in the incinerator is not city trash.
- More ash than trash At full capacity, the amount of ash left over at the Incinerator at the end of one day is more than all the trash the City produces (in one day). After the proposed retrofit, the ash amount will be roughly double the daily City trash amount.
- Toxic Dioxin, Dioxin is one byproduct of municipal waste incineration, and among the most poisonous substances ever studied This cancer-causing toxin accumulates in fat tissues
- Two pounds of poison. The Incinerator is legally permitted to emit up to one pound of dioxin per year for each of its two stacks. It has been suggested that a person's safe lifetime dose of dioxin is considerably less than one grain of salt.
- A mother's gift. Dioxin accumulates and stays with you. The
 only people able to rid their bodies of dioxin quickly are women, at
 childbirth and through nursing, The dioxin is passed along to their
 child.
- Health risks uncertain. There have been no actual health studies done to back up the City's claims that the incinerator does not pose a health risk. Heavy metalslike lead and mercury are not regulated under the current regulation agreement. Tests have shown these levels to be higher than other large incinerator limits.
- * Incinerating taxpayer dollars. The incinerator has lost money for the past eight years. Between 1993 and 2000 the total lost came to 15 million dollars. Currently the City is proposing to spend 93 million more to retrofit the incinerator, not including the over 55 million dollar debt.

Report on increased dioxin in ash due to activated carbon injection systems:



Chang, M., Lin, J., 2001. "Memory effect of the dioxin emissions from municipal waste incinerator in Taiwan." Chemosphere 45: 1151-1157

Mdel March Am Jack Lawred JWC

CQA SERVICES, INC.

Date:

October 17, 1990

Project:

B-2 Residue Disposal Area Harrisburg Incinerator Harrisburg, Pennsylvania

Contractor:

Adams County Asphalt Harrisburg, Pennsylvania

Subcontractor:

Gundle Lining Systems, Inc.

Houston, Texas

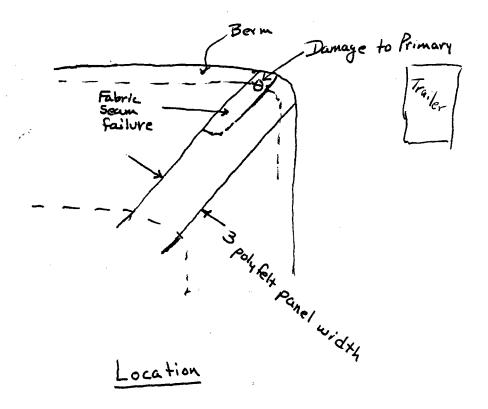
At about 1400 October 16, 1990 as Adams County Asphalt was placing sand for their access/haul road, black liner was discovered protruding out of the sand layer at the top of slope/berm interface. The area was hand excavated with plastic shovels to assess this condition. The primary liner in this area was damaged from the pressure of the equipment bearing through a sand cover layer that was only about 6 inches thick. The liner was torn in a small area about 4" x 4" and slit about 15". Track marks from the 931B loader were also visible on the liner above the slit for about 12 inches.

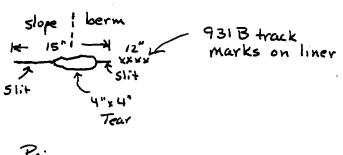
The polyfelt fabric in this area was also torn. Adams County Asphalt excavated sand by hand in the entire area to determine the total extent of damage. The fabric panel had separated at the sewn seam and also split. After excavating about 1/3 of the way down the slope on this fabric panel the intact seam was discovered. It appeared the weight of the sand being placed on the haul road had caused the panel seam to fail.

At 0700 October 17, 1990 a Gundle technician arrived on-site to perform all necessary repairs. The net and secondary liner were examined at the tear location and no damage was discovered. The primary liner was patched and capped. A new piece of fabric was cut and attached on all sides by liestering. Sand placement for the haul road continued after these repairs were performed.

Inspector: Pavid L. Wall

(See sketches on back)





Primary Damage CITY OF HARRISBURG
CONSTRUCTION OF B-2 RESIDUE AREA Correspondence
BKA NO. 86019-01

Job Conference No. 23

October 4, 1990

PROJECT DATA:

Contract Length: Start Date: Completion Date: Days Complete: Days Remaining:

Percent Time Consumed: Estimated Percent Complete

Adams County Asphalt: D & S Contractors:

Next Scheduled Job Conference:

165 days*

April 25, 1990 October 6, 1990*

163 998

> 83% 95%

October 11, 1990 at 9:00 A.M.

at the job site trailer

* Includes 15 day contract extension negotiated with Owner

THOSE IN ATTENDANCE:

David A. Brinjac Mark Bukowski Gordon Lambert Curt Helman Daniel Lispi John Lukens Robert Galardini Michael Shenk David Hall Richard Bodner Mark Vanoni Norman Dudanowicz Abdul Merchant

Brinjac, Kambic & Associates, Inc. Brinjac, Kambic & Associates, Inc.

Nassaux-Hemsley, Inc Nassaux-Hemsley, Inc. City of Harrisburg City of Harrisburg Adams County Asphalt Adams County Asphalt

COA Services COA Services

Gundle Lining Systems, Inc

D & S Contractors

Department of Environmental Resources

MEETING MINUTES:

Mr. Bukowski opened the meeting by asking if there were any 1. additions, deletions and/or corrections to the Job Conference No. 22 meeting minutes held on September 27, 1990.

Mr. Galardini stated that he objected to Item 8 in the previous minutes regarding pulling equipment off the job. The track dozer was not needed on the project when it was taken off and it will be brought back then it is needed again.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 23 BKA NO. 86019-01

With regards to Adams County Asphalt's "attitude" towards the project (also in Item 8), Mr. Galardini stated that Adams County Asphalt was just as concerned as the Owner and Engineer over completing the project as soon as possible. The delays that have occurred on this project are not the sole fault of the Contractor, especially with regards to the sand approval sequence.

Mr. Lukens stated the Contractor should make every effort to get the project completed since DER has advised the City that they will not recognize any rain delays on this project. The City will take exception to DER's position on the rain delays, but the outcome is not known at this time. Mr. Galardini stated that the Contractor would support the Owner with regards to the rain delay situation.

Mr. Galardini asked if the Owner has a problem with the effort expended to date by the Contractor. Mr. Lukens reiterated that the Contractor should make every effort to get the project complete to receive ash as soon as possible.

Mr. Brinjac stated that there was no reason for the rest of the job not to be complete. Landscaping, fencing and sewer work should be complete, but it is not. Mr. Galardini stated that the fence will not be installed until the trees are in and he has already advised the Owner and Engineer that the trees cannot be dug up until mid-October. Mr. Bukowski stated that the Engineer requested that the Contractor test the sewer line for many weeks prior to the actual testing. Since this testing was performed at such a late date, the installation of the new sewer may affect the use of the new basin.

Mr. Vanoni asked when the berm would be completed so Gundle could finish its work. Mr. Galardini stated that work on the berm would begin now.

No other objection or clarification was made to the previous minutes, so those minutes stand as amended.

- 2. Mr. Dudanowicz stated that he has not worked on the project since early September and he was concerned over when he would be able to complete his work. Mr. Galardini stated that this work depends on when the primary liner is completed. Mr. Dudanowicz asked for an approximate time frame. Mr. Galardini stated that he would be ready for D & S within the next two weeks. Mr. Dudanowicz requested five days notice for this work since he was very busy at this time.
- 3. Mr. Brinjac stated that the permanent pumps could not be activated until ash was placed in the basin. Temporary pumping of rainwater should continue either in the detection manhole or pump station until that time.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 23 BKA NO. 86019-01

- 4. Mr. Galardini reviewed Adams County progress and plans as follows:
 - a. The leak detection system is complete.
 - b. Fine grading of the basin floor is nearly complete.
 - c. Gundle will start on the floor today.
 - d. Construction of the berm will begin today.
 - e. Gundle and Adams County will have to work together very closely to complete the work as follows:
 - 1) As Gundle is completing the primary liner on the bottom, Adams County will work on the berm and complete the subbase preparation in the northeast corner.
 - 2) Once Gundle is complete on the bottom, they will proceed to line the northeast corner.
 - 3) Once the berm is complete and covered by Gundle, Adams County will bulldoze sand down the liner to give access into the basin for installation of the collection zone sand.

During this phase, the liner will be protected with geotextile material.

Mr. Vanoni stated that the primary liner in the northeast corner must be complete before installing the collection pipe.

- f. Once the final geotextile layer is installed, the anchor trench will be backfilled.
- g. After backfill of the anchor trench, sand will be pushed up the slope and the basin will be made ready for ash.
- 5. Mr. Bodner asked if a geotextile "rub sheet" would be employed over the first two feet of sand on the temporary access road. After some discussion, Mr. Galardini stated that he would use a geotextile "rub sheet" over the first two feet of sand on the temporary road.
- 6. Mr. Galardini asked if the daily cover sheets were still to be manufactured by Gundle. Mr. Brinjac stated that four 50 ft. x 50 ft. sheets should be made. Mr. Vanoni stated that the weight of these 50 ft. x 50 ft. sections would be 1400 lbs. for the liner only. Any attachment points may very will rip out when moving the liner given this weight.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 23 BKA NO. 86019-01

After the meeting, it was agreed to make each panel 20 ft. \times 24 ft. to lessen the weight. Gundle will devise a method for attaching slings to the cover for handling. Enough panels will be made to cover the original 100 ft. \times 100 ft. area.

- 7. Mr. Helman stated that there had been some discussion about placing the temporary haul road at an angle instead of straight down the slope. Mr. Galardini stated that the road would be straight down the slope.
- 8. Mr. Galardini stated that with regards to the other work, the following is planned:
 - a. Begin fence installation on 10/8/90.
 - b. Complete landscaping.
 - c. Remove the existing sewer line from manhole B-3 to B-1 and replace it with HDPE pipe.
 - d. Slip-line the existing sewer from manhole B-1 to the manhole near the creek. It was agreed that a meeting between the Contractor, Engineer and City would be held on 10/9/90 at 1:30 p.m. to discuss the plans for the slip-lining.
- 9. Mr. Lambert stated that Nassaux-Hemsley was requesting approval of the detection zone from DER at this meeting. Mr. Merchant will review this work. Mr. Bukowski stated that the bolts in the "Gripper" were not stainless steel as specified and would have to be replaced. Mr. Brinjac stated that the Engineer still did not have sufficient information on the "Gripper". Mr. Vanoni stated that he would leave a small area open over each "Gripper" when lining the bottom so the bolts can be replaced.
- 10. Mr. Brinjac asked if DER had approved the "Gripper". Mr. Merchant stated that the use of two "Grippers" in the detection zone was approved by DER.
- 11. Mr. Lambert stated that the clarification on last week's minutes regarding the slope on the detection zone pip, the following was agreed to with DER and implemented in the field:
 - a. A minimum of 4 inches of sand had to be below the pipe.
 - b. A minimum of 6 inches of sand had to be over the pipe.
 - c. The pipe minimum slope would be 1.6%.
- 12. Mr. Brinjac asked DER if there had been any decisions on the proposal for the manner of filling the landfill. Mr. Merchant stated that the proposal seems acceptable with the exception of the daily cover which is still under review. DER will advise Mr. Brinjac.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 23 BKA NO. 86019-01

- 13. Mr. Brinjac asked the Contractor when he projected that ash could be placed in the landfill:
 - a. Mr. Vanoni stated that Gundle had 6 to 7 working days left.
 - b. Mr. Galardini stated that he was planning on two weeks to start moving ash into the basin.
- 14. Mr. Hall stated that all testing performed in the last week has been acceptable. All primary liner on the side slopes has been approved.
- 15. Mr. Brinjac asked DER if it had any objection to any of the Engineer's letters that have been sent recently. Mr. Merchant stated that to his knowledge, no objection has been taken by DER.
- 16. Mr. Brinjac requested that the Contractor submit a plan for sifting and moving the ash. Mr. Galardini stated that he would like to start sifting the ash as soon as possible. A plan wil be prepared.

Any corrections, additions and/or deletions to these minutes should be received by Mark Bukowski on or before October 11, 1990 or the minutes will stand as prepared.

Minutes prepared by Mark Bukowski.

DISTRIBUTION

David A. Brinjac
Mark E. Bukowski
Daniel R. Lispi
James M. Close
John Lukens
Gordon Lambert
Norman Dudanowicz
Linda Houseal
Bob Galardini
File

EATHERNAUM CO.

PARTHERNAUM CO.

NON HAZ

HBG. INCIN.

B-25 ITE

CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA BKA NO. 86019-01

Job Conference No. 24

October 11, 1990

PROJECT DATA:

Contract Length: Start Date:

Completion Date:

Days Complete: Days Remaining:

Percent Time Consumed:

Estimated Percent Complete

Adams County Asphalt: D & S Contractors:

Next Scheduled Job Conference:

165 days*

April 25, 1990 October 6, 1990*

170 -5

103%

85% 95%

October 18, 1990 at 9:00 A.M.

at the job site trailer

* Includes 15 day contract extension negotiated with Owner

THOSE IN ATTENDANCE:

Mark Bukowski Sean Donnelly Curt Helman

John Lukens Robert Galardini Bryan Carbaugh

David Hall

Mark Vanoni Abdul Merchant

Tony Rathfon Steve Bowman

Brinjac, Kambic & Associates, Inc. Brinjac, Kambic & Associates, Inc.

Nassaux-Hemsley, Inc. City of Harrisburg Adams County Asphalt Adams County Asphalt

CQA Services

Gundle Lining Systems, Inc Department of Environmental Resources Department of Environmental Resources

Jet-Vac Services, Inc.

MEETING MINUTES:

- Mr. Bukowski opened the meeting by asking if there were any additions, deletions and/or corrections to the Job Conference No. 23 meeting minutes held on October 4, 1990. There being none, the minutes of that meeting stand as prepared.
- Messrs. Galardini, Vanoni an Carbaugh reviewed Adams County 2. Asphalt/Gundle's progress since the last meeting and plans for the next week as follows:

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 24 BKA NO. 86019-01

- a. The subbase in the northeast corner was completed.
- b. The leachate sewer from MHB-2 to MHB3-F has been dug up and replaced.
- c. The remainder of the leachate sewer pipe has been fused together.
- d. The asphalt roadway in front of the Vehicle Maintenance Building was repaired.
- e. Fence posts have been installed along Gibson Street.
- f. 75% of the berm is complete. It has been verified as 4 feet high by the surveyor. It will be rounded on top.
- g. Gundle has installed the secondary liner in the northeast corner so the entire basin is now covered.
- h. The 40 mil liner for the berm has been fused on the inside in preparation for lining the berm.
- i. Temporary cover mats are all complete except for 1 1/2 mats.
- j. Geotextile was placed below the berm.
- k. Plans for the next week are as follows:
 - 1) Slip-line the leachate sewer from MHB-1 to Spring Creek.
 - 2) Complete the leachate sewer from MHB-2 to MHB-1.
 - 3) Complete the berm.
 - 4) Complete all liner and geotextile deployments. A portion of the berm may be left out where the temporary haul road will be placed.
 - 5) Install the leachate collection sand and pipe.
 - 6) The landscaper will be on site on 10/16/90.
 - 7) Fencing will be completed.
- j. Mr. Galardini stated that he planned on starting to move ash into the basin prior to the end of next week (10/19/90).
- 3. A discussion of what is needed in order to place ash in the basin ensued. It was decided that as a minimum, the following items must be completed:

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 24 BKA NO. 86019-01

- a. Complete the leachate sewer line.
- b. Test the remaining leachate sewer manholes that failed previous testing and the three new runs of sewer pipe.
- c. Start up and commission the pump station.
- d. Test the liner boots per the procedure in the specifications.
- e. Have an approved procedure for screening the ash and removing metal.
- f. Install the channels in the leachate sewer manholes.
- g. Certify to DER that the basin is complete and ready for ash.
- 4. Mr. Bukowski stated that where the existing manholes on the leachate sewer are penetrated for the new pipe, a 1/2 cubic yard of concrete should be placed on the outside of the manhole around the pipe. The inside of the manhole shall be patched with Fosrock or an expansive grout similar to Water Plug. This method was acceptable to DER.
- 5. Mr. Vanoni stated that the temporary haul road will be constructed as previously discussed using a sheet of geotextile on top of the primary liner, 2 feet of sand, another "scrub sheet" of geotextile and another foot of sand.
- 6. Mr. Vanoni suggested that liner be used to form a box around the boots in order to test them. The use of only sand bags as specified will not provide a watertight box. The liner used for the box will be cut and laid flat on the primary liner after the test is complete.
- 7. Mr. Galardini stated that he would have an ash screening and metal separation plan together by 10/12/90 for submittal to the Engineer. The Engineer will forward the plan to DER for review,
- 8. Mr. Bukowski stated that due to the amount of rain that has fallen in the last day, the detection zone is saturated. This zone will take weeks (approximately 3-4) to drain from past experience. For this reason, the HDPE detection tank and standpipe probably cannot be installed in the detection manhole. This zone can still be sampled from the pump discharge. It was suggested that this water be sampled immediately prior to placing ash in the basin and in frequent intervals after that until this zone is fully drained. The City will perform this sampling. This will be addressed when the basin is certified.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 24 BKA NO. 86019-01

- 9. Mr. Rathfon stated that DER is working on a reply to the Engineer's letters in reference to outstanding permit conditions and new construction details.
- 10. After the meeting, another meeting was held with Jet-Vac, DER, Engineer, QA and City of Harrisburg personnel present to discuss how the slip-lining of the existing leachate sewer line would proceed. It was determined that the City could retain most of the flow into the Spring Creek manhole for 15-30 minutes at a time. This will allow Jet-Vac enough time to perform the slip-lining and penetration sealing. This work will be closely coordinated with City of Harrisburg personnel and was scheduled for 10/12/90. The rain day will be 10/16/90.

Any corrections, additions and/or deletions to these minutes should be received by Mark Bukowski on or before October 18, 1990 or the minutes will stand as prepared.

Minutes prepared by Mark Bukowski.

DISTRIBUTION

David A. Brinjac
Mark E. Bukowski
Daniel R. Lispi
James M. Close
John Lukens
Gordon Lambert
Norman Dudanowicz
Linda Houseal
Bob Galardini
File



file: Non-harandous
Harrisburgenciaela
B-2 Construction
Correspondence
Doughin Co.
LHU
AMU
HU BRINJAC, KAMBIC & ASSOCIATES

CONSULTING ENGINEERS

October 1, 1990

Ms. Linda Houseal Bureau of Waste Management Department of Environmental Resources Harrisburg Regional Office Commonwealth of Pennsylvania One Ararat Boulevard Harrisburg, PA 17110

City of Harrisburg Construction of B-2 Residue Area BKA No. 86019-01

DER WASTE MANAGEMENT OCT 0 4 1990 HARRISBURG REGION

Dear Ms. Houseal:

This letter serves to confirm our conversation of September 27, 1990 on the above referenced project regarding the joining of pipe in the leachate detection and collection zones on the above referenced project. Be advised that the contractor on the project, Adams County Asphalt Company (ACAC), has not been able to satisfactorily install the leachate detection zone pipe with all the joints being made utilizing the butt fusion technique.

Therefore, mechanical joints were discussed as an option to be installed on each lateral at a minimum. These mechanical joints will have stainless steel flanges joined together with stainless steel bolts. Polyethylene flange adapters are fixed to either end of the pipe to preserve the water tightness of the joints.

As explained to you, the manner in which ACAC chose to install this pipe was not conducive to using butt fusion process as the butt fusion machine is too large to properly operate in the trench and make all the joints. This manner of joining the pipe was you and Abdul Merchant of the Department of approved by Environmental the previously mentioned Resources during conversation.

It should be noted that this manner of joining the pipe cannot be utilized in the leachate detection zone on the trunk line as it leaves the landfill on either end.

Ms. Linda Houseal October 1, 1990 Page Two

Based on your verbal approval, this method of joining the pipe has been utilized in the leachate detection zone.

I trust that this is an accurate portrayal of our conversation. Should you have any questions regarding this, please feel free to contact me at your convenience.

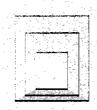
Sincerely,

BRINJAC, KAMBIC & ASSOCIATES, INC.

David A. Brinjac P.E

DAB:glk

c: Abdul Merchant
Daniel R. Lispi
John A. Lukens
Gordon Lambert
File



BRINJAC, KAMBIC & ASSOCIATES CONSULTING ENGINEERS

file: Non-harardons
Harrisburg Cneirenaln
B-2 Construction
Correspondence
Daughin Co.

October 1, 1990

HAMINAME TRIAME Pile

Ms. Linda Houseal
Bureau of Waste Management
Department of Environmental Resources
Harrisburg Regional Office
Commonwealth of Pennsylvania
One Ararat Boulevard
Harrisburg, PA 17110

Re: City of Harrisburg
Construction of B-2 Residue Area
BKA No. 86019-01

DER
WASTE MANAGEMENT

OCT 0 4 1990
HARRISBURG REGION

Dear Ms. Houseal:

As you are well aware, two of the three existing leachate lines from Residue Area B failed to pass the air test placed on them as part of this project. The City of Harrisburg has, therefore, elected to perform remedial work on all three lines to improve the integrity of this existing system into which the new system constructed for Site B-2 connects.

On September 27, 1990, you, Abdul Merchant of the Department of Environmental Resources and myself had a conversation on this topic. The existing 8" diameter clay pipe will be replaced in two sections with 8" diameter HDPE SDR 26 pipe, while the third section will be sliplined with 7" diameter HDPE SDR 26 pipe.

In our conversation, it was agreed that this concept was approved if the capacity in the new pipes exceeded 370 gpm. The design calculations enclosed support this concept.

It should be noted that sliplining is being used on the steep section of pipe so as not to disrupt refuse haulers and other traffic flow to the Steam Generating Facility as this section of pipe crosses the entrance road to the facility.

I trust that this is an accurate portrayal of our conversation.

BRINJAC, KAMBIC & ASSOCIATES

Ms. Linda Houseal October 1, 1990 Page Two

Should you have any questions regarding this, please feel free to contact me at your convenience.

Sincerely,

BRINJAC, KAMBIC & ASSOCIATES, INC.

David A. Brinjad, P.E.

DAB:glk

c: Abdul Merchant Daniel R. Lispi John A. Lukens Gordon Lambert File

PLEXED PIPE CARCULATIONS

FOR LONGHATE LINE REPLACEMENT / SCIPLINIALS

MH B3-F INVERT = 350.58'

APPROXIMATELY 5' DEEP

... HH B-2 INUERT 346.71 - DIZOP CONNECTION

349.88 - TOP INUE-RT

MH B-1 INVERT 345, 43

SPRING CREEK MANHOLE MUEST 302.76"

DISTANCES

83-F 10 B-Z = 200±

B-2 TO B-1 = 260 ±

B-1 TO SPRING CHOOSE 3 350 '±

CALCULATE % DE PROSTRIAL of PIPE

ASSUME 8" SDR ZG PIPE

0.D. = 8.625"

I.D. = 7.961"

DEPTH TO BURIAR # 10' ±

SOIL MODULUS E' = 3000 PSi (CRUSHED ROCK)

$$t = \frac{0.0 \times 1.06}{\text{SDR}} = \frac{0.625 \times 1.06}{20} = 0.352$$

$$l = \frac{\ell^3}{12} = \frac{(352)^3}{12} = 0.0036$$

7.0% is allowable so O.K.

Sharwiss Lewson of Pipe 15 From Ministole B-3F

TO MANHOLE B-2. WILL UTLIZE A SLOPE of

0.7% SLOPE BUTLUSH THESE MANHOLES. THES

WILL ALCO THE E" HDPE PIPE to Remain

MONE THE VARIOUS PIPES AT APPRICA MANTERLY

85 for FROM MANHOLE B3-F.

NEW INVERT AT MANHOLE B-2 IS 349.46±
INVERT LEMING B-2 WILL BE 349.36±

CALCULATE CAPACITIES IN MACH REBUILT SECTIONS

B-3F TO B-2

8" SDR Z6 PIPE O.D. = 8.625" I.D. = 7.961"

= 135.1 × 0.346 × 0.300 × 0.084

Qu = 1.18 cfs.

1.18cfs x 7.48 gar x 6050c = 530 gpm. C.14.

B-2 TO B-1

MANIFOLD B-2 NUMBER = 349.36 ±

MANIFOLD B-1 NUMBER = 345.43±

DISTANCE = 260 FT ±

Om = (1.486) × 0.346 × 0.166 43 × 5 1/2

S= (349.36-345.43) = 260 = 0.015 ft/ft.

Qu= 135.1 x.346x.300 x(0.015)1/2

Qui= 135.1 x.346 x.300 x 0.122 = 1.71 cts

1.71 x 7.48 x 60 = 767 gpM O.K.

CAPACITY of 7" SDR 26 PIPE SCIPLINED

SLope of LINE = (345.43-302.76) = 350 = 0.122 fr/er.

$$A = .7854 \left(\frac{6.577}{12}\right)^2 = 0.236 \text{ fr}^2$$

Que = 135.1 x0.236 x 0.264 x 0.349

THENE PORE, ARE PIPE SERVETIONS ARE MECEPTIFICE.

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The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

September 28, 1990

Mr. John W. Conrad Hydrogeologist Dept. of Environmental Resources Bureau of Solid Waste Management One Ararat Blvd. Harrisburg, PA 17110

RE: Permit Modification
Permit No. 100992
Residue Disposal Area B-2
Conditions 9 and 10
City of Harrisburg/Swatara Township
Dauphin County

response sent tetter
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in comprehensive H/BB
in comprehensive
DER 10/12490
WASTE MANAGEMENT

OCT 3 1990

HARRISBURG REGION

Dear Mr. Conrad:

I have reviewed your September 17, 1990 correspondence regarding the above-referenced subject.

The City is proceeding with arrangements to perform the test drilling, monitoring well construction and sampling/analysis as proposed for the two (2) wells designed to satisfy Conditions 9 and 10.

I have reviewed your proposed construction of a shallower monitoring well near the existing monitoring well MW-3 with the City's consultants on the B-2 project, David Brinjac, P.E. and David Eberle, Hydrogeologist. I have been advised that the local hydrogeological conditions are such that penetrating an appropriate fracture flow zone may require several attempts and may not be possible in the immediate vicinity of MW-3. With your concurrence, the City would like to propose alternate locations to the existing MW-3 location. If the Department and the City can agree on an alternate location to replace MW-3 and a monitor well can be constructed in that area, the City would propose that MW-3 be properly abandoned and replaced by the new well to be labeled 90-DGB1-MW3R (MW-3R).

Mr. John W. Conrad September 28, 1990 Page Two

If you have any questions and/or comments regarding the aforementioned, do not hesitate to contact me at 236-5361.

John A. Lukens

Director

JAL/jal cc:

Daniel R. Lispi, Project Manager - City
David A. Brinjac, P.E. - Brinjac, Kambic & Assoc.
David Eberle, Hydrogeologist - Skelly & Loy
Howard J. Wein, Esq. - Klett, Lieber, Rooney & Schorling
Michael Steiner, Regional Solid Waste Manager - PaDER
Michael Heilman, Esq., Assistant Counsel, PaDER
File

John RM AM

file: Nn-hazardaspouseal

Hbg. Cncin B-2 Constructs

Correspondence

Dauphin Co.

CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA

BKA NO. 86019-01

WASTE MANAGEMENT

Job Conference No. 21

SEP 2 4 1990

September 20, 1990

HARRISBURG REGION

PROJECT DATA:

Contract Length:

Start Date:

Completion Date:

Days Complete:

Days Remaining: Percent Time Consumed:

Estimated Percent Complete

Adams County Asphalt:

D & S Contractors: Next Scheduled Job Conference: 165 days*

April 25, 1990

October 6, 1990*

149

16

90%

72%

95%

September 27, 1990 at 9:00 A.M.

at the job site trailer

Includes 15 day contract time extension negotiated with Owner

THOSE IN ATTENDANCE:

Mark Bukowski Gordon Lambert Kurt Helmam John Lukens Robert Galardini Bryan Carbaugh Ronald Shaw Abdul Merchant Tony Rathfon David Hall

Brinjac, Kambic & Associates, Inc.

Nassaux-Hemsley, Inc. Nassaux-Hemsley, Inc. City of Harrisburg Adams County Asphalt Adams County Asphalt Adams County Asphalt

Department of Environmental Resources Department of Environmental Resources

CQA Services

Cumberland Geotechnical Gundle Lining Systems, Inc.

MEETING MINUTES:

Jeff Barnes

Mark Vanoni

Mr. Bukowski opened the meeting by asking if there were any 1. additions, deletions and/or corrections to the Job Conference No. 20 meeting minutes held on September 13, 1990.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 21 BKA NO. 86019-01

Mr. Lambert stated that, with reference to Item 10 in the previous minutes, it has been decided to survey the sand elevations after the leachate detection piping is installed and backfilled.

No other objections or clarification were made, so the minutes of that meeting stand as amended.

- 2. Mr. Galardini reviewed Adams County Asphalt's progress since the last meeting and plans for the next week as follows:
 - a. Welding has begun on the HDPE lechate detection piping. Some fittings were rejected due to the wrong SDR rating. Some new fittings have arrived and the remainder will arrive on-site by September 21, 1990 or September 24, 1990. Piping installation will continue.
 - b. Gundle is back on-site and all the Geonet material is onsite. Gundle will proceed to install the Geonet and the primary liner.
 - c. The remaining debris in the sedimentation basin area and around the toe of the basin slope has been cut up and will be removed during the next week.
 - d. The fence subcontractor will be on-site to begin work during the next week. Mr. Lambert confirmed that the property line has been layed out along Gibson Street and along NAPA Auto Parts.
 - e. The landscaper has been rained out twice. However, he will remobilize during the next week to complete his work.
 - f. Stockpiling of sand will continue until September 21, 1990. Further stockpiling will hinge on the approval of the current sand for the side slopes.
 - g. Rip-rap was reworked and cleaned up down to Spring Creek and part of the sedimentation pond freeboard was reworked. This work will continue.
 - h. The existing sewer down to the Spring Creek Interceptor was tested and failed.
- 3. Mr. Galardini asked what was the status of the approval of the current sand for use on the side slopes of the collection zone. The following conversation ensued:

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 21 BKA NO. 86019-01

· • • •

- a. Mr. Bukowski stated that the Geonet was approved for use on the detection side slope. The primary liner can also be installed over the Geonet. The remainder of the work cannot proceed without approval by DER.
- b. Mr. Merchant stated that the Engineer's redesign of the side slopes was still under DER review. This review should be completed by September 24, 1990.
- c. Mr. Bukowski requested that DER make every effort to expedite the review of the redesign and advise the Engineer by telephone as soon as possible when a final determination was made.
- d. Installation of the Geonet and primary liner will give Gundle enough work for now.
- 4. Mr. Bukowski stated the following:
 - a. The perforation configuration in the HDPE collection/detection piping has been verbally approved by DER. A letter from the Engineer to DER confirming this approval was given to Mr. Rathfon by Mr. Bukowski prior to the meeting. This letter was requested by DER.
 - b. Since the existing sewer testing has failed in 3 of 4 cases, the Engineer and Owner have decided to replace the entire sewer down to the Spring Creek Interceptor. Adams County Asphalt should prepare a lineal foot cost quotation for this work as soon as possible. The cost for this work must be negotiated by September 26, 1990. Mr. Galardini stated that Plexco has indicated that the existing TCP can be slip-lined with HDPE pipe with an interior diameter of around 7-1/2 inches. Mr. Bukowski requested that a cost quotation for this alternative be supplied along with the cost quotation for removal and reinstallation.
 - c. The Engineer has discussed the placement in two lifts of the leachate collection side slope sand with the Contractor. The following procedure was agreed to by the Engineer and Contractor:
 - 1) Side slope sand will be pushed half way up the side slope.
 - 2) Four 4-foot lifts of ash will be placed in the basin.
 - 3) The remaining side slope sand will be placed.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 21 BKA NO. 86019-01

This is the procedure to be used in the redesign of the side slopes. There is enough ash in the temporary pile to fill the basin with four 4-foot lifts.

- d. The price for the substitution of the Geonet for the detection side slope sand must be negotiated by September 26, 1990. Mr. David Brinjac will be available to discuss this price with Adams County Asphalt.
- 5. Mr. Lambert asked if the results of the Gundle peel and shear test on the liner had been submitted. Mr. Bukowski stated that these test results have not been submitted by the contractor.
- 6. Mr. Helman stated that the test results on the sewer pipe and manholes pressure/vacuum tests performed by Jet-Vac have not been submitted by the contractor. Three manholes failed the original test and must be retested.
- 7. Mr. Hall stated that once the Geonet is installed, people should refrain from walking on it since it is very slippery and since mud from shoes will clog the drainage path.
- 8. Mr. Bukowski stated that the Geonet should be deployed 3 feet into the sand along the 3:1 slope. One foot of sand should be above the Geonet. The Geonet will be anchored by one foot of backfill in the anchor trench. The remaining two feet will be used for the primary liner and geotextile material.
- 9. Mr. Helman asked if the coupling for the HDPE perforated pipe to the HDPE sewer pipe was approved yet. Mr. Galardini stated that this coupling was submitted to the Engineer today (September 20, 1990).
- 10. Mr. Bukowski stated that 8 copies of the O & M Manual for the pump station should be submitted prior to training. Training should be held at the time of start-up.
- 11. Mr. Carbaugh stated that a shallow cable that feeds the existing light posts in the laydown area become uncovered by the passage of vehicles and has shorted out. City personnel were advised and the breaker for this circuit was turned off. Mr. Bukowski stated that this breaker should be locked off. Mr. Lukens stated that he will advise Mr. Close of this so that Mr. Close's staff can perform this function. Mr. Bukowski stated that this cable should be reinstalled at a proper depth (3 feet of cover) prior to repaving this parking lot.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 21 BKA NO. 86019-01

Any corrections, additions and/or deletions to these minutes should be received by Mark Bukowski on or before September 27, 1990 or the minutes will stand as prepared.

Minutes prepared by Mark Bukowski.

DISTRIBUTION David A. Brinjac Mark E. Bukowski Daniel R. Lispi James M. Close John Lukens Gordon Lambert Norman Dudanowicz Linda Houseal Bob Galardini

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Harrisonn, Incinerator B-2

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BRINJAC, KAMBIC & ASSOCIATES CONSULTING ENGINEERS

SEP 2 7 1990

HARRISBURG REGION

September 26, 1990

Ms. Linda Houseal
Bureau of Waste Management
Department of Environmental Resources
Harrisburg Regional Office
Commonwealth of Pennsylvania
One Ararat Boulevard
Harrisburg, PA 17110

Re: City of Harrisburg Construction of B-2 Residue Area BKA No. 86019-01

Dear Ms. Houseal:

This letter serves to confirm my telephone conversation of September 25, 1990 with Abdul Merchant of the Bureau of Waste Management of the Harrisburg Regional Office of the Department of Environmental Resources (DER). During that conversation, Mr. Merchant stated that the side slope redesign, as submitted to DER in correspondence from the undersigned dated September 17, 1990, is approved as submitted. Therefore, geotextile will be placed above the primary liner on the side slopes, and the protective cover material for the side slopes will meet the criteria as defined in the above mentioned September 17, 1990 letter.

I have indicated verbally to the contractor, the City and Nassaux-Hemsley that this design is approved.

Ms. Linda Houseal September 26, 1990 Page Two

Should you have any questions regarding this, please feel free to contact me at your convenience.

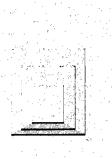
Sincerely,

BRINJAC, KAMBIC & ASSOCIATES, INC.

DAB:glk

c: Daniel R. Lispi John A. Lukens Gordon Lambert Abdul Merchant

File



file: Mon-hazardows
Harrisburg Incinerator
Pit B-2 Construction
Correspondence
Dauphin Co.

BRINJAC, KAMBIC & ASSOCIATES CONSULTING ENGINEERS

September 20, 1990

Ms. Linda Houseal
Bureau of Waste Management
Department of Environmental Resources
Harrisburg Regional Office
Commonwealth of Pennsylvania
One Ararat Boulevard
Harrisburg, PA 17110

Re: City of Harrisburg Construction of B-2 Residue Area BKA No. 86019-01

Dear Ms. Houseal:

This letter serves to confirm my conversation of September 18, 1990 with Abdul Merchant of the Bureau of Waste Management of the Harrisburg Regional Office of the Department of Environmental Resources (DER). During that conversation discussion was held regarding the pipe perforations in the SDR 11 HDPE pipe to be utilized in the leachate detection and collection zones.

I have been informed by Curt Helman of Nassaux-Hemsley, the Quality Assurance firm on this project, that the pipe has been drilled to the following specifications:

6" and 8" pipe: Hole diameter 7/16" at a 6" C-C spacing, two rows of holes.

Two rows of holes for each size.

The contract drawings had stated the following requirements:

Hole Diameter: 3/16" to 3/8" at 3" to 31/2" spacing Four rows of hole

A comparison reveals that the pipe to be utilized on this project exceeds the minimum requirements specified for opening areas. A comparison follows: Ms. Linda Houseal September 20, 1990 Page Two

PIPE AT SITE:

- 7/16" diameter hole equals an opening area of 0.15 in² Number of openings equals 2 per 6". Therefore, total opening area in 6" length = 0.30 in^2 .
- 3/16" diameter hole equals an opening area of 0.03 in Number of openings equals 8 per 6". Therefore, total opening area in 6" length = 0.24 in^2 .

Therefore, based on the above analysis, Mr. Merchant agreed that the pipe on the site could be used in this project. Based on the verbal approval, the contractor has been authorized to install the pipe.

Should you have any questions regarding this, please feel free to contact me at your convenience.

Sincerely,

BRINJAC, KAMBIC & ASSOCIATES, INC.

DAB:glk

c: Daniel R. Lispi John A. Lukens Gordon Lambert Abdul Merchant

David A. Briljac,

File



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Correspondence

WASTE MANAGEMENT

NOV1 1990

HELPMEURG RECION

M Abdul M.

- Bob Beneth

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BRINJAC, KAMBIC & ASSOCIATES CONSULTING ENGINEERS

October 31, 1990

Ms. Linda Houseal Bureau of Waste Management Department of Environmental Resources Harrisburg Regional Office One Ararat Boulevard Harrisburg, PA 17110

City of Harrisburg Construction of B-2 Residue Area BKA No. 86019-01

Dear Ms. Houseal:

At Job Conference No. 25 on the above referenced project, which took place on Thursday, October 18, 1990, discussion was held regarding revising the berm construction detail. Following this job conference, further discussion was held among you, me and Abdul Merchant of DER to determine an acceptable construction detail. Enclosed, please find one (1) copy of a "Revised Type Berm Section" dated October 26, 1990 which reflects the results of that discussion. This was agreed to by you and Abdul. As a result of this agreement, Adams County Asphalt Company has been instructed to construct the berm in this manner.

Should you have any questions regarding this, please feel free to contact me at your convenience.

Sincerely,

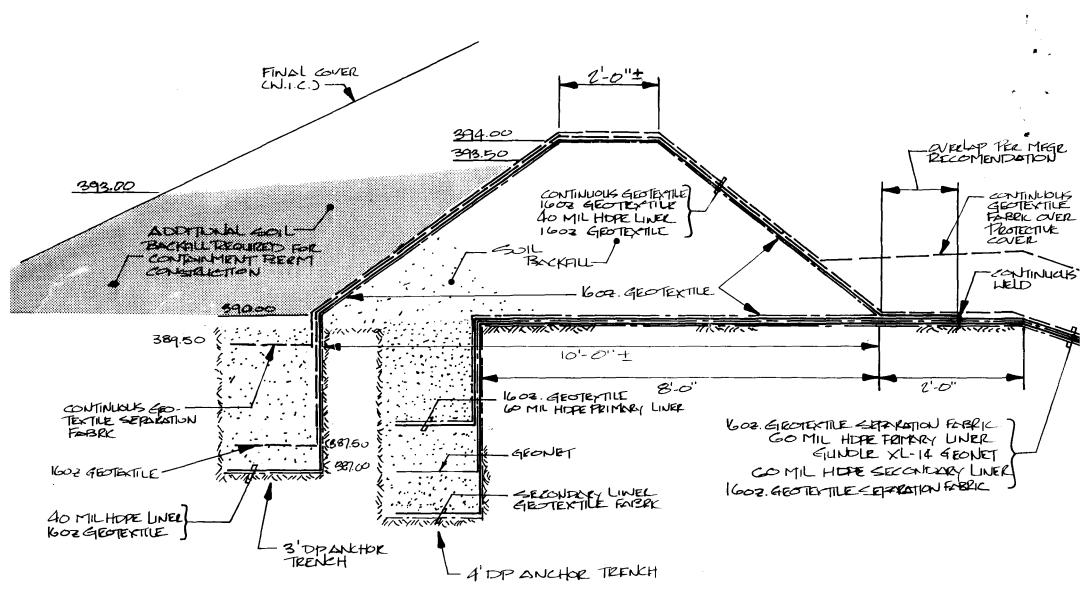
BRINJAC, KAMBIC & ASSOCIATES, INC.

David A. Brinjac, P.

DAB:glk Enclosure

Abdul Merchant (w/enclosure) John Lukens (w/enclosure) Daniel Lispi (w/enclosure) Gordon Lambert (w/enclosure) File (w/enclosure)

> 910 N. Second St., Harrisburg, PA 17102 P.O. Box 2857, Harrisburg, PA 17105 Phone: (717) 233-4502 FAX: 233-0833



REVISED TYP BERM SECTION

SCALE: 1"=2'-0"



file: Non-hazardons Hog. Incinerate B-2 Construction

> AC JUCONIAL CH Ansenl AN Abdulm. Atomyk — Bob Benuth — fule

DAMPOER MASTE MANAGEMENT

HARRISBURG REGION

BRINJAC, KAMBIC & ASSOCIATES CONSULTING ENGINEERS

October 29, 1990

Ms. Linda Houseal
Bureau of Waste Management
Department of Environmental Resources
Commonwealth of Pennsylvania
One Ararat Boulevard
Harrisburg, PA 17110

RE: City of Harrisburg
Construction of B-2 Residue Area
BKA No. 86019-01

Dear Ms. Houseal:

Condition No. 8 of the Major Permit Modification issued on the above referenced project required certain conditions be met regarding the sealing of all test borings, monitoring wells, piezometers and the bore holes affected by this project. On February 9, 1990, the undersigned, in correspondence to Michael R. Steiner of the Department of Environmental Resources (DER), submitted a plan for the sealing of CB-2 and CB-4, the known bore holes in which casings were installed and were located within this construction area. This plan was included in the contract documents for this project.

As you well know, CB-4 was not abandoned in this manner, as the contractor, Adams County Asphalt Company, Inc. (ACAC), did not perform this work prior to beginning the excavation. Additionally, ACAC did not maintain the location of this bore hole throughout construction. I have been verbally assured by the Quality Assurance firm, Nassaux-Hemsley, that CB-2 was abandoned as per the contract documents. This is also noted in the minutes to Job Conference No. 26, a copy of which is enclosed.

Since CB-4 was unable to be located, ACAC has provided the attached letter to the City accepting liability should peizometer CB-4 ever cause contamination to the groundwater. Several months ago, this was discussed with John W. Conrad of DER and he agreed

Ms. Linda Houseal October 29, 1990 Page Two

to this approach. The reason for the delay in submitting this information was the delay in receiving the attached letter. I trust this meets with your approval.

Should you have any questions regarding this, please feel free to contact me at your convenience.

Sincerely,

BRINJAC, KAMBIC & ASSOCIATES, INC.

David A. Brinjac, P

DAB:glk Enclosures

c: John W. Conrad John Lukens Daniel R. Lispi Gordon Lambert File



OCT 2 2 1990

adams county asphalerassociates inc.

PLANT ADDRESS: 2090 N. UNION ST., MIDDLETOWN, PA (717) 566-3285

October 22, 1990

Mr. David Brinjac Brinjac, Kambic and Associates, Inc. 910 North Second street P. O. Box 2857 Harrisburg, PA 17105

> Re: City of Harrisburg B-2 Residue Area Piezometer

Dear David:

During the early phase of construction, the location of a piezometer in the west corner of the B-2 Residue Area has been lost. The effort to re-establish the location has been unsuccessful. It is our contention that this piezometer has been sealed by its proximity from the subgrade which has met, or exceeded, the permeability requirements. The risk of contamination from this piezometer is nominal, and we agree to accept the responsibility of any liability should piezometer CB-4 ever cause contamination to groundwater.

Very truly yours,

Robert M. Mumma, II

President

RMMII/par

CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA BKA NO. 86019-01

Job Conference No. 26

October 25, 1990

PROJECT DATA:

165 days* Contract Length:

Start Date: April 25, 1990 October 6, 1990* Completion Date:

Days Complete: 184177 Days Remaining: -19 Percent Time Consumed: 112%

Estimated Percent Complete

Adams County Asphalt: 888 D & S Contractors: 95%

Next Scheduled Job Conference: November 1, 1990 at 9:00 A.M.

at the job site trailer

* Includes 15 day contract extension negotiated with Owner

THOSE IN ATTENDANCE:

Brinjac, Kambic & Associates, Inc. Mark Bukowski Brinjac, Kambic & Associates, Inc. Sean Donnelly Gordon Lambert Nassaux-Hemsley, Inc. Nassaux-Hemsley, Inc. Curt Helman City of Harrisburg John Lukens Daniel R. Lispi City of Harrisburg Robert Galardini Adams County Asphalt Department of Environmental Resources Abdul Merchant Tony Rathfon Department of Environmental Resources

David Hall CQA Services

MEETING MINUTES:

Mr. Bukowski opened the meeting by asking if there were any additions, deletions and/or corrections to the Job Conference No. 25 meeting minutes held on October 18, 1990.

Mr. Galardini stated that items 6f and 9 in the previous minutes had been addressed by Adams County Asphalt in writing to the Engineer. Adams County Asphalt also highly disagrees with the statement in item 9 that all delays are the fault of the Contractor. Adams County Asphalt will provide correspondence to support this objection. Mr. Lispi later stated that the portion of item 9 regarding the Contractor being at fault for all delays should be amended to read that "The Owner does not accept any responsibility for delays".

No other objections or clarifications were made so the minutes of the previous minutes stand as amended.

- 2. Mr. Galardini reviewed Adams County Asphalt's progress since the last meeting and plans for the next week as follows:
 - a. The berm is being rebuilt to the revised dimensions and is 80% complete.
 - b. Backfill was completed on the original anchor trench.
 - c. Gundle has the primary liner complete on the cell floor. An inspection by DER has been requested for today in order to proceed with the geotextile cover.
 - d. Two and a half days have been lost to rain this week. One half day on 10/22 and all day on 10/23 and 10/24.
 - e. The sewer line testing was completed.
 - f. All channels were placed in all sewer manholes.
 - g. The following work is planned for the next week:
 - 1) Install geotextile material on the cell floor and up the slopes.
 - 2) Begin sand deployment in the cell and simultaneously install the leachate collection pipe.
 - 3) Complete the landscaping.
 - 4) Complete the fence.
 - 5) Continue the berm construction and deploy the geotextile and 40 mil HDPE over the berm.
 - 6) Jet-Vac will be in to complete the Fosrock work in all the manholes and to test the three manholes that have never passed.
 - 7) Complete backfill of the sewer line.
 - 8) Perform the liner/boot test on 10/29/90.
- 3. Mr. Donnelly stated that the mandrel testing of the sewer line has not been done. It was agreed that a mandrel with an area of 95% of the pipe interior at a weld should be used on all new sewer pipe except the slip-lined section since this section does not have soil pressure on it.

JOB CONFERENCE NO. 26 BKA NO. 86019-01

,

- 4. Mr. Donnelly also requested that the official test report from Jet-Vac on the sewer line testing be submitted.
- 5. Mr. Galardini stated that he will continue to follow the revised schedule and asked if the Owner has satisfied with the progress thus far. Mr. Lukens stated that the Owner sees a good effort now and expects this to continue in order to maintain the revised schedule.
- 6. Mr. Merchant stated that DER will review the primary liner on the bottom when the meeting is over.
- 7. Mr. Lambert reiterated that no welding on the primary liner should be performed for the boot test. Mr. Hall stated that duct tape and silicon sealant will be used against the primary liner.
- 8. Mr. Bukowski stated/asked the following:
 - a. Has piezometer CB-2 been sealed per the contract procedure? Mr. Helman confirmed that this piezometer was sealed properly.
 - b. The letter from Adams County Asphalt accepting responsibility for any liability from groundwater contamination from CB-4 which was not sealed has been accepted by the Owner.
 - c. What will be used to attach to the daily ash covers? Mr.Hall stated that grommets will be installed on these covers.
- 9. Mr.Helman stated that all the daily ash covers should be secured to keep them from blowing around. Mr. Bukowski stated that this was the contractor's responsibility until they are accepted by the Owner.
- 10. Mr. Hall stated that all testing of liner and geotextile materials has been acceptable with the exception of one roll of geotextile that was 140 mils instead of 170 mils. This roll is installed on the cell bottom and is not subject to tension. An additional sample will be extracted from the middle of this roll to confirm the thickness.
- 11. Mr. Helman stated the following:
 - a. The QA Engineer would like to have a sketch of the revised berm cross-section from the Engineer.
 - b. The completed berm from the pump station around the west side to the clean out manhole was checked for elevation and averages 0.1 foot low. Mr. Bukowski stated that 0.1 foot tolerance was acceptable. However any extended areas below this tolerance should be filled. No objection was taken to this tolerance.

JOB CONFERENCE NO. 26 BKA NO. 86019-01

- c. Gundle's representative told Mr. Helmen that he did not like how the berm material was vertical for a short section above the liner on the inside face of the berm. This area should be sloped. Mr. Galardini will review this with Mr. Vanoni from Gundle after the meeting.
- d. A silt fence should be reinstalled around the area cleared for the fence along NAPA Auto Parts.
- e. The roadway north of the Traffic Building should be cleaned up daily. Mr. Lukens added that the roadway west of the Vehicle Maintenance Garage should also be cleaned of all mud. Mr. Galardini stated that this would be done.
- 12. Mr. Bukowski stated that the extra styrofoam and the empty van should be removed from site. In general, the contractor should start overall clean up of the project site.
- 13. Mr. Hall stated that every effort should be made to keep excess berm material off the liner. The liner will be swept prior to installing the geotextile cover.

Any corrections, additions and/or deletions to these minutes should be received by Mark Bukowski on or before November 1, 1990 or the minutes will stand as prepared.

Minutes prepared by Mark Bukowski.

DISTRIBUTION

David A. Brinjac
Mark E. Bukowski
Sean P. Donnelly
Daniel R. Lispi
James M. Close
John Lukens
Bradley Bechtel
Gordon Lambert
Norman Dudanowicz
Linda Houseal
Bob Galardini
File

CITY OF HARRISBURG
CONSTRUCTION OF B-2 RESIDUE AREA MESPONDENCE

BKA NO. 86019-01 Daughin Co.

Job Conference No. 26

October 25, 1990

DER WASTE MANAGEMENT

PROJECT_DATA:

Contract Length:

Start Date:

Completion Date:

Days Complete: Days Remaining:

Percent Time Consumed:

Estimated Percent Complete

Adams County Asphalt:

D & S Contractors: Next Scheduled Job Conference: OCT 2 9 1989 days*

April 25, 1990 HARRISBURGOELOBER 6, 1990*

184177

-19

112%

888

95%

November 1, 1990 at 9:00 A.M.

at the job site trailer

* Includes 15 day contract extension negotiated with Owner

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Brinjac, Kambic & Associates, Inc. Brinjac, Kambic & Associates, Inc.

Nassaux-Hemsley, Inc. Nassaux-Hemsley, Inc. City of Harrisburg City of Harrisburg Adams County Asphalt

Department of Environmental Resources Department of Environmental Resources

CQA Services

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JOB CONFERENCE NO. 26 BKA NO. 86019-01

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Norman Dudanowicz
Linda Houseal
Bob Galardini
File

file: Lon-Harandons Harrisburg Incinerata B-2 Constru

NASSAUX-HEMSLEY, INCORPORATED-

NHI BUILDING - 56 NORTH SECOND STREET CHAMBERSBURG, PENNSYLVANIA

Department of Environmental Resources

November 16, 1990

Solid Waste Division

One Ararat Boulevard

Corporate Officers: WILLIAM T. HEMSLEY, P.E. GORDON LAMBERT, P.E. MAURICE L GOSSERT

DER WASTE MANAGEMENT

NOV 1 9 1990

HARRISBURG REGION

Attention: Ms. Linda Houseal

Harrisburg, Pennsylvania 17110

RE:

City of Harrisburg Residue Areas B2 Our File No. 88ID07

Dear Me Houseal:

Enclosed are relevant test results on sand and geotextile material recently received from the laboratory. I'll be calling you on the latter early next week.

Very truly yours,

NASSAU MSLAY, INCORPORATED

> Gorden Lambert, P.E. Vice President

GL:dd

Enclosure

CC: Dave Brinjac w/copies John Lukens

natural is on sideslosse

CUMBERLAND GEOTECHNICAL CONSULTANTS, INC.

263 West South Street Carlisle, Pennsylvania 17013

717-245-9100 Telephone:

ARELL AMPERT

FAX: 717-245-9656

FAX TRANSMISSION

TO:	GORDON LATTIDER	
FAX:	NASSAUX HEMSLEY, INC.	TREAD AND THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE
	263-4117	
FROM:	JEFF BARNES / DAVE HALL	OER L WASTE MARKETMENT
DATE:	11-15-90	NOV 1 9 1990

MEMO Rei Harrisburg Incinerator

Gordon, Aftached is another conformance test result on the Polyfelt geotextile fabric which did not meet the minimum average roll value for thickness (150mils) specified by Polyfelt. All other test results in our last batch of conformance tests met the minimum specifications. This roll of fabric (no. 135) is installed on a sideslope and is still exposed about the sand (protective court top elevation and up and over the containment bern. Let us know how you, Bring's and PADER want to proceed. Jeff

Pages to follow

FROM CUMB. GEOT. CONSLT.

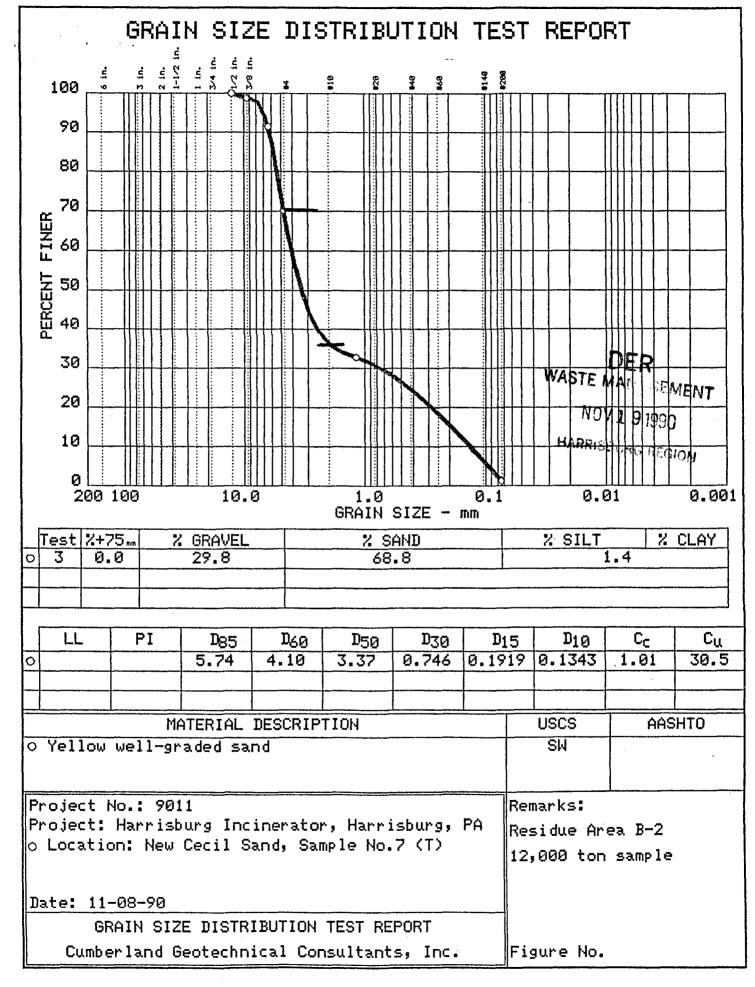
.15.1990 07:34

GT-16
GEOTEXTILE TEST RESULTS
POLYFELT TS-1000
SAMPLE NO. 16
ROLL NO. 135
FOR

CUMBERLAND GEOTECHNICAL CONSULTANTS, INC. RESIDUE DISPOSAL AREA B-2 CITY OF HARRISBURG

			REPLICATE NO.						
TEST	ASTM	UNITS	1	2	3	4	5	AVE	
UNIT WEIGHT	D-3776	ozłsy	16.62	15.06	14.58	13.37	16.66	15.3	
PUNCTURE	D-4833	lbs	193.3	153.8	165.9	159.1	240.3	182.5	
THICKNESS	D-1777	mils	147.0	143.5	138.0	141.0	143.5	142.5	150

This have some concern about catteny another Sample out at this point.



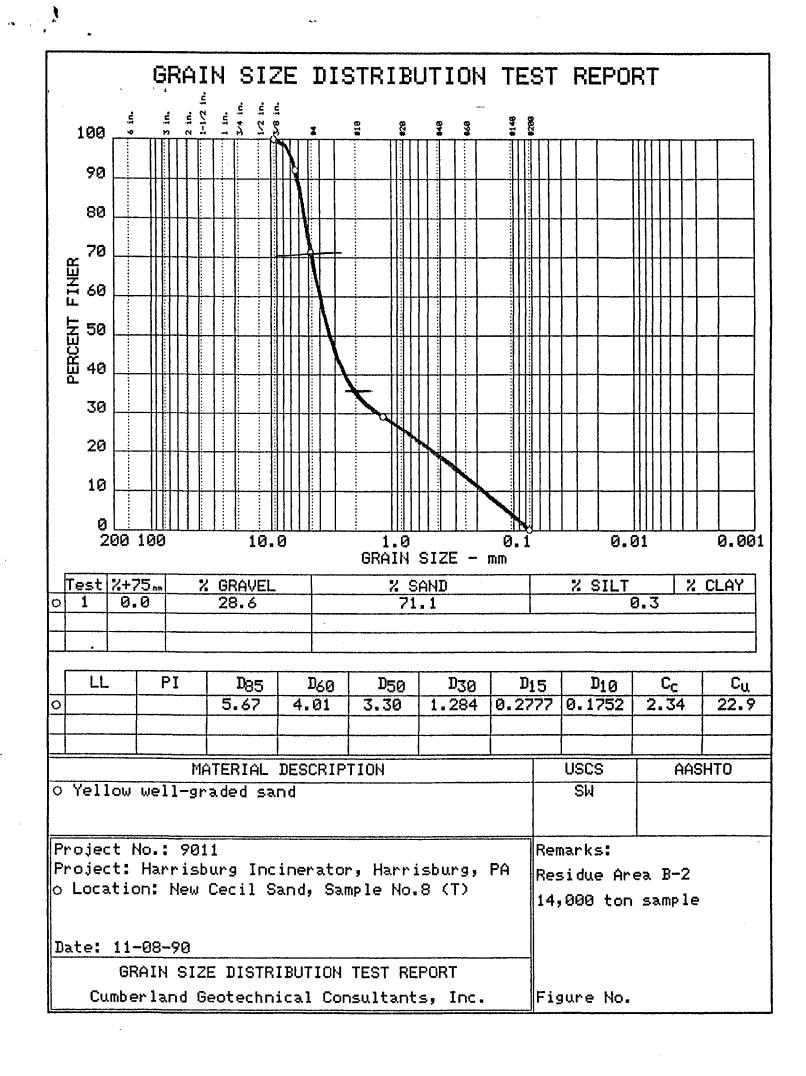
GRAIN SIZE DISTRIBUTION TEST DATA Date: 11-08-90 Project No.: 9011 Project: Harrisburg Incinerator, Harrisburg, PA Sample Data Location of Sample: New Cecil Sand, Sample No.7 (T) Sample Description: Yellow well-graded sand USCS Class: SW Liquid limit: AASHTO Class: Plasticity index: Notes Notes Remarks: Residue Area B-2 12,000 ton sample Fig. No.: Mechanical Analysis Data Initial Dry sample and tare= 6.00 Tare = 0.00 Dry sample weight = 6.00 Tare for cumulative weight retained= 0 Sieve Cumul. Wt. Percent retained finer 0.5 inches 0.00 100.0 0.375 inches 0.07 98.8 0.25 inches 0.51 91.5 # 4 1.79 70.2 # 16 32.8 4.03 # 200 5.92 1.3 Fractional Components

% + 3 in. = 0.0 % GRAVEL = 29.8 % SAND = 68.8 % FINES = 1.4

D85= 5.74 D60= 4.102 D50= 3.373

D30= 0.7464 D15= 0.19187 D10= 0.13428

Cc = 1.0116 Cu = 30.5492



```
GRAIN SIZE DISTRIBUTION TEST DATA Test No.: 1
Date:
               11-08-90
Project No.:
               9011
Project:
              Harrisburg Incinerator, Harrisburg, PA
Sample Data
Location of Sample: New Cecil Sand, Sample No.8 (T)
Sample Description: Yellow well-graded sand
USCS Class:
              SW
                            Liquid limit:
AASHTO Class:
                            Plasticity index:
Notes
Remarks: Residue Area B-2 14,000 ton sample
Fig. No.:
                   Mechanical Analysis Data
               Initial
Dry sample and tare= 7.90
Tare
                 0.00
Dry sample weight = 7.90
Tare for cumulative weight retained= 0
 Sieve
           Cumul. Wt. Percent
            retained finer
 0.375 inches
             0.00
                      100.0
 0.25 inches
               0.61
                       92.3
                      71.4
 # 4
               2,26
 # 16
               5.59
                       29.2
                      0.3
 # 200
              7.88
                   Fractional Components
% + 3 in. = 0.0 % GRAVEL = 28.6 % SAND = 71.1
```

% FINES = 0.3

5.67 D60= 4.013 D50= 3.300

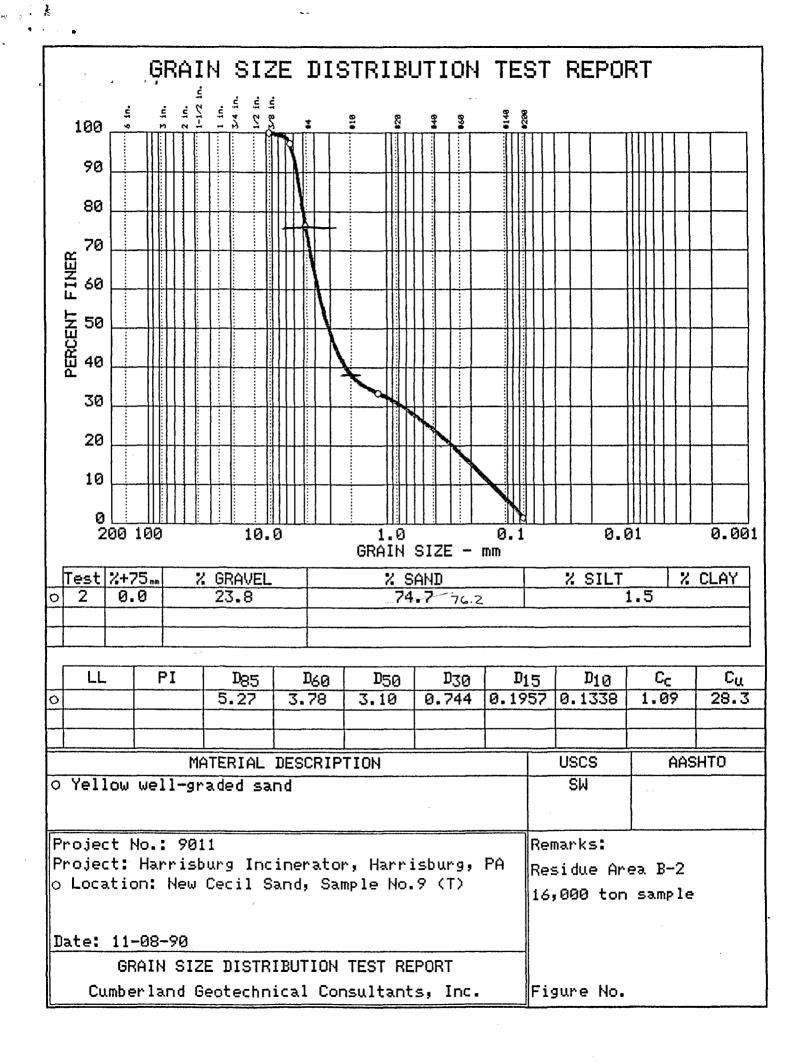
2.3442 Cu = 22.9087

1.2838 D15= 0.27765 D10= 0.17519

D85=

Cc =

D30=



```
GRAIN SIZE DISTRIBUTION TEST DATA
                                   Test No.: 2
           11-08-90
Date:
Project No.:
           9011
Project:
           Harrisburg Incinerator, Harrisburg, PA
_______
                  Sample Data
Location of Sample: New Cecil Sand, Sample No.9 (T)
Sample Description: Yellow well-graded sand
USCS Class:
           SW
                     Liquid limit:
AASHTO Class:
                     Plasticity index:
Notes
Remarks: Residue Area B-2 16,000 ton sample
Fig. No.:
     Mechanical Analysis Data
Initial
Dry sample and tare=
           8.84
Tare
             0.00
Dry sample weight = 8.84
Tare for cumulative weight retained= 0
 Sieve
         Cumul. Wt.
         retained
                finer
 0.375 inches
          0.00
                 100.0
 0.25 inches
           0.23
                 97.4
 # 4
           2.10
 # 16
           5.88
                 33.5
           8.70
 # 200
                 1.6
               Fractional Components
% + 3 in. = 0.0 % GRAVEL = 23.8 % SAND = 74.7
% FINES = 1.5
```

5.27 D60= 3.784 D50= 3.101

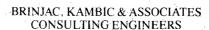
1.0927 Cu = 28.2813

0.7439 D15= 0.19566 D10= 0.13381

D85=

Cc =

D30=



May 12, 1994

Ms. Linda Houseal
Department of Solid Waste
Pennsylvania Department of
Environmental Resources
One Ararat Boulevard
Harrisburg, PA

Re: Construction of B-3 Residue Area
The Harrisburg Authority

BKA No. 90013

Dear Ms. Houseal:

Enclosed, please find Drawing SD-6, revision date of May 4, 1994, depicting excavation contours and the projected groundwater conditions for the above referenced project. The groundwater has been projected utilizing the data discussed at our April 27, 1994 meeting.

Should you have any questions or comments, please feel free to contact me at your convenience.

Very truly yours,

BRINJAC, KAMBIC & ASSOCIATES, INC.

David A. Brinjac, P.E.

DAB:djp Enclosure

c: Daniel R. Lispi w/copy
 John A. Lukens w/copy
 Thomas J. Mealy w/copy
 File w/copy



October 3, 1991

Mr. John W. Conrad, Hydrogeologist Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Solid Waste One Ararat Boulevard Harrisburg, PA 17110

DER
WASTE MANAGEMENT
OCT 5 1991
HARRISBURG REGION

Re: Harrisburg Steam Generating Facility
Ash Residue Area B-3
Permit Application Requirements
BKA No. 90013

Dear Mr. Conrad:

On April 22, 1991 a meeting was held at DER to discuss the requirements of DER in relation to the permit application for an ash Residue Area B-3, which is to be located adjacent to the existing Residue Area B-2, which is owned by the City of Harrisburg. As a result of this meeting, information was requested for your review to confirm the proposed groundwater level observation well locations and the test pit plans for the B-3 area.

The installation of four ground-water level observation wells (GWLOW) in and adjacent to the proposed location of Area B-3 was proposed. These wells are identified on the enclosed partial site plan as GWLOW Nos. 91-11W through 91-14W. One additional GWLOW was requested by DER, and has been installed as GWLOW No. 91-15W. GWLOW'S 91-12W through 91-15W were installed in May at the locations noted. GWLOW No. 91-11W was installed in June, as the installation in the temporary ash pad became more accessible. Drilling was performed by Borings, Soils & Testing Co., Inc. Test boring reports are attached. During the second drilling operation, observation wells were installed adjacent to 91-14W and 87-4W, for the purpose of subsequent aquifer tests. An additional observation well was placed adjacent to 91-11W to monitor a perched zone encountered at a depth of eight feet. These observation wells have an O suffix instead of a W.

Mr. John Conrad October 3, 1991 Page Two

Wells were installed via hollow stem augers with continuous split spoon sampling in accordance with ASTM methodology. A Skelly & Loy, Inc. staff geologist provided appropriate subsurface and well installation documentation. Well installation consisted of sufficient riser pipe and ten feet of PVC screen installed such that the top of the screen was approximately at the top of the saturation zone as encountered during drilling.

Weekly water level measurements were begun in May of existing GWLOW's 87-2W, 87-4W, 87-6W and 87-6P, new GWLOW's 91-12W, 91-13W,91-14W and 91-15W, and monitor wells MW 7 and MW 8. Water level measurements of 87-1W, 91-11W, 91-11O, 91-14O and 91-4O were commenced in June. A summary of groundwater elevations measured to date is attached. Quarterly measurements of all site wells continues.

Additionally, during our April meeting it was agreed that a total of nine test pits would be dug in the location of the proposed Area B-3. One sieve and one hydro-meter analysis will be performed per test pit. A total of five Standard Compaction Tests will be performed. In deference to Ms. Houseal, a Certified Soil Scientist or other staff acceptable to DER will be utilized during the test pit investigation in lieu of Mr. Ed Lesny, P.E. We would appreciate notification of any specific test pit locations or other requirements which DER feels in necessary.

I trust this satisfies your requirements for the groundwater monitoring at this site. Please provide us with a letter of confirmation to this effect.

We anticipate permit application submittal during the month of December. If any additional information is required, please do not hesitate to contact the undersigned.

Very truly yours,

BRINJAC, KAMBIC & ASSOCIATES, INC.

David A. Brinjac, P.E.

AdS/DAB Enclosure

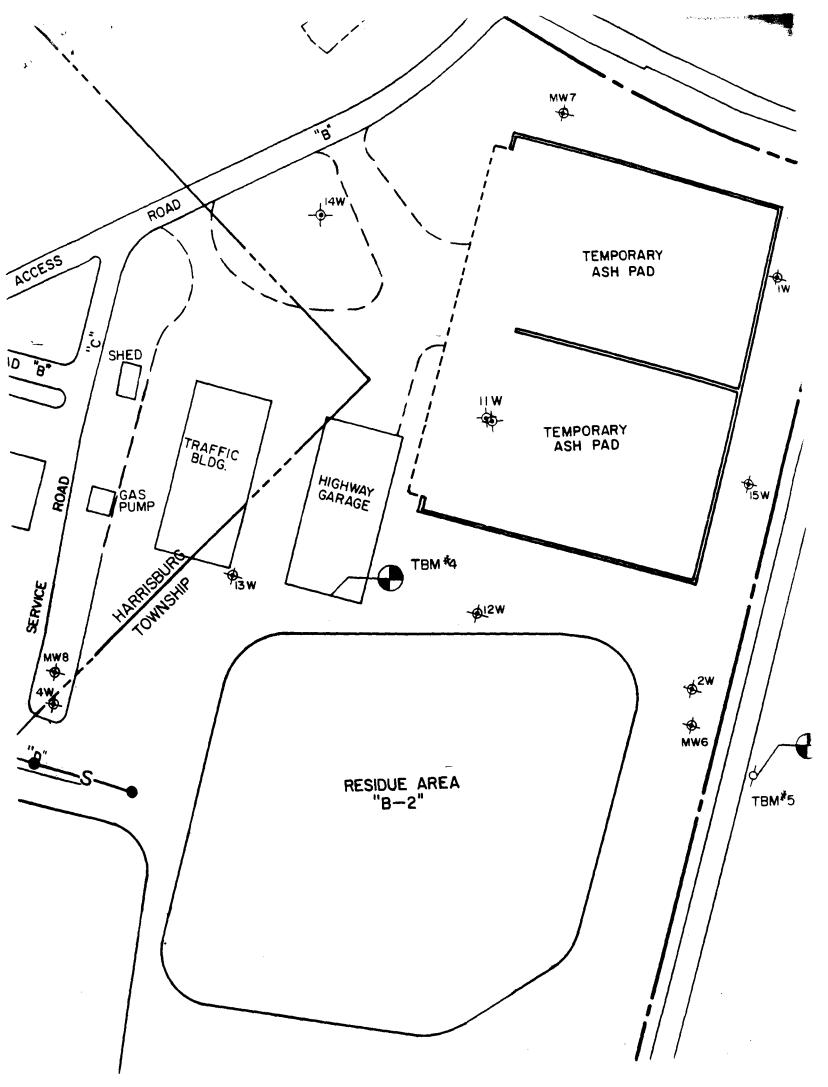
c: Linda Houseal w/enc.

Robert Benvin w/enc.

John Lukens w/enc.

David Eberle w/enc.

file w/enc.



PIEZOMETER OR WELL NO.	FILTER PACK ELEVATIONS	REF. PT. ELEV.	11/13/87	11/19/87	02/09/88	03/11/88	03/28/88	05/23/88	06/14/88	11/04/88	11/17/88
RESIDUE AREA B3 PIEZOMETERS											
1W	360.70 to 347.20	383.32	364.52	365.32	365.92	364.65	1	366.12		363.62	
2W	339.50 to 330.50		337.85	337.80	337.85	337.47		338.25		000.02	
6W	359.40 to 346.90		366.04	367.49		366.27				363.54	
6P	276.70 to 264.50		357.17	357.62		354.97				353.17	
11W	364.02 to 353.02								· · · · · · · · · · · · · · · · · · ·		
110	384.05 to 378.05										<u>-</u>
12W	354.83 to 342.83	393.83									
13W	372.53 to 358.53	394.53									
14W	369.86 to 357.86	390.86									
140	370.02 to 362.02										
15W	356.30 to 344.30	384.30									
RESIDUE AREA B3 MON. WELLS	<u>.</u>	!									
MW6	301.30 to 283.50	373.68						1		<i></i>	295.28
MW7	370.90 to 346.90						371.35	371.70	374.20		
RESIDUE AREA B2											
3W	294.90 to 281.90			295.65		297.82				299.90	
3P	264.70 to 260.20		295.62	295.72		297.90				300.27	
CB2	UNKNOWN	382.80			339.20	335.90 3	1	338.80		338.00	
4W	327.00 to 315.00		352.83	352.58		350.31		350.23		351.73	:
40	361.83 to 352.08			_							
MW5	294.90 to 269.11					-					
MW8	360.00 to 348.00	391.28							I		

PIEZOMETER OR WELL NO.	FILTER PACK ELEVATIONS	REF. PT. ELEV.	12/05/88	12/19/88	01/09/89	02/21/89	03/10/89	03/28/89	04/20/89	05/01/89	05/19/89
RESIDUE AREA B3 PIEZOMETERS											
iw	360.70 to 347.20	383.32	361.22		364.01	364.22	[365.32	1
2W	339.50 to 330.50	384.35	334.85	337.15	337.11	337.15					
6W	359.40 to 346.90	378.44	364.24		364.14	363.44			364.94	364.84 *	
6P	276.70 to 264.50	378.47	353.67		353.37	353.17			354.77	354.57 *	1
11W	364.02 to 353.02	391.02									
110	384.05 to 378.05	388.05									
12W	354.83 to 342.83	393.83									
13W	372.53 to 358.53	394.53									
14W	369.86 to 357.86	390.86									
140	370.02 to 362.02	391.02									
15W	356.30 to 344.30	384.30									
RESIDUE AREA B3 MON. WELLS								÷			
MW6	301.30 to 283.50	373.68				295.08		296.93		296.98	
MW7	370.90 to 346.90	390.60	368.90		369.48	370,30	371.60				373.52
RESIDUE AREA B2											
3W	294.90 to 281.90		295.10	295.22	295.15	295.20				296.20	
3P	264.70 to 260.20		295.07	295.27	295.14	295.17				295.67	
CB2	UNKNOWN	382.80	334.50	338.10	338.00	338.00				340.85	ļ
4W	327.00 to 315.00	388.73	346.93		350.83	350.48		<u> </u>	352.63	349.93	
40	361.83 to 352.08	388.83									
MW5	294.90 to 269.11	356.36		295.67	295.74	295.26		297.11		287.16	
MW8	360.00 to 348.00	391.28			l						l

XXXXX

*04/28/89

PIEZOMETER OR WELL NO.	FILTER PACK ELEVATIONS	REF. PT. ELEV.	05/23/89	06/13/89	07/17/89	07/21/89	10/06/89	03/13/90	03/15/90	06/14/90	06/15/90
RESIDUE AREA B3 PIEZOMETERS											
1W	360.70 to 347.20	383.32	365,47	365.92					I		
2W	339.50 to 330.50				338.75					337.20	
6W	359.40 to 346.90		369.64 *	364.84 *	365.64			365.30		364.88	·
6P	276.70 to 264.50		356.07 *	355.37 *	355.57			355.10		355.02	
11W	364.02 to 353.02			,							
110	384.05 to 378.05										
12W	354.83 to 342.83	393.83									
13W	372.53 to 358.53	394.53									
14W	369.86 to 357.86										
140	370.02 to 362.02										
15W	356.30 to 344.30	384.30									
RESIDUE AREA B3 MON. WELLS								I			
MW6	301.30 to 283.50	373.68	296.78	297.28	1	297.28 *	4		298.39	298.47	298.69
MW7	370.90 to 346.90						373.10		371.80	371.35	371.20
RESIDUE AREA B2											
3W	294.90 to 281.90			296.50	300.50					298.78	
3P	264.70 to 260.20		295.72	297.47	300.57					298.62	
CB2	UNKNOWN	382.80		341.40	341.60						
4W	327.00 to 315.00		353.13 *	353.13 1				353.00		959.92	
40	361.83 to 352.08										
MW5	294.90 to 269.11			287.66	289.06	300.86 *			298.20	298.66	298.70
MW8	360.00 to 348.00	391.28									

XXXXX

*05/22/89

*06/12/89

*07/20/89

PIEZOMETER OR WELL NO.	FILTER PACK ELEVATIONS	REF. PT. ELEV.	09/14/90	12/18/90	02/28/91	5/6/91	5/7/91	5/8/91	5/9/91	A.M. 5/10/91	P.M. 5/10/91
RESIDUE											
AREA B3 PIEZOMETERS				,							
1W	360.70 to 347.20	383.32						•			
2W	339.50 to 330.50	384.35			341.05 *	337.14	337.31	337.23	336.85	336.89	336.89
6W	359.40 to 346.90				366.84 *	364.00	365.61	365.94	367.40	367.15	367.11
6P	276.70 to 264.50				357.07 *	354.43	354.43	354.55	354.55	354.64	354.64
11W	364.02 to 353.02										
110	384.05 to 378.05					_					-
12W	354.83 to 342.83	393.83				-		357.83	357.50	356.95	357.00
13W	372.53 to 358.53	394.53						367.20	367.03	364.20	364.16
14W	369.86 to 357.86									374 (29)	372.03
140	370.02 to 362.02	391.02									
15W	356.30 to 344.30	384.30		L						355.55	355.55
RESIDUE AREA B3		!									
MON. WELLS											
MW6	301.30 to 283.50	373.68	295.59	294.88	290.28						
MW7	370.90 to 346.90	390.60	370.75	370.60	370.60	370.70	370.56	369.39	370.27	370.31	370.27
RESIDUE AREA B2											
3W	294.90 to 281.90	357.40			299.00 *	298.95 *					
3P	264.70 to 260.20				299.12 *	299.05 *					
CB2	UNKNOWN	382.80									
4W	327.00 to 315.00	388.73			352.93	352.69	352.73	352.73	352.52	352.56	352.52
40	361.83 to 352.08	388.83		T							
MW5	294.90 to 269.11			297.76	* 299.16 *	298.12 *					
MW8	360.00 to 348.00			359.43	359.48 *	359.28	359.45	359.45	359.32	359.32	359.32

XXXXXX

*12/19/90 *03/01/91 *05/03/91

PIEZOMETER OR WELL NO.	FILTER PACK ELEVATIONS	REF. PT. ELEV.	5/13/91	5/22/91	5/29/91	5/30/91	6/7/91	6/12/91	6/21/91	6/28/91	7/3/91
RESIDUE AREA B3 PIEZOMETERS				-						<u> </u>	*
1W	360.70 to 347.20	383.32		· · ·			363.57	359.40		364.32	359.49
2W	339.50 to 330.50			337.77			000.07	336.68	336.74	336.80	336.64
6W	359.40 to 346.90		366.27	364.44		364.52		363.44	363.22	363.24	363.15
6P	276.70 to 264.50		354.97	354.39		354.72		353.64	353.47	353.47	353.39
11W	364.02 to 353.02	391.02							364.41	364.37	364.27
110	384.05 to 378.05							DRY	DRY	DRY	DRY
12W	354.83 to 342.83	393.83	356.79	357.00	357.16	357.00		356.91	357.59	356.88	356.75
13W	372.53 to 358.53	394.53	364.28	364.86	364.45	362.95		364.28	364.23		364.11
14W	369.86 to 357.86		371.78	371.82		370.90		370.19	370.09	369.96	369.86
140	370.02 to 362.02	391.02						369.69	369.77	369.67	369.56
15W	356.30 to 344.30	384.30		356.01		355.38		355.05	355.05	355.10	354.90
RESIDUE AREA B3 MON. WELLS		ı									
MW6	301.30 to 283.50	373.68							295.51	295.43	
MW7	370.90 to 346.90	390.60	370.43	370.39		370.43		369.98	369.83		369.73
RESIDUE AREA B2											
3W	294.90 to 281.90										
3P	264.70 to 260.20										
CB2	UNKNOWN	382.80									
4W	327.00 to 315.00		352.65	352.48	352.31	352.52		350.31	352.10	352.18	352.06
40	361.83 to 352.08							356.25	358.13	358.08	357.37
MW5	294.90 to 269.11	356.36									
MW8	360.00 to 348.00	391.28	359.49	359.24	359.11	359.36		359.11	359.16	360.53	358.95

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PIEZOMETER OR WELL NO.	FILTER PACK ELEVATIONS	REF. PT. ELEV.	7/11/91	7/17/91	7/23/91	7/31/91	8/13/91	8/16/91	8/23/91	8/30/91	9/3/91
RESIDUE AREA B3 PIEZOMETERS											
1W	360.70 to 347.20	383.32	359.27	359.24	358.95						
2W	339.50 to 330.50	384.35	336.70	336.66	336.55	336.73		336.77	336.70	336.92	337.14
6W	359.40 to 346.90	378.44	363.00	363.11	363.00		368.44	367.16	368.46	366.07	365.11
6P	276.70 to 264.50	378.47	353.42	353.23	353.33	353.59	354.77	353.77	355.28	354.88	354.53
11W	364.02 to 353.02	391.02	364.42	364.12	364.27	365.63	366.67	364.20	366.91	366.82	366.00
110	384.05 to 378.05	388.05	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
12W	354.83 to 342.83	393.83	356.78	356.65	356.55	356.56	356.48	356.30	357.18	357.32	357.53
13W	372.53 to 358.53	394.53	364.03	364.04	364.14	364.08	364.23	364.38	364.40	364.41	364.35
14W	369.86 to 357.86	390.86	369.29	369.74	369.68	369.56	370.11	368.92	371.12	370.92	370.73
140	370.02 to 362.02		369.91	369.29	369.28	369.34		369.93	370.95	370.61	370.38
15W	356.30 to 344.30	384.30	354.90	354.93	354.84	354.89	354.49	354.99	355.00	355.22	355.33
RESIDUE AREA B3 MON. WELLS											
MW6	301.30 to 283.50	373.68	295.28	295.19					295.44	295.14	295.21
MW7	370.90 to 346.90	390.60	369.70	369.55		369.53	369.45	369.82	370.08	370.03	370.04
RESIDUE AREA B2			•		· · · · · · · · · · · · · · · · · · ·						
3W	294.90 to 281.90	357.40							295.33	295.25	295.12
3P	264.70 to 260.20	357.57							295.48	295.35	295.26
CB2	UNKNOWN	382.80									
4W	327.00 to 315.00	388.73	352.08	351.88	351.89	351.91	351.88	352.46	351.96	351.96	351.90
40	361.83 to 352.08	388.83	358.08	358.03	358.04	357.88		358.93	358.11	358.19	358.14
MW5	294.90 to 269.11	356.36				· · · · · · · · · · · · · · · · · · ·			295.50	295.32	295.27
MW8	360.00 to 348.00		359.08	359.06		359.08	358.91	358.02	359.00	359.20	359.11

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PIEZOMETER OR WELL NO.	FILTER PACK ELEVATIONS	REF. PT. ELEV.	9/13/91	9/20/91	9/27/91	LOWEST ELEVATION	HIGHEST ELEVATION	AVERAGE ELEVATION
RESIDUE AREA B3 PIEZOMETERS								
1W	360.70 to 347.20	383.32				358.95	366.12	363.19
2W	339.50 to 330.50	384.35			336.83	334.85	341.05	337.20
6W	359.40 to 346.90	378.44	363.93	363.47	363.38	363.00	368.64	365.17
6P	276.70 to 264.50	378.47	353.74	353.66	353,58	353.17	357.62	354.49
11W	364.02 to 353.02	391.02	365.21	365.03	364.68	364.12	366.91	365.13
110	384.05 to 378.05	388.05	DRY	DRY	DRY	0.00	0.00	0.00
12W	354.83 to 342.83	393.83	357.61	357.48	357.40	356.30	357.83	357.05
13W	372.53 to 358.53	394.53	364.41	364.33	364.27	362.95	367.20	364.47
14W	369.86 to 357.86	390.86	370.23	369.99	369.81	368.92	374.03	370.51
140	370.02 to 362.02	391.02	369.97	369.72	369.53	369.28	370.95	369.84
15W	356.30 to 344.30	384.30	355.25	355.22	355.03	354.49	356.01	355.13
RESIDUE AREA B3 MON. WELLS		**! **!				:		ì
MW6	301.30 to 283.50	373.68	296.19	295.23	295.12	294.88	299.28	296.29
MW7	370.90 to 346.90	390.60	369.84	369.63	369.60	368.90	374.20	370.53
RESIDUE AREA B2								
3W	294.90 to 281.90	357.40	295.09	294.94		294.94	300.60	
3P	264.70 to 260.20	357.57	295.15	295.23		295.07	300.57	296.64
CB2	UNKNOWN	382.80						
4W	327.00 to 315.00	388.73	351.87	351.85	351.86	346.93		
40	361.83 to 352.08	388.83	358.13	358.15	358.08	356.25		
MW5	294.90 to 269.11	356.36		295.19		287.16		
MW8	360.00 to 348.00	391.28	359.08	359.05	359.04	358.02	360.53	359.21

XXXXXX

borings, soils & testing co.

7				V		Test Bo	oring Report	Weather	
Dat	e 6,	/12/91			Skel	ly & Lo	у	Sheet ^l o	f 1
					Harr:	isburg	Incinerator	,	
BOI	ring Loc	acion							
	roject	No.	J-273	5 5	oon O.	D. 2"]	Ground Elev.	
_	oring N		11-W			140 #	Fall 30	Depth Ground Water	
_	tq. Soi		35.0'					Elev. Ground Water	
	tq. Roc				sing [mmer		Fall	Depth Sound Rock	
_	riller		linger) —		<u>"</u>	Bit No.	Elev. Sound Rock	
						_===			
ev.	Depth	Blows	Blows	Sample / Run No.	′ F	lock			
	Depen.	Casing	Spoon	Run No	Rec.	Lost	Description 0.0' to 1.0' BALL	of Materials & Remarks	
	0-1			S-1	 	 	0.0 to 1.0 BALLA	own Silty CLAY with ROO	K Frag-
	1-2 2-3	 -	3-4	0.0'-2. S-2	4	ļ	ments, Medium Sti	ff Firm-Moist	
	3-4	 		2.0'-4.	 	 	2 0' to 6 0' Bro	own Silty SAND with ROO	K Frag-
	4-5	 	+	S-3	4	╂───	ments, Medium Sti	ff. Firm-Moist	
	5-6	 		4.0'-6.	d-	 	ments, neurum otr.		
-	6-7	 		S-4	١	 	6.0' to 21.9' Bro	own Silty Weathered SHALE	, Medium
	7-8	 		6.0'-8.	d•	 	Stiff, Firm-Moist		
	8-9			S-5	1	 			
	9-10			8.0'-10	10'				
	10-11			S-6		1			
	11-12		12-13	10.0'-1	2.0'				
	12-13			S-7					
	13-14			12.0'-1	4.0'				
	14-15			S-8				·	
	15-16		_	14.0'-1	d. 0'				
	16-17	<u> </u>		S-9	 	ļ			
	17-18	 -		16.0'-1	<u>8.0'</u>				
	18-19			S-10	 	ļ		<u></u>	
	19-20	 		18.0'-2	9.0.	 			
	20-21 21-22			S-11 20.0'-2	1	├──	21 0' to 35 0' At	igered thru Gray Weathere	d SHALE-
	22-23		20-51		1.9	1	Moist	agerea three oray mounters	<u> </u>
	23-24		 		 	 	110136		
	24-25	 	t	 	 	 	REFUSAL w/Auger a	t 35.0'	
	25-26		 						
	26-27		1		1	1			
	27-28								
	28-29								
	2 9- 30						End of Boring 35.	0, 1/17	
	30-31	ļ	ļ	L	<u> </u>		GWL at Completion	26.6'	
	31-32		ļ		 		<u>Completed 6/12/91</u>		
	32-33		 	 	 				
	33-34		 	 	 	[7 0' 45 2" PVC	
	34-35 35-36	 	 		┼	├ ──	NOTE: Installed 3		
	36-37		 		 	 		- Set	
	37-38	 		The second					
	38-39	 	 	 	 	 		00	
	39-40		 	 	 	1		Societie	
	40-41		1		1	1		50	
	41-42				1	1			
	42-43				1				

G.W.L. Depth Time Date

Inspector

BORINGS, SOIL & TESTING CO. AUGER TEST BORING LOG

Inspector_

J-2735

BORINGS, SOIL & TESTING CO. AUGER TEST BORING LOG

Inspector ...

Client					Skelly 11-01	6/12/9	91
		Date6/12/91		Boring No	Harriel	DateDurg Incinerator	
Location _	Harrisb	urg Incinerator		Location _	- Hullion		
Soil Series	·	Elev		Soil Series		Elev	
D•		Soil Description	AASHO		pth	Soil Description	A 45140
From Surface	T ₀	Poddish Proup Clause CIIT	Class	From	To	D. Alia D. Giller	AASHO Class
	10.0	Reddish Brown Clayey SILT w/LIMESTONE Fragments, Firm-			4.5'	Reddish Brown Clayey SILT	
		Moist				FILL w/LIMESTONE Fragments,	,
10.0'	26.0'	Gray Weathered Martinsburg		-		Firm-Moist	
10.0	20.0	SHALE, Stiff, Moist-Wet				DEFUCAT TALL S	
		SHALE, Still, Noist-wet				REFUSAL at 4.5'	
	1,12	End of Boring 26.0' RTW				End of Boring 4.5'	
	4º	GWL at Completion 21.5'				GWL at Completion Dry	
	4	Completed 6/12/91				Completed 6/12/91	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		NOTE: Installed 29.0' of 3/4'	evc				
							· <u></u>
							
		<u> </u>		·			

BORINGS, SOIL & TESTING CO. AUGER TEST BORING LOG

after completion.

Inspector_

J-2735

BORINGS, SOIL & TESTING CO. AUGER TEST BORING LOG

Client	Skelly 8	Loy		Client	Skelly	Skelly & Loy					
		Date6/12/91	·····			Date6/12/	91				
		org Incinerator				ourg Incinerator					
Soil Series	i	Elev		Soil Series		Elev	· · · · · · · · · · · · · · · · · · ·				
D _e From	pth To	Soil Description	AASHO	De From	pth To	Soil Description	AASHO				
Surface	8.0'	Reddish Brown Clayey SILT	Class	Surface	10.0'	Orangish Brown CLayey SILT	Class				
		FILL w/LIMESTONE Fragments				FILL w/LIMESTONE Fragments					
		Firm, Moist-Wet				Firm-Damp					
				10.0'	30.5'	Light Brown & Gray Clayey					
		End of Boring 8.0'			_	SILT w/SHALE Fragments, Firm-					
		GWL at Completion Dry				Moist-Wet					
		Completed 6/12/91	1,2								
	2				Lee	REFUSAL at 30.5'					
	05-36	NOTE: Installed 10.0' of 3/4'	PVC		<u> </u>						
	01/2			6ZQ		End of Boring 30.5'					
					 	GWL at Completion 30.0'					
						Completed 6/12/91	· 				
				}		NOTE: Installed 33.0' of 3/4"	PVC				
	<u> </u>		<u></u>	<u> </u>	<u> </u>						
Water Lev	el is	ft. below surface	_hrs.	Water Leve	el is	ft. below surface	_hrs.				

after completion.

Inspector __

	NAME	15C, 11	E WES	CATE	STACC VC	47.0	O PISE	ار ارائی ایک ایک ایک ایک ایک ایک ایک ایک ایک ایک	Exect (SP)	REPORTOR OF	VET)	ME COLO	PIGLIC	irlan (AES) 1	•	
	ORING	J. HEPTH	, DE, POCH	W/	77	V	201871	A Shape	م الم	450 ()	3/4	Y \	111.21.		O.M.		-
3.W	33.0	330		10.0	25.0		(r)	3	50 ^H	2		2					
2W	38.0	38.0		1	300)	4	3	50 [#]								
<u>5W</u>	37.0	37.0		100	27.5	1	3	4	50 [#]		37.0	1			·		
4w	30.0	30.0		10,0	· 22.5		3	3	55#		_	1					
															- 		
DTAL	138.0	/38.0		40.0	105,0	4	13	13	Z00#		37.0	5					
									_								
								·									
																	
						-											
		<u> </u>															
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borings, soils & testing co. Test Boring Report west

Weather				_
Sheet	1	of	1	

Date	-	5/	8,	/ 9	1

Skelly & Loy

Boring Location

Harrisburg Incinerator

Project No.	J-2735
Boring No.	12-W
Ftg. Soil	38.0'
Ftg. Rock	
Driller I	₹.Neidlinger

G.W.L. Depth____

Time

Spoon O.D.	2"		
Hammer 1	40 #	Fall	30
Casing Dia	•		
Hamme r	#	Fall	
Core Size		Bit No	

Ground	i Elev.	
Depth	Ground Water	
	Ground Water	
	Sound Rock	
	Sound Rock	

Elev.	Depth	Blows	Blows	Sample /	Ro	ock	
	0-1	Casing		Run No.	Rec.	Lost	Description of Materials & Remarks 0.0' to 4.0' Brown & Gray CLAY with ROCK Frag-
	1-2		4-9	S-1 0.0'-2.0	,		ments, Medium Stiff, Firm-Moist
	2-3		13-23				ments, Medium Stiff, Firm-Moist
	3-4			2.0'-4.0	,		
	4-5		9-9	S-3			4.0' to 12.5' Brown Silty CLAY with ROCK Frag-
	5-6			4.0'-6.0			ments, Medium Stiff, Firm-Moist
	6-7		20-22				
	7-8			6.0'-8.0			
	8-9			S-5			
	9-10		11-10	8.0'-10.	0'		
	10-11			S-6			
	11-12			10.0'-12	.0'		
	12-13		11-13		<u> </u>		12.5' to 35.0' Brown & Gray Weathered SHALE.
	13-14			12.0'-14	.0'		Medium Stiff, Firm-Moist
	14-15		2-2	S-8			
	15-16		3-4		.0'		
	16-17			S-9			
	17-18 18-19			16.0'-18	.0'		
	19-20		3-4	S-10 18.0'-20			
	20 - 21			18.0°-70 S-11	.0-		
	21-22		3-4	20.0'-22	0'		
	22-23		3-4		· V		
	23-24			22.0'-24	0'		
	24-25		6-6	S-13			
	25-26			24.0'-26	.0'		
	26-27		7-8	S-14			
	2 7- 28		9-13	26.0'-28	.0'		
	28-29		8-9	S-15			
	29-30			28.0'-30	.0'		
	30-31			S-16	<u> </u>		
	31-32			30.0'-32	-0'		
	32-33 33-34			S-17	 		
	34-35			32.0'-34	-0'-		
	34-35 35-36			S-18 34 0'-36			35.0' to 37.5' Gray Decomposed Martinsburg SHALE
	36-37				0.		Medium Stiff. Firm-Moist
	37-38			S-19 36.0'-37	-		37.5' to 38.0' Augered to REFUSAL
	38-39		- 20/ - 3	30.U = 3/			17.3 to 30.0 Augered to Refusab
	39-40						End of Boring 38.0'
	40-41						GWL at Completion 36.0'
	41-42						Completed 5/8/91
	42-43					1	NOTE: Hit water at 36.0'
	43-44	ļ					Installed 40.0' of 2" PVC
	44-45				ليبيا		

Date

Inspector

55t borings, soils & testing co.

Weather

			Test Boring Report	Weather	
Date_	5/7/91	 _	Skelly & Loy	Sheet 1	of 1
Boring	, Location	·	Harrisburg Incinerator		
Proj	ect No.	J-2735	Spoon O.D. 2"	Ground Elev.	
Bori	ng No.	13-W	Hammer 140 # Fall 30	Depth Ground Water	
Ftq.	Soil	33.0'	Casing Dia	Elev. Ground Water	

Project No.	J-2735	Spoon O.D.	2"		Ground Elev.	
Boring No.	13-W	Hammer 14	0 #	Fall 30	Depth Ground Water	
Ftg. Soil	33.0'	Casing Dia,			Elev. Ground Water	
Ftg. Rock		Hammer	#	Fall	Depth Sound Rock	
Driller R.Ne	idlinger	Core Size	 ''	Bit No.	 Elev. Sound Rock	

	, 	Plous	2.				
Elev.	Depth	Casing	Spoon	Sample / Run No.	Rec.	ock Lost	Description of Materials & Remarks
	0-1		5-5	S-1			0.0' to 2.0' Brown Silty CLAY with CINDERS,
	1-2		6-5	0.0'-2.0	,		Medium Stiff, Firm-Moist
	2-3	 	5-8	S-2			2.0' to 11.5' Brown & Gray CLAY, Medium Stiff.
	3-4		10-12	2.0'-4.0	•		Firm-Moist
	4-5		4-5	S-3			
	5-6		7-7	4.0'-6.0	T		
	6-7		11-12	S-4			
	7-8		16-18	6.0'-8.0	1		
	8-9		5-7	S-5			
	9-10		9-10	8.0'-10	0'		
	10-11		6-5	S-6			
	11-12		4-3	10.0'-12	.0'		11.5' to 31.0' Brown & Gray Decomposed SHALE.
	12-13		4-4	S-7			Medium Stiff, Firm-Moist
	13-14		8-7	12.0'-14	.0'		
	14-15		4-6	S-8			
	15-16		8-10	14.0'-16	.0'		
	16-17		8-10	S-9			
	17-18		11-8	16.0'-18	.0'		
	18-19		5-6	S-10			
	19-20		7-9	18.0'-20	.0'		
	20-21		5~5	S-11			
	21-22		7-8	20.0'-22	.0'		
	22-23		15-13				
	23-24		9-9	22.0'-24	.0'		
	24-25		2-4	S-13			
	25-26		14-18		.0'		
	26-27		20-35				
	27-28			26.0'-28	.0'		
	28-29			S-15			
	29-30			28.0'-30	0.0'		
	30-31			S-16			
	31-32		35-50	/30.0'-32	.0'		31.0' to 32.0' Gray Martinsburg SHALE, Medium
	32-33	ļ				ļ	Stiff, Firm-Moist
	33-34						32.0' to 33.0' Augered thru Decomposed SHALE
	34-35					 	REFUSAL w/ Auger at 33.0'
	35-36 36-37			·			B 1 . C B d m 22 0!
		 				 	End of Boring 33.0'
	37-38 38-39						GWL at Completion 25.5'
	38-39 39-40						Completed 5/7/91
	40-41	 					NOTE: Installed 35.0' of 2" PVC
	41-42	 					MOTE: TURISTIER 22.0 OT 5 140
	42-43						
	43-44					 	
	44-45						

G.W.L. Depth_ Time Date Inspector

bot borings, soils & testing co. Test Boring Report

1				V	V		Test Bo	ring Report		Weathe	er			_
Dat	e	5/10/9	1		·	Skell	ly & Lo				Sheet	1	of	1
Воз	ring Loc	ation				Harri	isburg	Incinerator			-			
	roject	No.	J-273	5	Spo	oon O.	D. 2"			Ground I	lev.			
	oring N	10.	14-W				140 #	Fall 30)		cound Wat	er		
	tg. Soi	. 1	30.0'	30.0'		sing D	Ni a				cound Wat			
	tg. Roc						#	Fall			und Rock			
L	priller	R.Neid	llinger				e			Elev. So	ound Rock	<u> </u>		
	7	Plows	D1	G										
Lev.	Depth	Casing	Spoon	Run N	le /	Rec.	Lost	Descri	ption	of Mate	rials & R	emark	s	
	0-1	1	4-5	S-1				0.0' to 6.5						ments
	1-2		5-6			1		Medium Stiff						
	2-3	1	5-8											
	3-4		11-9	2.0'	-4.d	•								
	4-5		4-5	S-3										
	5-6			4.0'		•								
	6-7		10-11					6.5' to 16	0.0'	Brown &	Gray Wo	eat he:	red	SHALE
	7-8		12-10			ľ		Medium Stiff						
	8-9		4-9	S-5						4				
	9-10		11-13	8.0	-10.	0'								
	10-11			S-6										
	11-12		22-23			.0'								
	12-13		22-28											
	13-14		33-37			.0'								
	14-15		16-28											
	15-16		47-52			.0'								
	16-17							16.0' to 30).0' A	Augered	hru Gra	y SHA	LE,	Moist
	17-18							Wet						
	18-19													
	19-20													
	20-21													
	21-22													
	22-23													
	23-24													
	24-25													
	25-26													
	26-27													
	2 7- 28													
	28-29													
	29-30							REFUSAL w/Au	iger a	t 30.0'				
	30-31													
	31-32							End of Borin	ıg 30.	0'				
	32-33							GWL at Compl	etion	16.0'				
	33-34				\Box			Completed 5/						
	34-35]									
	35-36							NOTE: Instal	led 3	2.5' of	2" PVC			
	36-37	L]									
	37-38													
	38-39				\Box									
	39-40													
	40-41		<u> </u>		1									
	41-42]									
	42-43	1	1	1	1		1 T				·			

G.W.L. Depth Time Date Inspector

)	X			C	15	T bo	rings Test Bo	, SOIIS & oring Repor	iesiini I	g CO. Weather	
D	ate 5	/8/91				Skell	y & Lo	y		Sheet 1	of 1
							-	<u> </u>			
В	oring Loc	ation_				Harri	sburg	Incinerator	:		
	Project	NO.	J-273	5	ا احت	00n 0	D. 2"			Ground Elev.	1
	Boring N		15-W	<u>. </u>				Fall	30	Depth Ground Water	+
	Ftq. Soi		37.0'		1 ==	sing D				Elev. Ground Water	
	Ftq. Roc					mmer	±a. #	Fall		Depth Sound Rock	
	Driller	R.Neid	llinger				e) .	Elev. Sound Rock	↓
			T		===	1					
Elev	. Depth	Casing	Blows Spoon	Samp	le /	Rec.	ock Lost	Des	criptio	n of Materials & Remarks	
	0-1		1-4	S-	1					own Silty CLAY with ROCK	
	1-2			0.0		'		Medium St			
	2-3		9-11	s-:	2						
	3-4	ļ		2.0		<u>'</u>		 			
	4-5			S-		ļ	ļ		12 51		2 01117
	5-6 6-7	 		4.0		 '	 			Brown & Gray Decompose	a SHALE
	7-8	 	15-18			 	 	Medium st	1II, F1	rm-rioist	
	8-9	 	24-22 13-15			 	-				
	9-10		18-30			6'	1				
	10-11		40-33			1					
	11-12		38-51			0'		12.0' to	37.0	Augered thru Gray D	ecompose
	12-13							Martinsbu			
	13-14							NOTE: Wet	30.0	'-37.0'	
	14-15	<u> </u>				<u> </u>					
	15-16	<u> </u>	 	 		ļ	ļ	·			
	16-17	 	╂───			 _	 				
	17-18 18-19		 	 		 	 			7. T	
	19-20		 								
	20-21		†	1							
	21-22		1						······································		
	22-23										
	23-24										
	2 4- 25	<u> </u>									_
	25-26	<u> </u>	ļ								
	26-27	 		 							
	27-28		 	 		 	 -				
	2 8- 29 2 9- 30	 	 	 		 					
	30-31	 	 	 		 	}				
	31-32	 	 			 		<u> </u>			
	32-33		1								
	33-34										
	34-35										
	35 - 36							REFUSAL	w/Auger	at 37.0'	
	36-37	 	 -	<u> </u>		ļ					
	37-38		 	 		<u> </u>	ļ	End of B			
	38-39	 	 	 				GWT. at Co			
	39-40	 	 	 				Complete	4_5/9/97	<u> </u>	
	40-41 41-42		+	ļ <u>.</u>		 	ļ	NOTE: 7-	0+ 21104	37.0'of 3/4" PVC	
	41-42	 -	 	 		 				37.5' of 2" PVC	
	43-44		1					<u> </u>	<u>staired</u>	J1.J V1 2 1 VV	
	44-45			 		1					

G.W.L. Depth Date Time Inspector

Subject Piezometer Installation Job No. M913100 Harrisburg Steam Generating Sheet No. 11-31. 1 Facility 2601 North Front Street _ Drawing No. _ 4-0 Harrisburg, Pennsylvania 17110 Computed by TAD _ Checked by __ _ Date 9/27/91 +3.0H. - Ref. point elevation 4" Diameter Steel Casing Approx. Ground Elevation Orangish brown Clayey Silt Fill with limestone fragments Firm-Damp Growt Light brown + craw clayey Sitt with Shale fragments Firm - Moist - Wet 3" Volclay Bentonite Tablets **-** 30' Sand Pack

3/4" PVC, 0.010 inch slotted

Subject Piezoneter Installation ___ Job No. M9/3/00 Harrisburg Steam Caenerating Sheet No. _ JI] Facility 2601 North Front Street . Drawing No. 11-W Harrisburg, Pennsylvania 17110 Computed by TAO Checked by _____ Date 9/27/91 Ret. point elevation
4 inch diameter Steel Casing +3.0 ft Approx. Ground Elevation Limestone gravet Orange/brown dense clay 2.0 Brown sandy material (possibly fill) 6.0 River cobbles + Sand Weathered material, Clay amounts greater than Eard. Moderately moist Sity Grout Pieces of Calcite at 15' 15 Calcite and sand mixture Sandstone structure 21.9' Spoon refusal 1/2" Volclay Bentonite Tublets Shale, dark grey to black in color 25' Moderately hard & dry 2 26.5'= SWL Sand Pack

> 2" PVC, 37' in length 0.010 inch slotted

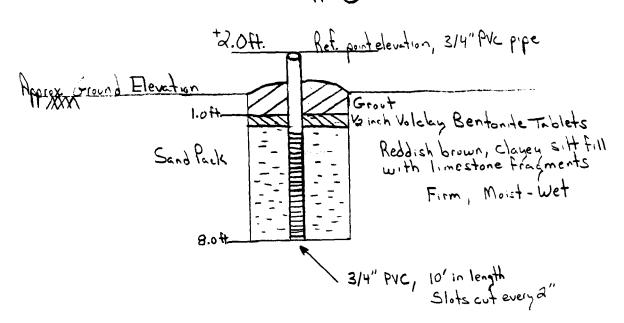
Auger refusal at 35'

SKELLYAND LOY ENGINEERS-CONSULTANTS 2601 North Front Street Harrisburg, Pennsylvania 17110 Subject Piezo meter Installation Job No. M913100

Harrisburg Steam Caenerating Sheet No. 1/31 1

Facility Drawing No. 11-0

Computed by TAD Checked by Date 9/27/91



* Assuming standard well completion

Subject Piezometer Installation JOB NO. M910100 SKELLY we LOY Harrisburg Steam Caenerating Sheet No. 1 314 ENGINEERS-CONSULTANTS Facility 2601 North Front Street _ Drawing No. 12-W Harrisburg, Pennsylvania 17110 Computed by JAE Checked by ____ Date 5/91 12-W +3.0 Ft. finch Diameter Steel Casing Ref N+ Elev Approx and Sortace Elev 2.0 Ft. /*** Fill material mixed with orange Iton clay; broken gless, plastic; TOTAL INSIDE LENGTH 40 ft moderately dry River cobbles 12.5 Ft. VOLCLAY BENTONITE/PORTLAND CEMENT GROUT 2inch I.D., Schedule 40, Flush Threaded Tan to olive grey PVC RISER PIPE highly weathered shale; laminated; moderately dry 123Ft 26Ft Yainch VOLCLAY BENTONITE TABLETS 28 Ft. Zinch I.D. O. 010 inch Slotted PVC Approx. binch Auger Hole √ 36.2 Ft

Black Shale with highly fractured calcite seams

38 Ft. Bottomof Hole

Clean Silica SAND

Subject Pezoneter Installation JOB NO. M910100 SKELLY we LOY Harrisburg Steam Generating Shoot No. 2 31 4 ENGINEERS-CONSULTANTS Facility 2601 North Front Street - Drawing No. 13 W Harrisburg, Pennsylvania 17110 Computed by TAE _Checked by ____ Date _5/9/ 13-W +3.0 Ft. finch Diameter Steel Casin Ref D+ Elev Approx and Surface Elev 2.0 FT. /⁄⁄⁄⁄⁄ Fill material mixed with orange Itoniclay; broken gless, plastic; moderately dry TOTAL INSIDE LENGTH 33 Ft River cobbles 9.2 Ft VOLCLAY BENTONITE/PORTLAND CEMENT GROUT 2inch I.D., Schedule 40, Flush Threads. Tan to olive grey highly weathered shale; PVC RISER PIPE laminated; moderately dry 16 ft Yainch VOLCLAY BENTONITE TABLET Dinch I.D. O.010 inch Slotted PVC

Black Shale with highly fractured calcite seams

Approx. binch Auger Hole

33 Ft. Bottomof Hole

Clean Silica SAND

SKELLY AND LOY ENGINEERS-CONSULTANTS 2601 North Front Street Harrisburg, Pennsylvania 17110 Ref Pt Elev

Subject Piezometer Installation Job No. M910100 Harrisburg Steam Generating Sheet No. 3 of 4 Facility ___ Drawing No. 14 W Computed by JAE Checked by Date 5/91 14-W +3.0 Ft. finch Diameter Steel Casino Approx and Surface Elev 2.0FT. 778 Fill material mixed with orange Iton clay; broken glass, plastic; TOTAL INSIDE LENGTH 40ft moderately dry 6.0 Ft River cobbles 6.5 Ft. VOLCLAY BENTONITE/PORTLAND CEMENT GROUT 2inch I.D., Schedule 40, Flush Threaded Tan to live grey PVC RISER PIPE highly weathered shale; laminated; moderately 15F+ V 18.0 ft. 18 Ft Yainch VOLCLAY BENTONITE TABLET

28.0 Ft

Approx. Ginch Auger Hole 30 Ft. Bottomof Hole

linch I.A. O. 010 inch Slotted PVC

Black Shale with highly fractured calcite seams

Clean Silica SAND

Subject Piezometer Installation Job No. M913100 SKELLYwoLO Harrisburg Steam Generating Sheet No. 11:31 Facility _____ Drawing No. 14-0 2601 North Front Street __ Checked by _____ Date __9187/91 Computed by TAD Harrisburg, Pennsylvania 17110 Ref. point elevation <u>Hinch Diameter Steel Casing</u> +3.0ft Reddish brown claver silt with limestone fragments, Firm-Moist Grout 10 Gray weathered Martinsburg Ehale, Stiff, Moist-Wet 1/2" Volclay Bentonite Tablets 20.75'= SWL Sand Packed 26

> 3/4" PVC 0.010 inch slotted

SKELLYMOLOY ENGINEERS-CONSULTANTS

2601 North Front Street Harrisburg, Pennsylvania 17110

Subject Piezoneter Installation Job No. M913100 Harrisburg Steam Generating Sheet No. 4 of 4 Facility Drawing No. 15 W Computed by JAE Checked by ____ Date 5/91

	15-	W				
Ref Pt Elev		+3	3.0 Ft.	finch	Diamete	- Steel Casina
Approx and Surface Elev						
Fill material mixed with orange /tonclay; broken gless, plastic; moderately dry			2.0ft.	insi o e	LENGT	H 37Ft.
			VOLCLAS	v BENT	ONITE	PORTLAND
Tan to live grey					CEMEN dule 40,	Flush Threaded
highly weathered shale; laminated; moderately dry			0444	-	PVC RISE	K FIFE
□ 28 Ft.			27 Ft.			NTONITE TABLE
Black Shale with highly Fractured calcite seams			Jinsh I.A Approx. 37 Ft.	binch 1	Auger Ho	
			Clean Si			•

Subject Piezometer Installation JOD NO. M913100 Herrisburg Steam Caenersting Facility 2601 North Front Street Drawing No. 11-W Harrisburg, Pennsylvania 17110 Computed by TAO _ Date 9/27/91 Checked by_ 391.00 Ref. point elevation
4 inch diameter Steel Casin: 391.02 Approx. Fround Elevation Limestone gravel
Orange/brown dense clay à.0° Brown sardy material (posses, fill) 6.0 River cobbles + Sand Weathered material, Clay amounts greater than Earl. Moderately moist Grant Silty Pieces of Calcite at 15' Calcite and sand mixture Sandstone structure 21.9' Spoon refusal 1/2" Volclay Bentonite Tablets 364.0 Shale, dark grey to black in color 25' Moderately hard & dry. 2 a6.5'= SWL Sand Pack Auger refusal at 35° 353.0 35H 2" PVC, 37' in length

O.010 inch slotted



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES

BUREAU OF WASTE MANAGEMENT Harrisburg Regional Office One Ararat Boulevard Harrisburg, PA 17110 (717) 657-4588

DATE 5/23/89		
MEETING ATTENDANCE WITH H	ARRISBURG INCINERATOR B-	1,8-2,
	A Pits	
ROOM 2155		-
NAME TITLE	ORGANIZATION	PHONE NUMBER
Linda Houseal Soil	Sei. Blum	657-4588
David O. Eberle Hy	drogeologist Skelly a LOY	232 0593
GORDON LAWBORY	MASSAX Homschy	2634104
DAVID A. BRINGE	BRINGE, KAMBIC	233-4502
Bob Benjin Facili	tus Mar DER	657-4588
Abdul R Merchant	DER	4
EAK W. Bully	4. Epusco Ersce & Xeece.	233.1026
JOHN W. CONRAN	DER	6574588
Dan Fini	City of Harrishure,	255-6455
FRANK FAIR	DER /	657-458
		

DAUPHIN CHARLISTURE OF THE MANNEY STE

CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA BKA NO. 86019-01

WASTE MANAGEMENT

PREFINAL PROJECT REVIEW

DEC 4 1990

November 29, 1990

HARRISBURG REGION

PROJECT DATA:

Contract Length:
Start Date:
Completion Date:
Days Complete:

Days Complete:
Days Remaining:
Percent Time Consumed:

Estimated Percent Complete

Adams County Asphalt:
D & S Contractors:

Next Scheduled Job Conference:

165 days*

April 25, 1990 October 6, 1990*

219 -54 133%

96% 99%

December 13, 1990 at 9:00 A.M. at the job

site trailer

* Includes 15 day contract extension negotiated with Owner

THOSE IN ATTENDANCE:

Mark Bukowski
Gordon Lambert
Curt Helman
Daniel R. Lispi
Robert Galardini
Abdul Merchant
Tony Rathfon
Norman Dudanowicz

Brinjac, Kambic & Associates, Inc.

Nassaux-Hemsley, Inc. Nassaux-Hemsley, Inc. City of Harrisburg Adams County Asphalt

Department of Environmental Resources
Department of Environmental Resources

D & S Contractors

MEETING MINUTES:

- 1. Mr. Bukowski opened the meeting by stating that this was the prefinal project review. The object of this review is to identify all incomplete or deficient work. See the punchlist in Item 8 of these minutes.
- 2. Mr. Bukowski stated that the basin was certified by the Engineer and QA Engineer on November 28, 1990. Therefore, the date of substantial completion is established as November 28, 1990. A copy of the certification was given to Mr. Galardini on November 28, 1990.
- 3. Mr. Rathfon stated that all the screened ash cannot be placed in the basin. However, DER is reviewing test results on some of the other ash. Currently the ash from weeks 7, 8, 9, and 29 cannot be screened or placed in the B-2 site. All of the remaining ash in the temporary pad was authorized by Mr. Rathfon to be placed in the B-2 site.

- 4. Mr. Galardini stated that there are currently approximately 5000 cy of ash screened. Adams County Asphalt will start to move this ash on November 30, 1990.
- 5. Mr. Lispi stated that the contractor for the B-1 site will start work by December 10, 1990. When this work starts, Adams County Asphalt must coordinate their ash hauling with the B-1 contractor. Adams County Asphalt should have at least one 4-foot lift of ash in B-2 at that time. Since two contractors will be hauling into B-2, it is necessary to determine the amount of ash being hauled by Adams County Asphalt now. Mr. Galardini stated that the ash pile has been surveyed and he should have the quantities calculated for submittal to the Engineer today (November 29, 1990).
- 6. It was agreed that Nassaux-Hemsley will monitor compaction of the ash as it is placed in B-2 to see if it is necessary to use a compactor to densify it.
- 7. Mr. Rathfon stated that he thought that the permit required that there be a means to measure the flow from the pump station. Mr. Bukowski stated that he would review this with Mr. Brinjac.
- 8. The following list is the punchlist for all remaining work. All items must be completed within 30 days except as noted in the item. The timetable for moving the ash into B-2 will be determined at a later date.

A. Administrative Items

- 1. Provide construction record drawings (both contracts).
- 2. Provide final certified payrolls from all contractors (both contracts).
- 3. Provide 8 copies of O & M manuals for pump station equipment (ACA).
- 4. Provide training for Owner personnel on pump station (ACA).
- 5. Provide all test reports from Gundle on the liner and geotextile materials (ACA).
- 6. Submit the final panel layout drawing and Boot Penetration Detail from Gundle (ACA).
- 7. Provide final test reports on all manholes and leachate sewer lines (ACA).
- 8. Provide additional data on the "Gripper" (ACA).
- 9. Provide all data and certifications for rejected submittals on Gundle materials (ACA).
- 10. Provide source identification for any borrow material to be used to complete backfill around the berm (ACA).
- 11. Provide final test report from pump station installer/manufacturer (ACA).
- 12. Submit the original copy of Middle Department Inspection Certificate (D&S).
- 13. Provide the manufacturer's recommended spare parts for the pumps and controls (ACA).
- 14. Provide warranty certificates per specification on the pump station equipment (ACA).

B. Work Items

D & S Contractors

- 1. Remove tape from pump control panel.
- 2. Provide laminated identification for Lighting Contactor.
- 3. Provide ID tags on disconnect switches at pole and in Vehicle Maintenance Building ground floor.

- 1. Provide one locking wingnut on pump control panel.
- 2. Provide ID tag on pump control panel per specification.
- 3. Install top for the detection manhole.
- 4. Install HDPE tank and sampling pipe and clean out the detection manhole.
- 5. Grout the leachate detection well casing pipe.
- 6. Install locking cap on casing pipe.
- 7. Paint casing pipe orange.
- 8. Clean out pump station and paint discharge pipe with bitumastic paint.
- 9. Paint threads on galvanized vent pipes at pump station.
- 10. Paint pipe in valve chamber with bitumastic paint.
- 11. Repair leak in valve chamber at drain penetration.
- 12. Install new cover on manhole B3-B.
- 13. Re-seed all areas with no growth in the Spring of 1991.
- 14. Remove pile of stone and pipe materials near manhole B1.
- 15. Re-install sign post at Spring Creek manhole.
- 16. Remove all silt fence once vegetation is established. Where vegetation is established remove silt fence now.
- 17. Repair erosion damage under jute netting going into sedimentation pond. Re-seed slopes of sedimentation pond.
- 18. Fill in low spot in swale at NW corner of B-2.
- 19. Complete fencing and provide maximum 2-4" clearance below mesh.
- 20. Clean-up all debris from fence clearing and construction.
- 21. Fill post holes back in and restore the Napa Auto Parts lawn and parking lot.
- 22. Install silt fence at Napa Auto Parts lot.
- 23. Install mangate in fence at SW corner.
- 24. Seed all disturbed areas due to fence construction.
- 25. Remove all construction debris over the entire site.
- 26. Clean out the Clean Out Manhole and seal pipe penetration.
- 27. Raise monitoring well at SE corner of B-2.
- 28. Install remainder of sand and geotextile on side slopes.
- 29. Resolve bridging of geotextile at berm when the remainder of the sand is installed.
- 30. Remove all dirt and debris along east side of B-2 and re-grade.
- 31. Remove sand with hydraulic oil to approved landfill site.
- 32. Remove construction trailer, tool trailer and storage trailers.
- 33. Install grommets on temporary cover pads.
- 34. Secure temporary cover pads.

CONSTRUCTION OF B-2 RESIDUE AREA PREFINAL PROJECT REVIEW BKA NO. 86019-01

- 35. Remove test pad and place material in "suitable" stockpile. Review with the Owner if a gravel surface will be acceptable. Seed in Spring 1991 if gravel not desired.
- 36. Relocate ash from B-1 in stockpile area to B-2 after screening.
- 37. Re-build silt fence around stockpile area in a few places on the east and north sides.
- 38. Construct ash ramp into B-2.
- 39. Straighten out bowed bubbler line at the pump control panel and paint with white epoxy paint.
- 40. Perform final grading around the pump station and detection manhole.
- 41. Re-establish the 390 elevation around the berm, re-dress exterior side slopes and construct the wedge of soil over the final layer of geotextile when it is installed.
- 42. Apply topsoil to the areas covered by items 40 and 41 and seed in the Spring of 1991.
- 43. Seed the unsuitable and suitable stockpile areas in the Spring of 1991 per the Erosion and Sedimentation Control Plan.
- 44. Repave the damaged parking lot.
- 45. Re-install the damaged light pole and repair the damaged underground cables and verify that parking area lights work.
- 46. Dig out the monitor well at the toe of the berm near Napa Auto Parts.
- 47. Re-grade the B-1/B-2 interface area. The B-2 berm is crowding the B-1 ash.
- 48. Repair damaged quide rails by B-1. Review this with the Owner.
- 49. Complete Swale 8 outside of B-2.
- 50. Restore the stone access roads to both the Traffic Building and the Highway Garage. Restore stone along the north side of the Traffic Building.
- 51. Restore drainage for the area between the Traffic Building and the Highway Garage.

Any corrections, additions and/or deletions to these minutes should be received by Mark Bukowski on or before December 13, 1990 or the minutes will stand as prepared.

Minutes prepared by Mark Bukowski.

DISTRIBUTION

David A. Brinjac

Mark E. Bukowski

Sean P. Donnelly

Daniel R. Lispi

James M. Close

John Lukens

Bradley Bechtel

Gordon Lambert

Norman Dudanowicz

Linda Houseal

Bob Galardini

File

file: Non-hazardous
Harrisburg incinention
Correspondence B-2 cass
BURG Damphing

CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA BKA NO. 86019-01

Job Conference No. 31 and Follow-up Review of Punchlist

December 13, 1990

WASTE MAN AGEMENT

DEC 1 8 1990

MARRISBURG REGION

PROJECT DATA:

165 days*

Start Date:

April 25, 1990 October 6, 1990*

Completion Date**:
Days Complete:

Contract Length***:

233

Days Remaining: Percent Time Consumed: -68 141%

Estimated Percent Complete

96%

Adams County Asphalt:
D & S Contractors:

100%

Next Scheduled Job Conference:

December 28, 1990 at 9:30 A.M. at the job site

trailer

- * Includes 15 day contract extension negotiated with Owner
- ** Substantial Completion was granted on November 28, 1990.
- *** Does not include extra time for classification and deposition of ash.

THOSE IN ATTENDANCE:

Mark Bukowski Robert Martzall Curt Helman

Brinjac, Kambic & Associates, Inc. Brinjac, Kambic & Associates, Inc.

Curt Helman John Lukens Robert Galardini Nassaux-Hemsley, Inc. City of Harrisburg Adams County Asphalt

MEETING MINUTES:

1. Mr. Bukowski opened the meeting by asking if there were any additions, deletions and/or corrections to the minutes of the Pre-final Project Review held on November 29, 1990.

Mr. Galardini stated that he would like to have the punchlist amended to show when each item had to be completed. Mr. Bukowski stated that the punchlist would be reviewed after the meeting and amended to show when each item should be completed.

No other objection or clarification was made so the minutes of the previous meeting stand as amended.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 31 BKA NO. 86019-01

- 2. Mr. Bukowski stated for the record, that D&S Contractors had completed all of their punchlist work and had satisfactorily addressed their administrative punchlist items.
- Mr. Galardini reviewed Adams County Asphalt's progress and plans as follows:
 - a. Ash is being moved into the basin on a regular basis. It is not known how much has been moved.
 - b. Work has been performed on the punchlist.
 - c. Training was held on the pump station. Mr. Lukens confirmed that this training was acceptable. Manuals have been submitted to the Engineer.
 - d. A second shift on the screening operation was added on December 10, 1990. A third loader was also added. Currently 100 to 120 loads (10-12 cy each) of ash are screened per day. This is approximately 1000 cy/day.
 - e. The fence subcontractor has re-worked the fence and is currently finishing up his punchlist work.
 - f. Ash screening and transport and punchlist work will continue in the next two weeks.
- 4. Mr. Lukens stated that the temporary storage piles and the ash in B-2 should be re-surveyed on December 31, 1990 to determine the amount of ash moved. Mr. Galardini stated that this would be done. Mr. Bukowski asked when the original survey data would be available. Mr. Galardini promised he would have it by the meeting scheduled for 2:00 P.M. on December 17, 1990.
- 5. Mr. Helman stated that he had run three sand cone density tests on the ash. The laboratory is currently performing a Proctor Test to be able to determine the percent compaction. Mr. Bukowski stated that the Engineer is interested in obtaining the wet density of the ash in PCF to compare with the design assumption. Mr. Helman will review his test data and advise Mr. Bukowski.
- 6. Mr. Lukens stated that the City will be providing more tarps for covering the ash in B-2 today. It is a responsibility of Adams County Asphalt to cover the ash daily. The City will closely monitor the covering. DER will have the right to issue a Notice of Violation if this work is not performed.
- 7. Attached is a copy of the revised punchlist showing when specific items have to be performed. All administrative and work items not qualified by an extended completion date must be complete within 30 days after substantial completion (December 28, 1990). Items that are complete no longer appear on this list.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 31 BKA NO. 86019-01

Any corrections, additions and/or deletions to these minutes should be received by Mark Bukowski on or before December 28, 1990 or the minutes will stand as prepared.

Minutes prepared by Mark Bukowski.

DISTRIBUTION

David A. Brinjac
Mark E. Bukowski
Robert Martzall
Daniel R. Lispi
James M. Close
John Lukens
Bradley Bechtel
Gordon Lambert
Norman Dudanowicz
Linda Houseal
Bob Galardini
File

CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA PRE-FINAL PROJECT REVIEW PUNCHLIST

BKA NO. 86019-01

November 29, 1990 Updated December 13, 1990

A. Administrative Items

- 1. Provide construction record drawings (ACA).
- 2. Provide final certified payrolls from all contractors (ACA).
- 3. Provide 8 copies of O & M manuals for pump station equipment (ACA).
- 5. Provide all test reports from Gundle on the liner and geotextile materials (ACA).
- 6. Submit the final panel layout drawing and Boot Penetration Detail from Gundle (ACA).
- 8. Provide additional data on the "Gripper" (ACA).
- 9. Provide all data and certifications for rejected submittals on Gundle materials (ACA).
- 10. Provide source identification for any borrow material to be used to complete backfill around the berm (ACA).
- 11. Provide final test report from pump station installer/manufacturer (ACA).
- 13. Provide the manufacturer's recommended spare parts for the pumps and controls (ACA).
- 14. Provide warranty certificates per specification on the pump station equipment (ACA).

B. Work Items

- 1. Provide one locking wingnut on pump control panel.
- 2. Provide ID tag on pump control panel per specification.
- 3. Install top for the detection manhole.
- 4. Install HDPE tank and sampling pipe and clean out the detection manhole.
- 6. Install locking cap on casing pipe.
- 7. Paint casing pipe orange. (Needs to be properly primed prior to painting.)
- 8. Clean out pump station and paint discharge pipe with bitumastic paint.
- 10. Paint pipe in valve chamber with bitumastic paint.
- 11. Repair leak in valve chamber at drain penetration. (Slope floor to drain.)
- 12. Install new cover on manhole B3-B.
- 13. Re-seed all areas with no growth in the Spring of 1991.
- 16. Remove all silt fence once vegetation is established. Where vegetation is established remove silt fence now. (Spring 1991)
- 17. Repair erosion damage under jute netting going into sedimentation pond. Re-seed slopes of sedimentation pond. (Spring 1991)

- Fill in low spot in swale at NW corner of B-2. 18.
- 19. Complete fencing as follows: (Revised 12/13/90)
 - Install bottom tension wire per specification.
 - Add ties to top rail, tension wire and posts to comply with b. specified spacing (24", 24" & 12" respectively).
 - Pull fabric tight between all posts. Areas of very slack mesh c. exist.
 - Regrade all areas where bottom of fence is more than four inches d. above grade (varies from 2" to 16").
 - Specific deficiencies (line post numbered starting with 1 at the e. post at the northeast corner of B-2):
 - Grade from post 1 to post 22 (corner post) varies from 8" to 12" below fence.
 - 2. Line posts 14 and 17 - additional ties needed on top rail.
 - Line posts 22 through 24 slack fabric up slope. Remove tree 3. root.
 - 4. Line post 26 - remove corner post, install line post and support top rail properly.
 - 5. Line posts 27-28 and 37-38 - additional ties needed to secure top rail.
 - 6. Line post 49 is approximately 2-inches too low. Correct.
 - Corner post 53 (at Gibson Street) secure fabric at brace 7. and tighten the truss rod.
 - Line posts 54-54 install additional ties on the top rail. 8.
 - Line post 68-69 top rail is uneven. Correct to have even 9. top rail and fix joint between the two rails.
 - 10. Line posts 77-78 - fence in this area is too high. these posts to match posts 76 and 79.
 - 11. Line post 86 - cap is not attached to the post.
 - Line post 88 intermediate cap is not installed properly. 12.
 - 13. Line posts 100-102 - fence is kinked in these areas.
 - 14. Line post 111 - fence post is too high and coupling in top rail is not properly supporting the rail.
- 20. Clean-up all debris from fence clearing and construction.
- 21. Fill post holes back in and restore the Napa Auto Parts lawn and parking lot.
- 24. Seed all disturbed areas due to fence construction. (Spring 1991)
- 25. Remove all construction debris over the entire site.
- 26, Clean out the Clean Out Manhole and seal pipe penetration.
- WW is geo 27. Raise monitoring well at SE corner of B-2.
- >28. Install remainder of sand and geotextile on side slopes. (After 16' of Installed ofter of ash is installed)
 - 29. Resolve bridging of geotextile at berm when the remainder of the sand is installed. (After 16' of ash is installed).
 - 30. Remove all dirt and debris along east side of B-2 and re-grade.
 - -31.Remove sand with hydraulic oil to approved landfill site.
 - 32. Remove construction trailer (after all work is complete).
 - 34. Secure temporary cover pads.
 - 35. Remove test pad. Leave gravel surface (After 16' of ash is installed).
 - 36. Relocate ash from B-1 in stockpile area to B-2 after screening.

December 13, 1990

from being.

P. 3.74

- 37. Re-build silt fence around stockpile area in a few places on the east and north sides.
- 39. Straighten out bowed bubbler line at the pump control panel and paint with white epoxy paint.
- 40. Perform final grading around the pump station and detection manhole. (After final geotextile layer is complete.)
- 41. Re-establish the 390 elevation around the berm, re-dress exterior side slopes and construct the wedge of soil over the final layer of geotextile when it is installed.
- 42. Apply topsoil to the areas covered by items 40 and 41 and seed in the Spring of 1991.
- 43. Seed the unsuitable and suitable stockpile areas in the Spring of 1991 per the Erosion and Sedimentation Control Plan.
- 44. Repave the damaged parking lot. (After sand is installed.)
- 45. Repair the damaged underground cables and verify that the parking area lights work.
- 46. Dig out the monitor well at the toe of the berm near Napa Auto Parts.
- 47. Re-grade the B-1/B-2 interface area. The B-2 berm is crowding the B-1 ash. (After final geotextile is complete.)
- 49. Complete Swale 8 outside of B-2.
- 50. Restore the stone access roads to both the Traffic Building and the Highway Garage. Restore stone along the north side of the Traffic Building.
- 51. Restore drainage for the area between the Traffic Building and the Highway Garage. (Address this when final anchor trench is excavated.)
- 52. Change out the two cast iron pump motor housings for Hi-Chrome (CD4MCU) per specification 11A, Section 1.2 (Item added on December 13, 1990).

CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA BKA NO. 86019-01

Job Conference No. 32 and Follow-up Review of Punchlist

WASTE MANAGEMENT

JAN 3 1991

HARRISBURG REGION

December 31, 1990

PROJECT DATA:

Contract Length***:

165 days*

Start Date:

April 25, 1990

Completion Date**:

October 6, 1990*

Days Complete:

251

Days Remaining:

-86

Percent Time Consumed:

152%

Estimated Percent Complete

_ _ _

Adams County Asphalt:
D & S Contractors:

96% 100%

Next Scheduled Job Conference:

January 10, 1991 at 9:00 A.M. at the job site

trailer

- * Includes 15 day contract extension negotiated with Owner
- ** Substantial Completion was granted on November 28, 1990.
- *** Does not include extra time for classification and deposition of ash.

THOSE IN ATTENDANCE:

Mark Bukowski Robert Martzall Brinjac, Kambic & Associates, Inc. Brinjac, Kambic & Associates, Inc.

Curt Helman John Lukens Nassaux-Hemsley, Inc. City of Harrisburg

Robert Galardini

Adams County Asphalt

MEETING MINUTES:

- 1. Mr. Bukowski opened the meeting by asking if there were any additions, deletions and/or corrections to the minutes of the Job Conference No. 31 held on December 13, 1990.
 - Mr. Galardini reviewed certain punchlist items from those minutes as follows:
 - a. Administrative Items 1 and 2 cannot be done until all work is complete.
 - b. Administrative Items 3, 5, 8 and 9 are complete.
 - Mr. Bukowski agreed on Items 1, 2 and 3 and stated that he would verify compliance on Items 5, 8 and 9.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 32 BKA NO. 86019-01

Mr. Galardini stated that all of the fence punchlist items had been sent to the fence subcontractor for action. The punchlist items for the pump station were addressed by Mid-Atlantic in a letter which was forwarded to the Engineer. Mr. Bukowski stated that the Engineer had not as yet received this letter.

No other objections or clarifications were made, so the minutes of that meeting stand as amended.

- 2. Mr. Galardini reviewed Adams County Asphalt's progress and plans as follows:
 - a. The HDPE tank in the detection manhole will be installed this week and the top put in place.
 - b. The manhole cover for manhole B3-B has been ordered.
 - c. Silt fence has been removed where new vegetation is established.
 - d. Approximately 40% of the temporary pad ash has been screened and hauled into B-2. The screening operation continues working two shifts with an extra loader. At least one more month is needed to complete this operation.
 - e. The surveyor is on-site today to survey the temporary ash pad. From this survey the following quantities will be established:
 - 1. Daily Ash
 - 2. Questionable Ash
 - 3. Ash to be Screened
- 3. Mr. Bukowski stated that some ash in B-2 was not covered. Mr. Lukens stated that the City would be supplying more tarps to Adams County Asphalt.
- 4. Mr. Galardini asked when the daily ash test results would be available. Mr. Lukens stated that it would be one to two more weeks.
- 5. Mr. Lukens stated that Mr. Tony Rathfon from DER reviewed the site on December 27, 1990 and stated that there were several areas where the geotextile was torn. This was later confirmed by Messrs. Bukowski, Helman and Martzall near the southeast corner of the basin at the top of the berm.
- 6. An updated copy of the punchlist is attached.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 32 BKA NO. 86019-01

Any corrections, additions and/or deletions to these minutes should be received by Mark Bukowski on or before January 10, 1991 or the minutes will stand as prepared.

Minutes prepared by Mark Bukowski.

DISTRIBUTION

David A. Brinjac
Mark E. Bukowski
Robert Martzall
Daniel R. Lispi
James M. Close
John Lukens
Bradley Bechtel
Gordon Lambert
Linda Houseal
Bob Galardini
File

CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA PRE-FINAL PROJECT REVIEW PUNCHLIST

BKA NO. 86019-01

November 29, 1990 Updated December 13, 1990 Updated December 31, 1990

A. Administrative Items

- 1. Provide construction record drawings (ACA).
- Provide final certified payrolls from all contractors (ACA).
- 5. Provide all test reports from Gundle on the liner and geotextile materials (ACA).
- 6. Submit the final panel layout drawing and Boot Penetration Detail from Gundle (ACA).
- 8. Provide additional data on the "Gripper" (ACA).
- 9. Provide all data and certifications for rejected submittals on Gundle materials (ACA).
- 10. Provide source identification for any borrow material to be used to complete backfill around the berm (ACA).
- 11. Provide final test report from pump station installer/manufacturer (ACA).
- 13. Provide the manufacturer's recommended spare parts for the pumps and controls (ACA).
- 14. Provide warranty certificates per specification on the pump station equipment (ACA).

B. Work Items

- 1. Provide one locking wingnut on pump control panel.
- 2. Provide ID tag on pump control panel per specification.
- 3. Install top for the detection manhole.
- 4. Install HDPE tank and sampling pipe and clean out the detection manhole.
- 6. Install locking cap on casing pipe.
- 7. Paint casing pipe orange. (Needs to be properly primed prior to painting.)
- 8. Clean out pump station and paint discharge pipe with bitumastic paint.
- 10. Paint pipe in valve chamber with bitumastic paint.
- 11. Repair leak in valve chamber at drain penetration. (Slope floor to drain.)
- 12. Install new cover on manhole B3-B.
- 13. Re-seed all areas with no growth in the Spring of 1991.
- 16. Remove all silt fence once vegetation is established. Where vegetation is established remove silt fence now. (Spring 1991)
- 17. Repair erosion damage under jute netting going into sedimentation pond. Re-seed slopes of sedimentation pond. (Spring 1991)

- 18. Fill in low spot in swale at NW corner of B-2.
- 19. Complete fencing as follows: (Revised 12/13/90)
 - a. Install bottom tension wire per specification.
 - b. Add ties to top rail, tension wire and posts to comply with specified spacing (24", 24" & 12" respectively).
 - c. Pull fabric tight between all posts. Areas of very slack mesh exist.
 - d. Regrade all areas where bottom of fence is more than four inches above grade (varies from 2" to 16").
 - e. Specific deficiencies (line post numbered starting with 1 at the post at the northeast corner of B-2):
 - Grade from post 1 to post 22 (corner post) varies from 8" to 12" below fence.
 - 2. Line posts 14 and 17 additional ties needed on top rail.
 - 3. Line posts 22 through 24 slack fabric up slope. Remove tree root.
 - 4. Line post 26 remove corner post, install line post and support top rail properly.
 - 5. Line posts 27-28 and 37-38 additional ties needed to secure top rail.
 - 6. Line post 49 is approximately 2-inches too low. Correct.
 - 7. Corner post 53 (at Gibson Street) secure fabric at brace and tighten the truss rod.
 - 8. Line posts 54-54 install additional ties on the top rail.
 - 9. Line post 68-69 top rail is uneven. Correct to have even top rail and fix joint between the two rails.
 - 10. Line posts 77-78 fence in this area is too high. Lower these posts to match posts 76 and 79.
 - 11. Line post 86 cap is not attached to the post.
 - 12. Line post 88 intermediate cap is not installed properly.
 - 13. Line posts 100-102 fence is kinked in these areas.
 - 14. Line post 111 fence post is too high and coupling in top rail is not properly supporting the rail.
- 20. Clean-up all debris from fence clearing and construction.
- 21. Fill post holes back in and restore the Napa Auto Parts lawn and parking lot.
- 24. Seed all disturbed areas due to fence construction. (Spring 1991)
- 25. Remove all construction debris over the entire site.
- 26. Clean out the Clean Out Manhole and seal pipe penetration.
- 27. Raise monitoring well at SE corner of B-2.
- 28. Install remainder of sand and geotextile on side slopes. (After 16' of ash is installed)
- 29. Resolve bridging of geotextile at berm when the remainder of the sand is installed. (After 16' of ash is installed).
- 30. Remove all dirt and debris along east side of B-2 and re-grade.
- 31. Remove sand with hydraulic oil to approved landfill site.
- 32. Remove construction trailer (after all work is complete).
- 34. Secure temporary cover pads.
- 35. Remove test pad. Leave gravel surface (After 16' of ash is installed).
- 36. Relocate ash from B-1 in stockpile area to B-2 after screening.
- 37. Re-build silt fence around stockpile area in a few places on the east and north sides.
- 39. Straighten out bowed bubbler line at the pump control panel and paint with white epoxy paint.

- 40. Perform final grading around the pump station and detection manhole. (After final geotextile layer is complete.)
- 41. Re-establish the 390 elevation around the berm, re-dress exterior side slopes and construct the wedge of soil over the final layer of geotextile when it is installed.
- 42. Apply topsoil to the areas covered by items 40 and 41 and seed in the Spring of 1991.
- 43. Seed the unsuitable and suitable stockpile areas in the Spring of 1991 per the Erosion and Sedimentation Control Plan.
- 44. Repave the damaged parking lot. (After sand is installed.)
- 45. Repair the damaged underground cables and verify that the parking area lights work.
- 47. Re-grade the B-1/B-2 interface area. The B-2 berm is crowding the B-1 ash. (After final geotextile is complete.)
- 49. Complete Swale 8 outside of B-2.
- 50. Restore the stone access roads to both the Traffic Building and the Highway Garage. Restore stone along the north side of the Traffic Building.
- 51. Restore drainage for the area between the Traffic Building and the Highway Garage. (Address this when final anchor trench is excavated.)
- 52. Change out the two cast iron pump motor housings for Hi-Chrome (CD4MCU) per specification 11A, Section 1.2 (Item added on December 13, 1990).

file: Non-Hazardona

Harrisburg Incinerator Pit

B-2 Const.

Strespondence

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RESIDUE AREA uphin County
9-01

CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA BKA NO. 86019-01

Job Conference No. 33 and Follow-up Review of Punchlist -

January 15, 1991

DER **WASTE MANAGEMENT**

PROJECT DATA:

JAN 1 7 1991

Contract Length***:

165 days*

MARRISBURG REGION

Start Date: Completion Date**: April 25, 1990 October 6, 1990*

Days Complete:

266

Days Remaining:

-101

Percent Time Consumed: Estimated Percent Complete 161%

Adams County Asphalt:

97%

D & S Contractors:

100%

Next Scheduled Job Conference:

January 24, 1991 at 9:00 A.M. at the job site

trailer

- * Includes 15 day contract extension negotiated with Owner
- ** Substantial Completion was granted on November 28, 1990.
- *** Does not include extra time for classification and deposition of ash.

THOSE IN ATTENDANCE:

Mark Bukowski Robert Martzall Curt Helman John Lukens Robert Galardini

Joseph Loomis

Don Adams

Brinjac, Kambic & Associates, Inc.

Brinjac, Kambic & Associates, Inc.

Nassaux-Hemsley, Inc. City of Harrisburg Adams County Asphalt Adams County Asphalt

Handwerk Contractors, Inc.

MEETING MINUTES:

- 1. Mr. Bukowski opened the meeting by asking if there were any additions, deletions and/or corrections to the minutes of the Job Conference No. 32 held on December 31, 1990. There being none, the minutes to that meeting stand as prepared.
- 2. Mr. Galardini stated the following:
 - A letter was sent to the Engineer today (January 15, 1991) in response to the Engineer's letter on the punchlist.
 - b. The survey data on the temporary ash pad will be hand-carried today (January 15, 1991) or tomorrow (January 16, 1991) to the Engineer.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 33 BKA NO. 86019-01

- c. 65% of the available ash in the temporary pad has been screened and placed in B-2. The remaining work should be complete in 2 weeks.
- d. The HDPE tank was installed in the detection manhole. The hole in the slab was drilled today (January 15, 1991) and the installation is being completed at this time.
- 3. Mr. Bukowski stated the following:
- ? X
- The HDPE pipe entering the detection manhole from B-2 was observed to have a flange glued on rather than welded. Mr. Galardini explained that welding was not possible at this location due to inaccessibility. Mr. Bukowski stated that this connection would be reviewed in the field by the Engineer to see if it would be acceptable.
- b. Access to the area between B-1 and B-2 will be cut off when Handwerk places their conveyor in this area. A discussion ensued on the work remaining in this area and it was agreed that when Adams County Asphalt needed access to complete their work in this area, Handwerk would move their conveyor. The exact duration of this access will be coordinated at a later date.
- white compies?
- Once the detection manhole and HDPE tank is <u>complete</u>, the City should start monitoring the fluid level in the tank in order to monitor the detection zone. Mr. Lukens stated that this would be done as well as sampling of the leachate in the pump station per the DER permit.

Mr. Lukens requested a pumping rate on the pumps in order to determine the amount of leachate pumped. (Mr. Bukowski later verified this rate per the test data as 485 GPM or 29,100 GPH.)

4. Mr. Galardini asked that the Engineer verify the calculations on the amount of ash it will take to reach the 16 foot level in the basin. This was later verified as follows:

		<u>Approximate Volume</u>
*First Lift	To Elev. 366	2,164 cy
Second Lift	To Elev. 370	7,000 cy
Third Lift	To Elev. 374	11,552 cy
Fourth Lift	To Elev. 378	<u>13,381 cy</u>

- * First lift is a "leveling" wedge that is not uniformly four feet thick.

 34,097 cy
- 5. Mr. Adams stated that Handwerk proposed to fill half of the basin while Adams County Asphalt filled the other half. The dividing line would be a diagonal from the northeast corner (haul road entrance) to the southwest corner (Napa Auto Parts). Mr. Galardini agreed that this division would be acceptable. Handwerk will replace all tarps at the end of the day that they move and Adams County Asphalt will do likewise.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 33 BKA NO. 86019-01

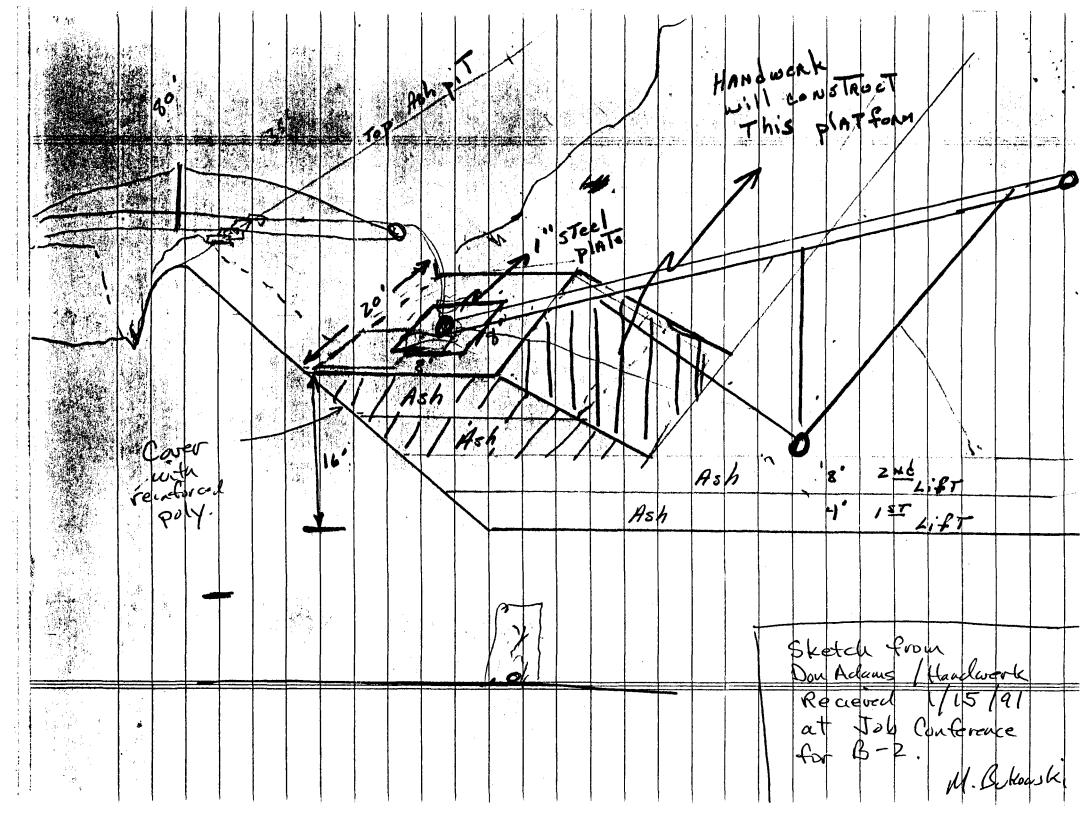
- 6. Mr. Adams discussed the attached sketch with Mr. Bukowski regarding Handwerk's stacker configuration. No support for the conveyor or stacker will be placed on the geotextile in this configuration. The 8 foot high platform of ash will be covered with reinforced polyethylene after placement. Mr. Bukowski later discussed this with Mr. David Brinjac. No objection to this installation was taken.
- 7. Mr. Lukens stated that Mr. Rathfon from DER had once again pointed out to him that some exposed seams in the geotextile had separated. Mr. Lukens stated that it was acceptable to DER to repair these tears when they return to the site to install the final geotextile.
- 8. Mr. Bukowski stated that once 16 feet of ash (Elev. 378) was reached in the basin, all placement of ash would have to halt until the final sand protective cover and geotextile was installed. There is also a DER requirement to place 6-inches of dirt over this 16 feet of ash. Mr. Lukens stated that he was discussing the necessity of the 6-inches of dirt with DER and will advise the Contractor of the results of this discussion. Mr. Adams stated that this stacker was portable and could be moved when the sand was being placed. Further coordination of this work will occur at a later date.
- 9. Mr. Galardini turned over the locking well cap to Mr. Lukens and the following pump spare parts to Mr. Bukowski for review:
 - 1. Mechanical Seals One Set
 - 2. Volute Gasket One
 - 3. Jam Washer One
- 10. Attached is an updated copy of the punchlist. Items 53 and 54 are new items. All completed items have been removed from the list.

Any corrections, additions and/or deletions to these minutes should be received by Mark Bukowski on or before January 24, 1991 or the minutes will stand as prepared.

Minutes prepared by Mark Bukowski.

DISTRIBUTION

David A. Brinjac
Mark E. Bukowski
Robert Martzall
Daniel R. Lispi
James M. Close
John Lukens
Bradley Bechtel
Gordon Lambert
Linda Houseal
Bob Galardini
Don Adams
File



CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA PRE-FINAL PROJECT REVIEW PUNCHLIST

BKA NO. 86019-01

November 29, 1990 Updated December 13, 1990 Updated December 31, 1990 Updated January 15, 1991

A. Administrative Items

- 1. Provide construction record drawings (ACA).
- Provide final certified payrolls from all contractors (ACA).
- 5. Provide all test reports from Gundle on the liner and geotextile materials (ACA).
- 6. Submit the final panel layout drawing and Boot Penetration Detail from Gundle (ACA).
- 10. Provide source identification for any borrow material to be used to complete backfill around the berm (ACA).
- 11. Provide final test report from pump station installer/manufacturer (ACA).
- 14. Provide warranty certificates per specification on the pump station equipment (ACA).

B. Work Items

- 1. Provide one locking wingnut on pump control panel.
- Provide ID tag on pump control panel per specification.
- 4. Install HDFE tank and sampling pipe and clean out the detection manhole. (90% complete)
- 7. Paint casing pipe orange. (Needs to be properly primed prior to painting.)
- 8. Clean out pump station and paint discharge pipe with bitumastic paint.
- 10. Paint pipe in valve chamber with bitumastic paint.
- 11. Repair leak in valve chamber at drain penetration. (Slope floor to drain.)
- 12. Install new cover on manhole B3-B.
- 13. Re-seed all areas with no growth in the Spring of 1991.
- 16. Remove all silt fence once vegetation is established. Where vegetation is established remove silt fence now. (Spring 1991)
- 17. Repair erosion damage under jute netting going into sedimentation pond. Re-seed slopes of sedimentation pond. (Spring 1991)
- 18. Fill in low spot in swale at NW corner of B-2.

- 19. Complete fencing as follows: (Revised 12/13/90)
 - Install bottom tension wire per specification. (Tension wire is installed but it needs ties on west side from 1 to 26)
 - Add ties to top rail, tension wire and posts to comply with b. specified spacing (24", 24" & 12" respectively).
 - Pull fabric tight between all posts. Areas of very slack mesh exist.
 - d. Regrade all areas where bottom of fence is more than four inches above grade (varies from 2" to 16").
 - Specific deficiencies (line post numbered starting with 1 at the post at the northeast corner of B-2):
 - Grade from post 1 to post 22 (corner post) varies from 8" to 12" below fence.
 - Line posts 14 and 17 additional ties needed on top rail.
 - Line posts 22 through 24 slack fabric up slope. Remove tree 3.
 - 4. Line post 26 - remove corner post, install line post and support top rail properly.
 - Line posts 27-28 and 37-38 additional ties needed to secure 5.
 - Line post 49 is approximately 2-inches too low. Correct. 6.
 - 7. Corner post 53 (at Gibson Street) - secure fabric at brace and tighten the truss rod.
 - 8. Line posts 54-54 - install additional ties on the top rail.
 - Line post 68-69 top rail is uneven. Correct to have even 9. top rail and fix joint between the two rails.
 - 10. Line posts 77-78 - fence in this area is too high. Lower these posts to match posts 76 and 79.
 - 11. Line post 86 - cap is not attached to the post.
 - Line post 88 intermediate cap is not installed properly. 12.
 - 13. Line posts 100-102 - fence is kinked in these areas.
 - 14. Line post 111 - fence post is too high and coupling in top rail is not properly supporting the rail.
- 20. Clean-up all debris from fence clearing and construction.
- Fill post holes back in and restore the Napa Auto Parts lawn and parking 21. lot.
- 24. Seed all disturbed areas due to fence construction. (Spring 1991)
- 25. Remove all construction debris over the entire site.
- Clean out the Clean Out Manhole and seal pipe penetration. --26.
 - 27. Raise monitoring well at SE corner of B-2.
 - 28. Install remainder of sand and geotextile on side slopes. (After 16' of ash is installed)
- -29. Resolve bridging of geotextile at berm when the remainder of the sand is installed. (After 16' of ash is installed).
 - 30. Remove all dirt and debris along east side of B-2 and re-grade.
 - 31. Remove sand with hydraulic oil to approved landfill site.
 - 32. Remove construction trailer (after all work is complete).
 - 34. Secure temporary cover pads.
 - 35. Remove test pad. Leave gravel surface (After 16' of ash is installed).
 - 36. Relocate ash from B-1 in stockpile area to B-2 after screening.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 33

BKA NO. 86019-01

. . . .

- 37. Re-build silt fence around stockpile area in a few places on the east and north sides.
- 39. Straighten out bowed bubbler line at the pump control panel and paint with white epoxy paint.
- 40. Perform final grading around the pump station and detection manhole. (After final geotextile layer is complete.)
- 41. Re-establish the 390 elevation around the berm, re-dress exterior side slopes and construct the wedge of soil over the final layer of geotextile when it is installed.
- 42. Apply topsoil to the areas covered by items 40 and 41 and seed in the Spring of 1991.
- 43. Seed the unsuitable and suitable stockpile areas in the Spring of 1991 per the Erosion and Sedimentation Control Plan.
- 44. Repave the damaged parking lot. (After sand is installed.)
- 45. Repair the damaged underground cables and verify that the parking area lights work.
- 47. Re-grade the B-1/B-2 interface area. The B-2 berm is crowding the B-1 ash. (After final geotextile is complete.)
- 49. Complete Swale 8 outside of B-2.
- 50. Restore the stone access roads to both the Traffic Building and the Highway Garage. Restore stone along the north side of the Traffic Building.
- 51. Restore drainage for the area between the Traffic Building and the Highway Garage. (Address this when final anchor trench is excavated.)
- 52. Change out the two cast iron pump motor housings for Hi-Chrome (CD4MCU) per specification 11A, Section 1.2 (Item added on December 13, 1990).
- 53. Gate at Napa Auto Parts is not properly aligned and plumbed (added January 15, 1991).
- 54. Piezometer 87-9-2W was bent by Adams County Asphalt and should be straightened. (Added January 15, 1991)

GILE: Non-Harardons

Hog Invan. B-2 Construct.

CITY OF HARRISBURG

CONSTRUCTION OF B-2 RESIDUE AREA ON ESPONDENCE

BKA NO. 86019-01

Job Conference No. 34

and Follow-up Project Construct.

Pec: 1-28-9

and Follow-up Review of Punchlist

January 24, 1991

PROJECT DATA:

Contract Length***:

165 days*

Start Date:

April 25, 1990

Completion Date**:

October 6, 1990*

Days Complete:

275

Days Remaining:

-110

Percent Time Consumed:

167%

Estimated Percent Complete

97%

Adams County Asphalt:

100%

D & S Contractors: Next Scheduled Job Conference:

February 7, 1991 at 9:00 A.M. at the job site trailer

- * Includes 15 day contract extension negotiated with Owner
- ** Substantial Completion was granted on November 28, 1990.
- *** Does not include 60 days for classification and deposition of ash.

THOSE IN ATTENDANCE:

Mark Bukowski Robert Martzall Brinjac, Kambic & Associates, Inc. Brinjac, Kambic & Associates, Inc.

Curt Helman John Lukens

Nassaux-Hemsley, Inc. City of Harrisburg

Robert Galardini

Adams County Asphalt

MEETING MINUTES:

- 1. Mr. Bukowski opened the meeting by asking if there were any additions, deletions and/or corrections to the minutes of the Job Conference No. 33 held on January 15, 1991. There being none, the minutes to that meeting stand as prepared.
- 2. Mr. Galardini stated the following:
 - Ash was hauled three days last week. Approximately 75% of the ash is now in
 - Hauling of ash will start again on January 25, 1991.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 34 BKA NO. 86019-01

3. Mr. Lukens stated the following:

- a. Adams Counnty Asphalt must cover all of their ash except the ramp and haul road on a daily basis. Mr. Galardini agreed to recover and weight the tarps on January 25, 1991.
- b. The temporary cover pads made by Gundle can be used in B-2 to cover the ash if Adams County Asphalt desires. Mr. Bukowski added that if these pads are not used, they should be properly tied down immediately.
- c. Some conveyor equipment belonging to Handwerk was damaged inside B-2 on either January 19 or January 20, 1991. Handwerk discovered this damage on January 21, 1991 in the morning. Mr. Galardini stated that he would check with his operators that worked on January 19, 1991 to see if they know anything about this damage and advise Mr. Lukens.

4. Mr. Bukowski stated the following:

- a. The Certificate of Substantial Completion which was sent to Adams County Asphalt in early December has not been returned to the Engineer.
- b. The well cap for the monitoring well pipe cannot be installed because the interior PVC pipe is to close to the end. Mr. Galardini stated that the cap on the PVC pipe should be removed and the cap should fit. If not, Adams County Asphalt will trim the PVC's pipe.
- c. The only work performed on the fence punchlist has been to install the bottom tie wire. Mr. Galardini stated he would advise his subcontractor so that he can finish the work.
- d. The Engineer has responded to Adams County Asphalt regarding the pump station punchlist. Mr. Galardini stated that this response was sent to Mid-Atlantic for action.
- 5. A review of the ash quantity calculations was made. It was discovered that the quantity of 26.94/cy for pile no. 7 is actually a combined total for piles numbered 6 and 7 as surveyed on November 7, 1990. It was also determined that the 290 foot dimension on pile no. 6 is correct not the 335 foot dimension that is scaled on Section A-A. This was deduced since the temporary pad dimension from wall to wall is 300 feet. Mr. Lukens stated that he would provide the Engineer with a tonnage of ash present in the temporary pad on November 7, 1990 so that a ton per cubic yard figure can be determined. Once this value is established the City's records on the tonnage moved into the temporary pad and handled by Adams County Asphalt will be used to determine the actual cubic yardage for payment under this contract.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 34 BKA NO. 86019-01

Any corrections, additions and/or deletions to these minutes should be received by Mark Bukowski on or before February 7, 1991 or the minutes will stand as prepared.

Minutes prepared by Mark Bukowski.

DISTRIBUTION

David A. Brinjac
Mark E. Bukowski
Robert Martzall
Daniel R. Lispi
James M. Close
John Lukens
Bradley Bechtel
Gordon Lambert
Linda Houseal
Bob Galardini
File

CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA PRE-FINAL PROJECT REVIEW PUNCHLIST

BKA NO. 86019-01

November 29, 1990 Updated December 13, 1990 Updated December 31, 1990 Updated January 15, 1991 Updated January 24, 1991

A. Administrative Items

- 1. Provide construction record drawings (ACA). (Initial Submission Rejected)
- Provide final certified payrolls from all contractors (ACA).
- 5. Provide all test reports from Gundle on the liner and geotextile materials (ACA).
- 6. Submit the final panel layout drawing and Boot Penetration Detail from Gundle (ACA). (Initial Submission Rejected)
- 10. Provide source identification for any borrow material to be used to complete backfill around the berm (ACA).
- 11. Provide final test report from pump station installer/manufacturer (ACA). (Three Submissions Rejected)
- 14. Provide warranty certificates per specification on the pump station equipment (ACA). (Initial Submission Rejected)

B. Work Items

- 2. Provide ID tag on pump control panel per specification.
- 4. Install HDPE tank and sampling pipe and clean out the detection manhole. (Need supports on riser pipe.)
- 7. Paint casing pipe orange. (Needs to be properly primed prior to painting.)
- 8. Clean out pump station and paint discharge pipe with bitumastic paint.
- 10. Paint pipe in valve chamber with bitumastic paint.
- 11. Repair leak in valve chamber at drain penetration. (Slope floor to drain.)
- 12. Install new cover on manhole B3-B.
- 13. Re-seed all areas with no growth in the Spring of 1991.
- 16. Remove all silt fence once vegetation is established. Where vegetation is established remove silt fence now. (Spring 1991)
- 17. Repair erosion damage under jute netting going into sedimentation pond. Reseed slopes of sedimentation pond. (Spring 1991)
- 18. Fill in low spot in swale at NW corner of B-2.

- 19. Complete fencing as follows: (Revised 12/13/90)
 - a. Install bottom tension wire per specification. (Tension wire is installed but it needs ties on west side from 1 to 26)
 - b. Add ties to top rail, tension wire and posts to comply with specified spacing (24", 24" & 12" respectively).
 - c. Pull fabric tight between all posts. Areas of very slack mesh exist.
 - d. Regrade all areas where bottom of fence is more than four inches above grade (varies from 2" to 16").
 - e. Specific deficiencies (line post numbered starting with 1 at the post at the northeast corner of B-2):
 - Grade from post 1 to post 22 (corner post) varies from 8" to 12" below fence.
 - 2. Line posts 14 and 17 additional ties needed on top rail.
 - 3. Line posts 22 through 24 slack fabric up slope. Remove tree root.
 - 4. Line post 26 remove corner post, install line post and support top rail properly.
 - 5. Line posts 27-28 and 37-38 additional ties needed to secure top rail.
 - 6. Line post 49 is approximately 2-inches too low. Correct.
 - 7. Corner post 53 (at Gibson Street) secure fabric at brace and tighten the truss rod.
 - 8. Line posts 54-54 install additional ties on the top rail.
 - 9. Line post 68-69 top rail is uneven. Correct to have even top rail and fix joint between the two rails.
 - 10. Line posts 77-78 fence in this area is too high. Lower these posts to match posts 76 and 79.
 - 11. Line post 86 cap is not attached to the post.
 - 12. Line post 88 intermediate cap is not installed properly.
 - 13. Line posts 100-102 fence is kinked in these areas.
 - 14. Line post 111 fence post is too high and coupling in top rail is not properly supporting the rail.
- 20. Clean-up all debris from fence clearing and construction.
- 21. Fill post holes back in and restore the Napa Auto Parts lawn and parking lot.
- 24. Seed all disturbed areas due to fence construction. (Spring 1991)
- 25. Remove all construction debris over the entire site.
- 26. Clean out the Clean Out Manhole and seal pipe penetration.
- 27. Raise monitoring well at SE corner of B-2.
- 28. Install remainder of sand and geotextile on side slopes. (After 16' of ash is installed)
- 29. Resolve bridging of geotextile at berm when the remainder of the sand is installed. (After 16' of ash is installed).
- 30. Remove all dirt and debris along east side of B-2 and re-grade.
- 31. Remove sand with hydraulic oil to approved landfill site.
- 32. Remove construction trailer (after all work is complete).
- 34. Secure temporary cover pads.
- 35. Remove test pad. Leave gravel surface (After 16' of ash is installed).
- 36. Relocate ash from B-1 in stockpile area to B-2 after screening.
- 37. Re-build silt fence around stockpile area in a few places on the east and north sides.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 34 BKA NO. 86019-01

- 39. Straighten out bowed bubbler line at the pump control panel and paint with white epoxy paint.
- 40. Perform final grading around the pump station and detection manhole. (After final geotextile layer is complete.)
- 41. Re-establish the 390 elevation around the berm, re-dress exterior side slopes and construct the wedge of soil over the final layer of geotextile when it is installed.
- 42. Apply topsoil to the areas covered by items 40 and 41 and seed in the Spring of 1991.
- 43. Seed the unsuitable and suitable stockpile areas in the Spring of 1991 per the Erosion and Sedimentation Control Plan.
- 44. Repave the damaged parking lot. (After sand is installed.)
- 45. Repair the damaged underground cables and verify that the parking area lights work.
- 47. Re-grade the B-1/B-2 interface area. The B-2 berm is crowding the B-1 ash. (After final geotextile is complete.)
- 49. Complete Swale 8 outside of B-2.
- 50. Restore the stone access roads to both the Traffic Building and the Highway Garage. Restore stone along the north side of the Traffic Building.
- 51. Restore drainage for the area between the Traffic Building and the Highway Garage. (Address this when final anchor trench is excavated.)
- 52. Change out the two cast iron pump motor housings for Hi-Chrome (CD4MCU) per specification 11A, Section 1.2 (Item added on December 13, 1990).
- 53. Gate at Napa Auto Parts is not properly aligned and plumbed (added January 15, 1991).
- 54. Piezometer 87-9-2W was bent by Adams County Asphalt and should be straightened. (Added January 15, 1991)

TUENIN CORRESTER B-2 SITE

UBGINON SITE

UBGINON .

WASTE MANAGEMENT

FEB 1 2 1991

HARRISBURG REGION

CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA BKA NO. 86019-01

Job Conference No. 35 and Follow-up Review of Punchlist

February 7, 1991

PROJECT DATA:

Contract Length***: 165 days*
Start Date: April 25, 1990
Completion Date**: October 6, 1990*
Days Complete: 289
Days Remaining: -124
Percent Time Consumed: 175%
Estimated Percent Complete

Adams County Asphalt: 97% D & S Contractors: 100%

Next Scheduled Job Conference:

February 21, 1991 at 9:00 A.M. at the job site trailer

- * Includes 15 day contract extension negotiated with Owner
- ** Substantial Completion was granted on November 28, 1990.
- *** Does not include 60 days for classification and deposition of ash.

THOSE IN ATTENDANCE:

Mark Bukowski
Robert Martzall
John Lukens
Robert Galardini

Brinjac, Kambic & Associates, Inc. Brinjac, Kambic & Associates, Inc.

City of Harrisburg Adams County Asphalt

MEETING MINUTES:

- Mr. Bukowski opened the meeting by asking if there were any additions, deletions and/or corrections to the minutes of the Job Conference No. 34 held on January 24, 1991. There being none, the minutes to that meeting stand as prepared.
- 2. Mr. Galardini stated the following:
 - a. Ash was moved during 2 days last week. The remaining ash will be moved on 2/8/91.
 - b. The fence subcontractor was back and worked on the punch list. (After the meeting, Mr. Martzall reviewed the fence and updated the punch list. See item 19 in the attached punch list for all remaining work.)
 - c. The pump station subcontractor has responded to the Engineer's letter on the punch list. This will be forwarded to the Engineer for review.
 - d. The temporary cover pads are currently being tied down with ropes and properly staked to keep them from blowing around.
 - e. The remaining liner materials along the east side of B-2 will be cleaned up on 2/8/91 when the ash is moved.
 - f. The PVC pipe for the B-2 monitoring well will be trimmed back so the casing plug will fit.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 35 BKA NO. 86019-01

- 3. Mr. Lukens stated that areas 49-90, 50-90 and 51-90 were released by DER. The City will stake these piles out so they can be removed on 2/8/91. Piles 7 and 8 will have to be moved to access these piles. Mr. Ed Powell will be advised of this.
- 4. Mr. Bukowski stated that there still exists a discrepancy on the Contractor's drawings for the ash volume on 11/7/90. The one drawing shows 26,941 CY and the drawings with sections when calculated shows 25,837 CY. Mr. Galardini stated that the surveyor will produce a copy of his actual survey taken on 11/7/90 to confirm which figure is correct.
- 5. Mr. Bukowski stated that if 25,837 CY is used as the volume on 11/7/90, the unit weight of the ash with scrap removed is 2,769 PCY using 35,766.21 tons of ash on 11/5/90. A unit weight of ash with scrap is needed to determine the volume of ash handled by Adams County after 11/7/90. The standard trailer used to haul scrap will be measured and a load weighed to determine the unit weight and therefore the cubic yardage for payment.
- 6. Mr. Bukowski confirmed with Mr. David Brinjac by phone that once 8 feet of screened ash is in the bottom, then larger size material can be placed in the basin as long as 8 feet of screened ash is kept between the side slopes and the larger material. Mr. Galardini stated that he would have his surveyor check the grade in the basin to confirm that 8 feet of ash is over the entire bottom prior to moving the larger material in.
- 7. Mr. Bukowski again asked that Adams County Asphalt forward the executed copies of the Certificate of Substantial Completion. Mr. Galardini stated that this would be done today. It is understood that the punch list attached to the certificate has been modified and updated since the certificate was issued.
- 8. Attached is a copy of the updated punch list. All completed items have been removed. Item 55 was added.

Any corrections, additions and/or deletions to these minutes should be received by Mark Bukowski on or before February 21, 1991 or the minutes will stand as prepared.

Minutes prepared by Mark Bukowski.

DISTRIBUTION

David A. Brinjac
Mark E. Bukowski
Robert Martzall
Daniel R. Lispi
James M. Close
John Lukens
Bradley Bechtel
Gordon Lambert
Linda Houseal
Bob Galardini
File

CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA PRE-FINAL PROJECT REVIEW PUNCHLIST

BKA NO. 86019-01

November 29, 1990 Updated December 13, 1990 Updated December 31, 1990 Updated January 15, 1991 Updated January 24, 1991 Updated February 7, 1991

A. Administrative Items

- 1. Provide construction record drawings (ACA). (Initial Submission Rejected)
- Provide final certified payrolls from all contractors (ACA).
- 5. Provide all test reports from Gundle on the liner and geotextile materials (ACA).
- 6. Submit the final panel layout drawing and Boot Penetration Detail from Gundle (ACA). (Initial Submission Rejected)
- 10. Provide source identification for any borrow material to be used to complete backfill around the berm (ACA).
- 11. Provide final test report from pump station installer/manufacturer (ACA). (Three Submissions Rejected)
- 14. Provide warranty certificates per specification on the pump station equipment (ACA). (Initial Submission Rejected)

B. Work Items

- 2. Provide ID tag on pump control panel per specification.
- 4. Install HDPE tank and sampling pipe and clean out the detection manhole. (Need supports on riser pipe.)
- 7. Paint casing pipe orange. (Needs to be properly primed prior to painting.)
- 8. Clean out pump station and paint discharge pipe with bitumastic paint.
- 10. Paint pipe in valve chamber with bitumastic paint.
- 11. Repair leak in valve chamber at drain penetration. (Slope floor to drain.)
- 12. Install new cover on manhole B3-B.
- 13. Re-seed all areas with no growth in the Spring of 1991.
- 16. Remove all silt fence once vegetation is established. Where vegetation is established remove silt fence now. (Spring 1991)
- 17. Repair erosion damage under jute netting going into sedimentation pond. Reseed slopes of sedimentation pond. (Spring 1991)
- 18. Fill in low spot in swale at NW corner of B-2.

BKA NO. 86019-01

- 19. Complete fencing as follows: (Revised 12/13/90)
 - d. Regrade all areas where bottom of fence is more than four inches above grade (varies from 2" to 16").
 - e. Specific deficiencies (line post numbered starting with 1 at the post at the northeast corner of B-2):
 - Grade from post 1 to post 22 (corner post) varies from 8" to 12" below fence.
 - 2. Line posts 14 and 17 additional ties needed on top rail.
 - Line posts 22 through 24 slack fabric up slope. Remove tree root.
 - 4. Line post 26 remove corner post, install line post and support top rail properly.
 - 6. Line post 49 is approximately 2-inches too low. Correct.
 - 7. Corner post 53 (at Gibson Street) secure fabric at brace and tighten the truss rod.
 - 9. Line post 68-69 top rail is uneven. Correct to have even top rail and fix joint between the two rails.
 - 10. Line posts 77-78 fence in this area is too high. Lower these posts to match posts 76 and 79.
 - 11. Line post 86 cap is not attached to the post.
 - 14. Line post 111 fence post is too high and coupling in top rail is not properly supporting the rail.
- 20. Clean-up all debris from fence clearing and construction.
- 21. Fill post holes back in and restore the NAPA Auto Parts lawn and parking lot.
- 24. Seed all disturbed areas due to fence construction. (Spring 1991)
- 25. Remove all construction debris over the entire site.
- 26. Clean out the Clean Out Manhole and seal pipe penetration.
- 27. Raise monitoring well at SE corner of B-2.
- 28. Install remainder of sand and geotextile on side slopes. (After 16' of ash is installed)
- 29. Resolve bridging of geotextile at berm when the remainder of the sand is installed. (After 16' of ash is installed).
- 30. Remove all dirt and debris along east side of B-2 and re-grade.
- 32. Remove construction trailer (after all work is complete).
- 34. Secure temporary cover pads.
- 35. Remove test pad. Leave gravel surface (After 16' of ash is installed).
- 36. Relocate ash from B-1 in stockpile area to B-2 after screening.
- 37. Re-build silt fence around stockpile area in a few places on the east and north sides.
- 39. Straighten out bowed bubbler line at the pump control panel and paint with white epoxy paint.
- 40. Perform final grading around the pump station and detection manhole. (After final geotextile layer is complete.)
- 41. Re-establish the 390 elevation around the berm, re-dress exterior side slopes and construct the wedge of soil over the final layer of geotextile when it is installed.
- 42. Apply topsoil to the areas covered by items 40 and 41 and seed in the Spring of 1991.
- 43. Seed the unsuitable and suitable stockpile areas in the Spring of 1991 per the Erosion and Sedimentation Control Plan.
- 44. Repave the damaged parking lot. (After sand is installed.)
- 45. Repair the damaged underground cables and verify that the parking area lights work.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 35 BKA NO. 86019-01

- 47. Re-grade the B-1/B-2 interface area. The B-2 berm is crowding the B-1 ash. (After final geotextile is complete.)
- 49. Complete Swale 8 outside of B-2.
- 50. Restore the stone access roads to both the Traffic Building and the Highway Garage. Restore stone along the north side of the Traffic Building.
- 51. Restore drainage for the area between the Traffic Building and the Highway Garage. (Address this when final anchor trench is excavated.)
- 52. Change out the two cast iron pump motor housings for Hi-Chrome (CD4MCU) per specification 11A, Section 1.2 (Item added on December 13, 1990).
- 53. Gate at Napa Auto Parts is not properly aligned and plumbed (added January 15, 1991).
- 54. Piezometer 87-9-2W was bent by Adams County Asphalt and should be straightened. (Added January 15, 1991)
- 55. Silt fence at NAPA Auto Parts is not properly installed (added 2/7/91).

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file: Non-Harardono RH Harrisburg Incinerator Pit B-Z Constr.

CITY OF HARRISBURG
CONSTRUCTION OF B-2 RESIDUE AREA
BKA NO. 86019-01

Job Conference No. 33 and Follow-up Review of Punchlist

January 15, 1991

DER WASTE MANAGEMENT

JAN 1 7 1991

MARRISBURG REGION

PROJECT DATA:

Contract Length***:

Start Date: Completion Date**:

Days Complete: Days Remaining: Percent Time Consumed:

Estimated Percent Complete

Adams County Asphalt: D & S Contractors:

Next Scheduled Job Conference:

165 days*

April 25, 1990 October 6, 1990*

266 -101 161%

97%

January 24, 1991 at 9:00 A.M. at the job site

trailer

- * Includes 15 day contract extension negotiated with Owner
- ** Substantial Completion was granted on November 28, 1990.
- *** Does not include extra time for classification and deposition of ash.

THOSE IN ATTENDANCE:

Mark Bukowski
Robert Martzall
Curt Helman
John Lukens
Robert Galardini
Joseph Loomis

Brinjac, Kambic & Associates, Inc. Brinjac, Kambic & Associates, Inc.

Nassaux-Hemsley, Inc. City of Harrisburg Adams County Asphalt Adams County Asphalt

Don Adams Handwerk Contractors, Inc.

MEETING MINUTES:

- Mr. Bukowski opened the meeting by asking if there were any additions, deletions and/or corrections to the minutes of the Job Conference No. 32 held on December 31, 1990. There being none, the minutes to that meeting stand as prepared.
- Mr. Galardini stated the following:
 - a. A letter was sent to the Engineer today (January 15, 1991) in response to the Engineer's letter on the punchlist.
 - b. The survey data on the temporary ash pad will be hand-carried today (January 15, 1991) or tomorrow (January 16, 1991) to the Engineer.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 33 BKA NO. 86019-01

- c. 65% of the available ash in the temporary pad has been screened and placed in B-2. The remaining work should be complete in 2 weeks.
- d. The HDPE tank was installed in the detection manhole. The hole in the slab was drilled today (January 15, 1991) and the installation is being completed at this time.

3. Mr. Bukowski stated the following:

- Holand
- a. The HDPE pipe entering the detection manhole from B-2 was observed to have a flange glued on rather than welded. Mr. Galardini explained that welding was not possible at this location due to inaccessibility. Mr. Bukowski stated that this connection would be reviewed in the field by the Engineer to see if it would be acceptable.
- b. Access to the area between B-1 and B-2 will be cut off when Handwerk places their conveyor in this area. A discussion ensued on the work remaining in this area and it was agreed that when Adams County Asphalt needed access to complete their work in this area, Handwerk would move their conveyor. The exact duration of this access will be coordinated at a later date.
- what isn tete?

c.

Once the detection manhole and HDPE tank is complete, the City should start monitoring the fluid level in the tank in order to monitor the detection zone. Mr. Lukens stated that this would be done as well as sampling of the leachate in the pump station per the DER permit.

Mr. Lukens requested a pumping rate on the pumps in order to determine the amount of leachate pumped. (Mr. Bukowski later verified this rate per the test data as 485 GPM or 29,100 GPH.)

4. Mr. Galardini asked that the Engineer verify the calculations on the amount of ash it will take to reach the 16 foot level in the basin. This was later verified as follows:

·		Approximate Volume
*First Lift	To Elev. 366	2,164 cy
Second Lift	To Elev. 370	7,000 cy
Third Lift	To Elev. 374	11,552 cy
Fourth Lift	To Elev. 378	<u>13,381 cy</u>

- * First lift is a "leveling" wedge that is not uniformly four feet thick. 34,097 cy
- 5. Mr. Adams stated that Handwerk proposed to fill half of the basin while Adams County Asphalt filled the other half. The dividing line would be a diagonal from the northeast corner (haul road entrance) to the southwest corner (Napa Auto Parts). Mr. Galardini agreed that this division would be acceptable. Handwerk will replace all tarps at the end of the day that they move and Adams County Asphalt will do likewise.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 33 BKA NO. 86019-01

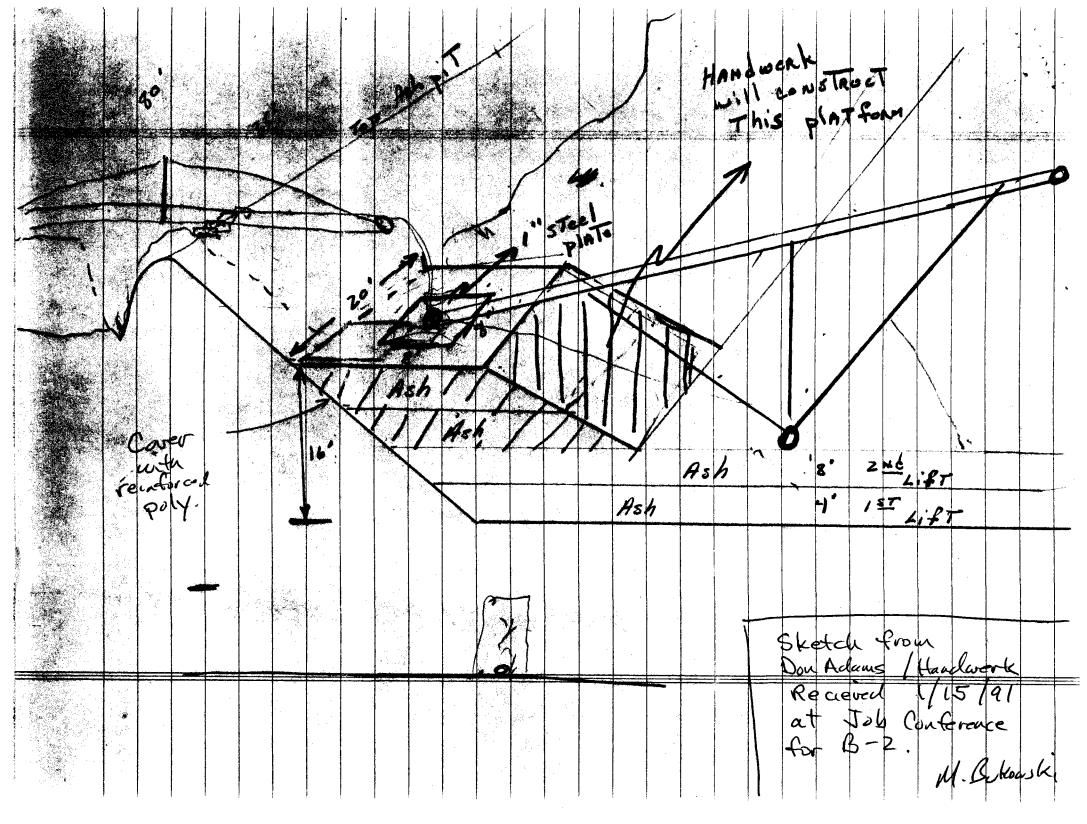
- 6. Mr. Adams discussed the attached sketch with Mr. Bukowski regarding Handwerk's stacker configuration. No support for the conveyor or stacker will be placed on the geotextile in this configuration. The 8 foot high platform of ash will be covered with reinforced polyethylene after placement. Mr. Bukowski later discussed this with Mr. David Brinjac. No objection to this installation was taken.
- 7. Mr. Lukens stated that Mr. Rathfon from DER had once again pointed out to him that some exposed seams in the geotextile had separated. Mr. Lukens stated that it was acceptable to DER to repair these tears when they return to the site to install the final geotextile.
- 8. Mr. Bukowski stated that once 16 feet of ash (Elev. 378) was reached in the basin, all placement of ash would have to halt until the final sand protective cover and geotextile was installed. There is also a DER requirement to place 6-inches of dirt over this 16 feet of ash. Mr. Lukens stated that he was discussing the necessity of the 6-inches of dirt with DER and will advise the Contractor of the results of this discussion. Mr. Adams stated that this stacker was portable and could be moved when the sand was being placed. Further coordination of this work will occur at a later date.
- 9. Mr. Galardini turned over the locking well cap to Mr. Lukens and the following pump spare parts to Mr. Bukowski for review:
 - 1. Mechanical Seals One Set
 - Volute Gasket One
 - 3. Jam Washer One
- 10. Attached is an updated copy of the punchlist. Items 53 and 54 are new items. All completed items have been removed from the list.

Any corrections, additions and/or deletions to these minutes should be received by Mark Bukowski on or before January 24, 1991 or the minutes will stand as prepared.

Minutes prepared by Mark Bukowski.

DISTRIBUTION

David A. Brinjac
Mark E. Bukowski
Robert Martzall
Daniel R. Lispi
James M. Close
John Lukens
Bradley Bechtel
Gordon Lambert
Linda Houseal
Bob Galardini
Don Adams
File



CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA PRE-FINAL PROJECT REVIEW PUNCHLIST

BKA NO. 86019-01

November 29, 1990 Updated December 13, 1990 Updated December 31, 1990 Updated January 15, 1991

A. <u>Administrative Items</u>

- 1. Provide construction record drawings (ACA).
- 2. Provide final certified payrolls from all contractors (ACA).
- 5. Provide all test reports from Gundle on the liner and geotextile materials (ACA).
- 6. Submit the final panel layout drawing and Boot Penetration Detail from Gundle (ACA).
- 10. Provide source identification for any borrow material to be used to complete backfill around the berm (ACA).
- 11. Provide final test report from pump station installer/manufacturer (ACA).
- 14. Provide warranty certificates per specification on the pump station equipment (ACA).

B. Work Items

Adams County Asphalt

- 1. Provide one locking wingnut on pump control panel.
- 2. Provide ID tag on pump control panel per specification.
- 4. Install HDFE tank and sampling pipe and clean out the detection manhole. (90% complete)
- 7. Paint casing pipe orange. (Needs to be properly primed prior to painting.)
- 8. Clean out pump station and paint discharge pipe with bitumastic paint.
- 10. Paint pipe in valve chamber with bitumastic paint.
- 11. Repair leak in valve chamber at drain penetration. (Slope floor to drain.)
- 12. Install new cover on manhole B3-B.
- 13. Re-seed all areas with no growth in the Spring of 1991.
- 16. Remove all silt fence once vegetation is established. Where vegetation is established remove silt fence now. (Spring 1991)
- 17. Repair erosion damage under jute netting going into sedimentation pond. Re-seed slopes of sedimentation pond. (Spring 1991)
- 18. Fill in low spot in swale at NW corner of B-2.

- 19. Complete fencing as follows: (Revised 12/13/90)
 - a. Install bottom tension wire per specification. (Tension wire is installed but it needs ties on west side from 1 to 26)
 - b. Add ties to top rail, tension wire and posts to comply with specified spacing (24", 24" & 12" respectively).
 - c. Pull fabric tight between all posts. Areas of very slack mesh exist.
 - d. Regrade all areas where bottom of fence is more than four inches above grade (varies from 2" to 16").
 - e. Specific deficiencies (line post numbered starting with 1 at the post at the northeast corner of B-2):
 - Grade from post 1 to post 22 (corner post) varies from 8" to 12" below fence.
 - Line posts 14 and 17 additional ties needed on top rail.
 - Line posts 22 through 24 slack fabric up slope. Remove tree root.
 - 4. Line post 26 remove corner post, install line post and support top rail properly.
 - 5. Line posts 27-28 and 37-38 additional ties needed to secure top rail.
 - 6. Line post 49 is approximately 2-inches too low. Correct.
 - 7. Corner post 53 (at Gibson Street) secure fabric at brace and tighten the truss rod.
 - 8. Line posts 54-54 install additional ties on the top rail.
 - 9. Line post 68-69 top rail is uneven. Correct to have even top rail and fix joint between the two rails.
 - 10. Line posts 77-78 fence in this area is too high. Lower these posts to match posts 76 and 79.
 - 11. Line post 86 cap is not attached to the post.
 - 12. Line post 88 intermediate cap is not installed properly.
 - 13. Line posts 100-102 fence is kinked in these areas.
 - 14. Line post 111 fence post is too high and coupling in top rail is not properly supporting the rail.
- 20. Clean-up all debris from fence clearing and construction.
- 21. Fill post holes back in and restore the Napa Auto Parts lawn and parking lot.
- 24. Seed all disturbed areas due to fence construction. (Spring 1991)
- 25. Remove all construction debris over the entire site.
- -26. Clean out the Clean Out Manhole and seal pipe penetration.
 - 27. Raise monitoring well at SE corner of B-2.
 - 28. Install remainder of sand and geotextile on side slopes. (After 16' of ash is installed)
- Resolve bridging of geotextile at berm when the remainder of the sand is installed. (After 16' of ash is installed).
 - 30. Remove all dirt and debris along east side of B-2 and re-grade.
 - 31. Remove sand with hydraulic oil to approved landfill site.
 - 32. Remove construction trailer (after all work is complete).
 - 34. Secure temporary cover pads.
 - 35. Remove test pad. Leave gravel surface (After 16' of ash is installed).
 - 36. Relocate ash from B-1 in stockpile area to B-2 after screening.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 33 BKA NO. 86019-01

- 37. Re-build silt fence around stockpile area in a few places on the east and north sides.
- 39. Straighten out bowed bubbler line at the pump control panel and paint with white epoxy paint.
- 40. Perform final grading around the pump station and detection manhole. (After final geotextile layer is complete.)
- 41. Re-establish the 390 elevation around the berm, re-dress exterior side slopes and construct the wedge of soil over the final layer of geotextile when it is installed.
- 42. Apply topsoil to the areas covered by items 40 and 41 and seed in the Spring of 1991.
- 43. Seed the unsuitable and suitable stockpile areas in the Spring of 1991 per the Erosion and Sedimentation Control Plan.
- 44. Repave the damaged parking lot. (After sand is installed.)
- 45. Repair the damaged underground cables and verify that the parking area lights work.
- 47. Re-grade the B-1/B-2 interface area. The B-2 berm is crowding the B-1 ash. (After final geotextile is complete.)
- 49. Complete Swale 8 outside of B-2.
- 50. Restore the stone access roads to both the Traffic Building and the Highway Garage. Restore stone along the north side of the Traffic Building.
- 51. Restore drainage for the area between the Traffic Building and the Highway Garage. (Address this when final anchor trench is excavated.)
- 52. Change out the two cast iron pump motor housings for Hi-Chrome (CD4MCU) per specification 11A, Section 1.2 (Item added on December 13, 1990).
- 53. Gate at Napa Auto Parts is not properly aligned and plumbed (added January 15, 1991).
- 54. Piezometer 87-9-2W was bent by Adams County Asphalt and should be straightened. (Added January 15, 1991)

what about the "french drain" (located near the constituction trailer) being relocated outletted to the storm sends us. substitute discharge in the NE corner area."

- have the unsuitable soil been characterized + will Shey be screened before being used in B-2? THIN WAZ THEN STORE -

BRINJAC. KAMBIC & ASSOCIATES CONSULTING ENGINEERS

DER WASTE MALL CAMENT

Copy sent worked, to Jony K, Frank F, abdul für ammi. t

NOV 6 1990

HARRISBURG REGION

November 6, 1990

Mr. Robert G. Benvin
Facilities Manager
Bureau of Waste Management
Harrisburg Regional Office
Department of Environmental Resources
Commonwealth of Pennsylvania
One Ararat Boulevard
Harrisburg, PA 17110

Re: City of Harrisburg

Construction of B-2 Residue Area

BKA No. 86019-01

Dear Mr. Benvin:

Condition No. 19 of the Major Permit Modification to Permit No. 100992 for the construction of Residue Area B-2 required that a tarp system be a minimum of six inches in thickness if used for daily cover. In correspondence from the undersigned dated September 20, 1990, it was proposed that the tarps currently being used to cover the ash in the temporary ash storage pad be utilized to cover this ash when placed in Residue Area B-2. In correspondence from you dated October 12, 1990, the plan as described in the September 20, 1990 letter was approved provided several concerns were addressed. In that regard, be advised of the following:

1. The City is currently having the excavated soil (unsuitable soil) tested for conformance with the requirements of 273.232(c)(1-4). You will be notified of the results once they are received.

It is understood that these soils will not be suitable for intermediate cover purposes. However, the City does anticipate utilizing this material in the area between the ash and the berm until the level is reached to begin the placement of the intermediate cover soil.

Mr. Robert G. Benvin November 6, 1990 Page Two

- 2. The tarps that will be reutilized from the temporary ash storage pad will be anchored during use in Residue Area B-2 with sand bags. However, the six inch tarps will be anchored utilizing grommets and stakes. The grommets will be installed in the edges of the tarps.
- 3. It is realized that the Department will evaluate this system and reserves the right to impose other daily cover requirements it deems appropriate

This being the case, the City respectfully requests that the Department allow it to place the ash from Sites A and B-1 in the B-2 Residue Area in a manner similar to that authorized for the temporary storage pad ash. Therefore, the following is proposed:

- 1. It is currently estimated that the total ash removal from Sites A and B-1 will approximate 115,000 cubic yards.
- 2. The September 20, 1990 letter stated that once a height of 16 vertical feet of ash is reached in Residue Area B-2, the ash would be covered with six inches of soil.
- 3. It is proposed that when ash is being moved from Sites A and B-1, that the daily ash generated by the HSGF be stored on the temporary ash pad in a manner equivalent to that presently being utilized.
- 4. It is proposed that the ash removed from Sites A and B-1 will be placed in four foot lifts and covered with the tarps utilized in the temporary ash storage pad. However, every eight feet, the ash will be covered with six inches of soil.
- 5. Once the ash becomes exposed above the berm, the intermediate cover will be placed concurrently with the six inch daily cover. However, the unsuitable soil will not be used as the intermediate cover.
- 6. Once the ash from Sites A and B-1 is totally moved into B-2, the remaining ash from the temporary pad will be placed in B-2.
- 7. It is estimated that once the ash from the temporary ash storage pad and Sites A and B-1 is completely relocated to Residue Area B-2, the height of this ash will be between elevation 402 and 406 or 8 to 12 feet above the berm.

Mr. Robert G. Benvin November 6, 1990 Page Three

The six inch tarp system will be utilized when the HSGF is depositing its daily production in Residue Area B-2 and the ash will be covered with six inches of soil every eight feet.

The plan outlined in this letter has been discussed, in concept, with Linda Houseal. The plan certainly meets the intent of the regulations and provides for conditions which will improve upon the existing. We trust that you will look favorably on it.

Should you have any questions regarding this, please feel free to contact me at your convenience.

Sincerely,

BRINJAC, KAMBIC & ASSOCIATES, INC.

David A. Briniac

DAB:glk

c: Daniel R. Lispi John A. Lukens Gordon Lambert Linda Houseal

File

CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA BKA NO. 86019-01

Job Conference No. 36 and Follow-up Review of Punchlist

February 21, 1991

Nin-Horandona
Pit B-2 Construction
Hog. Inclose atal

Daughix DER GEMENT
WASTE MANAGEMENT
FEB 2 5 1991

HARRISBURG REGION

PROJECT DATA:

Contract Length***:

165 days*

Start Date:

April 25, 1990

Completion Date**:

October 6, 1990*

Days Complete:

303

Days Remaining:

-138

Percent Time Consumed:

184%

Estimated Percent Complete

Adams County Asphalt: D & S Contractors: 97%

Next Scheduled Job Conference:

100% March 7, 1991 at 9:00 A.M. at the job site trailer

- * Includes 15 day contract extension negotiated with Owner
- ** Substantial Completion was granted on November 28, 1990.
- *** Does not include 60 days for classification and deposition of ash.

THOSE IN ATTENDANCE:

Mark Bukowski Robert Martzall Brinjac, Kambic & Associates, Inc. Brinjac, Kambic & Associates, Inc.

John Lukens City of Harrisburg

Daniel R. Lispi Robert Galardini

City of Harrisburg Adams County Asphalt

Curt Helman (part-time) Nassaux

Nassaux-Hemsley

MEETING MINUTES:

- Mr. Bukowski opened the meeting by asking if there were any additions, deletions and/or corrections to the minutes of the Job Conference No. 35 held on February 7, 1991. There being none, the minutes to that meeting stand as prepared.
- Mr. Galardini stated the following:
 - a. Ash was moved two days during the last two weeks. All plus 6-inch material and all screened ash that can be moved is in B-2. Mr. Lukens concurred that no more ash can be moved without acceptable test results.
 - b. All temporary cover pads were tied down and weighted with earth.
 - The fence punchlist was worked on. Anchor Fence representatives will review this portion of the punchlist with Mr. Martzall after the meeting.
 - The PVC pipe in the monitor well should have been trimmed.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 36 BKA NO. 86019-01

- e. Items 5, 6, 11 and 14 of the Administrative Items of the punchlist have been delivered to the Engineer. See the Engineer's comments on those items on the attached punchlist.
- 3. Mr. Bukowski stated that the Certificate of Substantial Completion had been executed by Adams County Asphalt and was being forwarded to the City for execution.
- 4. The Engineer has not received Mid-Atlantic's follow-up letter on their punchlist items. Mr. Galardini stated that he would forward this letter to the Engineer for review.
- 5. Mr. Lukens stated that the tarps were not properly covering the ash in Adams County's half of B-2. Mr. Galardini stated that he would check to see if Handwerk had moved these tarps. If not, Adams County would move the tarps.
- 6. It was agreed that Handwerk would be requested to concentrate on filling the southern half of the basin so that Adams County could return to the site, possibly in two weeks, to start placing the remaining sand on the side slopes. Handwerk will attend the next job conference to further coordinate this work.
- 7. It was agreed that Adams County would place additional stone along the north side of the garages because of the mud. Handwerk will be required to provide stone in all other areas.

Any corrections, additions and/or deletions to these minutes should be received by Mark Bukowski on or before March 7, 1991 or the minutes will stand as prepared.

Minutes prepared by Mark Bukowski.

DISTRIBUTION

David A. Brinjac
Mark E. Bukowski
Robert Martzall
Daniel R. Lispi
James M. Close
John Lukens
Bradley Bechtel
Gordon Lambert
Linda Houseal
Bob Galardini
File

Attachment

CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA PRE-FINAL PROJECT REVIEW PUNCHLIST

BKA NO. 86019-01

November 29, 1990 Updated December 13, 1990 Updated December 31, 1990 Updated January 15, 1991 Updated January 24, 1991 Updated February 7, 1991 Updated February 21, 1991

A. Administrative Items

- 1. Provide construction record drawings (ACA). (Initial Submission Rejected)
- Provide final certified payrolls from all contractors (ACA).
- 5. Provide all test reports from Gundle on the liner and geotextile materials (ACA). (After final geotextile is installed.)
- 6. Submit the final panel layout drawing and Boot Penetration Detail from Gundle (ACA). (Initial Submission Rejected) (Being reviewed by Engineer.)
- 10. Provide source identification for any borrow material to be used to complete backfill around the berm (ACA).

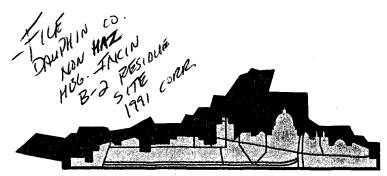
B. Work Items

Adams County Asphalt

- 2. Provide ID tag on pump control panel per specification.
- 4. Install HDPE tank and sampling pipe and clean out the detection manhole. (Need supports on riser pipe.)
- 7. Paint casing pipe orange. (Needs to be properly primed prior to painting.)
- 8. Clean out pump station and paint discharge pipe with bitumastic paint.
- 10. Paint pipe in valve chamber with bitumastic paint.
- 11. Repair leak in valve chamber at drain penetration. (Slope floor to drain.)
- 12. Install new cover on manhole B3-B.
- 13. Re-seed all areas with no growth in the Spring of 1991.
- 16. Remove all silt fence once vegetation is established. Where vegetation is established remove silt fence now. (Spring 1991)
- 17. Repair erosion damage under jute netting going into sedimentation pond. Reseed slopes of sedimentation pond. (Spring 1991)
- 18. Fill in low spot in swale at NW corner of B-2.

BKA NO. 86019-01

- 19. Complete fencing as follows: (Revised 12/13/90)
 - d. Regrade all areas where bottom of fence is more than four inches above grade (varies from 2" to 16").
 - e. Specific deficiencies (line post numbered starting with 1 at the post at the northeast corner of B-2):
 - 1. Grade from post 1 to post 22 (corner post) varies from 8" to 12" below fence.
- 20. Clean-up all debris from fence clearing and construction.
- 21. Fill post holes back in and restore the NAPA Auto Parts lawn and parking lot.
- 24. Seed all disturbed areas due to fence construction. (Spring 1991)
- 25. Remove all construction debris over the entire site.
- 26. Clean out the Clean Out Manhole and seal pipe penetration.
- 27. Raise monitoring well at SE corner of B-2.
- 28. Install remainder of sand and geotextile on side slopes. (After 16' of ash is installed)
- 29. Resolve bridging of geotextile at berm when the remainder of the sand is installed. (After 16' of ash is installed).
- 30. Remove all dirt and debris along east side of B-2 and re-grade.
- 32. Remove construction trailer (after all work is complete).
- 35. Remove test pad. Leave gravel surface (After 16' of ash is installed).
- 36. Relocate ash from B-1 in stockpile area to B-2 after screening.
- 37. Re-build silt fence around stockpile area in a few places on the east and north sides.
- 39. Straighten out bowed bubbler line at the pump control panel and paint with white epoxy paint.
- 40. Perform final grading around the pump station and detection manhole. (After final geotextile layer is complete.)
- 41. Re-establish the 390 elevation around the berm, re-dress exterior side slopes and construct the wedge of soil over the final layer of geotextile when it is installed.
- 42. Apply topsoil to the areas covered by items 40 and 41 and seed in the Spring of 1991.
- 43. Seed the unsuitable and suitable stockpile areas in the Spring of 1991 per the Erosion and Sedimentation Control Plan.
- 44. Repave the damaged parking lot. (After sand is installed.)
- 45. Repair the damaged underground cables and verify that the parking area lights work.
- 47. Re-grade the B-1/B-2 interface area. The B-2 berm is crowding the B-1 ash. (After final geotextile is complete.)
- 49. Complete Swale 8 outside of B-2.
- 50. Restore the stone access roads to both the Traffic Building and the Highway Garage. Restore stone along the north side of the Traffic Building.
- 51. Restore drainage for the area between the Traffic Building and the Highway Garage. (Address this when final anchor trench is excavated.)
- 52. Change out the two cast iron pump motor housings for Hi-Chrome (CD4MCU) per specification 11A, Section 1.2 (Item added on December 13, 1990).
- 53. Gate at Napa Auto Parts is not properly aligned and plumbed (added January 15, 1991).
- 54. Piezometer 87-9-2W was bent by Adams County Asphalt and should be straightened. (Added January 15, 1991)
- 55. Silt fence at NAPA Auto Parts is not properly installed (added 2/7/91).



The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY DEPARTMENT OF INCINERATION AND STEAM GENERATION

March 4, 1991

Mr. Billy Ellis B C Signs RD#2 Mifflintown, PA 17059

RE: Request for Price Quotation

Dear Mr. Ellis:



Attached please find a Harrisburg All America City Seal and Text Guideline for a proposed sign for The City of Harrisburg, Department of Incineration and Steam Generation. Two (2) such signs are to be constructed and installed, one (1) sign is to be placed at the Cameron Street entrance and one (1) sign is to be placed at the Nineteenth Street entrance, on location at the Harrisburg Steam Generating Facility.

The signs must each be a 10' x 16' finished size with the text sized and centered pursuant to the Text Guideline. The colors for Harrisburg All America City Seal must match those of the attached sample. The size of the aforementioned Seal shall be determined by the Contractor relative to that which is shown in the Text Guideline. The signs shall be constructed of a durable, weather resistant material with a light background and contrasting letters and numbers that can be easily seen and read.

Emphasis shall be given to the durability of these signs and their respective supports in various weather conditions. All materials for the construction and placement of the signs are to be furnished by you, the Contractor. Therefore, the costs of such materials must be included in the Contractor's price quotation. In addition, included with the written price quotation, Contractors are required to specify the proposed materials and structural support including but not limited to the manner in which the signs will be anchored into the ground.

The Contractor selected for this project will be required to submit to the City, within five (5) business days from date of selection, a scaled drawing(s) of the proposed sign design for the City's review. Upon receipt of approved drawing(s) from the City, the Contractor shall have four (4) weeks within which to construct and place the signs. The approximate locations for the placement of the signs will be provided to the Contractor by the City.

Request for Price Quotation March 4, 1991 Page Two

The entire scope of work described above must be performed by the Contractor. No portion of this work may be subcontracted to any third party.

Quotations for the aforementioned project are to be submitted to:

John A. Lukens, Director
Department of Incineration and Steam Generation
1670 South 19th Street
Harrisburg, PA 17104

The deadline for submission is 5:00 p.m. on March 13, 1991. If you have any questions or require additional information, please do not hesitate to contact me at (717) 236-5361.

Sincerely

John A. Lukens

Director

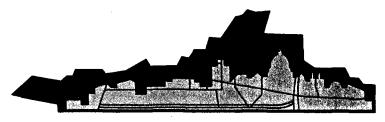
JAL/jal Attachments cc:

> Greg Snyder Tony Rathfon File

DER WASTE MANAGEMENT

MAR 6 1991

HARRISBURG REGION



The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY DEPARTMENT OF INCINERATION AND STEAM GENERATION

March 4, 1991

Deforest Signs & Lighting Inc. 780 Elder Street Harrisburg, PA 17111

RE: Request for Price Quotation

Dear Sir or Madam:

Attached please find a Harrisburg All America City Seal and Text Guideline for a proposed sign for The City of Harrisburg, Department of Incineration and Steam Generation. Two (2) such signs are to be constructed and installed, one (1) sign is to be placed at the Cameron Street entrance and one (1) sign is to be placed at the Nineteenth Street entrance, on location at the Harrisburg Steam Generating Facility.

The signs must each be a 10' x 16' finished size with the text sized and centered pursuant to the Text Guideline. The colors for Harrisburg All America City Seal must match those of the attached sample. The size of the aforementioned Seal shall be determined by the Contractor relative to that which is shown in the Text Guideline. The signs shall be constructed of a durable, weather resistant material with a light background and contrasting letters and numbers that can be easily seen and read.

Emphasis shall be given to the durability of these signs and their respective supports in various weather conditions. All materials for the construction and placement of the signs are to be furnished by you, the Contractor. Therefore, the costs of such materials must be included in the Contractor's price quotation. In addition, included with the written price quotation, Contractors are required to specify the proposed materials and structural support including but not limited to the manner in which the signs will be anchored into the ground.

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Request for Price Quotation March 4, 1991 Page Two

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Department of Incineration and Steam Generation
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Harrisburg, PA 17104

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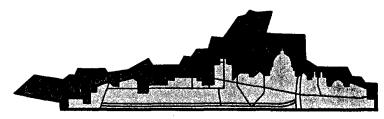
Singerely,

John A. Lukens

Director

JAL/jal Attachments

Greg Snyder Tony Rathfon File



The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY DEPARTMENT OF INCINERATION AND STEAM GENERATION

March 4, 1991

Mr. Sam Finkel Sam Finkel Signs 3604 North Sixth Street Harrisburg, PA 17110

RE: Request for Price Quotation

Dear Mr. Finkel:

Attached please find a Harrisburg All America City Seal and Text Guideline for a proposed sign for The City of Harrisburg, Department of Incineration and Steam Generation. Two (2) such signs are to be constructed and installed, one (1) sign is to be placed at the Cameron Street entrance and one (1) sign is to be placed at the Nineteenth Street entrance, on location at the Harrisburg Steam Generating Facility.

The signs must each be a 10' x 16' finished size with the text sized and centered pursuant to the Text Guideline. The colors for Harrisburg All America City Seal must match those of the attached sample. The size of the aforementioned Seal shall be determined by the Contractor relative to that which is shown in the Text Guideline. The signs shall be constructed of a durable, weather resistant material with a light background and contrasting letters and numbers that can be easily seen and read.

Emphasis shall be given to the durability of these signs and their respective supports in various weather conditions. All materials for the construction and placement of the signs are to be furnished by you, the Contractor. Therefore, the costs of such materials must be included in the Contractor's price quotation. In addition, included with the written price quotation, Contractors are required to specify the proposed materials and structural support including but not limited to the manner in which the signs will be anchored into the ground.

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Request for Price Quotation March 4, 1991 Page Two

The entire scope of work described above must be performed by the Contractor. No portion of this work may be subcontracted to any third party.

Quotations for the aforementioned project are to be submitted to:

John A. Lukens, Director
Department of Incineration and Steam Generation
1670 South 19th Street
Harrisburg, PA 17104

The deadline for submission is 5:00 p.m. on March 13, 1991. If you have any questions or require additional information, please do not hesitate to contact me at (717) 236-5361.

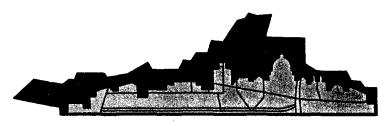
Sincerely

John A. Lukens

Director

JAL/jal Attachments

Greg Snyder Tony Rathfon File



The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY DEPARTMENT OF INCINERATION AND STEAM GENERATION

March 4, 1991

Mr. Leroy Hawkins Hawkins Signs 2703 Waldo Street Harrisburg, PA 17110

RE: Request for Price Quotation

Dear Mr. Hawkins:

Attached please find a Harrisburg All America City Seal and Text Guideline for a proposed sign for The City of Harrisburg, Department of Incineration and Steam Generation. Two (2) such signs are to be constructed and installed, one (1) sign is to be placed at the Cameron Street entrance and one (1) sign is to be placed at the Nineteenth Street entrance, on location at the Harrisburg Steam Generating Facility.

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Request for Price Quotation March 4, 1991 Page Two

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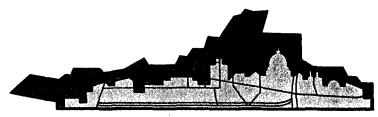
Singerely,

John A. Lukens

Director

JAL/jal Attachments

> Greg Snyder Tony Rathfon File



The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY DEPARTMENT OF INCINERATION AND STEAM GENERATION

March 4, 1991

Mr. Charles Witmer Whiteco Metrocom Inc. 308 South 10th Street Lemoyne, PA 17043

RE: Request for Price Quotation

Dear Mr. Witmer:

Attached please find a Harrisburg All America City Seal and Text Guideline for a proposed sign for The City of Harrisburg, Department of Incineration and Steam Generation. Two (2) such signs are to be constructed and installed, one (1) sign is to be placed at the Cameron Street entrance and one (1) sign is to be placed at the Nineteenth Street entrance, on location at the Harrisburg Steam Generating Facility.

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Request for Price Quotation March 4, 1991 Page Two

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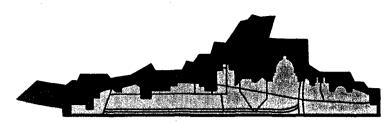
Sincerely,

John A. Lukens

Director

JAL/jal Attachments cc:

> Greg Snyder Tony Rathfon File



The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY DEPARTMENT OF INCINERATION AND STEAM GENERATION

March 4, 1991

METRO Signs & Service 6521 St. George Drive Harrisburg, PA 17110

RE: Request for Price Quotation

Dear Sir or Madam:

Attached please find a Harrisburg All America City Seal and Text Guideline for a proposed sign for The City of Harrisburg, Department of Incineration and Steam Generation. Two (2) such signs are to be constructed and installed, one (1) sign is to be placed at the Cameron Street entrance and one (1) sign is to be placed at the Nineteenth Street entrance, on location at the Harrisburg Steam Generating Facility.

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Request for Price Quotation March 4, 1991 Page Two

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sincerent,

John A. Lukens

Director

JAL/jal Attachments

> Greg Snyder Tony Rathfon File

The City of Harrisburg Providing Leadership for the Region



- Saving Land and Open Space
 - Recycling Renewable Resources
 - Creatively Disposing of Municipal Solid Waste to Generate Electricity and Steam for Homes and Businesses
 - Safe, Reliable Public Services

DEPARTMENT OF INCINERATION AND STEAM GENERATION 1670 SOUTH NINETEENTH STREET HARRISBURG, PA 17104 (717) 236-5361

HARRISBURG STEAM GENERATING FACILITY - PERMIT NO. 100758 RESIDUE DISPOSAL AREA B - PERMIT NO. 100992

OPERATING HOURS - 24 HOURS PER DAY

STEPHEN R. REED MAYOR

JOHN A. LUKENS DIRECTOR

MINIMUM TEXT HEIGHT 3 INCHES

MINIMUM TEXT HEIGHT 5 INCHES

file: Non-Harardons City of Harrisburg Pit 6-2 Construction CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA BKA NO. 86019-01 Job Conference No. 37 and Follow-up Review of Punchlist MAR 1 2 1991 MARRISBURG REGION March 7, 1991 PROJECT DATA: Contract Length***: 165 days* Start Date: April 25, 1990 Completion Date**: October 6, 1990* Days Complete: 317 Days Remaining: -152 Percent Time Consumed: 192% Estimated Percent Complete 97% Adams County Asphalt: D & S Contractors: 100% Next Scheduled Job Conference: March 21, 1991 at 9:00 A.M. at the job site trailer * Includes 15 day contract extension negotiated with Owner ** Substantial Completion was granted on November 28, 1990. *** Does not include 60 days for classification and deposition of ash. THOSE IN ATTENDANCE: David A. Brinjac Brinjac, Kambic & Associates, Inc. Mark Bukowski Brinjac, Kambic & Associates, Inc. Robert Martzall Brinjac, Kambic & Associates, Inc. John Lukens City of Harrisburg Robert Galardini Adams County Asphalt Curt Helman Nassaux-Hemsley Gordon Lambert Nassaux-Hemsley Don Adams Handwerk, Inc. MEETING MINUTES: 1. Mr. Bukowski opened the meeting by asking if there were any additions, deletions and/or corrections to the minutes of the Job Conference No. 36 held on February 21, 1991. There being none, the minutes to that meeting stand as prepared. 2. Mr. Galardini stated the following: The fence punchlist is complete. No more ash was released, so no ash was moved by Adams County Asphalt in the b. last two weeks.

c. Once the basin is ready, Adams County intends to place the sand up the sideslopes and then bring Gundle in to install the geotextile all at once. It was confirmed that the new geotextile can simply lap over the existing geotextile. However, this edge should be secured from being affected by the wind. CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 37 BKA NO. 86019-01

3. Mr. Bukowski stated the following:

- a. A review of the destructive liner test indicates that no results for the primary liner have been received.
- b. The as-built panel layout for the secondary liner has not been received.
- c. The boot detail on the liner as-built drawing is not clear. Nassaux-Hemsley will mark up this drawing and it will be returned to Adams County by 3/11/91.
- d. The PVC pipe in the monitoring well sleeve has not been cut back to allow the cover to be installed.
- e. The ductile iron pipe in the pump station will be acceptable in lieu of galvanized steel pipe. However, the galvanized bolts must be properly coated with bitumastic paint. The punch list will be amended to show this change.
- 4. Mr. Brinjac stated that a 6 inch lift of soil has to be placed in the basin once the ash reaches the 16 foot level. Performance of this work will be discussed with Adams County on 3/13/91. Mr. Brinjac also confirmed that the final geotextile layer does not have to be placed in an anchor trench. It will be anchored by the soil wedge that is to be placed along the outside of the berm.
- 5. Mr. Adams stated that he felt the amount of ash currently in the basin would fill it to the 16 or 18 foot level. Based on this, Handwerk was directed to stop placing ash in B-2 at the end of the shift today. Mr. Adams stated that he should have it all leveled by completion of work on 3/9/91.
- 6. Mr. Galardini estimated that it would take approximately 2 weeks to install the sand and geotextile, and about 1 week to place the 6 inches of soil in the basin. Mr. Galardini stated that 3000 tons of sand is ready. He will contact the trucking firm to see how soon they can start to haul. Gundle will also be contacted to see when they will be available to install the geotextile material.
- 7. Mr. Lambert stated that arrangements would be made to have the sand stockpile tested prior to hauling to the site.
- 8. Attached is a copy of the updated punch list for this project.

Any corrections, additions and/or deletions to these minutes should be received by Mark Bukowski on or before March 21, 1991 or the minutes will stand as prepared.

Minutes prepared by Mark Bukowski.

DISTRIBUTION

David A. Brinjac
Mark E. Bukowski
Robert Martzall
Daniel R. Lispi
James M. Close
John Lukens
Bradley Bechtel
Gordon Lambert
Linda Houseal
Bob Galardini
File
Attachment

CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA PRE-FINAL PROJECT REVIEW PUNCHLIST

BKA NO. 86019-01

November 29, 1990
Updated December 13, 1990
Updated December 31, 1990
Updated January 15, 1991
Updated January 24, 1991
Updated February 7, 1991
Updated February 21, 1991
Updated March 7, 1991

A. Administrative Items

- 1. Provide construction record drawings (ACA). (Initial Submission Rejected)
- Provide final certified payrolls from all contractors (ACA).
- 5. Provide all test reports from Gundle on the liner and geotextile materials (ACA). (After final geotextile is installed.)
- 6. Submit the final panel layout drawing and Boot Penetration Detail from Gundle (ACA). (Initial Submission Rejected) (Being reviewed by Engineer.)
- 10. Provide source identification for any borrow material to be used to complete backfill around the berm (ACA).

B. Work Items

Adams County Asphalt

- 2. Provide ID tag on pump control panel per specification.
- 4. Install HDPE tank and sampling pipe and clean out the detection manhole. (Need supports on riser pipe.)
- 7. Paint casing pipe orange. (Needs to be properly primed prior to painting.)
- 8. Clean out pump station and paint discharge pipe with bitumastic paint.
- 10. Paint pipe in valve chamber with bitumastic paint. (Pipe is acceptable. Coat bolts only)
- 11. Repair leak in valve chamber at drain penetration. (Slope floor to drain.)
- 12. Install new cover on manhole B3-B.
- 13. Re-seed all areas with no growth in the Spring of 1991.
- 16. Remove all silt fence once vegetation is established. Where vegetation is established remove silt fence now. (Spring 1991)
- 17. Repair erosion damage under jute netting going into sedimentation pond. Reseed slopes of sedimentation pond. (Spring 1991)
- 18. Fill in low spot in swale at NW corner of B-2.

BKA NO. 86019-01

- 19. Complete fencing as follows: (Revised 12/13/90)
 - d. Regrade all areas where bottom of fence is more than four inches above grade (varies from 2" to 16").
 - e. Specific deficiencies (line post numbered starting with 1 at the post at the northeast corner of B-2):
 - 1) Grade from post 1 to post 22 (corner post) varies from 8" to 12" below fence.
- 20. Clean-up all debris from fence clearing and construction.
- 21. Fill post holes back in and restore the NAPA Auto Parts lawn and parking lot.
- 24. Seed all disturbed areas due to fence construction. (Spring 1991)
- 25. Remove all construction debris over the entire site.
- 26. Clean out the Clean Out Manhole and seal pipe penetration.
- 27. Raise monitoring well at SE corner of B-2.
- 28. Install remainder of sand and geotextile on side slopes. (After 16' of ash is installed)
- 29. Resolve bridging of geotextile at bern when the remainder of the sand is installed. (After 16' of ash is installed).
- 30. Remove all dirt and debris along east side of B-2 and re-grade.
- 32. Remove construction trailer (after all work is complete).
- 35. Remove test pad. Leave gravel surface (After 16' of ash is installed).
- 36. Relocate ash from B-1 in stockpile area to B-2 after screening.
- 37. Re-build silt fence around stockpile area in a few places on the east and north sides.
- 39. Straighten out bowed bubbler line at the pump control panel and paint with white epoxy paint.
- 40. Perform final grading around the pump station and detection manhole. (After final geotextile layer is complete.)
- 41. Re-establish the 390 elevation around the berm, re-dress exterior side slopes and construct the wedge of soil over the final layer of geotextile when it is installed.
- 42. Apply topsoil to the areas covered by items 40 and 41 and seed in the Spring of 1991.
- 43. Seed the unsuitable and suitable stockpile areas in the Spring of 1991 per the Erosion and Sedimentation Control Plan.
- 44. Repave the damaged parking lot. (After sand is installed.)
- 45. Repair the damaged underground cables and verify that the parking area lights work.
- 47. Re-grade the B-1/B-2 interface area. The B-2 berm is crowding the B-1 ash. (After final geotextile is complete.)
- 49. Complete Swale 8 outside of B-2.
- 50. Restore the stone access roads to both the Traffic Building and the Highway Garage. Restore stone along the north side of the Traffic Building.
- 51. Restore drainage for the area between the Traffic Building and the Highway Garage. (Address this when final anchor trench is excavated.)
- 52. Change out the two cast iron pump motor housings for Hi-Chrome (CD4MCU) per specification 11A, Section 1.2 (Item added on December 13, 1990).
- 54. Piezometer 87-9-2W was bent by Adams County Asphalt and should be straightened. (Added January 15, 1991)
- 55. Silt fence at NAPA Auto Parts is not properly installed (added 2/7/91).

file: Non-hazardons
Harrisburg Incinerator B-2
construction garageon
dence

Daughin Co.

BRINJAC, KAMBIC & ASSOCIATES CONSULTING ENGINEERS

November 28, 1990

Ms. Linda Houseal
Bureau of Solid Waste Management
Department of Environmental Resources
Commonwealth of Pennsylvania
One Ararat Boulevard
Harrisburg, PA 17110

RE: City of Harrisburg Construction of B-2 Residue Area BKA No. 86019-01

Dear Ms. Houseal:

Enclosed, please find one original and one copy of Form 37-Certification of Facility Construction Activity for each of the following activities at the above referenced facility:

- Subbase
- Secondary Liner
- ° Leachate Detection Zone
- ° Primary Liner
- Protective Cover and the Collection System Within the Protective Cover
- Leachate Conveyance Faciilties

As you are aware, modifications to the permitted design were made during the construction. Certain of these modifications were formally approved in the October 12, 1990 correspondence from Robert G. Benvin of the Department of Environmental Resources (DER) to John A. Lukens of the City of Harrisburg. There have been additional modifications since that time that have been approved and documented in job conference minutes or approved verbally and confirmed in writing by this office. The certifications enclosed are based on the latest approved (either formally or informally) design.

Ms. Linda Houseal November 28, 1990 Page Two

The supporting documentation for these certifications is presently being compiled. The complete package will be transmitted to DER within 30 days from receipt from the contractor and QA/QC firms.

The sedimentation ponds/erosion and sedimentation control structures certification was previously supplied to DER.

Should you have any questions regarding this, please feel free to contact me at your convenience.

Sincerely,

BRINJAC KAMBIC & ASSOCIATES, INC.

David A. Brinjac,

DAB:glk Enclosure

c: John A. Lukens
Daniel R. Lispi
Gordon Lambert
File

November 1990

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

I.D. Number		

General References: 273.203/277.203				
Gordon Lambert, P.E. (Engineer's Name - Print or Type)	F		, being a Registered Professiona	al Engineer in
accordance with the Pennsylvania Professional knowledge, information and belief that the f				ne best of my
FACILITY NAME: <u>Harrisburg Stea</u>	m Generating	Fa	cility	
FACILITY LOCATION: _ City of Harri	sburg/Swatar	a T		auphin
is constructed, and prepared in accordance w of Application No. 100992 as app	ith the documents,			
The construction activity is:			•	
MUNICIPAL WASTE LANDFILL		CON	ISTRUCTION/DEMOLITION WAST	E LANDFILL
 Ground water monitoring system Subbase. Secondary liner. Leachate detection zone. Primary liner. Protective cover and the collection within the protective cover. Leachate treatment /conveyance Sedimentation ponds/erosion and sedimentation control structures. Closure. Final Closure. Gas management system. Roadways. 	n system facilities.		 Ground water monitoring sy Subbase. Leachate detection zone. Liner. Protective cover and the coll within the protective cover. Placement of attenuating so attenuation facilities. Leachate treatment/conveys. Sedimentation ponds/erosio sedimentation control struct Closure. Final Closure. Gas management system. Roadways. 	ection system il at natural ance facilities. n and
	PROCESSING FACE	LITY		•
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A description of the construction activity and appropriate as-built drawings, plans, photog	l phase or sequence raphs, and related	of co	onstruction involved is included, a results.	along with
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SYLV SYLV	Telephone Numbo	er:	Chambersburg, PA 17 (717) 263-4109 November 28, 1990	201

Date Prepared

November 28, 1990

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

I.D. Number		
	I.D. Number	

General References: 273.203/277.203		
S. Jeffrey Barnes, P.E. (Engineer's Name - Print or Type)	, being a Registered Professional Engineer in
accordance with the Pennsylvania Profession knowledge, information and belief that the		tion Law do hereby certify that to the best of my activity for:
FACILITY NAME: Residue Disposal Area	a B-2, Harrisburg	Incinerator/Steam Generating Facility
FACILITY LOCATION: City of Harrisbur	rg/Swatara Townsh:	ip Dauphin
	(Municipality)	(County)
		atements, designs, and plans submitted as part nent of Environmental Resources.
The construction activity is:		
MUNICIPAL WASTE LANDFILL	<u>cc</u>	ONSTRUCTION/DEMOLITION WASTE LANDFILL
 Ground water monitoring system Subbase. Secondary liner. (see Attachmel. Leachate detection zone. Primary liner. Protective cover and the collection within the protective cover. Leachate treatment /conveyance Sedimentation ponds/erosion and sedimentation control structures. Closure. Final Closure. Gas management system. Roadways. 	ents) n system facilities.	attenuation facilities. 7. Leachate treatment/conveyance facilities.
	PROCESSING FACILIT	<u>Y</u>
Description of Const	ruction Activity:	
A description of the construction activity and appropriate as-built drawings, plans, photog		construction involved is included, along with tresults.
The construction activity was observed by my with the approved permit.	self or a person under	my direct supervision, in a manner consistent
REGISTERED PROFESSIONAL S. JEFFREY BARNES	Engineer's Signature Name of Firm: Address:	CQA Services, Inc. 263 West South Street Carlisle, Pennsylvania 17013
ENGINEER	Telephone Number:	(<u>717</u>) <u>245-9100</u> November 28, 1990

November 1990

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

I.D. Number		

General References: 273.203/277.203			
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FACILITY NAME: <u>Harrisburg</u> Stea	m Generating	Facility	
FACILITY LOCATION: <u>City of Harri</u>	sburg/Swatara	Township Dauphi	in
is constructed, and prepared in accordance work of Application No. 100992 as app	ith the documents, st	tatements, designs, and plans submitted as p ment of Environmental Resources.	art
The construction activity is:		•	
MUNICIPAL WASTE LANDFILL	<u>c</u>	ONSTRUCTION/DEMOLITION WASTE LAND	FILL
 Ground water monitoring system. Subbase. Secondary liner. Leachate detection zone. Primary liner. Protective cover and the collection within the protective cover. Leachate treatment /conveyance. Sedimentation ponds/erosion and sedimentation control structures. Closure. Final Closure. Gas management system. Roadways. 	Consystem facilities.	 3. Leachate detection zone. 4. Liner. 5. Protective cover and the collection swithin the protective cover. 6. Placement of attenuating soil at nat attenuation facilities. 7. Leachate treatment/conveyance face 	ural
	PROCESSING FACILI	<u>TY</u>	•
<u> </u>		· · · · · · · · · · · · · · · · · · ·	
A description of the construction activity and appropriate as-built drawings, plans, photog	l phase or sequence o raphs, and related te	of construction involved is included, along was results.	ith
The construction activity was observed by my with the party seermit.	rself or a person unde	er my direct supervision in a manner consiste	ent
GORDON P. LAMBERT ENGINEER DE NO. 10230	Engineer's Signatur Name of Firm: Address:	Nassaux-Hemsley, Incorpor 56 North Second Street Chambersburg, PA 17201	cated
WSVLV BOOM	Telephone Number Date:		

November 28, 1990

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE, MANAGEMENT

	I.D. Number	
1		
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General References: 273.203/277.203			
S. Jeffrey Barnes, P.E. (Engineer's Name - Print or F	rpe)	, being a Registered F	Professional Engineer in
accordance with the Pennsylvania Profession knowledge, information and belief that the	e following construc	tion activity for:	•
FACILITY NAME: Residue Disposal Ar	ea B-2, Harrisbu	rg Incinerator/Steam G	enerating Facility
FACILITY LOCATION:City of Harrisb	urg/Swatara Town	ship	Dauphin
is constructed, and prepared in accordance of Application No. 100992 as a The construction activity is:		, statements, designs, and plantment of Environmental Re	
MUNICIPAL WASTE LANDFILL		CONSTRUCTION/DEMOLITIE	ON WASTE LANDFILL
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Description of Con 1. 2.	PROCESSING FAC		
A description of the construction activity an appropriate as-built drawings, plans, photo			ncluded, along with
The construction activity was observed by mith the approved permit.	nyself or a person un	der my direct supervision, in	a manner consistent
PROFESSIONAL S. JEFFREY BARNES	Engineer's Signati Name of Firm: Address: Telephone Number	CQA Services 263 West South Carlisle, Penns	sylvania 17013 O

Date Prepare	d
November	1990

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

I.D. Number		
l		

General References: 273.203/277.203	
Gordon Lambert, P.E. (Engineer's Name - Print or Type)	, being a Registered Professional Engineer in
accordance with the Pennsylvania Professional Engineer's Registration knowledge, information and belief that the following construction act	
FACILITY NAME: Harrisburg Steam Generating Fac	ility
FACILITY LOCATION: City of Harrisburg/Swatara To	wnship Dauphin (County)
is constructed, and prepared in accordance with the documents, staten of Application No. 100992 as approved by the Department	nents, designs, and plans submitted as part
The construction activity is:	•
MUNICIPAL WASTE LANDFILL CONS	TRUCTION/DEMOLITION WASTE LANDFILL
□ 2. Subbase. □ □ 3. Secondary liner. □ □ 4. Leachate detection zone. □ □ 5. Primary liner. □ □ 6. Protective cover and the Leachate Collection System within the protective cover. □ □ 7. Leachate treatment /conveyance facilities. □ 8. Sedimentation ponds/erosion and sedimentation control structures. □ □ 9. Closure. □ □ 10. Final Closure. □ □ 11. Gas management system. □ □ 12. Roadways. □	 Ground water monitoring system. Subbase. Leachate detection zone. Liner. Protective cover and the collection system within the protective cover. Placement of attenuating soil at natural attenuation facilities. Leachate treatment /conveyance facilities. Sedimentation ponds/erosion and sedimentation control structures. Closure. Final Closure. Gas management system. Roadways.
PROCESSING FACILITY	•
Description of Construction Activity: 1. 2.	
A description of the construction activity and phase or sequence of cor appropriate as-built drawings, plans, photographs, and related test res	
GORDON P. LAMBERT · Address: ENGINEESE AV No. 10230 Telephone Number: (Nassaux-Hemsley, Incorporated 56 North Second Street Chambersburg, PA 17201 717 263-4109 November 28, 1990

Nov. 28, 1990

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

I.D. Number	
100992	

General References: 273.203/277.203			
David A. Brinjac, P.E. (Engineer's Name - Print or Type)		, being a Registered Professional Engineer in	
•	nal Engineer's Regis following constructenerating Facil	tion ac	n Law do hereby certify that to the best of my tivity for:
FACILITY LOCATION:City of Harrisburg/Swatara Towns		wnshi	p Dauphin
is constructed, and prepared in accordance v of Application No. 100992 as ap			(County) ments, designs, and plans submitted as part t of Environmental Resources.
The construction activity is:			
MUNICIPAL WASTE LANDFILL		CONS	TRUCTION/DEMOLITION WASTE LANDFILL
□ 1. Ground water monitoring system. □ 2. Subbase. □ 3. Secondary liner. □ 4. Leachate detection zone. □ 5. Primary liner. □ 6. Protective cover and the collection system within the protective cover. □ 7. Leakname was harden for conveyance facilities. □ 8. Sedimentation ponds/erosion and sedimentation control structures. □ 9. Closure. □ 10. Final Closure. □ 11. Gas management system. □ 12. Roadways.			 Ground water monitoring system. Subbase. Leachate detection zone. Liner. Protective cover and the collection system within the protective cover. Placement of attenuating soil at natural attenuation facilities. Leachate treatment /conveyance facilities. Sedimentation ponds/erosion and sedimentation control structures. Closure. Final Closure. Gas management system. Roadways.
	PROCESSING FACE	LITY	
<u> </u>			
A description of the construction activity and appropriate as-built drawings, plans, photog			
The construction activity was observed by my with the approved permit.	yself or a person und	der my	direct supervision, in a manner consistent
REGISTERED Name of Firm: Address:		ure: <u>/</u> -	Brinjac, Kambic & Associates, Inc. 910 North Second Street Harrisburg, PA 17 02
DAVID ANTON ERINJAC	Telephone Numbe Date:	er: (717) 233-4502 November 28, 1990



NASSAUX-HEMSLEY, INCORPORATED-CONSULTANTS

NHI BUILDING - 56 NORTH SECOND STREET

CHAMBERSBURG, PENNSYLVANIA 17201

Corporate Officers:

WILLIAM T. HEMSLEY, P.E. GORDON LAMBERT, P.E. MAURICE L. GOSSERT

March 27, 1991

City of Harrisburg Department of Incineration and Steam Generation 1670 South 19th Street Harrisburg, Pennsylvania 17104-3298

Attention: John Lukens

DER WASTE MANAGEMENT

MAR 28 1991

HARRISBURG REGION

RE: City of Harrisburg

Residue Area B-2, QA\QC Our File No. 90ID03.01

Dear Mr. Lukens:

The purpose of this letter is to document our recent QA/QC efforts to prove the sand material to be used in the remaining lined areas of the B-2 basin. As you know the material proposed was processed last year at the Cecil Sand & Gravel Plant in Port Deposit, Maryland in conjunction with the other sand utilized in this project.

On Saturday, March 16, I visited the site to both abstract a sample from the stockpile and pick up two bags reportedly sampled from the same stockpile the previous day by Cecil employees. At that time two (2) piles of processed material were located approximately 500 feet from the main gate in a area that was obviously utilized for the storage of sand products and were essentially in the same general area being separated only by another pile of a concrete sand. They were estimated to contain 1,000 C.Y. and 2,000 C.Y. of material each. It was obvious that the surface of the larger pile had been recently opened and it was from this face that my sample was obtained.

On Sunday, March 17, the three (3) samples were delivered to the Carlisle office of Cumberland Geotechnical for gradation analysis. The results of these three (3) tests are attached. Based on favorable results indicated by these tests it was decided during a

City of Harrisburg
Department of Incineration
and Steam Generation
March 27, 1991
Page Two



March 19th phone conversation with Dave Brinjac that we would return to the original protocol and test samples from truck loads delivered directly to the site. Adams County was notified and two (2) truckloads were subsequently delivered to the site that afternoon and sampled. The results of this test were available the morning of March 21 and are also attached.

The following table generally summarizes the pertinent information contained in these recent tests:

Test			Perc	ent Passing	
No.	Date	Location	3/8"	#4	#200
	8/30/90	Criteria	100 max.	70.0 min	3.0 max.
1	3/15/91	Quarry (Cecil)	100	70.4	1.7
2	3/15/91	Quarry (Cecil)	100	70.4	1.7
3	3/16/91	Quarry (NHI)	100	74.1	1.7
4	3/19/91	Site (NHI)	100	69.5	1.9

Based on the previously approved criteria, these results and our previous knowledge and experience with the 24,000 tons of material produced by this quarry and supplied to this project, it was our opinion that the material identified in this particular source meets the previously established criteria for this project and accordingly advised Dave Brinjac on the morning of March 21. It is our intention to continue with our sampling at the site during placement of the material to insure that no serious deviations are taking place as subsequent material is delivered.

As an aside, it has been recognized from the very beginning that when the gravel parameters were selected for this site that they were at the lower limits of the quarry production capabilities and that some tolerance would have to be allowed. In addition degradation during transportation and handling was to be expected

City of Harrisburg
Department of Incineration
and Steam Generation
March 27, 1991
Page Three

that would further lower the gravel content and increase the fines of this material. We have been monitoring this by randomly taking in place samples and have not found what can be considered to be any serious deviations from the standard. In addition we have taken permeabilities of the material after it has been placed and found these rates to also be in excess of the requirements. All in all, given the history of the search for a suitable material to serve as a filter media for both the detention and collection zones of this site, the dialogue that has taken place between all parties involved and the time restraints that were provided to make decisions we feel that the material selected is adequate for its intended purposes.

Very truly yours,

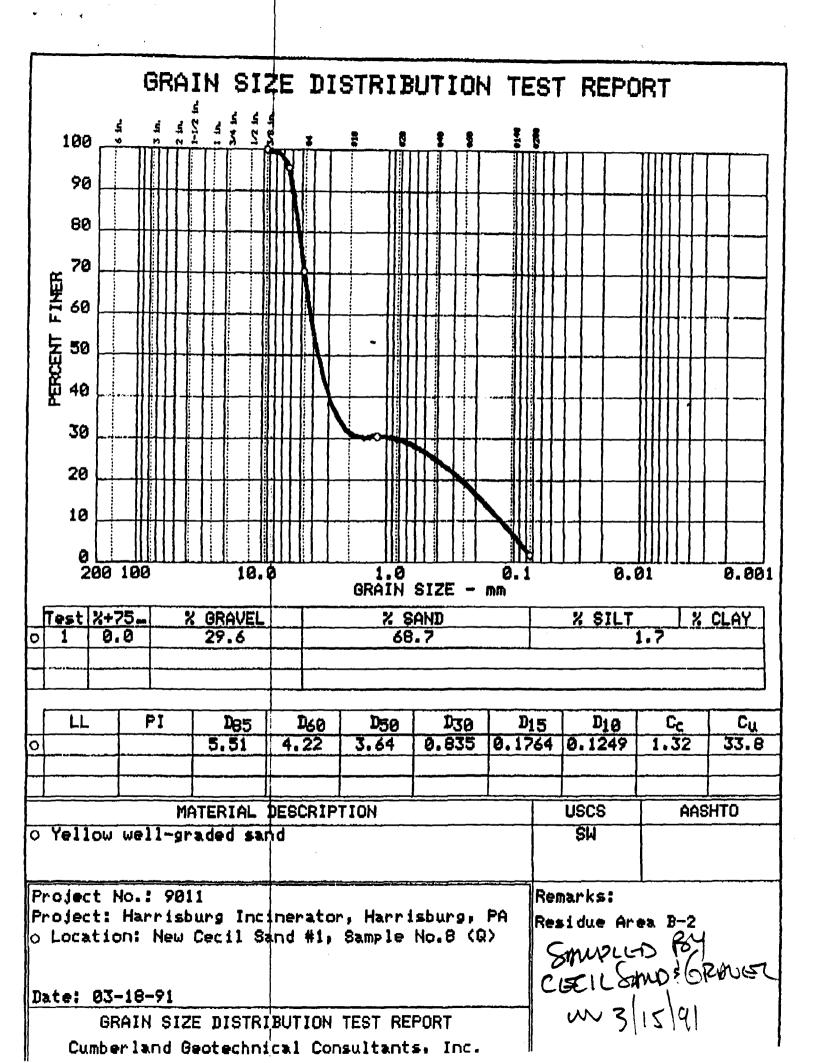
NASSAUX-HEMSLEY, INCORPORATED

Gordon Lambert, P.E. Vice President

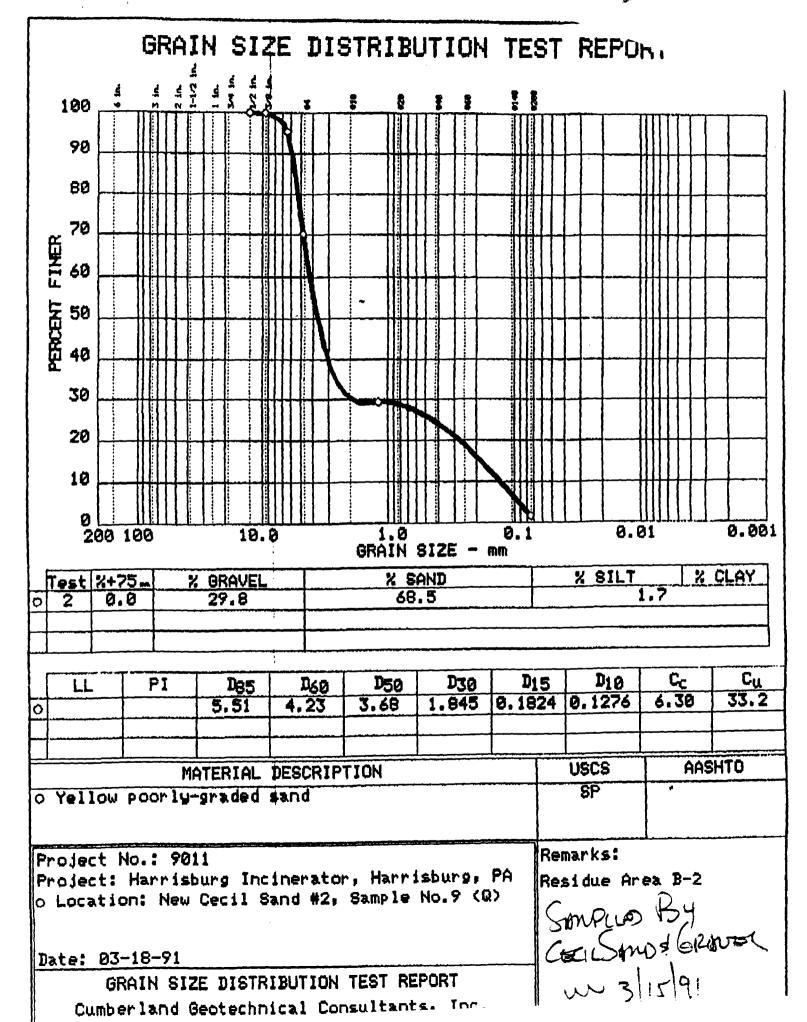
GL:dd

Enclosure

cc: Dave Brinjac Linda Houseal Curt Helman



```
GRAIN SIZE DISTRIBUTION TEST DATA
                                               Test No.: 1
             03-18-91
roject No.:
              9011
roject:
              Harrisbufg Incinerator, Harrisburg, PA
Sample Data
ocation of Sample: New Cecil Sand #1, Sample No.8 (Q)
ample Description: Yellow well-graded sand
SCS Class:
                            Liquid limit:
              SW
ASHTO Class:
                           Plasticity index:
                          Notes
omarks: Residue Area B-2
ig. No.:
                   Mechanical Analysis Data
              Initial
ry sample and tare= 6299.70
            ==
                 0.00
ry sample weight = 6299.70
are for cumulative weight retained= 0
           Cumul. Wt.
Sieve
           retained
                     finer
                     100.0
0.375 inches
             0.00
                      95.6
0.25 inches
            277.90
           1863.10
                      70.4
# 4
                      30.5
           4380.40
# 16
            6190.60
# 200
                    Fractional Components
~ 3 in. = 0.0 % GRAVEL + 29.6 % SAND = 68.7
FINES = 1.7
   5.51 D60= 4.217 D50= 3.643
35=
   0.8346 D15= 0.17640 D10= 0.12488
30≃
3 = 1.3228 Cu = 33.7676
```



```
GRAIN SIZE DISTRIBUTION TEST DATA Test No.: 2
Date:
               03-18-91
project No.:
               9011
Project:
              Harrisburg Incinerator, Harrisburg, PA
Sample Data
                       _ocation of Sample: New Cecil Sand #2, Sample No.9 (Q)
Sample Description: Yellow poorly-graded sand
JSCS Class:
              SP
                            Liquid limit:
AASHTO Class:
                            Plasticity index:
                         . Notes
Remarks: Residue Area B-2
Fig. No.:
                   Mechanical Analysis Data
               Initial
ory sample and tare= 3330.90
               0.00
lare
     *
ory sample weight = 3330.90
Tare for cumulative weight retained= 0
 Sieve
           Cumul. Wt. Percent
           retained
 0.5 inches 0.00
                     100.0
 0.375 inches
              0.50
                     100.0
 0.25 inches
            151,30
                      95.5
 # 4
             992.10
                      70.2
                       29.5
 # 16
             2347,90
 # 200
            3274.70
                    Fractional Components
```

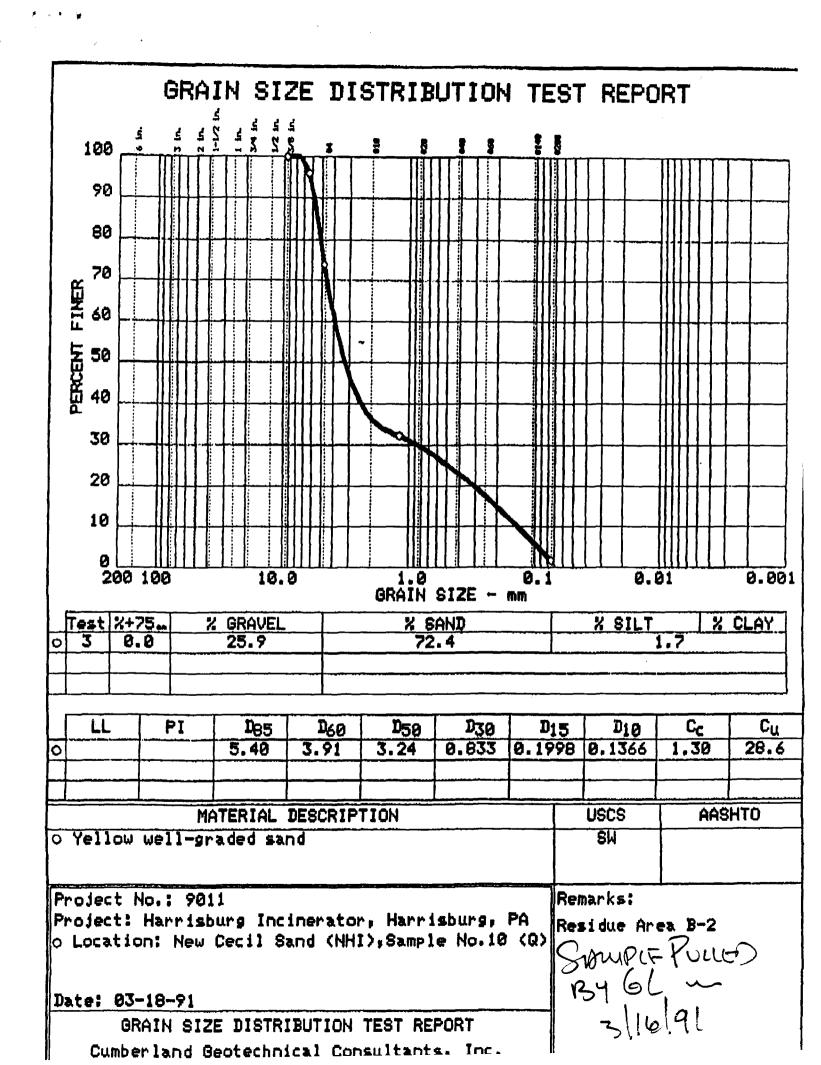
 $k + 3 i\pi$. = 0.0 % GRAVEL = 29.8 % SAND = 68.5

)85= 5.51 D60= 4.232 D50= 3.681

lo = 6.3023 Cu = 33.1513

030= 1.8450 D15= 0.18239 D10= 0.12764

FINES = 1.7



```
GRAIN SIZE DISTRIBUTION TEST DATA
ate:
             03-18-91
roject No.:
             9011
Project: Harrisburg Incinerator, Harrisburg, PA
Sample Data
ocation of Sample: New Cecil Sand (NHI), Sample No.10 (Q)
ample Description: Yellow well-graded sand
ISCS Class:
            SW
                          Liquid limit:
ASHTO Class:
                          Plasticity index:
                        Notes
emarks: Residue Area B-2
ig. No.:
                 Mechanical Analysis Data
             Initial
ry sample and tare= 3922.60
           22
              0.00
ry sample weight = 3922.60
are for cumulative weight retained= 0
Sieve
          Cumul. Wt. Percent
          rotained
                  finer
```

2.日前的民民政治社会社会社会社会社会政治政治的政治的政治的国际政治的政治的政治政治的政治政治的政治的政治的政治的政治、政治的国际政治、政治的国际政治、政治、国际政治、国际政治、国际政治、国际政治、国际

Fractional Components

100.0

96.0

32.3

74.1

+ 3 in. = 0.0 % GRAVEL = 25.9 % SAND = 72.4 FINES = 1.7

5= 5.40 D60= 3.913 D50= 3.240

0= 0.8327 D15= 0.19976 D10= 0.13662

0.00

156.20

1017.10

2655.30

3856.50

= 1.2972 Cu = 28.6418

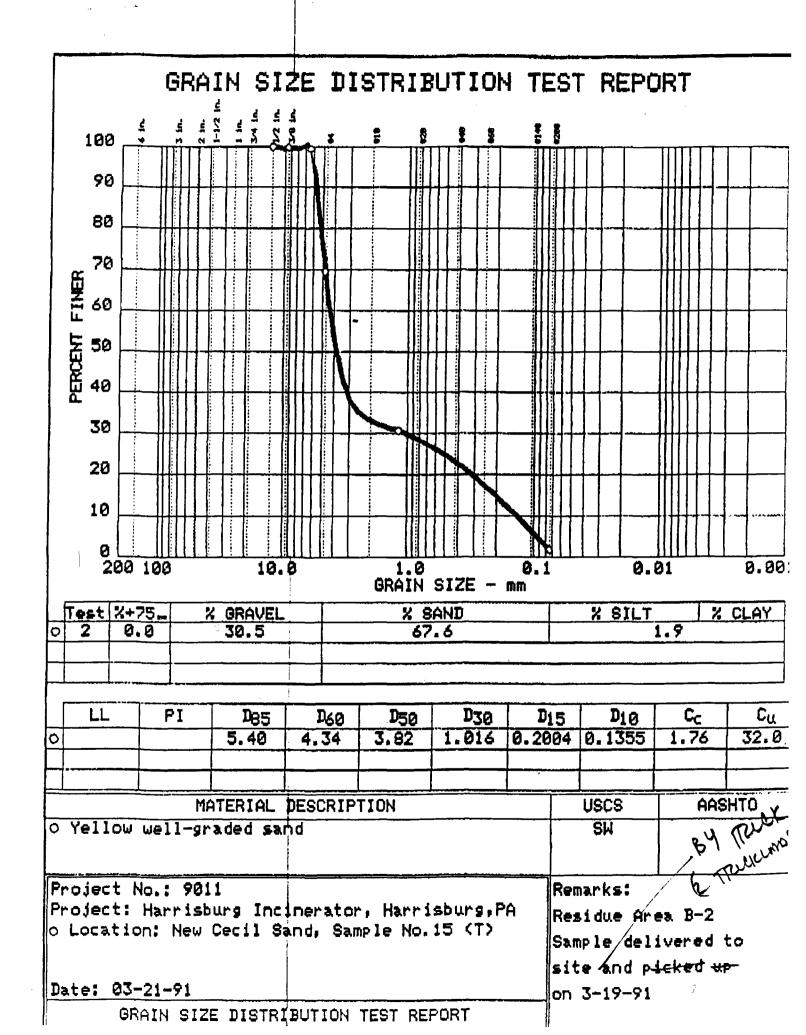
0.375 inches

0.25 inches

4

16

200



```
GRAIN SIZE DISTRIBUTION TEST DATA Test No.: 2
Date:
                03-21-91
Project No.:
                9011
Project:
                Harrisburg Incinerator, Harrisburg,PA
Sample Data
_ocation of Sample: New Cecil Sand, Sample No.15 (T)
Sample Description: Yellow well-graded sand
JSCS Class:
                               Liquid limit:
AASHTO Class:
                               Plasticity index:
                             Notes
      Residue Area B-2 Sample delivered to
       site and picked up | on 3-19-91
. No.:
                      Mechanical Analysis Data
                Initial
ry sample and tare = 5135.00
              = 0.00
are
ry sample weight = 5135.00
are for cumulative weight retained= 0
 Sieve
            Cumul. Wt.
                       Percent
             retained
                       finer
               0.00
 0.5 inches
                        100.0
 0.000 inches
               4.60
                        99.9
 0.23 Inches
                         99.5
              25.09
                         69.5
 # 4
              1563.80
             3555.60
                         30.8
 # 16
 # 200
             5036.50
                         1.9
                       Fractional Components
 + 3 in. = 0.0 % GRAVEL + 30.5 % SAND = 67.6
 FINES = 1.9
   5.40 D60= 4.335 D50= 3.819
35=
30= 1.0162 D15≈ 0.20045 D10≈ 0.13552
```

1.7579 Cu = 31.9890

BUREAU OF WASTE MANAGEMENT Harrisburg Regional Office One Ararat Boulevard Harrisburg, Pennsylvania 17110 (717) 657-4588 June 19, 1990

Hr. John Lukens, Director Harrisburg Steam Generating Facility 1670 South 19th Street Harrisburg, PA 17104

Re: Permit Modification
Permit No. 100992
Residual Disposal Area B-2
Condition Nos. 9 and 10
City of Harrisburg/Swatara Township
Dauphin County

Dear Mr. Lukens:

Your consultant, Brinjac, Kambic & Associates, Inc. has submitted data to the Department concerning Condition Nos. 9 and 10 of the above-referenced permit.

Please be informed that the Department will not approve this work as fulfillment of Condition Nos. 9 and 10. The complete requirement of Condition No. 10
as stated in the permit, stands as written. The first analyses as performed for
Condition No. 9 are not acceptable. The analyses performed for Condition No. 10
are not acceptable either.

We believe that the presence of chloroform in waters from the piezometers indicates that aquifer waters were not sampled, but rather flushing water or a mixture of aquifer water and flushing water was obtained for analysis.

Please perform the requirements of Condition No. 10 again. Within fifteen (15) days of receipt of this letter, please inform the Department of your anticipated schedule for completion of said requirements.

As regards Condition No. 9, the City of Harrisburg can only continue with the schedule of sampling and analysis as approved, but only after proper purging is performed in order to assure that aquifer water is being sampled. Hr. John Lukens, Director June 19, 1990 Page 2

Should you wish to discuss these matters or have questions regarding same, please contact me or Mr. John Conrad at the above number.

Sincerely,

Robert G. Benvin Pacilities Manager Harrisburg Regional Office

RGB:jvl

cc: Mr. Conrad

Harrisburg + Incmeration

Job Construction

Job

May 24, 1990

HARRISBURG REGION

PROJECT DATA:

Contract Length:

Start Date:

Completion Date:

Days Complete:

Days Remaining:

Percent Time Consumed:

Estimated Percent Complete

Adams County Asphalt:

D & S Contractors:

Next Scheduled Job Conference:

150 days

April 25, 1990

September 21, 1990

121

19%

13%

May 31, 1990 at 9:00 A.M. at

the job site trailer

THOSE IN ATTENDANCE:

Mark E. Bukowski

Daniel Lispi

John Lukens

John Reinard Gordon Lambert

Curt Helman

Jeff Finger

Robert Galardini

Michael Shenk

Linda Houseal

Adbul Mechart

Brinjac, Kambic & Associates, Inc.

City of Harrisburg

City of Harrisburg

City of Harrisburg

Nassaux-Hemsley, Inc.

Nassaux-Hemsley, INc.

Adams County Asphalt

Adams County Asphalt

Adams County Asphalt

Department of Environmental Resources

Department of Environmental Resources

MEETING MINUTES:

- Mr. Bukowski opened the meeting by asking if there were any additions, deletions and/or corrections to the Job Conference No. 4 meeting minutes held on May 17, 1990.
 - Mr. Galardini stated that he had not received his copy of the minutes. Mr. Finger then reviewed the minutes and took no exception. No other exception was taken, so the minutes of that meeting stand as prepared.
- 2. Mr. Finger reviewed Adams County Asphalt's progress since the last meeting and plans for the next week as follows:
 - a. All unsuitable material has been excavated and removed to the storage area.
 - b. Approximately 2000 cy of subbase material has been stockpiled near the temporary pad.
 - c. Embankment construction continues.
 - d. Work on the sedimentation pond was begun and should be complete by May 31, 1990.
 - e. Leachate pipe should arrive on May 25, 1990 or May 28, 1990 and installation will begin immediately outside of the landfill area.
 - f. Swales 1A and 1B to Spring Creek will be started prior to May 31, 1990.
- 3. Mr. Bukowski stated the following regarding Adams County Asphalt's work:
 - a. The Engineer requires a letter from Adams County Asphalt that certifies that they Contractor has reviewed and approved all submittals made to date. This is required since all submittals received to date have not had the contract required contractor

approval stamp on them. No other submittals will be processed without this letter and all future submittals made without the contractor's approval stamp will be returned "Not Reviewed".

- b. No further evaluation of the change order for the embankment foundation work along the south side will be done until the following items have been submitted:
 - 1. Catalog cut on the Geotechnical Fabric.
 - 2. Equipment cost breakdown.
 - 3. Layout sketch of survey points used to calculate quantities.

Mr. Galardini stated that all this information had been sent to the Engineer two days ago. Mr. Bukowski stated that he had not received it, but would check in his office and advise Mr. Galardini if it had indeed been received.

- c. The Contractor needs to prepare a plan of when and how the two piezometers will be sealed. This should be forwarded to the Engineer so that Skelly and Loy can review the plan and the work.
- d. The Schedule of Values and Master Submittal List still have not been submitted.
- e. Mr. David Brinjac visited the site on May 23, 1990 and discussed the top of berm dimension and slope layouts with Mr. Finger. All outstanding questions brought up by Adams County Asphalt's surveyor were resolved to Mr. Finger's satisfaction.
- f. The pump station work is scheduled to begin next week. The Contractor should look at the submittal that was returned today prior to beginning this work for this pump station since many discrepancies were found.
- g. The schedule submitted was returned to the Contractor. The comments were amended to add the requirement for a schedule for the work to be performed under Alternate 5.

- 4. A lengthy discussion was held on the acceptability of the leachate sand as follows:
 - a. Mr. Lambert stated that the two gradation tests performed to date had 1.6% and 1.2% material passing the 200 sieve. Permeability tests were acceptable. Some material greater than 3/8 inch was also encountered.
 - b. Ms. Houseal asked if the supplier had a cleaner sand or a clean pea gravel passing the 3/8 inch sieve?
 - c. Mr. Bukowski stated that it was the Contractor's responsibility to contact the supplier and advise him the sand did not comply with the specifications. The supplier should take measures to assure that the sand meets the specifications.
 - d. Mr. Shenk stated that the sand was specified in the contract and that the sand was being rescreened to remove the material greater than 3/8 inch.
 - e. Mr. Lambert stated that the source was specified and that the material still had to meet the specifications.
 - f. Ms. Houseal stated that the specifications limit of 1% passing the 200 sieve was based on one test of the material source. DER regulations require a "clean" material. However, DER has been using the 1% limit on fines across the board in this region.
 - g. Mr. Bukowski stated that the 1% limit on fines in the leachate sand is a very difficult specification to meet. Even processed sand for concrete production has an allowable fines (passing 200 sieve) content of 3%.
 - h. Mr. Lambert asked that the method used to establish the 1% limit on fines should be reviewed by DER.

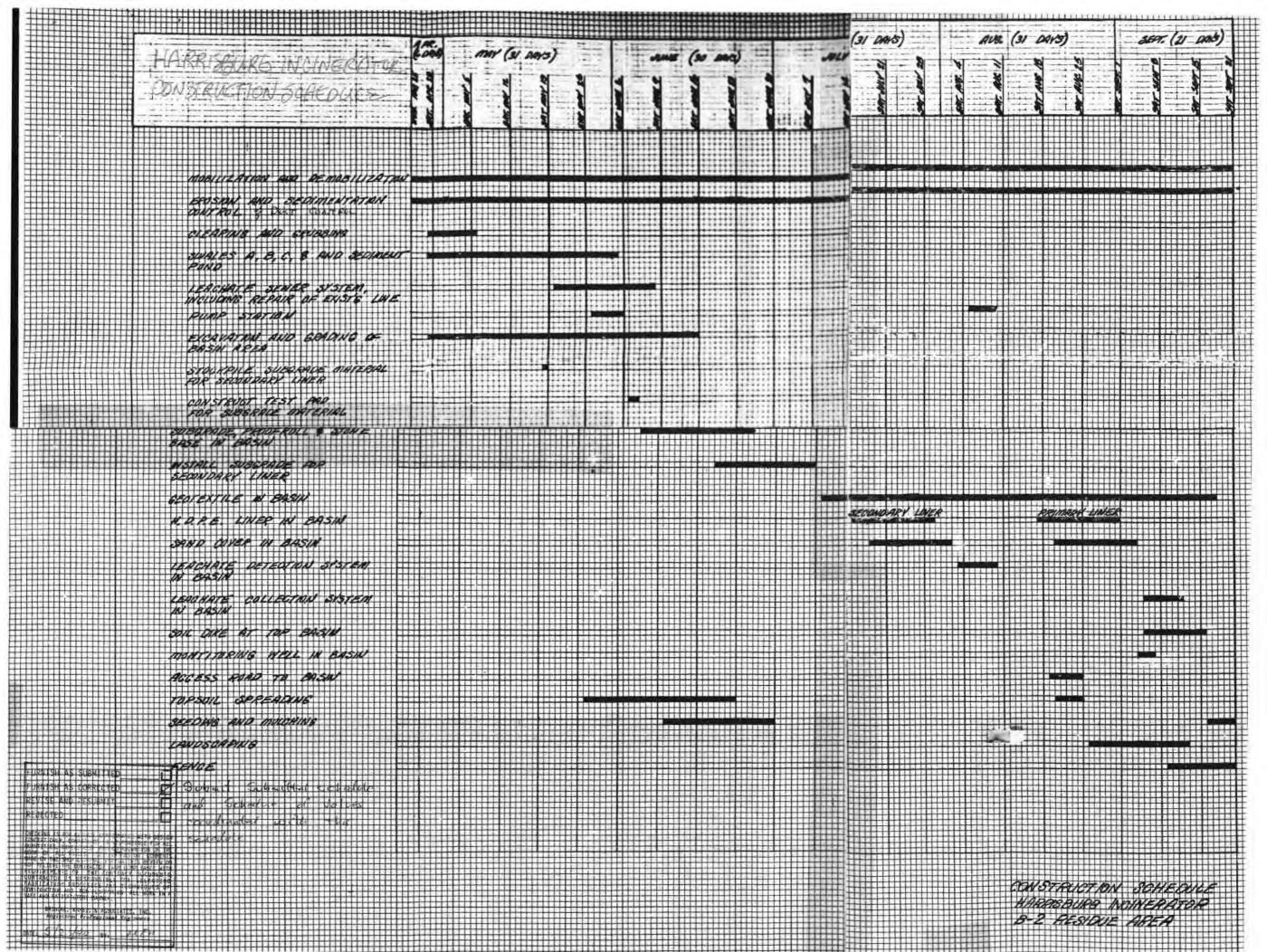
- i. Ms. Houseal stated that DER would look at the possibility of a revised upper limit on fines of 2%. However, a clean gravel less than 3/8 inch in size would also be acceptable as an alternate.
- j. Mr. Lambert stated that Nassaux-Hemsley would obtain three more samples of the rescreened sand and should have gradation results on these samples by the next meeting on May 31, 1990.
- k. Mr. Lispi stated he wanted it understood that either the material met the specification or a new material had to be found by the Contractor.
- Mr. Lambert stated that the sand also had to be approved by the liner manufacturer. A sample of the sand was provided to the Contractor for transmittal to the liner manufacturer.
- 5. Mr. Bukowski asked Ms. Houseal if DER was going to require that subbase material be placed on the interior slopes of the embankment. Ms. Houseal stated that this was just a suggestion since DER was going to review these slopes very carefully for oversize material. Mr. Galardini stated that the Contractor knew the specifications that they must meet and would meet it.
- 6. Mr. Helman stated that density test results continue to be acceptable.
- 7. Mr. Lambert stated that the unsuitable material stockpile was surveyed on May 22, 1990. The quantity of material will be known by May 29, 1990.
- 8. Mr. Lambert stated that a pre-construction meeting should be set up by the Contractor with the liner manufacturer in order to begin the QA/QC procedure for this work.

Any corrections, additions and/or deletions to these minutes should be received by Mark Bukowski on or before May 31, 1990 or the minutes will stand as prepared.

Minutes prepared by Mark Bukowski.

DISTRIBUTION:

David A. Brinjac
Mark E. Bukowski
Daniel R. Lispi
James M. Close
John Lukens
Gordon Lambert
Norman Dudanowicz
Linda Houseal
Bob Galardini
File



BRINJAC, KAMBIC & ASSOCIATES, INC.

LETTER OF TRANSMITTAL

CONSULTING ENGINEERS 910 N. SECOND STREET, P.O. BOX 2857, HARRISBURG, PA 17105-2857 (717) 233-4502

				DATE 5/30/90	JOB NO.	
T O	Departmen	t of Enviro	nmental Resources	Linda House		
то		,		B-2 Residue	e Area, City of H	larrisburg
		Waste Mana	DER			
	One Arara	t Boulevard	WASTE MANAGEN	MENT		
	Harrisbur	g, PA 17110	MAY 3 0 1990)		
			HARRISBURG REG	GION	06010 01	
			• • • • • • • • • • • • • • • • • • • •	B & K PROJECT	NO: 86019-01	
WE A	RE SENDING '	YOUXX Attache	ed 🛘 Under separate via 📖		the followin	g items:
□ Sh	op drawings		Prints	□ Plans	☐ Samples	☐ Specifications
□ Co	py of letter		Change order	o		
СОР	IES DATE	NO.		DESCR	IPTION	
1	5/22/9	0	Gundle - Proposed I	Panel Layout a	and Details for E	3-2 Residue Area
				~ · 000l	Mayout	
			only one comme	t: no horizon	ntal seams to	no close to
			for the stope.	SW corner	is area wh	ich old be
<u> </u>			laid ont a.	little De	tler.	
						
THES	E ARE TRANS	MITTED as che	cked below:			
□ Fo	r approval		Approved as submitted	□ Resubmit _	copies for appro	oval
□ Fo	r your use		Approved as noted	□ Submit	copies for distribu	tion
□ As	requested		Returned for corrections	□ Return	corrected prints	
XXX Fo	r review and co	omment				
<u> </u>						
□ FC	R BIDS DUE _		19	PRINTS RET	URNED AFTER LOAN	TO US
REMA	ARKS	· · · · · · · · · · · · · · · · · · ·	<u> </u>	· · · · · · · · · · · · · · · · · · ·		
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COPI	ES: PROJEC	T FILE (1)				7>
		·			1111	15 -

David A. Brinjac, P. B.

file: Non-hazurdous

Aby. Incinerata Pit B2

SBURG
RESIDUE AREA

Dauphin SED

CITY OF HARRISBURG
CONSTRUCTION OF B-2 RESIDUE AREA
BKA NO. 86019-01

Job Conference No. 4

WASTE MANAGEMENT

May 17, 1990

MAY 2 1 1990

HARRISBURG REGION

PROJECT DATA:

Contract Length:

State Date:

Completion Date:

Days Complete:

Days Remaining: Percent Time Consumed:

Estimated Percent Complete

Adams County Asphalt:

D & S Contractors:

Next Scheduled Job Conference:

150 days

April 25, 1990

September 21, 1990

22

128

15%

10%

May 24, 1990 at 9:00 A.M. at the job site

trailer

THOSE IN ATTENDANCE:

David A. Brinjac
Mark E. Bukowski
Daniel Lispi
John Lukens
Thomas J. Mealy
Bill Baker
Gordon Lambert
Curt Helman
Jeff Finger

Norman Dudanowicz

Brinjac, Kambic & Associates, Inc. Brinjac, Kambic & Associates, Inc.

City of Harrisburg
City of Harrisburg
City of Harrisburg
City of Harrisburg
Nassaux-Hemsley, Inc.
Nassaux-Hemsley, INc.
Adams County Asphalt
D & S Contractors

MEETING MINUTES:

 Mr. Bukowski opened the meeting by asking if there were any additions, deletions and/or corrections to the Job Conference No. 3 meeting minutes held on May 24,? 1990.

Mr. Lukens stated that item 5f from the previous minutes needed to be clarified. The Owner requires access to the west side of the two garages. If the Contractor is going to use the entire parking area, then provisions must be made to enter these garages on the west side by using another route (such as along the north side of the Traffic Garage). Mr. Mealy asked whether the contract required the Owner to make the parking lot available to the Contractor at all times. Mr. Brinjac stated that the contract did allow the Contractor to use the parking lot at all times, however, the contract also states that the Contractor's operations should not impact the operations of the Owner's existing facilities. Mr. Mealy stated that the Owner is on record as being impacted by the Contractor's work. Mr. Finger stated that he would clean up the area east of the garages right after the meeting,

but could not really do much west of the buildings until all the unsuitable material was hauled to the storage site. At that time, the Contractor would clean up this area to provide access to the west side at all times. Mr. Finger also stated that when he began to haul the excess fill material at a later date, this work would impact access to the west side of the garages. Mr. Bukowski stressed that the Contractor must maintain these access routes as discussed at all times during the hauling operation.

There were no other comments on the previous minutes, so the minutes of that meeting stand as corrected.

- 2. Mr. Finger reviewed Adams County Asphalt's progress since the last meeting and plans for the next week as follows:
 - a. Only 2 days since the last meeting have been available for embankment construction due to inclement weather and wet site conditions. Dawn to dusk work was performed on those days. All available days in the future will be worked dawn to dusk.
 - b. Continue to haul unsuitable material. The southwest corner of the unsuitable area is much deeper than thought. This will require extra time to remove. Hopefully, all unsuitable material will be removed by the next meeting (5/25/90).
 - c. The riser pipe for the sedimentation basin has not arrived despite continued assurances from the manufacturer. However, as soon as this pipe is on site, the sedimentation basin will be completed.
 - d. During the first 17 days of May, 8 days have been lost due to wet weather or wet site conditions.
 - e. After all the unsuitable material is hauled out, the 2,000 cy of the subbase shale will be stockpiled. Since there will not be enough room in the current storage area, the Contractor will require a site large enough to stockpile this material. In addition, another site will be needed later to stockpile excess cover material. The size of this area will not be known until all unsuitable material is hauled out. There exists a possibility that, with the increased quantity of unsuitable material, there will not be much excess cover material. This will only be known after the unsuitable storage piles are cross-sectioned after completion.
- 3. Mr. Lukens cautioned the Contractor not to cover any of the debris by the storage area silt fence. This has not been moved by the Owner due to bad weather.
- 4. Mr. Lispi asked if Nassaux-Hemsley had finalized the protocol for the unsuitable material sampling. Mr. Lambert stated that he preferred to wait until the piles were finalized, trimmed and surveyed so that an exact quantity was known. Currently, it was estimated that 18,000 cy was stockpiled and 4,000 to 5,000 cy still exist to be hauled to the stockpile.

excess sover material (if any exist)

- 5. Mr. Brinjac stated that Ms. Linda Houseal from DER had contacted him with the following comments:
 - a. The silt fence along the property line with NAPA Auto Parts had to be cleaned so that it was in a "working condition", i.e., excess silt should be removed from the upstream side of the fence. Mr. Finger stated that he would do this.
 - b. When will the rip-rap be placed in swale B-1? Mr. Finger stated that he needed to install the leachate pipe first. However, due to the Engineer's comment on the submittal for this pipe, the Contractor had canceled the order. Mr. Brinjac stated that none of the comments made affect the purchase of the pipe The submittal was marked "Furnish as Corrected". in swale B-1. dimensioned installation drawings are required for the pipe in the landfill area. These drawings should show all fittings to be used in the landfill area. Mr. Finger stated that this submittal was made on May 3, 1990 and was not returned until May 16, 1990. The Contractor expects a better turnaround time than this. Mr. Brinjac stated that verbal approval was given on this material immediately following shop drawing receipt and the review time was within the contract time limits and the comments do not impact the contractor in any way. Mr. Finger also asked why a certification for watertightness was required for a manhole cover that was specified. Mr. Brinjac stated that this was a requirement of the contract documents and must be met. Mr. Finger asked if the Engineer had any information on the Fosroc material since the company that makes it appears to be out of business. Mr. Brinjac stated that he had a catalog on this material and would pass this information on to the Contractor. Mr. Finger stated that all these submittal questions and the notice to proceed must be discussed with Mr. Galardini. Mr. Finger also stated that he had talked to Ms. Houseal regarding swale B-1 and stated that annual rye grass seed would be placed in this swale to provide some vegetation cover prior to installing the rip-rap.
- 6. Mr. Lambert stated that the unsuitable pile should be properly shaped up upon completion. Mr. Finger stated that he would shape it up as best he could given the muddy characteristic of the material.
- 7. Mr. Bukowski stated the following with regards to Adams County Asphalt's work:
 - a. No resubmittal has been made on the schedule returned to the Contractor on May 8, 1990.
 - b. No master submittal list has been submitted as requested in the Pre-Construction Meeting and the last job conference.
 - c. No quantities and costs have been provided for the extra work along Gibson Street. No data has been submitted on the geotextile fabric used. This was promised on May 10, 1990.
 - d. The Engineer met with the Owner regarding existing drainage problems and it was decided that the Owner would take care of these problems until the excavation is complete. Mr. Mealy asked what had happened regarding the possible leaking pipe at the northwest corner of the Traffic Building. Mr.

Helman stated that the area was pumped out on May 18, 1990, but no pipe could be located. Mr. Baker stated that, to the City's knowledge, there was no pipe there.

- e. Trees and brush still have not been removed from the Owner's property. Mr. Lukens stated that this material would <u>not</u> be burned in the incinerator. Mr. Finger stated that this would be removed from the site.
- 8. Mr. Finger stated that answers to items 7a, 7b, and 7c above would have to be discussed with Mr. Galardini. Mr. Brinjac stated that a meeting would be set-up today to resolve these issues.
- 9. Mr. Bukowski asked Mr. Lambert what the status was regarding the leachate sand testing. Mr. Lambert stated that the first test did not pass (1.6% passing the 200 sieve). Two more samples were taken and will be tested soon. Mr. Brinjac is discussing this issue with DER.
- 10. Mr. Bukowski asked if the Contractor had suffered any impact to his work progress due to actions of the Owner or Engineer. Mr. Finger stated that from the Owner there had been no impact. However, the submittal comments discussed earlier have impacted the Contractor. Mr. Brinjac disagreed that any impact was caused since none of the review comments made affected the purchase of the pipe. This will be discussed with Mr. Galardini.
- 11. Messrs. Lambert and Helman reviewed Nassaux-Hemsley's work as follows:
 - a. The Contractor's benchmarks have been tied into Nassaux-Hemsley's benchmarks and are consistent.
 - b. The surveyor continues to work on the grid system.
 - Density test results have been satisfactory. Some high moisture areas were encountered, however, the Contractor took adequate measures to correct these problems and compact the material.
- 12. Mr. Finger requested to know the width of the top of the embankments. Mr. Brinjac stated that this width should be scaled off drawing 5A. Mr. Brinjac scaled this drawing and stated that this dimension was approximately 22 feet along the south and west sides and wider in the cut areas on the north and east sides.
- 13. Mr. Bukowski requested that Nassaux-Hemsley attach a copy of all lab test reports to the construction logs. The results of the initial proctor tests have not been made available to the Engineer. Mr. Lambert stated that this would be done.
- 14. Mr. Dudanowicz stated/asked the following:
 - a. When will his executed contract be returned? Messrs. Brinjac and Lispi stated that it had been signed and should be returned to him by early next week.
 - b. D & S Contractors will start work as soon as the pump station is staked out by the General Contractor.

15. Mr. Baker asked who his contact point would be if he continued to have problems with access to the garages. Mr. Brinjac stated that the site QA representative, Mr. Helman, should be contacted. Mr. Bukowski stated that once notified, Mr. Helman should notify the Contractor of a noncompliance situation. The Contractor must act to rectify any noncompliance. Mr. Lukens stated that if these "noncompliances" regarding the Owner's access continue, he would take appropriate action as outlined in the contract documents. The Contractor must comply with the contract documents. Mr. Bukowski stated that if a noncompliance issue was not resolved by the Contractor, Mr. Helman should so notify the Owner and Engineer so that appropriate action could be taken.

Any corrections, additions and/or deletions to these minutes should be received by Mark Bukowski on or before May 24, 1990 or the minutes will stand as prepared.

Minutes prepared by Mark Bukowski

DISTRIBUTION:

David A. Brinjac
Mark E. Bukowski
Daniel R. Lispi
James M. Close
John Lukens
Gordon Lambert
Norman Dudanowicz
Bob Galardini
File

File Dauphin Co. NONHAZ.

Harrisburg Incinerator

Harrisburg Incinerator

Harrisburg Incinerator

Alean Gant Interfact

BRINJAC, KAMBIC & ASSOCIATES

CONSULTING ENGINEERS

8-2

May 16, 1990

Mr. Michael Steiner
Regional Solid Waste Manager
Harrisburg Regional Office
Bureau of Waste Management
Department of Environmental Resources
Commonwealth of Pennsylvania
One Ararat Boulevard
Harrisburg, PA 17110

Re: Permit Modification
Permit No. 100992
Residue Disposal Area B-2
City of Harrisburg & Swatara Township
Dauphin County
BKA No. 86019-01

DER
WASTE MANAGEMENT
MAY 1 7 1990

HARRISBURG REGION

Dear Mr. Steiner:

This letter serves to transmit the initial results of the piezometer samplings and analyses performed in order to satisfy Condition 9 of the above referenced Permit Modification. This work was performed in accordance with the procedure as detailed in correspondence from the undersigned to you dated February 28, 1990. Piezometers 5W, 7W, 8W, 9W and 10W were sampled on Tuesday, March 13, 1990. The piezometers were flushed with City water prior to sampling.

Attached hereto, please find one (1) copy of the Groundwater Assessment forms summarzing the laboratory analyses results for chloride, sodium, sulfate, total dissolved solids, dissolved aluminum, dissolved iron, total alkalinity, and pH for piezometers 5W, 7W, 8W, 9W and 10W. The sampling and analyses for piezometers 7W, 8W, 9W and 10W will continue on a quarterly basis and will be considered complete with the collection of four quarters of samples after

Mr. Michael Steiner May 16, 1990 Page Two

completion of capping of Residue Area A. Sampling and analysis of piezometer 5W will be considered complete with the collection of four quarters of samples after completion of capping of Residue Area B-1.

Should you have any questions regarding this, please feel free to contact me at your convenience.

Sincerely,

BRINJAC, KAMBIC & ASSOCIATES, INC.

David A. Brinjac, P.E.

DAB:glk Enclosure

c: John A. Lukens
Daniel R. Lispi
Howard Wein, Esquire
John W. Conrad
File

5/5/90

COMMONWEALTH OF PENNSYLVANNIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

HARRISBURG STEAM GENERATING FACILITY GROUNDWATER ASSESSMENT

PERMIT MODIFICATION PERMIT NO. 100992

Sample Identification: 4W NOT APPLICABLE TO PERMIT CONDITION 9

Companies (mail)		Dates Sampled (yy/mm/dd)				
Parameters (mg/L)		89/5/1	89/5/23	89/6/12	90/3/13	
Groundwater Elevation (Ft/MSL)		349.9	353.1	353.1	353.0	
Aluminum, Dissolved		6.6	(0.1	⟨0.1		
Alkalinity, Total (as CaCO3)			62			
Chloride		3.5	8	(0.5		
Iron, Dissolved		11	<0.01	<0.01		
Potassium, Dissolved		5.9	18	4.7		
Sodium , Dissolved		12	23	11		
Sulfate		43	25	58		
Total Dissolved Solids		360	138	464		
all (straded weite)	Field	7.6	8.5	7.85	8.0	
pH (standard units)	Laboratory		10.18			
Specific Conductance (ushos/cm)	Field	363	387	425	625	
	Laboratory		362			

Sample Identification: 5W

Properties (and)		Dates Sampled (yy/mm/dd)				
Parameters (mg/L)		89/6/13	90/3/13			
Groundwater Elevation (Ft/MSL)		306.6	304.9			
luminum, Dissolved		<0.1	⟨0.1			
Alkalinity, Total (as CaCO3)			283			
Chloride		23	202			
Iron, Dissolved		0.10	<0.01			
Potassium, Dissolved		12				
Sodium, Dissolved		31	89			
Sulfate	_	25	84.6			
Total Dissolved Solids		180	858			
pH (standard units)	Field	9.75	7.1			
hu (scandard duries)	Laboratory		7.23			
Specific Conductance (umhos/cm)	Field	600	460			
specific consuctance (umnos/CM)	Laboratory					

5/5/90

COMMONWEALTH OF PENNSYLVANNIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

HARRISBURG STEAM GENERATING FACILITY GROUNDWATER ASSESSMENT

PERMIT MODIFICATION
PERMIT NO. 100992

RESIDUAL DISPOSAL AREA B-2

Sample Identification: 6W NOT APPLICABLE TO PERMIT CONDITION 9

Paraghara (agl)			Dates Samp	led (yy/mm/dd)	
Parameters (mg/L)		89/5/2	89/5/22	89/6/12	90/3/13
Sroundwater Elevation (Ft/MSL)		364.8	368.6	364.8	365.3
Aluminum, Dissolved		(0.1	<0.1	<0.1	
Alkalinity, Total (as CaCO3)			197		
Chloride		163	153.0	159.4	
Iron, Dissolved		1.4	(0.01	<0.01	
Potassium, Dissolved		3'8	5.2	2.4	
Sodium , Dissolved		55	65	59	
Sulfate		63	74	69	
Total Dissolved Solids		922	772	724	
all (standard units)	Field	7.16	7.4	7.2	7.6
pH (standard units)	Laboratory		7.41		
Specific Conductance (umhos/cm)	Field	602	664	610	1250
	Laboratory		943		

Sample Identification: 6P NOT APPLICABLE TO PERMIT CONDITION 9

Parameters (mg/L)			Dates Sampl	ed (yy/mm/dd)	
		89/5/2	89/5/23	89/6/12	90/3/13
Groundwater Elevation (Ft/MSL)		354.6	356.1	355.4	355.1
Aluminum, Dissolved		0.7	<0.1	0.1	
Alkalinity, Total (as CaCO3)			424		
Chloride		22	3.5	6.5	
Iron, Dissolved		2.3	(0.01	(0.01	
Potassium, Dissolved		15	7.8	12	
Sodium, Dissolved		42	55	51	
Sulfate		9	18	19	
Total Dissolved Solids		1686	742	1134	
Field		11.86	8.7	9.9	11.1
pH (standard units)	Laboratory		11.15		
Caraidia Candushanas (unhas !)	Field	1960	643	935	2850
Specific Conductance (unhos/cm)	Laboratory		1955		

5/5/90

COMMONWEALTH OF PENNSYLVANNIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

HARRISBURG STEAM GENERATING FACILITY GROUNDWATER ASSESSMENT

PERMIT MODIFICATION
PERMIT NO. 100992
RESIDUAL DISPOSAL AREA B-2

Sample Identification: 7W

Parameters (mg/L)			Dates Samp	led (yy/mm/dd)	
		89/5/2	89/5/22	89/6/13	90/3/13
Groundwater Elevation (Ft/MSL)		300.65	306.35	300.85	303.2
Aluminum, Dissolved		(0.1	(0.1	(0.1	(0.1
Alkalinity, Total (as CaCO3)			193		180
Chloride		230	64.5	60.5	46
Iron, Dissolved		(0.01	(0.01	<0.01	(0.01
Potassium, Dissolved		2.3	4.9	2.4	
Sodium , Dissolved		58	65	70	52
Sulfate		95	70	100	72.6
Total Dissolved Solids		1042	512	514	392
all (abaded waite)	Field	8.88	7.30	9.0	7.55
pH (standard units) Laborator			7.68		7.50
Considia Conductions (wahra/an)	Field	510	392	540	490
Specific Conductance (unhos/cm)	Laboratory		782		

Sample Identification: BW

Parameters (mg/L)		Dates Sampled (yy/mm/dd)				
		89/5/1	89/5/31	89/6/13	90/3/13	
Groundwater Elevation (Ft/MSL)		302.2	304.0	302.4	303.8	
Aluminum, Dissolved		19	<0.1	(0.1	(0.1	
Alkalinity, Total (as CaCO3)		Ţ			302	
Chloride		6	5.5	6.0	230	
Iron, Dissolved		91	12	(0.01	0.57	
Potassium, Dissolved		4.9	6.1	0.91		
Sodiu∎, Diŝsolved		78	170	10	250	
Sulfate		105	240	31	376	
Total Dissolved Solids		690	936	380	1170	
all (attacked units)	Field	7.0	6.9	6.85	7.2	
pH (standard units)	Laboratory				7.11	
Considir Conductors (unbod)1	Field	619	702	710	495	
Specific Conductance (umhos/cm)	Laboratory					

5/5/90

COMMONWEALTH OF PENNSYLVANNIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

HARRISBURG STEAM GENERATING FACILITY GROUNDWATER ASSESSMENT

PERMIT MODIFICATION
PERMIT NO. 100992
RESIDUAL DISPOSAL AREA B-2

Sample Identification: 9%

Proceedings (as (1))			Dates Samp	led (yy/mm/dd)	
Parameters (mg/L)		89/5/1	89/5/31	89/6/13	90/3/13
Groundwater Elevation (Ft/MSL)		301.5	305.3	301.4	303.7
Aluminum, Dissolved		2.2	(0.1	(0.1	1.8
Alkalinity, Total (as CaCO3)					140
Chloride		11.5	<0.5	0.5	7
Iron, Dissolved		5.4	0.88	(0.01	0.01
Potassium, Dissolved		1.9	2.1	2.3	
Sodium , Dissolved		19	16	17	12
Sulfate		36	41	48	17.8
Total Dissolved Solids		420	434	476	184
all (etandard units)	Field	7.35	7.4	7.5	7.27
pH (standard units)	Laboratory				7.0
Specific Conductance (umhos/cm)	Field	316	219	425	275
	Laboratory				

Sample Identification: 10W

Danashare to-11 t			Dates Sampl	ed (yy/mm/dd)	,
Parameters (mg/L)		89/5/1	89/5/22	89/6/13	90/3/13
Groundwater Elevation (Ft/MSL)		302.0	307.7	301.8	307.64
Aluminum, Dissolved		4.8	0.1	(0.1	12.0
Alkalinity, Total (as CaCO3)			402		130
Chloride		20.5	36.4	17.0	119
Iron, Dissolved		9.7	<0.01	<0.01	(0.01
Potassium, Dissolved		12	12	9.9	
Sodium, Dissolved		480	510	540	170
Sulfate		760	600	710	280
Total Dissolved Solids		2490	1932	2198	680
all (abanded units)	Field	6.8	7.36	6.85	8.1
pH (standard units)	Laboratory		7.58		7.14
Considir Conductors (unberlant	Field	893	471	910	500
Specific Conductance (umhos/cm)	Laboratory		3105		

file: Non-hetartino
Harrisburg Incineration

correspondence

CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA BKA NO. 86019-01

Job Conference No. 3

May 10, 1990



PROJECT DATA:

ti 🛴 🗼 🚡 🗷

Contract Length:

State Date:

Completion Date: Days Complete:

Days Remaining:

Percent Time Consumed:

Estimated Percent Complete

Adams County Asphalt: D & S Contractors:

Next Scheduled Job Conference:

150 days

April 25, 1990

September 21, 1990

15 135

10%

8% 0%

May 17, 1990 at 9:00 A.M. at the job

site trailer.

THOSE IN ATTENDANCE:

David A. Brinjac Mark E. Bukowski Daniel Lispi John Lukens Gordon Lambert Curt Helman Michael Shenk Bob Galardini Jeff Finger Brinjac, Kambic & Associates, Inc.
Brinjac, Kambic & Associates, Inc.
City of Harrisburg
City of Harrisburg
Nassaux-Hemsley, Inc.
Nassaux-Hemsley, INc.
Adams County Asphalt
Adams County Asphalt
D & S Contractors

MEETING MINUTES:

Norman Dudanowicz

1. Mr. Bukowski opened the meeting by asking if there were any additions, deletions and/or corrections to the Job Conference No. 2 meeting minutes held on May 3, 1990. Mr. Galardini stated that Adams County Asphalt had not received their copy yet. Mr. Bukowski's copy was read by all in attendance prior to the meeting. There were no comments, so the minutes of that meeting stand as prepared. Minutes will be expedited in the future.

- 2. Mr. Finger reviewed Adams County Asphalt's progress since the last meeting and their plans for the next week as follows:
 - a. Embankment work began on May 9, 1990 and will continue.
 - b. Unsuitable excavation is 90% complete and should be complete by the next meeting.
 - c. The work on the sedimentation pond has not been started due to the delivery time for the riser pipe. This pipe should be in early next week and the sedimentation pond work will be completed at that time.
 - d. The extra excavation, geotextile separation fabric and rock fill was completed along Gibson Street. This work began on May 7, 1990 and was completed on May 8, 1990. This work was reviewed by Mr. Edward Lesny. There is approximately 2 to 4 feet of rock over the area. The 4 feet thickness is in the center tapering to 2 feet at either edge.
- 3. Mr. Helman stated that the density control testing on May 9, 1990 indicated that all lifts met the specification requirement for compaction and the material was near the optimum moisture content.
- 4. Mr. Galardini stated that Adams County Asphalt had signed the contract and returned it to the City. Mr. Brinjac stated that he would contact the City to see when the notice to proceed could be sent out. The notice to proceed will indicate a start date of April 25, 1990.
- 5. Mr. Bukowski stated/asked the following with regards to Adams County Asphalt's work:
 - a. When will the cost quotation for the excavation and rock fill work be submitted? Mr. Galardini stated that it would be submitted today (May 10, 1990).
 - b. A schedule resubmittal must be made addressing the Engineer's comments made on May 8, 1990. The schedule should be cost loaded in order to be able to process progress payments.
 - C. A master submittal list should be submitted as soon as possible as discussed in the preconstruction meeting.
 - d. Trees and brush removed during the clearing operation still have not been removed from the site. These must be removed from City property as soon as possible.
 - e. Adams County Asphalt has not addressed any of the Owner's concerns with regards to existing pipes that have been broken and existing drainage that has been interrupted. Mr. Galardini stated that none of

the pipes in question had been marked or shown on the drawing and felt it was the Owner's responsibility to find out what existing pipes/drainage have been impacted and what should be done about it. Mr. Lukens stated that there are now three drainage pipes in question. It was agreed that the Engineer would meet with the City's personnel on May 11, 1990 at 9:00 A.M. to discuss/resolve this issue.

- f. Adams County Asphalt has indicated that the entire parking area west of the Traffic Building will be used to store the liner material and the leachate sand. This area must be made available to the Contractor when these materials arrive. This will impact the City's access to the west side of the two garages. Mr. Brinjac stated that this had been discussed with Mr. James Close and Mr. Close indicated that the Department of Public Works will work with the contractors in a spirit of cooperation. Mr. Finger stated that there was enough room in the current disposal area for all the unsuitable material. However, he was not sure if there would be enough room for the estimated 20,000 cy of excess excavation material that must be stockpiled. Mr. Finger stated that he would know more by the next meeting on May 17, 1990.
- 6. Mr. Brinjac asked if the Contractor knew the volume of unsuitable material removed to date. Mr. Finger stated that he did not know. Mr. Bukowski requested that this data be prepared by May 17, 1990.
- 7. Mr. Lispi asked Mr. Lambert how material would be sampled. Mr. Lambert stated that he was working on the sampling and testing protocol for this material now and should have something ready by May 17, 1990 for presentation to DER.
- 8. Mr. Lukens stated that the City would remove all the old white goods, furniture and other material that was inside the silt fence in the disposal area and not deposited by the contractor. This will be done this weekend or early next week. This work will be done on a clear day since the silt fence will have to be partially removed during the operation. However, it is important to move these materials to avoid inadvertent covering up by the Contractor.
- 9. Mr. Brinjac asked the Contractor if he foresaw any impact on his ability to perform his work due to inaction by the Owner or Engineer. Mr. Galardini stated that he was disappointed in the turnaround time for the decision on what to do with the soft foundation material along Gibson Street. Mr. Brinjac stated that he felt the Engineer had reacted expeditiously to arrive at a method to bridge this soft soil. Mr. Brinjac stated that due

to regulatory requirements, additional time was required because of the involvement of DER. It is hoped that should a similar condition arise in the future, that the turnaround time could be improved.

- 10. Mr. Dudanowicz stated the following:
 - a. The tires along the west side of the Vehicle Maintenance Center must be moved prior to June 1, 1990 to allow him to install his feeder for the pump station.
 - b. The location of the pump station should be staked by the General Contractor prior to June 1, 1990 so that his trench could be layed out.

Any corrections, additions and/or deletions to these minutes should be received by Mark Bukowski on or before May 17, 1990 or the minutes will stand as prepared.

Minutes prepared by Mark Bukowski

DISTRIBUTION:

David A. Brinjac
Mark E. Bukowski
Daniel R. Lispi
James M. Close
John Lukens
Gordon Lambert
Norman Dudanowicz
Linda Houseal
Bob Galardini
Edward Lesny
File

CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA BKA NO. 86019-01

MAY 0 9 1990

All Marketing

HARRISBURG REGION

WASTE MANAGEMENT

Job Conference No. 2

May 3, 1990

PROJECT DATA:

Contract Length:

State Date:

Completion Date:

Days Complete:

Days Remaining:

Percent Time Consumed:

Estimated Percent Complete

Adams County Asphalt:

D & S Contractors:

Next Scheduled Job Conference:

150 days

April 25, 1990

September 21, 1990

8

142

5%

5%

0%

May 10, 1990 at 9:00 A.M. at the job

site trailer.

THOSE IN ATTENDANCE:

Mark E. Bukowski
Daniel Lispi
John Lukens

> Abdul R. Mechant

Tony Rathfon
Gordon Lambert
Curt Helman
Bob Galardini
Jeff Finger
Norman Dudanowicz

Brinjac, Kambic & Associates, Inc. City of Harrisburg City of Harrisburg DER - Harrisburg Regional Office DER - Harrisburg Regional Office DER - Harrisburg Regional Office Nassaux-Hemsley, Inc. Nassaux-Hemsley, INc. Adams County Asphalt

Adams County Asphalt

D & S Contractors

MEETING MINUTES:

1. Mr. Bukowski opened the meeting by asking if there were any additions, deletions and/or corrections to the preconstruction meeting minutes held on April 17, 1990. There being none, the minutes of that meeting stand as prepared.

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 2 BKA NO. 86019-01

- 2. Mr. Finger reviewed Adams County Asphalt's progress since the last meeting and their plans for the next week as follows:
 - a. Excavation and hauling of unsuitable materials is 50% complete and will continue.
 - b. Erosion control is 90% complete. Only the area from the detention pond to the creek remains.
 - c. Swale B improvement is complete.
 - d. Plans for the next week are:
 - 1. Enlarge detention pond.
 - 2. Install drain out of the detention pond.
 - Continue removal of unsuitable material.
 - 4. Begin the embankment on the south side where the soft foundation soil has been found.
 - 5. Begin installation of the CMP.
 - 6. Begin installation of the rip-rap in Swale B.
- 3. Mr. Galardini stated that the Contractor needed an answer by 12:00 noon on May 4, 1990 on what to do with the soft foundation soils or the Contractor would consider his schedule to be impacted.
- 4. Mr. Bukowski stated that a meeting will be held at 3:00 P.M. today (May 3, 1990) to further review this area to decide what to do. The following items must be completed prior to 3:00 P.M.
 - a. Stake out the soft area.
 - b. Tie these stakes into the landfill grid lines.
 - c. Stake three test pit locations.

Every effort will be made by the Engineer to provide an expeditious solution to this situation.

5. Mr. Galardini asked what the status was on the submittals made to date. Mr. Bukowski stated that all submittals received to date had been approved and would be going out to Adams County by May 3, 1990. Mr. Galardini will pick up advance copies of these submittals on May 3, 1990.

- 6. Ms. Houseal stated/asked the following:
 - a. How long will the detention pond work take? Mr. Galardini stated that it should only take one day to complete this work.
 - b. Who would be doing the seeding? Mr. Galardini stated that either Davis Landscaping or Walter-Nisley and Walter would do this work.
 - c. What is the approximate quantity of unsuitable soil removed to-date. Mr. Galardini stated that this was not known but this information could be given to Ms. Houseal after the meeting.
 - d. What does the City intend to do with the unsuitable material? Mr. Lispi and Mr. Lukens stated that they will sample the material and run tests on it to determine its content and make a proposal to DER.
 - e. What has the Contractor seen in this unsuitable material? Mr. Finger stated that it looked like a lot of "Spring clean-up" material.
- 7. Mr. Bukowski stated the following with regards to Adams County Asphalt's work:
 - a. All of the parking lot that has been torn up by the hauling equipment must be restored to original condition when all hauling is complete.
 - b. All trees and brush must be removed from City property as soon as possible.
- 8. Mr. Bukowski stated that the notice to proceed had not been given yet since contracts were not signed. However, the Contractor began work on April 25, 1990 which basically established the beginning of the contract time. Mr. Galardini stated that the Contractor "basically" agreed.
- 9. Mr. Bukowski stated that Nassaux-Hemsley needed to stake the corners of the sedimentation basin today. Mr. Helman stated that this was currently being done. In addition, the survey crew will tie the contractors stakes for the landfill into the grid pattern.
- 10. Mr. Lambert asked the Contractor if he felt there would be enough space in the storage area for the unsuitable material, leachate sand and the liner materials. Mr. Galardini stated that he did not think there would be enough room. The City will advise at the next meeting about other areas available for storage. Mr. Lambert stated that a 50 X 100 ft. area is required for the test pad. This should be protected until the liner placement begins to maintain the quality standard. An area near the temporary storage area near 19th street may be a good site. (After the meeting, Mr. Galardini stated that Gundel would need approximately 2500 SF

CONSTRUCTION OF B-2 RESIDUE AREA JOB CONFERENCE NO. 2 BKA NO. 86019-01

for their storage. The remainder of the parking lot in front of the Traffic Building would be used for this. The sand would be stockpiled just south of the same parking lot.)

- 11. Mr. Dudanowicz stated that he was preparing submittals for the project.
- 12. Mr. Bukowski stated the following with regards to Mr. Dudanowicz's questions from the Preconstruction Meeting:
 - a. All conduit should be 36-inches deep.
 - b. The survey markings on the light pole need not be saved since new survey marks are being used for this project.
- 13. Mr. Galardini confirmed that all underground utilities had been located by the "one-call" system and by the City.
- 14. The job site trailer telephone number is 238-8354

Any corrections, additions and/or deletions to these minutes should be received by Mark Bukowski on or before May 10, 1990 or the minutes will stand as prepared.

Minutes prepared by Mark Bukowski

DISTRIBUTION:

David A. Brinjac
Mark E. Bukowski
Daniel R. Lispi
James M. Close
John Lukens
Gordon Lambert
Norman Dudanowicz
Linda Houseal
Bob Galardini
File

Houseal

CITY OF HARRISBURG CONSTRUCTION OF B-2 RESIDUE AREA BKA NO. 86019-01

Preconstruction Meeting Minutes

April 17, 1990



PROJECT DATA:

Contract Length: State Date: Completion Date:

Days Complete: Days Remaining:

Percent Time Consumed: Estimated Percent Complete

Adams County Asphalt:

D & S Contractors:

Next Scheduled Job Conference:

150 days

April 25, 1990 September 21, 1990

0 150 0%

0% 0%

May 3, 1990 at 9:00 A.M. at the job site

trailer.

THOSE IN ATTENDANCE:

David A. Brinjac Mark E. Bukowski James Close Daniel Lispi John Lukens Joe Sebzda Abdul R. Mechart Linda Houseal Tony Rathfon Gordon Lambert Curt Helman Bob Mumma Harvey Stein Bob Galardini Mike Shenk Bob Benson Norman Dudanowicz

Brinjac, Kambic & Associates, Inc. Brinjac, Kambic & Associates, Inc. City of Harrisburg City of Harrisburg City of Harrisburg DER - Harrisburg Regional Office DER - Harrisburg Regional Office DER - Harrisburg Regional Office DER - Harrisburg Regional Office Nassaux-Hemsley, Inc. Nassaux-Hemsley, INc. Adams County Asphalt Adams County Asphalt Adams County Asphalt Adams County Asphalt Adams County Asphalt D & S Contractors

MEETING MINUTES:

- 1. Mr. Bukowski began the meeting by having everyone in attendance introduce themselves. After these introductions, Mr. Bukowski reviewed the attached meeting agenda in detail. The following items of discussion were brought up during the review of the agenda:
 - a. Item I.H Contractor's Project Manager & Superintendent
 - 1. D & S Contractors Mr. Norman Dudanowicz will act as both project manager and superintendent. Telephone No. 697-8866.
 - Adams County Asphalt Mr. Bob Galardini Project Manager;
 Mr. Harvey Stein Project Superintendent Telephone No. 257-1850.
 - b. Item I.J Adams County Asphalt requested five (5) copies of contract documents and D & S Contractors requested three (3) copies.
 - c. Item II.A The contract for D & S Contractors has been submitted to the City. However, Mr. Mumma stated that he was unable to execute his contract due to a question over the bond for the liner manufacturer. Mr. Brinjac stated that he would investigate this and respond to Mr. Mumma. (Mr. Brinjac spoke to Mike Shenk about this on April 18, 1990.)
 - d. Item II.G.2 Mr. Mumma advised that a Swatara Township building permit was not required due to the nature of the construction.
 - e. Item II.J A notice to proceed date of April 25, 1990 was acceptable to all in accordance. This yields a completion date of September 21, 1990.
 - f. Item V.C The first site Job Conference will be held on May 3, 1990 at 9:00 A.M. at the job site trailer.

After the meeting a site was chosen for the Engineer's trailers.

2. Mr. Lambert requested that all material sources for aggregates be identified on the submittals so the QA Engineer could conduct a site review. Mr. Shenk stated that the sources would be as per the specifications and offered to accompany Mr. Lambert to the sources to facilitate sampling and testing.

- 3. Mr. Brinjac stated that there were five inspection points for DER required per the DER permit. The Engineer will give 48 hours advance notice to DER (Ms. Linda Houseal) prior to each of these inspections. The inspection points are:
 - a. Subbase construction
 - b. Secondary liner installation
 - c. Leachate detection zone installation
 - d. Primary liner installation
 - e. Leachate collection zone installation.
- 4. Mr. Sebzda stated that the QA Engineer should first have the contractor prepare the subbase and other phases of the project to his satisfaction prior to calling out DER for their inspection. Mr. Lambert stated that the entire area would probably not be ready all at once, so various DER inspections would be required for each phase.
- 5. Mr. Sebzda and Ms. Houseal expressed their concern over the finish of the subbase. This could be a big time delay since DER would require a "mirrorlike" finish on the subbase. Mr. Lambert stated that for this reason, a test area was designed into the project requirements in an effort to facilitate the DER acceptance process.
- 6. Mr. Mumma stated that test pits would be excavated in order to locate acceptable subbase material. Mr. Lambert stated that Nassaux-Hemsley would review and test all material in the test pits to establish if site material could be used for the subbase. If no site material met the specification requirements, an off-site material would be required. This would be negotiated with the Contractor at that time. Mr. Brinjac stated that it was the intent of the specification to use on-site material for the subbase unless specifically noted otherwise.
- 7. Mr. Lambert stated that nuclear density testing would be performed onsite. All other tests (proctors, permeability, gradations, liner, etc.) would be performed off-site by Cumberland Geotecnical (Mr. Jeff Barnes).
- 8. Mr. Sebzda asked who the Engineer was on the project since both Brinjac, Kambic & Associates, Inc. and Nassaux-Hemsley, Inc. were involved. Mr. Brinjac stated that Nassaux-Hemsley, Inc. was the QA Engineer only. Brinjac, Kambic & Associates, Inc. would coordinate with the QA Engineer and handle overall project coordination such as with DER and the Contractors. Both engineers are contracted directly to the City of Harrisburg. Mr. Sebzda stated that DER will also have an inspection role. Mr. Brinjac stated that, at a minimum, this would occur at the inspection points required in the permit. Ms. Linda

Houseal was established as the contact point at DER for these inspections and overall project coordination. Mr. Bukowski requested that Nassaux-Hemsley, Inc. copy Brinjac, Kambic & Associates, Inc. on all test and inspection reports.

- 9. Mr. Lambert explained the test pad that would be used. It will be a 100 x 50 foot area built up in identical fashion to the permanent construction. It will be reviewed after each phase to establish the quality standard. After construction, it will be tested for permeability. Mr. Mumma stated that this would be no problem as long as the QA Engineer indicated where the acceptable subbase material was located based on the test pits.
- 10. Mr. Sebzda asked if a contingency plan existed in case subbase material was not acceptable. Mr. Brinjac, stated that the use of offsite material would have to be investigated at that point should it be required.
- Mr. Mumma stated that Adams County Asphalt would begin the first day with excavation of test pits and felt confident that in the 90,000 cy of material to be excavated, 5,000 cy of acceptable material for subbase could be located. Mr. Mumma asked if some of the loam on-site could be used for subbase. Mr. Lambert stated that he doubted it would meet the permeability requirements.
- 12. Mr. Lambert stated that Mr. Helman would be the QA Engineer for the site work. Cumberland Geotecnical will perform all on-site and off-site testing. Another QA Engineer, with experience on liners, will be used for the liner installation.
- Mr. Brinjac asked Mr. Mumma how he planned on classifying the ash to a 6" size. Mr. Mumma stated that he would us a conveyor, magnet, screen arrangement. Mr. Brinjac asked that a description of this procedure be submitted. Dust control must be addressed so that this work could be coordinated with the DER Air Quality (Mr. Hartwin Weiss).
- Mr. Sebzda stated that it was very important that the QA be active on the site at <u>all</u> times that the contractor is working. A detailed daily log must be kept at <u>all</u> times. Mr. Lambert stated that this would be done.
- Discussion was held on the possibility of hauling the municipal solid waste to the "A" site as opposed to the soil stockpile area. Mr. Mumma stated that this would be no problem as long as the same equipment he had planned on using could be used.
- 16. Mr. Houseal handed out the attached "Construction Quality Assurance Checklist" and reviewed it in detail.

- 17. Mr. Sebzda asked how the QA engineer would verify the depth of the materials placed on the liner. Mr. Lambert stated that they planned on using hand excavation with plastic tools per the QA plan.
- 18. Mr. Sebzda asked who issued the final certification. Mr. Brinjac and Mr. Lambert stated that they would discuss this with the City and respond.
- 19. Mr. Sebzda stated that the QC specifications must be submitted by the liner manufacturer and asked who would perform the destructive testing on the liner. Mr. Lambert stated that Cumberland Geotecnical will perform the liner tests in Carlisle using a tensionometer.
- 20. Ms. Houseal stated that all synthetic materials must be carefully stored without violating their factory packing.
- 22. Mr. Dudanowicz stated the following:
 - a. A clarification was required for the pole demolition. This will be reviewed after the first site job conference.
 - b. Details on the plans show both a 24" and 36" conduit trench depth. Mr. Bukowski will clarify.
 - c. A copy of the electrical equipment submittals will be needed to coordinate his work. Mr. Bukowski will see that a copy of these submittals is provided to the Electrical Contractor.
 - d. Who should do the utility contacts for underground work? Mr. Bukowski stated that this should be coordinated with the General Contractor.
- A site review indicated that a salt pile, leaf pile and metal rubble pile must be removed by the City prior to April 25, 1990. Mr. Close stated that these piles would be removed.

Any corrections, additions and/or deletions to these minutes should be received by Mark Bukowski on or before May 3, 1990 or the minutes will stand as prepared.

Minutes prepared by Mark Bukowski

DISTRIBUTION:

David A. Brinjac (w/attachments)
Mark E. Bukowski (w/attachments)
Daniel R. Lispi (w/attachments)
James M. Close (w/attachments)
John Lukens (w/attachments)
Gordon Lambert (w/attachments)
Norman Dudanowicz (w/attachments)
Linda Houseal (2) (w/attachments)
Bob Galardini (w/attachments)
File (w/attachments)

PRECONSTRUCTION MEETING

AGENDA

ı.	Introd	luction
٠.		
	Α.	Project Name: Construction of B-2 Residue Area
	В.	Engineer's Name and Project No.: Brinjac Kambic & Assoc /86019-0
	С.	Client: City of Harrisburg (Project No. 1482-90)
	D.	Contractor: Adams County Asphalt / D&S Contractors
	E.	Time for Completion: 150 calendar days
	F.	Liquidated Damages: $\frac{5,000}{1000}$ per calendar day beyond completion date
	G.	All project correspondence will be through the Engineer. Please address to: Brinjac Kambic Assoc. 910 North Second Street P. 0. Box 2857 Harrisburg, PA 17105 ATTN: Mark E. Britowski, P. E.
	н.	Contractor's Project Manager and Superintendent
	I.	If there are any questions or additions to be made during the meeting, please bring them up.
	J.	Distribution of copies of the contract documents
II.	Checkl	ist of Items Required to Begin Work:
	Α.	Signed Contract
	В.	Executed Performance and Maintenance Bond
	С.	Executed Labor and Materialmen's Bond
	D.	Approved Material Submittals
	E.	Approved Schedule of Values
	F.	Approved Construction Schedule
	G.	Approved Permits
		1. DER Permit (by Owner)
		2. Swatara Tusp Brilding
		3.

Н.	Approved Insurance Submittals						
	1. Compensation						
	2. Contractor's General Liability						
	3. Builder's Risk						
	4. Vehicle Liability						
	5. Owner's Protective Liability						
	6.						
	7.						
	8.						
I.	Location of all underground utilities by the utility company (Act 172 Notification)						
7	Notice-To-Proceed Date 1/2 5/00						
J.	4/25/90						

III. Submittals

A. Schedule of Values

- Must be submitted and approved prior to first payment.
- 2. Use of the bid proposal tabulation list is acceptable. However a more detailed listing should be used on lump sum items.
- Should include: item, approximate quantity, and cost.

B. Construction Schedule

- Submit as soon as possible and prior to beginning work.
- Updated monthly (submitted with pay request).
- Include all major events, including submittals, procurement, and construction activities.
- Goal is early completion, no extensions.

C. Subcontractor List

- Submit as soon as possible and prior to beginning work.
- 2. Notify Engineer prior to subcontractors commencing work.
- 3. Arrange for informal meeting before any work.
- Prime Contractors are totally responsible for subcontractors work and coordination with other subcontractors.

D. "Record" Drawings

- 1. Dedicated for "Records", not a work set.
- 2. Kept continuously up to date.
- Must be up to date for payment approval.
 Must be turned over to the Engineer at the end of the project prior to final payment.

E. Monthly Progress Payments (Use BKA form attached)

- 1. Must be submitted prior to 1st of Each Month
- 2. Engineer should review prior to final tabulation.
- 3. No payment for stored material except as noted in the contract documents.
- 4. Use the same format as the Schedule of Values.
- 5. Attach the certified payrolls for the period. (Prevailing Minimum Wage Project)
- 6. Attach the revised schedule showing progress to date and what will be done to accelerate activities that are behind schedule.

F. Shop Drawings

- 1. Submit master list as soon as possible.
- 2. Submit 8 copies of each.
- 3. All submittals will come through the Prime Contractor.
- 4. Send submittals to: Bringer, Kambie & Assoc.

910 North Second Street

P. O. Box 2857

Harrisburg, PA 17105

ATTN: Mark E. Bukacski, P.E.

RE: B-2 Residue Area Shop Drawing

(Name of Job)

- 5. As a minimum, each submittal shall include:
 - a. Specific job name.
 - b. Specific contract number.
 - c. Description of item including intended location and use.
 - d. Reference to the specification section.
 - e. Letter explaining any deviations with technical justification.
 - f. If a resubmittal reference original submittal too.
 - g. An approval stamp signed by the Contractor assuring that he has reviewed the submittal for compliance with the contract documents.
- 6. Rejected submittals can cause delays.
- 7. No extensions for delays due to late shop drawings submittals.
- 8. Allow a minimum of 14 days in the schedule for submittal approval.

G. Change Orders

- 1. No changes without written approval of Owner and Engineer.
- 2. Any change orders done on a time and material basis will include:
 - a. Daily time sheets
 - b. Invoices and bills
- 3. All time and material invoices and bills must be signed by the Engineer's site representative or payment will not be made.
- H. Operation and Maintenance Manuals for Equipment
 - 1. Assemble as early as possible.
 - 2. Submit for review through the submittal process.

- I. Equipment Installation Manuals for Equipment
 - 1. Provide to Engineer 14 days prior to commencing work as a formal submittal.

J. Spare Parts

- 1. Will not be used during startup.
- 2. Inventoried by Contractor and Engineer.

K. Training

- IV. Key Contract Requirements (see attachment)
- V. The Construction Process
 - A. The Contractor is <u>solely</u> responsible for planning the work, devising construction methods, assuring the specified quality and complying with all safety codes for workmen and the public.
 - B. The Engineer will act as an observer and will advise the Contractor of any concerns as they occur. It is the Contractor's responsibility to address these concerns in accordance with the contract documents and applicable codes.
 - C. Periodic job conferences will be scheduled by the Engineer's Field Representative to discuss progress of the project with representatives from the client, the Engineer, the Contractor, and other interested parties.
 - D. Special preparatory work meetings between the engineer and Contractor will be held as needed prior to beginning key elements of the work.
- VI. Questions and Clarifications
- VII. Summary and Action Items
 - A. The Engineer will make every effort to facilitate the Contractor's work. However, the Contractor must thoroughly review the contract documents and advise the engineer far enough in advance of any concerns and/or possible discrepancies or oversights so that appropriate action can be taken.
 - B. Action Items

IV. Key Contract Requirements

- a. The work is in close proximity to existing facilities of the Owner. As such, utmost care must be exercised to protect both the work and the Owner's property. Any damage shall be made good by the Contractor at no additional cost to the Owner.
- b. The Contractor is responsible for all survey and layout work.
- c. Should a "Differing Site Condition" be encountered, it shall be brought to the attention of the Engineer and Owner prior to disturbance so that a determination on how to proceed can be made.
- d. The Engineer has the authority to disapprove or reject work that does not comply with the Contract Documents; to require special inspection or testing; and to decide the meaning and intent of the plans and specifications.
- e. The site shall be kept clean at all times and storage locations shall be coordinated with the Owner.
- f. The Contractor is responsible for complying with all Federal and Local safety regulations to protect his work force, the Owner's personnel and the public.
- g. Blasting will not be permitted.
- h. The Contractor shall verify all existing conditions and dimensions prior to beginning work and advise the Engineer of any discrepancy.
- i. The General Contractor shall supply an office trailer for the exclusive use of the Engineer. This trailer shall have a telephone and shall be heated and cooled as required. Furnishings are described in the specifications.
- j. No work will be allowed to impact the normal operations of the City's Public Works Center.
- k. The General Contractor is responsible for overall coordination of the project. Upon approval of the construction schedule, the General Contractor will coordinate all work with the Electrical Contractor.
- Water and power will be made available from existing outlets.
 However, extension cords, hoses, pipes, etc. are the responsibility
 of the Contractor.
- m. All work shall be performed in strict accordance with the Erosion and Sediment Control Section of the specifications.
- n. Full cooperation with the QA Engineer and his technicians is a requirement. No work shall be covered up if the required tests have not been performed and passed.

Subject: Construction Quality Assurance

checklist

To: Robert G. Benvin

Facilities Manager

Harrisburg Regional Office

From: John Oren

Engineer

Harrisburg Regional Office

The following are design and construction details that have typically caused a delay in the permitting and/or construction of a landfill. The Department has compiled the following items so that the consultant(s) can address the concerns of the Department. This list is to address particular areas of concern rather than an exhaustive quality assurance plan.

Construction Quality Control Checklist

- 1. A detailed quality assurance plan must be submitted that details all of the various aspects of construction. This plan should include but not be limited to QA/QC on geosynthetics, natural materials, etc. It should detail exactly what steps are taken when a test indicates a 'failure.' Specifics should be submitted that indicates how the Department will be assured that the QA on-site engineer has thoroughly reviewed all the design documents. The quality assurance personnel should receive a quality control certificate for each roll of liner material. The quality assurance personnel should verify the results of the quality control certificates.
- The conformance testing should include at minimum density, carbon black content, thickness, tensile characteristics. Conformance testing should be done for at least one sample for every 50,000ft^e of material.
- 3. Quality control certificates should be provided for the extrudate to ensure the quality of the extrudate as well as ensure compatibility of the liner.
- 4. The subgrade must be as-built surveyed and must be a minimum 2% grade.
- 5. Compaction testing procedures should reviewed.

- The subbase must contain no protruding stones or foreign material and be rolled smooth.
- 7. The panel layout should be given to the department and included with the as-built documentation with all of the repairs.
- 8. The seaming experience (on the material that will be utilized) of all the seaming personnel should be submitted to the Department.
- 9. No smoking should be allowed on the liner.
- 10. Each seaming apparatus should be tested at least every 5 hours, or when operators are changed. What is the procedure for testing previous seams if while testing a seaming apparatus that has been in operation, the trial seam fails?
- 11. At what temperatures will cold weather procedures be implemented? A copy of the cold weather procedures should be submitted to the Department.
- 12. If grinding is necessary the grinding should not extend more than .5 inch past the weld.
- 13. Particles from the grinding the HDPE must not be left in the seam.
- 14. No cutting should take place on the liner without a scrub sheet.
- 15. The geomembrane must be protected when laying down such items such as shovels, hot welders etc. No metal implements may be utilized on the liner. Only plastic shovels, etc. should be specified.
- 16. The weld must be free of dirt, dust, moisture or any foreign matter.
- 17. No horizontal seams should be within 5 feet of the toe or top of the berm.
- 18. No fishmouths are permitted.
- 19. The minimum overlap of seams and patches should be specified.
- 20. No construction may take place unless the fulltime QA engineer is within the permitted boundary. Construction is defined as grading, excavating, welding, liner deployment, grinding, material placement, etc.
- 21. If vacuum testing is done the seams should be 100 percent vacuum tested. The Quality Assurance should observe all vacuum testing.

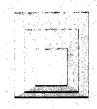
- 22. If air pressure testing is done, the pressure must be verified in 100 percent of the seam length. The Quality Assurance personnel should observe all seam testing.
- 23. One (vertical) foot of material must be kept between the liner and a wide track dozer. For rubber tired vehicles two feet or greater is needed.
- 24. The Department reserves the right to inspect and sign off on the subbase before the geomembrane is installed.
- 25. Any excess folds (that may overlap) should be cut and repaired. When spreading the flow zone material, folds must be "pushed out and not folded over. If the vertical fold is greater than six (6") inches for the liner, the material placement must cease until a solution is arrived at so that when the material is placed, little or no folds occur. This may mean material placement may only take place after 6pm and before 9am.
- 26. No probes may be used to check the depth of the flow zone material.
- 27. No bridging of the liner is permissible (unsupported liner). Care must be taken when spreading material that the liner is not bridged.
- 28. How will the geomembrane be protected in heavy traffic areas such as ramps, ect?
- 29. Welding of the liner should continue to the edge of the liner in the anchor trench.
- 30. No rocks greater than three inches may be in the anchor trench.

 A detail that indicates how material in the anchor trench will be prevented form sliding down the subbase should be included.
- 31. There must be adequate placing of sandbags to prevent windlifting of the material.
- 32. Any area where there are penetrations should be tested for leakage by submersion if applicable. The pipe penetrations must be fully detailed on the drawings. All grades of stainless must be indicated. It is preferable if the boot sleeve is bonded (welded) to the pipe. A step-by-step procedure should be included that indicates how the penetration and pipe boot will be constructed.
- 33. The total number of full time QA engineers for each specific function should be indicated.

- 34. Sampling frequencies for all materials should be indicated.
- 35. Geonet should be joined by white ties or translucent ties. The tie spacing should be indicated. What is the spacing of the ties on the berms? What will be the spacing of the ties on the base of the cell?
- 36. All geotextile must be sewn.
- 37. As built documentation must be submitted along with a form 37 before written approval is given by the Department for disposal of waste in the cell.
- 38. The geotextile must be protected from rainfall when storing the material.
- 39. The geotextile may not be exposed to sunlight for more than 30 days.
- 40. No dirt or dust is permitted in the geonet.
- 41. Accessible survey control must be available at all times. A minimum of three (3) benchmarks should be specified.
- 42. All Quality Assurance documentation must be available on site to reviewed by the Department personnel.

BRINJAC, KAMBIC AND ASSOCIATES INC.			
TO OWNER:	PRO	GRESS ESTIMATE	NO.:
VIA ENGINEER:		PAGEOF_	PAGES
FROM CONTRACTOR:	PERIOD FROM		, 19
	то		, 19
PROJECT NAME:		PROJECT NO.:	
CHANGE ORDER SUMMARY			
Change Orders approved in previous months by Owner.	Increase	Decre	:486
Approved This Period	\$	\$	
No. DATE BRIEF DESCRIPTION			
Net Change by Change Order	\$	\$	
1. ANALYSIS OF ADJUSTED CONTRACT AMOUNT TO DATE:			
a) Original contract amount			
b) Plus: Change Order Incresse			
c) Less: Change Order Decrease		·	
d) Adjusted contract amount to date (la + lb - lc)	\$		
	· · · · · · · · · · · · · · · · · · ·		
2. ANALYSIS OF WORK PERFORMED AND PAYMENT DUE:			
a) Cost of original contract work performed to date			
b) Extra work performed to date	\$		· · · · · · · · · · · · · · · · · · ·
c) Subtotal (2a + 2b)			
d) Less: Amount retained%			
e) Net amount earned less retainage (2c - 2d)			
f) Less: Previous Applications (Line 2e from prior Application)			
g) CURRENT PAYMENT DUE			
3. BALANCE TO FINISH, PLUS RETAINAGE (1d - 2e)	\$		
According to the best of my knowledge and belief, I certify that all item Estimate are correct; that all work has been performed and/or material su of the referenced Contract, and/or duly authorized deviations, substituti foregoing is a true and correct statement of the contract account up to a by this Progress Estimate; that no part of the "Current Payment Due" has tractor represented by the undersigned for labor, materials, expendable e etc., which were outstanding prior to the date of the last preceding peri with the Contract Documents; and, that the undersigned and his subcontrac	pplied in full accordance, alterations, and/ nd including the last of the property of the all quipment, work perform odical estimate, have tors have - (check applact. act except in those incomes, alterations in the accordance of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the prop	nce with the re or additions; iay of the peri- l claims agains aed by subcontr- ceen paid in ac- licable line):	quirements that the od covered t the Con- actors, cordance
(Date) Name of Contractor (Signature)	· · · · · · · · · · · · · · · · · · ·		
CERTIFICATION BY THE ENGINEER This will certify that I have reviewed the information contained on this knowledge and belief, all work for which payment is herein being requeste with the respective requirements of the Contract Documents.			
AMOUNT CERTIFIED: \$ (Attach explanation if amount certified differs from amount applied for)	(Signature)		(Date)

BRI	RINJAC, KAMBIC AND ASSOCIATES INC.											
Application Number:					Period To:						* *	
				_		Engineer's Proje	ct Num	ber:			PAGEOF	PAGES
Α	В	С	D	E		F		G	Н	1	J	к
ltem	Description Of Work	Qty.	Unit	Scheduled		Work C			Total		Balance	
No.	Of Work		Price	Value		ous Application		is Application	Completed To Date (F+G)	% (u.5)	To Fini sh (E-H)	Retainage
		-			Qty.	Value	Qty.	Value	(F+6)	(H-E)	(E-N)	
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	TOTALS											



BRINJAC, KAMBIC & ASSOCIATES CONSULTING ENGINEERS

Parisburg incireration
Pat B-2

Correspondence-1990
Dauphin County

April 6, 1990

Certified Mail

Ms. Linda Houseal
Bureau of Waste Management
Harrisburg Regional Office
Department of Environmental Resources
Commonwealth of Pennsylvania
One Ararat Boulevard
Harrisburg, PA 17110

Re: City of Harrisburg Project No. 1482-90 Construction of B-2 Residue Area BKA No. 86019-01

Dear Ms. Houseal:

This letter serves to confirm our two (2) telephone conversations which occurred on April 5, 1990 regarding your April 3, 1990 meeting with Mr. Jack Hutchins of J. H. Water Systems, Inc. regarding to the above referenced project. The following is a summary of our conversations:

You informed me that on Tuesday, April 3, 1990, you, Joseph Sebzda, Frank Fair of the Harrisburg Regional Office of the Pennsylvania Department of Environmental Resources (DER) met with Mr. Hutchins. You stated that during this meeting, Mr. Hutchins was informed that the plans and specifications prepared for this project were done so per the permit conditions and in consultation with DER, and that the requirement of municipal incinerator ash EPA 9090 testing was a requirement of DER. You stated that Mr. Hutchins was advised that this was the position of DER at the time of bidding. However, DER is presently reviewing its waste specific requirements for EPA 9090 testing and is considering the possibility of comparing the chemical analysis of waste streams against those that have had previous EPA 9090 testing performed. A favorable comparison could possibly be found acceptable. You stated that Mr. Hutchins was also informed that DER was uncertain how this would impact the bids on this project or if it could even be done on this project.

Ms. Linda Houseal April 6, 1990 Page Two

I trust that this is an accurate representation of our conversations. If it is not, please notify this office verbally by April 11, 1990 and in writing by April 18, 1990.

Should you have any questions regarding this, please feel free to contact me at your convenience.

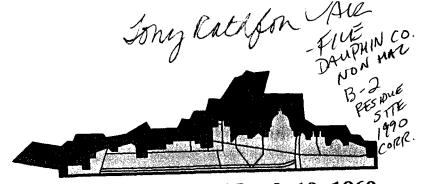
Sincerely,

BRINJAC, KAMBIC & ASSOCIATES, INC.

David A. Brinjac, P

DAB:g1k

c: Daniel R. Lispi John A. Lukens Alan Morton



The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

July 27, 1990

Ms. Linda Houseal
Soils Scientist
Dept. of Environmental Resources
Bureau of Solid Waste Management
Harrisburg Regional Office
One Ararat Blvd.
Harrisburg, PA 17110

DER WASTE MANAGEMENT

AUG 1 1990

HARRISBURG REGION

RE: Permit Modification Permit No. 100992 Residue Disposal Area B-2 Laboratory Analysis Results Unsuitable Soil

Dear Ms. Houseal:

Enclosed, please find copies of the Laboratory Analysis Reports for the "unsuitable soils" which were excavated from the B2 construction site.

A cursory glance through this information indicates that there are no indications of what would be considered hazardous materials residing in the material. Nevertheless, Gordon Lambert of Nassaux-Hemsley is in the process of developing a report which will better define the characteristics of the unsuitable soils in question. As soon as I receive Mr. Lambert's report, I will forward a copy of that document to you.

As you know, the reason these tests were conducted, is to determine whether a portion or all of the unsuitable soils may be used for some purpose other than disposal.

City of Harrisburg
Department of Incineration and Steam Generation
Laboratory Analysis Reports
07/27/90
Page 2

If you have any questions and/or comments regarding the aforementioned, do not hesitate to contact me at 236-5361.

John A. Lukens

Director

JAL/jal cc:

Daniel R. Lispi, Project Manager - City
Gordon Lambert, P.E. - Nassaux-Hemsley
David A. Brinjac, P.E. - Brinjac, Kambic & Associates
Howard J. Wein, Esq. - Klett, Lieber, Rooney & Schorling
Michael Steiner, Regional Solid Waste Manager - PaDER
Michael Heilman, Esq., Assistant Counsel - PaDER
Enclosures
File

ANALYTICAL LABORATIKTES

A DIVISION OF SABLUE AND LOY

2601 North Front Street Harrisourg: PA 17110

1717) RBR-0591

LABORATORY ANALYSIS REPORT

NAME. CITY OF HARRISBURG

PROJECT NO:

13549

ADDRESS:

HARRICBURG STEAM GENERATING FA

CLIENT NO

150

1670 SOUTH 19TH STREET HARRISBURG, PA 17104

SAMPLE NO:

50231

ATTENTION:

JÜHN A. LUKENS

DATE RECVD: 6/15/90

REF. NO:

MON, JUL 16 1990

SAMPLE IDENTIFICATION: TP #1

DATE: 6/15/90

	DETERMINATION		UNITS
	DER MODULE 1-LEACHATE ANALYSIS		
AG	SILVER, TOTAL ARSENIC, TOTAL BARIUM, TOTAL CADMIUM, TOTAL CYANIDE, TOTAL	<0. Q1	MG/L
AS .	ARSENIC, TOTAL	<0.1	MG/L
BA	BARIUM, TOTAL	0.08	MG/L
CD	CADMIUM, TOTAL	0.01	MG/L
CNT	CYANIDE, TOTAL	00.002	MG/L
COD	CHEMICAL DXYGEN DEMAND	163	MG/L
ÇR	CHROMIUM, TOTAL	<0. Q1	MG/L
CRA	CHROMIUM, HEXAVALENT	<0 Oi	MG/L
CU	COPPER, TOTAL	O. 07	MG/L
HG	MERCURY, TOTAL	CO. Q1	MG/L
MO	MOLYBDENUM, TOTAL	<0. Q1	MG/L
NH3	CYANIDE, TOTAL CHEMICAL OXYGEN DEMAND CHROMIUM, TOTAL CHROMIUM, HEXAVALENT COPPER, TOTAL MERCURY, TOTAL MOLYBDENUM, TOTAL AMMONIA NITROGEN NICKEL, TOTAL OIL AND GREASE LEAD, TOTAL PH, LAB PHENOL, DISTILLED ANTIMONY, TOTAL SELENIUM, TOTAL TOTAL DISSOLVED SOLIDS	0. 752	MG/L
NI	NICKEL, TOTAL	0.11	MG/L
OG	OIL AND GREASE	0.4	MG/L
РB	LEAD, TOTAL	<0.1	MG/L
PH	PH, LAB	4, 9	PH UNITS
PHEN	PHENOL, DISTILLED	<0. 05	MG/L
SB	ANTIMONY, TOTAL	<0. 1	MG/L
SE	SELENIUM, TOTAL	<0. i	MG/L
TDS	TOTAL DISSOLVED SOLIDS TOTAL DRGANIC CARBON TOTAL DRGANIC HALOGEN	290	MG/L
TOC	TOTAL DRGANIC CARBON	4.3	MG/L
TOX	TOTAL ORGANIC HALOGEN		MG/L
TVS	TOTAL VOLATILE SOLIDS	161	MG/L
	ZINC, TOTAL		MG/L
	MOD. 1-TOTAL ANALYSIS OF SOLID		
AGDWS	SILVER, DRY WEIGHT ARSENIC, DRY WEIGHT	¢0. 01	MG/KG
ASDWS	ARSENIC, DRY WEIGHT	<0. 1	MG/KG
BADWS	BARIUM, DRY WEIGHT	89	MG/KG
BTU	HEATING VALUE (DRY WEIGHT)	∜5 0	BTU/LB
CDDWS	CADMIUM, DRY WEIGHT	5.3	MG/KG
CNTS	CYANIDE, TOTAL (DRY WEIGHT)	Q. 850	MG/KG
CRDWS	CHROMIUM, DRY WEIGHT	31	MG/KG
CUDWS	CHROMIUM, DRY WEIGHT COPPER, DRY WEIGHT	58 °	MG/KG

ANALYTICAL LARGRATORIES

A DIVISION OF EMELLY AND LOY

Util Worth Front Street Garrisburg PA 17110

2.22 15:3

NAME.

CITY OF HARRISBURG

PROJECT NO.

13549

ADDRESS

HARRISBURG STEAM GENERATING FA

CLIENT NO:

160

1670 SOUTH 19TH STREET HARRISBURG, PA 17104

SAMPLE NO.

50231

ATTENTION:

JOHN A. LUKENS

DATE RECVD.

6/15/90

REF. NO.

MUN, JUL 16 1990

SAMPLE IDENTIFICATION: TP #1

DATE:

6/15/90

-TEST-	DETERMINATION	RESULTS	CHIMU
HGDWS	MERCURY, DRY WEIGHT	<0.01	MG/KG
MODWS	MOLYBDENUM, DRY WEIGHT	<0. 01	MG/KG
NIDWS	NICKEL, DRY WEIGHT	21	MG/KG
OGSOX	DIL AND GREASE BY SOXHLET EXT.	22. 04	MG/KG
PBDWS	LEAD, DRY WEIGHT	62	MC/KG
PPH	PASTE PH	7 59	
SBDWS	ANTIMONY, DRY WEIGHT	<0.1	MG/KG
SEDWS	SELENIUM, DRY WEIGHT	<0.1	MG/KG
TRP	TOTAL RESIDUE	80. 5	7.
TVRP	TOTAL VOLATILE RESIDUE	5. 04	74
ZNDWS	ZINC, DRY WEIGHT	207	MG/KG
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ 	ang agai trug ann Ead Anh Bud	
	REACTIVITY	<u>ـــ ـــ ـــ ـــ ـــ ـــ ـــ ـــ منه هنه جن</u>	
		<0. 24	PPM
SO2PPM	SULFIDE, REACTIVE	<100	MG/KG
	CORROSIVITY (PH)	7. 59	
			DEGREES F
IGN	IGNITABILITY	⊅180	הבפעכבם נ

Respectfully Submitted, Analytical Laboratories

of SKELLY and LOY

MICHAEL S. FARLLING

Laboratory Manager

ANALYTICAL CARDRATORIES

4 COVIETOR OF EXPLORANCE LIN

Radi North Frant Street Harrisburg, PA 17110 (717) 237 Jees

LABURATORY ANALYBIS REPORT

NAME.

CITY OF HARRISBURG

PROJECT NO

13549

ADDRESS:

HARRISBURG STEAM GENERATING FA

BARIUM, DRY WEIGHT

HEATING VALUE (DRY WEIGHT)

CLIENT NO

160

1570 SOUTH 19TH STREET HARRISBURG, PA 17104

SAMPLE NO:

50232

ATTENTION:

JOHN A. LUKENS

DATE RECVD:

· 8.2

< 50

6/15/90

DATE: 6/15/90

MG/KG

BTU/LB

REF. NO:

MDN, JUL 16 1990

SAMPL	_ 1	DEM	TTC *	CAT	t CINI	ΤÞ	447
SAMPL	= 1	170-1-1	1 1 1 1	LAL:	1 1 1101	1 1-	TI ~'

BADWS

BTU

-TEST-	DETERMINATION	RESULTS	UNITS
	DER MODULE 1-LEACHATE ANALYSIS		
AG	SILVER, TOTAL	<0. 01	MG/L
AS	ARSENIC: IDTAL	<0.1	MG/L
BA	BARIUM, TOTAL	0.15	MG/L
CĎ	CADMIUM, TOTAL	<0 Oi	MG/L
CNT	BARIUM, TOTAL CADMIUM, TOTAL CYANIDE, TOTAL	<0.002	MG/L
COD	CHEMICAL DXYGEN DEMAND	311	MG/L
CR	CHROMIUM, TOTAL CHROMIUM, HEXAVALENT	<0. 01	MG/L
CR6	CHROMIUM, HEXAVALENT	<0, 0 1	MG/L
CU	COPPER, TOTAL MERCURY, TOTAL MOLYBDENUM, FOTAL	0.03	MG/L
HG	MERCURY, TOTAL	<0. 01	MG/L
MO	MULYBDENUM, TOTAL	<0. 01	MG/L
инз	AMMONIA NITROGEN NICKEL, TOTAL OIL AND GREASE LEAD, TOTAL PH, LAB	0. 535	MG/L
NI	NICKEL, TOTAL	0.01	MG/L
OG	OIL AND GREASE	5. O	MG/L
PB	LEAD, TOTAL	<0. i	MG/L
PH	PH, LAB	4. 9	PH UNITS
PHEN	PHENOL, DISTILLED ANTIMONY, TOTAL SELENIUM, TOTAL	₹0. 05	MG/L
SB	ANTIMONY, TOTAL	<0. 1	MG/L
SE	SELENIUM, TOTAL	<0 1	MG/L
₹at	TOTAL DISSOLVED SOLIDS	231	MG/L
TOC	TOTAL ORGANIC CARBON		
TOX		<0.05	
TVS	TOTAL VOLATILE SOLIDS	174	
ZN	ZINC, TOTAL	0. 59	MG/L
	MOD. 1-TOTAL ANALYSIS OF SOLID		
			MG/KG
ASDWS	SILVER, DRY WEIGHT ARSENIC, DRY WEIGHT	<0.1	MG/KG

A CONTROL OF BRELLY AND LEY

ವೃತ್ತಿಯೇ ಗಾರಕ್ಷನ ಕ್ರಾರಂಥಕ ಕ್ರಮಕ್ಕನ ಬರ್ಬಿ ಅರ್ವಿಗಳಿಕೆ ಸಂಖ್ಯಾತಿ ಕ್ರಾರ್ಟಿಕ 1711ರ ಬರ್ಬಿಸಿದ್ದರೆ ಸಹಕ್ರಿಗಳಿಕೆ

LARGRATCRY ANALYSIS REPORT

MAME

CITY OF HARRISBURG

PROJECT NO

13549

ADDRESS

HARRISBURG STEAM GENERATING FA

CLIENT NO.

160

1670 SOUTH 19TH STREET

SAMPLE NO:

50234

ATTENTION

HARRISBURG, PA 17104 JOHN A LUKENS

DATE RECVD:

6/15/90

REF. NO:

MON: JUL 16 1990

SAMPLE IDENTIFICATION: TP # 4

DATE: 6/15/90

-TEST-	DETERMINATION	RESULTS	UNITS
HGDWS	MERCURY, DRY WEIGHT	<0. Q1	MG/KG
MODWS	MOLYBDENUM, DRY WEIGHT	<0.01	MG/KG
NIDWS		33	
OGSOX	OIL AND GREASE BY SOXHLET EXT.	181 2	MG/KG
PBDWS	LEAD, DRY WEIGHT	200	MG/KG
PPH	PASTE PH .	8.18	
SEDWS	ANTIMONY, DRY WEIGHT	<0. 1	MG/KG
SEDWS	SELENIUM, DRY WEIGHT	₹0. 1	MG/KG
TRP	TOTAL RESIDUE	84 1	%
TYRP	TOTAL VOLATILE RESIDUE	5.84	%
ZNDWS	ZINC, DRY WEIGHT	740	MG/KG
	REACTIVITY		
	CYANIDE, REACTIVE	<0. 24	PPM
	SULFIDE, REACTIVE	<100	MG/KG
CORROS	CORROSIVITY (PH)	8. 18	
IGN	IGNITABILITY	>180	DEGREES F

Respectfully Submitted: Analytical Laboratories of SKELLY and LOY

MICHAEL S. FARLLING Laboratory Manager

- ANALYTICAL LABORATORIES

A DIVISION OF EMELLY AND LOV-

Badi North Arant Street (Sectional Particles

LABORATORY ANALYSIS REPORT

NAME: CITY OF HARRISBURG

PROJECT NO:

13549

ADDRESS:

HARRISBURG STEAM GENERATING FA

CLIENT NO: SAMPLE NO:

160

1670 SOUTH 19TH STREET HARRISBURG, PA 17104

50235

ATTENTION:

JOHN A. LUKENS

DATE RECVD: 6/15/90

REF. NO.

MUN. JUL 16 1990

SAMPLE IDENTIFICATION: TP # 5

DATE 6/15/90

AG	SILVER, TOTAL ARSENIC, TOTAL BARIUM, TOTAL CADMIUM, TOTAL CYANIDE, TOTAL	(0.01	MG/L
AS	ARSENIC. TOTAL	30 t	MG/1.
BA	BARTUM, TOTAL	0 11	MG/L
CD	CADMIUM, TOTAL	<0.01	MG/L
CNT	CYANIDE, TOTAL	<0.00≅	MG/L
CHD	CHEMICOL DIVIGEN DEMAND	: -{`=' 1	M(37)
CR	CHROMIUM, TOTAL	<0. 01	MG/L
CR6	CHROMIUM, TOTAL CHROMIUM, HEXAVALENT COPPER, TOTAL MERCURY, TOTAL MOLYBDENUM, TOTAL	<0.01	MG/L
ĊU	COPPER, TOTAL	⊴0. 01	MG/L
HG	MERCURY, TOTAL	<0. 01	MG/L
MO	MOLYBDENUM, TOTAL	<0.01	MQ/L
EHN	AMMONIA NITROGEN NICKEL, TOTAL OIL AND GREASE	<0.100	MG/L
NI	NICKEL, TOTAL	0. 25	
OG	OIL AND GREASE	3. 4	MG/L
PB	LEAD, TOTAL	ÇO_1	MG/L
PH	LEAD, TOTAL PH, LAB	4. 8	PH UNITS
PHEN	LEAD, TOTAL PH, LAB PHENOL, DISTILLED ANTIMONY, TOTAL SELENIUM, TOTAL TOTAL DISSOLVED SOLIDS TOTAL ORGANIC CARBON TOTAL ORGANIC HALOGEN	<0. 05	MG/L
5B	ANTIMONY, TOTAL	<0. i	MG/L
SE	SELENIUM, TOTAL	<0. i	MG/L
TDS	TOTAL DISSOLVED SOLIDS	922	MG/L
TOC	TOTAL DRGANIC CARBON	18. 4	MG/L
TOX	TOTAL ORGANIC HALOGEN	<0. 05	MG/L
143	IOIME AGENITE SOCIA	370	11976
ZN	ZINC, TOTAL	0. 25	MG/L
	MOD. 1-TOTAL ANALYSIS OF SOLID		MO /KO
AGDUC	SILVER, DRY WEIGHT ARSENIC, DRY WEIGHT BARIUM, DRY WEIGHT	*.U. U.L	MG/KG
ASDAS	ANDENIO, DAI MEIGHT	100	MC/KC
SWUMS	DARION DRI WEIGH)	102 350	DIGITALIA BITALIA
בייט בייט	HEATING VALUE (DRY WEIGHT) CADMIUM, DRY WEIGHT	1 4	MG/KG
CNTS	CADMIUM, DRY WEIGHT CYANIDE, TOTAL (DRY WEIGHT)	0.350	MG/KQ
CRDWS	CHROMIUM, DRY WEIGHT	16	MG/KG
CUDWS	COPPER, DRY WEIGHT	34	MG/KG

ANALVETE CONTINUED ON NEYT PAGE

A DEVICED OF PARKLY AND LOY. Marka Morta Frent Street · 网络阿尔克亚斯亚斯森 · 网络 · · 查找集员 ·

LABORATORY ANALYSIS REPORT

NAME

CITY OF HARRISBURG

PROJECT NO:

13549

ADDRESS:

HARRISBURG STEAM GENERATING FA

CLIENT NO.

160

1570 GOUTH 19TH STREET HARRISBURG, PA 17104

SAMPLE NO:

50235

ATTENTION:

JOHN A. LUKENS

DATE RECVD:

6/15/90

REF. NO:

MON, JUL 16 1990

SAMPLE IDENTIFICATION. TP # 5 DATE: 6/15/90

-TEST-	DETERMINATION	RESULTS	UNITS
HGDW5	MERCURY, DRY WEIGHT	<0.01	MG/KG
MODWS	MOLYBDENUM, DRY WEIGHT	<0. 01	MG/KG
NIDWS	NICKEL, DRY WEIGHT	25	MG/KG
DGSOX	OIL AND GREASE BY SOXHLET EXT.	224. 6	MG/KG
PBDMS	LEAD, DRY WEIGHT	93	MG/KG
PPH	PASTE PH	7. 75	
SBDWS	ANTIMONY, DRY WEIGHT	<0. 1	MG/KG
SEDWS	SELENIUM, DRY WEIGHT	CO 1	MG/KG
TRP	TOTAL RESIDUE	83. 2	%
TVRP	TOTAL VOLATILE RESIDUE	3. 44	%
ZNDWS	ZINC, DRY WEIGHT	210	MG/KG
			
10 == -	REACTIVITY	* · · · · · · · · · · · · · · · · · · ·	
CNTPPM	CYANIDE, REACTIVE	<0. 24	PPM
SOZPPM	SULFIDE, REACTIVE	€100	MG/KG

CORROS		7. 7 5	
I GN	IGNITABILITY	⊃180	DEGREES F

Respectfully Submitted, Analutical Laboratories of SKELLY and LOY

MICHAEL S. FARLLING

Laboratory Manager

A DIVISION OF SKELL, AND LOY

Table North Front Street - Harristong PA 17:10

LABORATORY ANALYSIS REPORT

NAME	CITY OF HARRISBURG	PROJECT NO:	13549
ADDRESS	HARRISBURG STEAM GENERATING FA	CLIENT NO:	160
	1670 SOUTH 19TH STREET	SAMPLE NO.	50236
	HARRISBURG, PA 17104		
REF. NO:	JOHN A LUKENS	DATE RECVD	6/15/90

MON, JUL 16 1990

SAMPLE IDENTIFICATION. TP # 6

DATE: 6/15/90

-TEST-	DETERMINATION	RESULTS	UNITS
	DER MODULE 1-LEACHATE ANALYSIS	707 Te- 1709 Tell Hill State	
AG	SILVER, TÜTAL	€0. 01	MG/L
AS	ARSENIC, TOTAL	<0. 1	MG/L
BA	BARIUM, TOTAL	0. 13	MG/L
CD	CADMIUM, TOTAL	0. 05	MG/L
CNT	CYANIDE, TOTAL	<0.002	MG/L
COD	CHEMICAL OXYGEN DEMAND	305	MG/L
Ĉ₽	CHROMIUM, TOTAL	<0.01	MG/L
CR6	CHROMIUM, HEXAVALENT	<0. 01	MG/L
CU	COPPER, TOTAL	0.12	MG/L
HG	MERCURY, TOTAL	<0. 01	MG/L
MO	MOLYBDENUM, TOTAL	CO 01	MG/L
EHM	AMMONIA NITROGEN	<0.100	MG/L
NI	NICKEL, TOTAL	0. 08	MG/L
□ G	OIL AND GREASE	2. 2	MG/L
₽B	LEAD, TOTAL	<0. 1	MG/L
PH	PH, LAB	48	PH UNITS
PHEN	PHENOL, DISTILLED	<0. 05	MG/L
SB	ANTIMONY, TOTAL	CO. 1	MG/L
ŞE	SELENIUM, TOTAL	<0. 1	MG/L -
TDS	TOTAL DISSOLVED SOLIDS	394	MG/L
TOC	TOTAL ORGANIC CARBON	12. 7	MG/L
XCIT	TOTAL ORGANIC HALDGEN	<0. 05	MG/L
TVS	TOTAL VOLATILE SOLIDS	217	MQ/L
ZN	DER MODULE 1-LEACHATE ANALYSIS SILVER, TOTAL ARSENIC, TOTAL BARIUM, TOTAL CADMIUM, TOTAL CYANIDE, TOTAL CHEMICAL OXYGEN DEMAND CHROMIUM, TOTAL CHROMIUM, HEXAVALENT COPPER, TOTAL MERCURY, TOTAL MOLYBDENUM, TOTAL AMMONIA NITROGEN NICKEL, TOTAL OIL AND GREASE LEAD, TOTAL PH, LAB PHENOL, DISTILLED ANTIMONY, TOTAL SELENIUM, TOTAL TOTAL DISSOLVED SOLIDS TOTAL ORGANIC CARBON TOTAL ORGANIC HALDGEN TOTAL VOLATILE SOLIDS ZINC, TOTAL	2. 6	MG/L
	MOD.1-TOTAL ANALYSIS OF SOLID SILVER, DRY WEIGHT ARSENIC, DRY WEIGHT BARIUM, DRY WEIGHT		
AGDWS	SILVER, DRY WEIGHT	<0.01	MG/KG
ASDW5	ARSENIC: DRY WEIGHT	<0. i	MG/KG
BADWS	BARIUM, DRY WEIGHT	130	MG/KG
BTU	HEATING VALUE (DRY WEIGHT)	<50	BTUZLB
ewdap	CADMIUM, DRY WEIGHT	4. 5	MG/KG
CNTS	CYANIDE, TOTAL (DRY WEIGHT)	O 150	MG/KG
CRDWS	CHROMIUM, DRY WEIGHT	14	MG/KG
CUDWS	COPPER, DRY WEIGHT	108	MG/KG
	ANALYSIS SONTINUED ON NEV		•

ANALYSIS CONTINUED ON NEXT PAGE

ANALYTICAL LABORATORIES

A DIVISION OF SKELLY AND LOY 2601 North Front Street Herfisburg, PA 17110 (717) 232-0693

LABORATORY ANALYSIS REPORT

NAME.

CITY OF HARRISBURG

PROJECT NO:

13549

ADDRESS:

HARRISBURG STEAM GENERATING FA

CLIENT NO:

150

1670 SOUTH 19TH STREET HARRISBURG, PA 17104

SAMPLE NO:

50236

ATTENTION

JOHN A. LUKENS

DATE RECVD:

6/15/90

REF. NO:

MON, JUL 16 1990

SAMPLE IDENTIFICATION: TP # 6

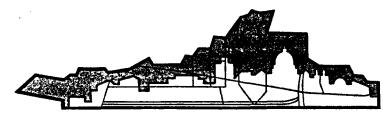
DATE: 6/15/90

-TEST-	DETERMINATION	RESULTS	UNIT5
HCDWS	MERCURY, DRY WEIGHT	<0.01	MG/KG
MODWS	MOLYBDENUM, DRY WEIGHT	CO. O1	MG/K G
NIDWS	NICKEL, DRY WEIGHT	32	MG/KG
QGSQX	OIL AND GREASE BY SOXHLET EXT.	236. 8	MG/KG
PBDWS	LEAD, DRY WEIGHT	95	MG/KG
PPH	PASTE PH	7. 74	
SBDWS	ANTIMONY, DRY WEIGHT	<0.1	MG/KG
SEDWS	SELENIUM, DRY WEIGHT	CO 1	MG/KG
TRP	TOTAL RESIDUE	83. 3	%
TVRP	TOTAL VOLATILE RESIDUE	3.08	%
	ZINC, DRY WEIGHT	590	MG/KG
	REACTIVITY	~~~~~ <u>~</u>	
CNTPPM	CYANIDE, REACTIVE	<0. 24	PPM
	SULFIDE, REACTIVE	<100	MG/KG
		سند سب چون بين جود. فات غلي	
CORROS	CORROSIVITY (PH)	7. 74	
IGN	IONITABILITY	>180	DEGREES F

Respectfully Submitted, Analytical Laboratories of SKELLY and LOY

MICHAEL S. FARILL

Laboratory Manager



The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

June 14, 1989

Michael Steiner
Acting Regional Director
Department of Environmental Resources
Bureau of Solid Waste
One Ararat Boulevard
Harrisburg, PA 17110

DER WASTE MANAGEMENT JUNI 4 1989 HARRISBURG REGION

RE: Quarterly Analysis of Ash Residue

Dear Mr. Steiner:

Enclosed for your information, please find the results of the first quarterly ash residue analysis for 1989 from the Harrisburg Steam Generating Facility. The original leaching analysis, done by Skelly and Loy, shows that the concentration of lead in the sample exceeds the standard. These are the results that Frank Fair and the City's representatives discussed at a meeting on June 1, 1989. To the City's knowledge, this is the first time a quarterly analysis of the HSGF's ash residue has not been in compliance.

Therefore, the City began an investigation into the sampling protocol used to develop the composite sample which was used to perform the test. Not only did we find no evidence of a formal ash sampling and composite sampling protocol, but we also found that no plant personnel training was in place to insure Quality Control. This led us to question the protocol which was used to both sample and composite the ash samples for testing. The City then requested Nassaux-Hemsley to take all of ash samples from that test period, mix together all of the ash samples together, take a composite sample from the sample mix and test that composite sample. As you can see, the second analysis shows that we are still high in lead. However, you can also see that the concentrations of the elements on the first analysis are not consistent with those on the second analysis. This, in the City's opinion, underscores the need for a formal ash sampling protocol to insure that the most representative composite sample of the ash is being tested.

The City also believes that the elevated concentrations of lead present in the two analyses may be related to activities which were undertaken in the plant during the period of time when the ash samples were taken. During this period, the City undertook extensive cleaning activities, removing accumulated particulate matter around the facility. We believe this material may have had a higher concentration of lead than would be expected.

As a result of the foregoing, the City is in the process of sampling ash for testing for the second quarterly analysis for 1989. In the interest of time, we have used a "Short Term Ash Sampling Protocol" (attached) to sample and composite the ash for testing for the second quarter analysis for 1989. As soon as those results are available, I will forward the analysis to the Department. In addition, the City and its consultants are developing a formal "Ash Sampling and Composite Sample Protocol" to submit to the department for approval for future ash testing. The formal protocol will be consistent with ASTM/ASME standard sampling protocols. I hope to have that submittal to you by next week. Immediately upon protocol approval from the Department, comprehensive training of plant personnel responsible for ash sampling and composite sampling will commence to insure Quality Control with respect to the formal "Ash Sampling and Composite Sample Protocol".

As you are well aware, the City is undertaking many improvements to the HSGF and plans to undertake additional improvements to the facility. Moreover, the City believes that the following additional measures will reduce the likelihood of excessive concentrations of heavy metal in our ash residue:

1. The City is revising the Rules and Regulations for Refuse Delivery and is notifying all haulers that it will not accept materials which may increase the concentrations of potentially hazardous substances. Haulers will be advised that random inspections of the waste delivered to the facility will be undertaken, with severe penalties to be imposed on violators. Please find attached copies of the former and revised rules and regulations; and the notification. Crane Operators, Floor Attendants and other operations personnel working at the facility will be trained to detect and identify potentially hazardous materials.

- 2. Improvements to the plant, which are now underway and planned, which will minimize the accumulation of particulate matter at the facility. Such as:
 - a. New Flyash Rotary Airlocks.
 - b. Replacing and repairing deteriorated Flyash Ducting.
 - c. Resealing doors, covers and man-ways to the Flyash System.
 - d. Repairing Expansion Joint Seals to prevent inleakage.
 - e. Installing Acoustic Horns on the Inlet Screens in the Precipitators to help prevent blocked Flyash Hoppers.

The City is willing to consider other reasonable measures which the Department may suggest.

If you have any questions and/or comments regarding this issue, do not hesitate to telephone me at 236-5361.

John M. Jukens

Sincerely,

Acting Director

JL/jl cc:

Stephen R. Reed, Mayor

Daniel R. Lispi, Project Manager

Leslie D. Davies, Director of Engineering

Howard J. Wein, Esquire

Frank P. Fair, Acting Regional Manager

Amy Putnam, Esquire

Enclosures

File

ER - \"M - 162:3/88 Date Prepared

89-05-18

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

FORM 41 MUNICIPAL INCINERATOR ASH RESIDUE MONITORING REPORT

I.D. Number				
100758				
100759	İ			
100992				

Part I. Facility NameC11	ty of Harrisburg Stem Ge	enerating Facil	lity	
Location: CountyDat	iphin	Municipality		
Date Sample Collected 2/2	21/89	Time of Sampling)	
Sample Collectors Name <u>Ed</u>	•			
Sampling Location (in accordar	nce with Section 283,403)			
				•
Part II. Chemical Analysis Para		•		
A. Total Analysis (dry weight	•	-		
Aluminum 20,000	. mg/kg	Aluminum .	27	mg/l
Antimony <u>78</u>	, mg/k g	Antimony	1	mg/l
Arsenic 0.65	. mq/kg	Arsenic	.08	mg/l
Barium · 440	. mg/kg	Barium	.26	mg/l
Cadmium 19	. mg/kg	Cadmium	.8	mg/l
Chromium 28	_ mg/kg	Chromium	< 0.1	mg/l
C opper <u>570</u>	_ mg/kg	Copper	· .9	mg/l
Lead 1,100	_ mg/kg	Lead	: 10	mg/l
Mercury55	mg/kg	Mercury	< 0.005	mg/l
Molybdenum4	mg/kg	Molybdenum	1	mg/l
Nickel 35	_ mg/kg	Nickel	5	· mg/l
Selenium 7.2	_ mg/kg	Selenium	< 0.05	mg/l
Silver 8.8	_ mg/kg	Silver	< 0.1	mg/l
Zinc 1,600	_, mg/kg	Zinc	62	mg/l
Total Residue 79.3	_ mg/kg	COD mg/l	2,840	ASTM Method A
Volatile Residue on 2.3 Total Residue	mg/kg	TOC mg/l		ASTM Method A
pH11.32			ed Solids Residual) mg/l	ASTM Methods A
Additional Parameters:		рН	5.35	
	mg/kg	Additional Pa	rameter\$:	
·	mg/kg	<u></u>		mg/l
	mg/kg			mg/l
			•	mg/l

CUDIN +

Part III. Name, Address and Supervisor of Laboratory Performing (Chemical Analysis:
Analytical Laboratories A Division of Skelly and Loy	
2601 North Front Street	
Harrisburg, Pennsylvania 17110	
Laboratory Manager Michael S. Farlling (717 232-0593) Part IV. CERTIFICATION OF OWNER/OR OPERATOR FOR PROCES	SSING FACILITY
This is to certify that I have personally examined and am familiar valuements. I am aware of the Department of Environmental Resource for this type of facility. I believe that the submitted information is truthat there are significant penalties for submitting false information.	es' permit and operational requirements se, accurate and complete. I am aware
Name JOHN A. LUKENS, ACTUME DIRECTOR	• ·
Signature Jan Figure	Date <u>5-19-89</u>

ER'-WM-162:3/88 Date Prepared

89-06-14

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF WASTE MANAGEMENT

FORM 41
MUNICIPAL INCINERATOR ASH
RESIDUE MONITORING REPORT

	I.D. Number
•	100758
	10075 9
	100992

rt I. Facility	NameC	ity of Harrisburg	Steam Generating Fa	cility	·
cation: Count	y <u>Dauph</u>	<u>n</u>	Municipality	Harrisburg	, Pa
te Sample Co	ollected 2/3/8	39 thru 2/19/89	Time of Sampli	ng	
mple Collecto	ors Name	Ed Egenrieder			·
molina Locati	on lin accord	ance with Section 28	3.403)		
mpinig Locati	on im accord	ance with Section 20	3.403/		
rt II. Chemica	l Analysis Par	ameters			
Total Analy	sis (dry weigh	nt basis)	B. Leaching An	alysis (EP-To	xicity Test)
Aluminum	41,000	_ mg/kg	Aluminum	11.7	mg/l
Antimony	56	_ mg/kg	Antimony	0.088	mg/l
Arsenic	21	_ mg/kg	Arsenic	0.04	mg/l
Barium	1120	_ mg/kg	Barium	< 0.5 ○	mg/l
Cadmium	29	_ mg/kg ··	Cadmium	0.78	mg/l
Chromium	169	_ mg/kg	Chromium	0.08	_ mg/l
Copper	1030	_ mg/kg	Copper	1.43	_ mg/l
Lead	1400	_ mg/kg	Lead	8.2	_ mg/l
Mercury	20	_ mg/kg	Mercury	0.60	mg/l
Molybdenur	m	_ mg/kg	Molybdenun	n	mg/l
Nickel	100	_ mg/kg	Nickel	0.62	_ mg/l
Selenium	59	_ mg/kg	Selenium	0.25	mg/l
Silver	12	_ mg/kg	Silver	0.02	mg/l
Zinc	4800	mg/kg	Zinc	1.07	mg/l
Total Residu	ue	_ mg/kg	COD mg/l	98	ASTM Method A
Volatile Res Total Res		mg/kg	TOC mg/l	13	_ ASTM Method A
рН	11.0	-			_ASTM Methods A g/l 2860mg/1
Additional P	Parameters:		pН	9.0	
		mg/kg	Additional P	arameters:	
	· · · · · · · · · · · · · · · · · · ·	mg/kg	· · · · · · · · · · · · · · · · · · ·		mg/
		mg/kg			mg/
				•	ma

^{**} The sample did not consume all the acid available for the leaching test.

FORM 41

	berland Analytical		, inc			
36 1	North Second Stree	T.				
Char	mbersburg, Pa.	17201	Phone: 717	7-263-5943		
Part IV.	CERTIFICATION OF	OWNER/OR O	PERATOR FOR E	PROCESSING FAC	LITY	·
documen for this ty	certify that I have ts. I am aware of the pe of facility. I belie are significant pen	Department of live that the sub-	Environmental Remitted information	esources' permit an on is true, accurate	d operation	nal requirements
Name	John A. Lukens	Acting D	irector			
Signature	John With				Date _	89-06-14
						· · · · · · · · · · · · · · · · · · ·
			~			
		•			•	en de la companya de la companya de la companya de la companya de la companya de la companya de la companya de La companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de

			#1	#1	#2	#2		
		1	BOILER	FLY ASH		FLY ASH	ſ	1
SAMPLE	DATE	TIME	IN	IN	IN	IN IN	SAMPLER	COMMENTS
SWITTE	1989	TIME	SERVICE	SERVICE	SERVICE	SERVICE	SAMPLER	COMMENTS
	02/03	09:00	YES				ECCV	
1 2	$\frac{02/03}{02/03}$	13:15	YES	YES	YES	YES	EGGY	
3	$\frac{02/03}{02/03}$	15:55	YES	YES YES	YES	YES	EGGY	#1 COMENC DOUBL
	02/03	20:20	NO		YES	YES	JOHN L.	#1 COMING DOWN
4	$\frac{02/03}{02/04}$			YES	YES	YES	AL McP	
5	$\frac{02/04}{02/04}$	00:30	NO	YES	YES	YES	AL McP	
6 7		04:10	NO	YES	YES	YES	AL MCP	
	$\frac{02/04}{03/04}$		NO	YES	YES	YES	JOHN L.	#1 COMTAG UD
8	$\frac{02/04}{03/04}$	14:10	NO	YES	YES	YES	JOHN L.	#1 COMING UP
9	02/04 02/05		YES	YES	YES	YES	AL MCP	#2 COMTNG DOUBL
10		00:05	YES	YES	YES	YES	AL McP	#2 COMING DOWN
11	02/05	04:00	YES	YES	YES	YES	AL McP	
12	02/05	08:00	YES	YES	NO	YES	JOHN L.	
13	02/05	12:30	YES	YES	NO	YES	JOHN L.	
14	02/05	15:50	YES	YES	NO	YES	JOHN L.	
15	$\frac{02/05}{02/05}$	20:00	YES	YES	NO	YES	SAM Z.	
16	02/05	23:55	YES	YES	NO	YES	SAM Z.	
17	02/06	03:50	YES	YES	NO	YES	SAM Z.	
18	02/06	08:45	YES	YES	NO	NO	EGGY	
19	$\frac{02/06}{02/06}$	12:00	YES	YES	NO	NO	EGGY	
20	02/06	16:00	YES	YES	NO	NO	D ANTLE	
21	$\frac{02/06}{02/07}$	20:00	YES	YES	NO	NO	L LEACH	
22	02/07	00:45	YES	YES	NO	NO	L LEACH	
23	$\frac{02/07}{02/00}$	04:10	YES	YES	NO	NO	L LEACH	
24	02/09	09:10	NO	NO	YES	YES	JOHN L	#2 COMING UP
25	02/09	13:25	NO	NO	YES	YES	JOHN L	
26	02/09	17:35	NO	NO	YES	YES	JOHN L	
27	02/09	22:10	NO	NO	YES	YES	AL McP	
28	02/10	02:05	NO	NO	YES	YES	AL McP	
29	02/10	06:10	NO	NO	YES	YES	AL McP	
30	02/16	10:32	YES	YES	YES	YES	EGGY	
31	02/16	14:50	YES	YES	YES	YES	EGGY	
32	02/16	17:45	YES	YES	YES		D ANTLE	# 2 GOLITICA III
33	$\frac{02/17}{02/17}$	18:30	YES	YES	YES	YES	JOHN L	#2 COMING UP
34	$\frac{02/17}{02/10}$	21:30	YES	YES	YES	YES	AL MCP	
35	02/18	01:45	YES	YES	YES	YES	AL McP	
36	02/18	05:20	YES	YES	YES	YES	AL McP	h
37	02/18	19:55	YES	YES	YES	YES	AL MCP	
38	02/18	23:55	YES	YES	YES	YES	AL MCP	
39	02/19	03:50	YES	<u> </u>	YES	YES	AL McP	
40	02/19	08:40	YES	YES	YES	YES	JOHN L	·
41	02/19	13:05	YES	YES	YES	YES	JOHN L	
42	02/19	17:25	YES	YES	YES	YES	JOHN L	
43								
44	i							

DEPARTMENT OF INCINERATION AND STEAM GENERATION

SHORT TERM ASH SAMPLING PROTOCOL FOR E.P. TOXICITY TEST

- 1. Every twelve (12) hours, during a seven (7) day period, take a five (5) Gallon sample from each ash discharger on line. Log the date, time and condition of operation when samples are taken from the respective ash dischargers. (Note: Flyash Systems must be operational, do not take a sample from a unit if the flyash system is out of service. If necessary, wait until a respective Flyash System is in operation, before taking a sample from that unit.)
- 2. Combine one day's worth of samples in a mixing pan.
- 3. Remove all visible scrap metal from the combine sample only. Leave remaining material in the combined sample.
- 4. Crush the combined sample into pieces no larger that one half (1/2) inch.
- 5. Mix combined sample thoroughly.
- 6. Dump combined sample out, making a pile.
- 7. Spread out the pile and quarter (1/4) it.
- 8. Keep one (1) of the quarters (1/4) and discard the remaining three quarters (3/4).
- 9. Repeat procedures six (6) and seven (7) until there is approximately one (1) Gallon of combined sample.
- 10. Crush the remaining one (1) Gallon combined sample into pieces no larger than one quarter (1/4) inch.
- 11. Place the combined sample into a one (1) Gallon sample container and seal the lid.
- 12. After the seven (7) day period is complete, combine all of the one (1) Gallon combined samples and repeat procedures six (6) and seven (7) until there is approximately one (1) Gallon of combined composite sample.
- 13. Send final combined sample to laboratory for E.P. Toxicity Test.

FORMER CITY OF HARRISBURG STEAM GENERATING FACILITY DEPARTMENT OF INCINERATION & STEAM GENERATION

Rules & Regulations for Refuse Delivery

1. Only authorized refuse collection and/or transport vehicles will be granted entry onto the tipping floor. All such vehicles must display a valid permit for the current year, unless approved by the Steam Generating Facility Billing Office.

These vehicles are those operated by:

- a. City of Harrisburg
- b. Other Municipalities
- c. Agencies of Federal, State or County Government
- d. Commercial or Industrial Establishments
- e. Private Collectors and/or Haulage Contractors
- f. Steam Plant Residue Haulage Vehicles
- g. Salvaged Metal Haulage Vehicles
- 2. The Steam Plant will operate on a twenty-four (24) hour daily basis including weekends and holidays.
- 3. All vehicles entering onto the Public Works Center grounds will be required to obey all traffic directional signs, stop signs, speed limits, etc., as posted, as well as such directives as may be issued by the Director of Public Works and/or Director of Incineration & Steam Generation for traffic control purposes.
- 4. Vehicles shall enter the tipping floor via the truck scale, west end, and exit via the east end truck door.
- 5. Prior to dumping, all vehicles will be weighed on the truck scale and the required information printed and recorded. The original slip will be issued to the hauler.
- 6. All vehicles shall dump their loads onto the assigned tipping floor area. There will be no dumping directly into the pit unless specifically authorized by S.G.F. personnel.
- 7. All unauthorized dumps and/or spills will be promptly cleaned up and removed by the violating hauler.
- 8. All areas of the Steam Plant, other than the tipping floor, Billing office, rest rooms, water cooler, and the public telephone adjacent to the front office are off limits to truck crews. At no time are truck crews permitted inside the plant or in the employees' lunchroom.
- except in parking spaces provided, unless specifically approved by the S.G.F. Billing Office or Shift Supervisor.

- 0. No vehicle shall leave the pit area with tail gates open, doors open or dump bodies in a raised position.
- 1. <u>Dumping</u> Unloading operations will be completed as swiftly as possible to prevent unnecessary delays on the tipping floor.
- 2. Scavenging on the tipping floor, or anywhere on the premises is strictly prohibited.
- .3. The use of, or dispensing of narcotics, dangerous prohibited substances, alcoholic beverages, etc. on City property is strictly forbidden.
- 14. All open box vehicles, including pickup trucks, must be covered by a tarpaulin to prevent unnecessary littering of streets and the Public Works Center grounds.
- 15. Any damage to City property or the property of others will be the sole responsibility of the operator and/or hauler involved. The violating driver shall remain at the S.G.F. until City personnel have completed their investigation and acquired all pertinent information.
- 16. Violations of Rules 3-15 may result in a thirty day suspension of dumping privileges. Two violations may result in permanent revocation of dumping privileges.
- 17. The following will not be accepted as refuse for disposal except as provided in Rules 19 and 20.
 - a. Highly flammable and/or explosive materials such as paint and paint thinners, cleaning fluids, waste oils and oil derivitives, chemicals, fine powders and dust, gun powder, blasting caps, ammunition, wood shavings and the like.
 - b. Non-handleable and non-burnable items such as motors, pumps, crankshafts, axles, large metal drums, large tree trunks and stumps, and the like.
 - c. Excessive admixtures (over 10% by weight) of non-burnables such as ashes, glass, ceramics, rigid plastics, concrete, masonry, brick, block, plaster, dirt, and the like.
 - d. Excessive admixtures (over 15% by weight) of abattoir and cannery wastes, canned or bottled food and beverages, unburned coal and the like.
 - e. All animal carcasses.
- 18. The following oversized materials will be accepted subject to billing at the oversized bulky waste (OBW) and tire rates.
 - a. Tree limbs and waste lumber under 150 square inches in cross section and under 15 in length.

- b. Wood, metal, large cardboard boxes, crates, barrels, drums, and pallets.
 - c. Home and office furnishings such as furniture, refrigerators, washing machines, dryers, stoves, water heaters, plumbing fixtures, mattresses, bed springs, bicycles, and the like. All appliances must have motors removed.
 - d. Rubber tires.
- 19. Special Handling Billing for special handling materials shall include charges for supervision, equipment used and/or manpower provided, and the current tonnage rates for classified and security items. These materials will include:

Non Hazardous Industrial Waste and High BTU Content Material - Prior approval, a minimum of twenty-four hours before dumping, must be obtained from the S.G.F. management. A one (1) gallon sample may be taken from each truck and tested at the time of delivery before dumping is permitted. In some instances, at the discretion of the S.G.F. management, a sample may be required for testing before delivery and disposal is permitted.

<u>Classified Material</u> - Narcotics, materials recieved from various law enforcement agencies, confidential papers and tapes, and spoiled or surplus foodstuffs, require special handling. All materials of this nature will require prior approval (a minimum of twenty-four hours) before they will be accepted for disposal. All such materials must be in sealed containers or bags before delivery will be accepted.

20. Rules 17, 18, and 19 will be strictly enforced.

The Steam Plant management reserves the right to inspect all truck loads received for disposal to determine any violations. Inspection will be made by dumping the suspect load on the Tipping Floor at the east end for sorting and inspection. Any prohibited materials discovered will be promptly and thoroughly removed by the hauler involved at no expense to the City.

Each violation (truck load) will be subject to the following penalties:

- a. First Offense \$100 fine and/or thirty day suspension of dumping privileges.
- b. Second Offense \$250 fine and/or sixty (60) day suspension of dumping privileges.
- c. Third Offense permanent revocation of dumping privileges.

21. Violations of the Rules by City collection crews will be punishable in accordance with the Standard Work Rules for the City of Harrisburg.

NOTE: On stipulated days, residents of the City of Harrisburg and such municipalities as may enter into a contractual agreement with the City of Harrisburg, will be granted free dumping privileges subject to the limitations described in Rules 18 and 19. Proof of bonafide residency in the appropriate municipality will be required before dumping privileges will be extended.

DRAFT TO HAULERS

Date

Hauler Name Hauler Address

Dear Plant User:

Enclosed, please find attached a copy of the revised Rules and Regulations for Refuse Delivery at the Harrisburg Steam Generating Facility (H.S.G.F.). These rules and regulations are effective immediately.

The City of Harrisburg, Department of Incineration and Steam Generation will not accept materials which may increase the concentrations of potentially hazardous substances. Therefore, the past rules and regulations were revised to more accurately reflect and comply with the current EPA and Pennsylvania DER Regulations regarding solid waste disposal. Random inspections of the loads of refuse delivered to our facility will be made on a daily basis. Any person(s) found in violation of the new rules and regulations will be penalized accordingly.

Copies of the new rules and regulations will also be distributed to all drivers.

If you have any questions regarding the issue, do not hesitate to telephone me at (717) 236-5361. We will certainly work with you to help you comply with the new rules and regulations.

Sincerely,

John A. Lukens Acting Director

JL/jl cc:

Enclosure

RULES & REGULATIONS FOR REFUSE DELIVERY TO THE HARRISBURG STEAM GENERATING FACILITY

Only authorized refuse collection and/or transport vehicles will be granted entry onto the tipping floor of the Steam Generating Facility (S.G.F.). All such vehicles shall display a valid permit issued by the City for the current year, unless otherwise approved in writing by the Steam Generating Facility Billing Office.

These vehicles are those operated by:

- 1. City of Harrisburg
- Other Municipalities
- 3. Agencies of Federal, State or County Government
- 4. Commercial or Industrial Establishments
- 5. Private Collectors and/or Haulage Contractors
- 6. Steam Plant Residue Haulage Vehicles
- 7. Salvaged Metal Haulage Vehicles
- 2. The S.G.F. will operate on a twenty-four (24) hour daily basis including weekends and holidays.
- 3. All vehicles entering onto the Public Works Center grounds shall be required to obey all traffic directional signs, stop signs, speed limits, etc., as posted, as well as such directives as may be issued by the Director of Public Works and/or Director of Incineration and Steam Generation for traffic control purposes.
- 4. Vehicles shall enter the tipping floor via the truck scale, west end, and exit via the east end truck door.
- Prior to dumping, all vehicles shall be weighed on the truck scale and the required information printed and recorded. The original slip will be issued to the hauler.
- All vehicles shall dump their loads onto the assigned tipping floor area. There will be no dumping directly into the pit unless specifically authorized by S.G.F. personnel.

- 7. All unauthorized dumps and/or spills shall be promptly cleaned up and removed by the violating hauler to the satisfaction of the City.
- 8. All areas of the Steam Plant, other than the tipping floor, Billing Office, Rest Room, water cooler and the public telephone adjacent to the front office, are off limits to truck crews. At no time are truck crews permitted inside the plant or in the employees' lunchroom.
- 9. Vehicles or containers shall not be left unattended nor parked on site except in parking spaces provided, unless specifically approved by the S.G.F. Billing Office or Shift Supervisor.
- 10. No vehicle shall leave the pit area with tail gates open, doors open or dump bodies in a raised position.
- Dumping Unloading operations shall be completed as swiftly as possible to prevent unnecessary delays on the tipping floor.
- 12. Scavenging on the tipping floor, or anywhere on the premises, is strictly prohibited.
- 13. The use of, or dispensing of narcotics, dangerous prohibited substances, alcoholic beverages, etc., or City property is strictly forbidden.
- 14. All open box vehicles, including pickup trucks, shall be covered by a tarpaulin to prevent unnecessary littering of streets and the Public Works Center grounds.
- 15. Any damage to City property or the property of others, including all consequential damages caused by the transporter, collector and/or hauler involved shall be the sole responsibility of the transporter, collector and/or hauler involved. The violating driver shall remain at the S.G.F. until City personnel have completed their investigation and acquired all pertinent information.

- 16. The following shall not neither be delivered to nor accepted at the S.G.F. for disposal:
 - a. Highly flammable and/or explosive materials such as paint and paint thinners, cleaning fluids, waste oils, oil derivatives and oil sludges, hazardous chemicals, fine powders and dust, gun powder, blasting caps, ammunition, wood shavings, crankcase oils, cutting oils, acids, caustics, poisons, or other materials including significant quantities of waste above 5,200 Btu per pound or below 3,800 Btu per pound and the like.
 - b. Non-handleable and non-burnable items such as; motors, pumps, crankshafts, axles, large metal drums, large tree trunks and stumps, motor vehicles, automotive transmissions, rear ends, springs, fenders, other major parts of motor vehicles, trailers, agricultural equipment, marine vessels or similiar items, farm and other large machinery.
 - c. Excessive admixtures (over 10% by weight) of non-burnables such as ashes, glass, ceramics, rigid plastics, concrete, masonry, brick, block, plaster, dirt, non-burnable construction and demolition material and the like.
 - d. Excessive admixtures (over 15% by weight) of abattoir and cannery wastes, canned or bottled food and beverages, unburned coal and the like.
 - e. All animal carcasses, animal remains, cesspool and other human waste, human remains and offal.
 - f. Metal containers or metal barrels and drums.
 - g. Rubber tires.
 - h. Pathological, infectious or chemotheurapeutic waste as defined in 25 Pa. Code §271.1.
 - i. Household hazardous waste as defined in section 1512(k) of the Pennsylvania Municipal Waste Planning, Recycling and Waste Reduction Act, Act 101 of 1988, No. 53 P.S. §4000.101 et seq., 53 P.S. §4000.1512(k).

- j. Hazardous waste as defined in the Pennsylvania Solid Waste Management Act, the Act of July 7, 1980, P.L. 380, No. 97, 35 P.S. §6018.101 et seq. and the rules and regulations promulgated thereunder, including but not limited to 25 Pa. Code §75.261 et seq.
- k. Automobile, marine, other lead acid and other storage batteries.
- 1. Liquid wastes.
- m. Source, special nuclear or by-product material as defined by the U.S. Atomic Energy Act of 1954, as amended, (68 stat. 923), 42 U.S.C.A. §2014.
- n. Any other waste not specifically authorized by the Solid Waste Management Act, or the rules or regulations promulgated thereunder.
- o. Any other waste that would be likely to cause the S.G.F. to violate any air quality standard or water quality effluent limitation or standard or pose a threat to health or safety or which may cause damage to the S.G.F.
- 17. The following oversized wastes may be accepted by the S.G.F. only provided that the wastes have been segregated by the hauler, collector or transporter and have been specifically approved by the S.G.F.:
 - a. Tree limbs and waste lumber under 150 square inches in cross section and under 15 inches in length.
 - b. Wood, large card board boxes, wooden crates and wooden pallets.
 - c. Home and office furnishings such as furniture, refrigerators, washing machines, dryers, stoves, water heaters, plumbing fixtures, mattresses, bed springs, bicycles and the like; provided however, that all appliances must have the motors removed prior to delivery to the Facility.

18. Special Handing Wastes

a. No special handling wastes shall be delivered to the S.G.F. for disposal unless, where required by the applicable rules and

regulations of Department of Environmental Resources ("Department"), the City has applied for and received approval from the Department after the submittal of a module 1 to the Department, and the transporter or hauler has obtained the prior written approval from the City for such delivery.

- b. No other special handling waste shall be delivered to the S.G.F. for disposal unless the transporter or hauler has obtained the prior written approval from the City for such delivery.
- c. Billing for special handling waste materials shall include charges for supervision, equipment used, and/or manpower provided, at the higher rate provided herein. The S.G.F. management reserves the right to determine when these charges are applicable.
- d. Non-Hazardous Industrial Waste and High BUT

 Content Material In addition to the
 foregoing, prior written approval, a minimum
 of twenty-four (24) hours before dumping, must
 be obtained from the S.G.F. management. A one
 (1) gallon sample may be taken from each truck
 and tested at the time of delivery before
 dumping is permitted. In some instances, at
 the discretion of the S.G.F. management, a
 sample may be required for testing before
 delivery and disposal is permitted.
- e. Classified Material Narcotics, materials received from various law enforcement agencies, confidential papers and tapes, and spoiled or surplus foodstuffs, require special handling. All materials of this nature will require prior written approval (a minimum of twenty-four (24) hours) before they will be accepted for disposal. All such materials must be in sealed containers or bags before delivery will be accepted.
- Right of Inspection By delivering waste material to the S.G.F. for disposal, the transporter, collector and/or hauler acknowledges the right of the City, its employees or its authorized agents to inspect all truck loads delivered to the S.G.F. to ascertain whether any violation of the rules and regulations exist.

 Inspection can be made in any manner that the City deems necessary. The City may require that the transporter, collector and/or hauler dump the suspect load on the

east end of the tipping floor for sorting and inspection. The discovery in the delivery of any materials not authorized by the rules or regulations by the City shall entitle the City to require the prompt and thorough removal by the transporter, collector or hauler involved at no expense to the City. The exercise of this remedy hereunder shall not be construed to waive any other remedy under these rules and regulations or at law or in equity for any violation hereunder of these rules and regulations.

- 20. Each truck that delivers waste material to the S.G.F. in violation of these rules and regulations shall be deemed to constitute a separate offense and shall subject to the collector, transporter and/or hauler to the following penalties:
 - 1. First offense \$1,000 fine and/or thirty (30) day suspension of dumping privileges.
 - 2. Second offense \$2,500 fine and/or sixty (60) day suspension of dumping privileges.
 - 3. Third offense \$5,000 fine and permanent revocation of dumping privileges.
- In addition to any other remedy or penalty prescribed herein, or any other remedy at law or in equity, a violation of any of the foregoing rules and regulations shall entitle the City to impose all direct and consequential costs associated with the violation, including but not limited to:
 - a. all costs for the proper disposal of all material delivered to the S.G.F. in violation of these rules and regulations.
 - b. all damage to equipment that is in any way caused by the delivery of material to the S.G.F. in violation of these rules and regulations.
 - c. all costs, damages, claims, fines and penalties imposed upon the City by an administrative agency, administrative tribunal or a court or settlement of any claim, for any action, activity or condition, including but not limited to cliams for personal injury or property damage arising out of or in any way caused either directly or indirectly by the delivery of material to the S.G.F. in violation of these rules and regulations.

- d. all costs, damages, fines and penalties associated with the storage, treatment, or disposal of any ash residue or other waste generated by the S.G.F., which would not have to have been incurred, except as a result of the delivery of material to the S.G.F. in violation of these rules and regulations.
- Rights Unaffected Nothing contained in these rules and regulations shall be construed to affect any right of the City now existing or hereinafter to institute any action to enforce these rules and regulations or any action, activity or condition caused by a violation of these rules and regulations, including but not limited to, an action to terminate a contract with a hauler, collector and/or transporter who has violated these rules and regulations.
- 23. Violations of these Rules and regulations by City collection crews will be punishable in accordance with the Standard Work Rules for the City of Harrisburg.

JUN2 1 1990

HARRISBURG REGION

	DELIVER TO:	NUA HOUSSEAL
	FIRM:	DER.
X		6-20-90 GALARDINI
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W. N. W. #B2-SPECIAL GRASS MIXTURE 49 00% LOT#94975 KENTUCKY 31 TALL FESCUE ORIG GERM + HS 19.60% CREEPING RED FESCUE 9. So% 85% SYLVANA HARD FESCUE 9. 78% 90% ANNUAL RYEGRASS 9.68% RANGER PERENNIAL RYEGRASS 85% 90% 45% OTHER CROP SEED 1.19% 90% INERT MATTER 50 LBS NET WT. 50% WEED SEED UNDESTRABLE GRASS SEED TEST DATE ORCHARDGRASS 1888/LB. 4/90

Jooks good overall what have been speced in permit

W.N.W #82-CONSERVATION MIXTURE
PURE % SEED ORIG GERM + HS
72.00% PERENNIAL RYEGRASS 90%
24.83% PENNGIFT CROWNVETCH MN. 50+20%HS

2.57% OTHER CROP SEED .50% INERT MATTER 50 LBS.NET WT. .10% WEED SEED TEST DATE 4/90

> HLEY-HARDY SEED CO 454 Railroad Avenue Shiremanstown, Pa. 17011

657-4416

March 28, 1990

The City of Harrisburg Department of Administration 10 North Market Square Harrisburg, PA 17101

Attention: Mr. Alan B. Morton, Purchasing Agent

Re: Project No. 1482-90 City of Harrisburg

Department of Incineration

B-2 Residue Area

Gentlemen:

In accordance with your letter dated March 28, 1990, we are submitting the additional information you requested from us and from Gundle Lining Systems, Inc.

If we can be of further assistance, please do not hesitate to contact us.

Very truly yours,

Robert M. Mumma, Il

President

RMMII/par Enclosures

GUNDLE LINING CONSTRUCTION CORP. REFERENCE LIST

Customer	Contact/Phone	Application	Mil	Sq.Ft.	Inst Date	Engineer
Wayne Disposal Dearborn, MI	Jerry Fore (313) 326-0200	Landfill	60	3,000,000	8/87	In House
Chemical Waste Mgmt. Kettleman Hills, CA	Bob Peterson (209) 386-9711	Landfill	60	3,000,000	10/87	In House
Gulf Coast Disposal Ft. Meyers, FL	Bob Himschoot (813) 334-4115	Landfill	60	1,000,000	5/87	In House
Newmont Mines Carlin, NV	Vern Sredronsky (702) 738-7196	Leach Pad	80	10,000,000	11/86-11/87	In House
Monsanto Corp. Columbia, TN	Bob Brooks (615) 388-3431	Landfill	60	7,000,000	8/86	Geologic Assoc.
Waste Management Morrisville, PA	Tony Eith (215) 736-2000	Landfill	60	5,000,000	9/87	In House
GSX St. Louis, MO	Chuck Emde (314) 241-3721	Landfill	30	300,000	6/86	In House
Smithfield Foods Smithfield, VA	Bo Manley (804) 357-4321	Holding Pond	30	2,000,000	8/87	In House
Cedar Hills Seattle, WA	Dave Nyblom (206) 228-4940	Landfill	80	2,000,000	9/87	CH2M H111
Waste Mgmt. Cape May, NJ	Gary Crawford (215) 736-2000	Landfill Cap	40	\831,53 7	7/87	In House
Magma Copper San Manuel, AZ	Paul Hovan (702) 738-7196	Leach Pad	60	5,000,000	5/87	In House
S.W. Orange County Orlando, FL	Emmett Owens (305) 660-2552	Holding Ponds	40	2,400,000	2/87	CDM



GUNDLINE HDT INSTALLATIONS

CUSTOMER	MIL	SQ. FT.
CECOS INTERNATIONAL Livingston, LA	80	20,000
TOWN OF ISLIP Islip, NY	80	400,000
WASTE MANAGEMENT New Milford, CT	40	80,000
CITY OF SPOKANE Spokane, WA	50	1,100,000
RUSSELL COUNTY LANDFILL Russell County, VA	60	100,000
CARY WASTEWATER TREATMENT Cary, NC	60/80	250,000
RAPPAHANNOCK COUNTY LANDFILL Rappahannock County, VA	60	100,000
MIDWAY LANDFILL Seattle, WA	60	265,000
CEDAR HILLS LANDFILL King County, WA	60	480,000
BROWNING-FERRIS INDUSTRIES Last Chance, CO	80 40	288,000 132,000
DEL HUR IND/COLUMBIA ALUMINUM Goldendale, WA	50 60	243,000 18,900
LAIDLAW WASTE Valencia, CA	60	9,450
VASHON ISLAND LANDFILL Vashon Island, WA	80	202,000
WHARF RESOURCES Deadwood, SD	60	1,426,000
CHARLES GEORGE SUPERFUND CLOSURE Tyngsboro, MA	60	2,800,000

Gundle Lining Construction Corp



19103 Gundle Rd. Houston, Texas 77073 U.S.A.

Phone: (713) 443-8564 Toll Free: (800) 435-2008 Telex: 4620281 GUNDLE HOU Fax: (713) 875-6010

WARRANTY NO.:

SAMPLE

EFFECTIVE DATE:

TBD

SAMPLE

WORKMANSHIP WARRANTY

GUNDLE LINING CONSTRUCTION CORP hereby warrants, to and only to, (OWNER'S NAME), that the GUNDLINE HD linings installed by GUNDLE LINING CONSTRUCTION CORP at the location and for the intended use described below, under this warranty, shall be installed free from defects in GUNDLE LINING CONSTRUCTION CORP'S workmanship. The warranty set forth in the preceding sentence (the "Workmanship Warranty") shall commence on the date that GUNDLE LINING CONSTRUCTION CORP completes the installation of the linings at the location and for the intended use described below, and shall apply until, and shall expire on the last day of a period of * year(s) from said date, and shall be subject to the following conditions:

- 1. The Workmanship Warranty shall extend only to proper installation of the linings. The Warranty shall not apply to any alleged defect in installation that is occasioned by fire, Acts of God, or acts of any person or entity other than GUNDLE LINING CONSTRUCTION CORP or its agent, including without limitations: abuse, negligence, misuse, improper treatment, vandalism, or any alleged defects caused by directly or indirectly by falling objects, abnormal environmental conditions, improper site preparation, subgrade settlement, or by any event beyond the reasonable control of GUNDLE LINING CONSTRUCTION CORP.
- 2. The Workmanship Warranty shall not be effective unless GUNDLE LINING CONSTRUCTION CORP receives Company's written claim therefore within the warranty period and within thirty (30) days after the date of discovery of such defect. GUNDLE LINING CONSTRUCTION CORP shall have the right to verify, by its own representative, the nature and extent of the defects complained of.
- 3. The extent of GUNDLE LINING CONSTRUCTION CORP'S liability for breach of the Workmanship Warranty shall be limited to timely repairing or replacing the defective installation workmanship, utilizing such workmanship as should result in providing the pro-rated performance remaining under the original period of the Workmanship Warranty. In the event that it is necessary for GUNDLE LINING CONSTRUCTION CORP to repair or replace any defective workmanship with respect to the Linings, Company shall afford GUNDLE LINING CONSTRUCTION CORP clear and unrestricted access to the Linings, which shall not be encumbered by any overlying material or liquid, and shall cooperate in all respect with GUNDLE LINING CONSTRUCTION CORP to accomplish said repair. In no event will GUNDLE LINING CONSTRUCTION CORP be liable for the cost of labor expended by any person or entity other than GUNDLE LINING CONSTRUCTION CORP or its agent on any defective workmanship with respect to the installation of the Linings.
- 4. The Workmanship Warranty is extended to Company and is non-transferable and non-assignable. No rights against GUNDLE LINING CONSTRUCTION CORP shall be created by any attempted transfer or assignment, nor shall any rights against GUNDLE LINING CONSTRUCTION CORP survive any attempted transfer or assignment.
- 5. No terms or conditions, other than those stated herein, and no agreement or understanding, oral or written, and no course of conduct or performance, in any way purporting to modify the Workmanship Warranty or to waive GUNDLE LINING CONSTRUCTION CORP'S rights hereunder,



PURCHASER/(COMPANY):

shall be binding on GUNDLE LINING CONSTRUCTION CORP unless the same shall be clearly described in written memorandum that expressly refers to the Workmanship Warranty and is separately signed by a duly-authorized officer of GUNDLE LINING CONSTRUCTION CORP. Moreover, additional liabilities of, or limitations upon, the rights and remedies of GUNDLE LINING CONSTRUCTION CORP contained in such documents as purchase orders, order acknowledgements, or change orders which may subsequently be exchanged between the parties shall have no force or effect upon the Workmanship Warranty. All proposals, negotiations and representations, if any, made prior to or with reference hereto are merged herein.

- 6. This Workmanship Warranty shall not be effective unless payment in full has been made to GUNDLE LINING CONSTRUCTION CORP for all labor, installation, and other services provided.
- 7. The laws of the State of Texas shall govern the rights and duties of the parties under this Agreement. Venue for all legal proceedings involving this Workmanship Warranty or any matter contained within, shall be in Harris County, Texas.

MANER'S NAME

THE FOREGOING WORKMANSHIP WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES (EXCEPT OF TITLE), EXPRESS, IMPLIED, OR STATUTORY. IN NO EVENT SHALL GUNDLE LINING CONSTRUCTION CORP BE LIABLE FOR LOSS OF PROFITS, OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSSES, RESULTING FROM ANY DEFECTS IN GUNDLE LINING CONSTRUCTION CORP'S WORKMANSHIP, INCLUDING WITHOUT LIMITATION IMPROPER INSTALLATION OF THE LININGS.

	(0
LOCATION OF INSTALLATION:	
DESCRIPTION OF INTENDED USE:	
GUNDLE LINING CONSTRUCTION CORP 19103 GUNDLE ROAD HOUSTON, TX 77073	SAMPLE
•	Curtis H. Wolthuis
	Contracts Specialist
	Date



19103 Gundle Rd. Houston, Texas 77073 U.S.A. Phone: (713) 443-8564 Toll Free: (800) 435-2008 Telex: 4620281 GUNDLE HOU Fax: (713) 875-6010

WARRANTY NO.

SAMPLE

EFFECTIVE DATE:

TBD

SAMPLE

MATERIAL WARRANTY

GUNDLE LINING SYSTEMS, INC. warrants, to and only to, (OWNER'S NAME), the material GUNDLINE HD, at the time of sale, to conform to the specifications of GUNDLE LINING SYSTEMS, INC., and to be free from defects in materials and to be able to withstand normal weathering and use from the date of installation or sale for a period of * year(s) for ^ mil HDPE under normal uses and services for which it is designed and manufactured in any customary weather which may be encountered and which is not customarily considered to be in the nature of an Act of God, casualty or catastrophe such as (but not limited to): earthquake, flood, piercing hall, or tornado. Normal use and service excludes, among other things: the exposure of the liner to chemicals known to be harmful to the liner, mechanical abuse by machinery, equipment or people; excessive pressure or stress from any source.

Should defects or premature loss of use within the scope of the above Material Warranty occur, GUNDLE LINING SYSTEMS, INC. will, at their option, supply repair or replacement material on a pro-rata basis at the then-current price in such manner as to charge Company only for that portion of the warranted * year life which has elapsed since the purchase of the material. To enable GUNDLE LINING SYSTEMS, INC.'S technical staff to properly determine the cause of any alleged defect and to take appropriate steps to supply repair or replacement material for timely corrective measures, any claim for alleged breach of warranty must be made in writing, by certified mail, to GUNDLE LINING SYSTEMS, INC. within thirty (30) days after the alleged defect was first noticed, and within the warranty period, or the defect and all warranties will be deemed to have been waived by Company. In the event repairs or replacements are to be effected, the lined area must be tendered to GUNDLE LINING SYSTEMS, INC. in a clean, dry, unencumbered condition. This includes (but is not limited to): removal of all water, dirt, sludge, residuals, or liquid of any kind from the lined area.

GUNDLE LINING SYSTEMS, INC.'S liability under this Material Warranty shall in no event exceed the amount of the sale price of the material sold to the Company for the particular installation in which any defect or premature loss of use is alleged to have occurred, and under no circumstances shall GUNDLE LINING SYSTEMS, INC. have any liability for consequential damages arising from loss of production or product owing to the failure of the material or installation, and no allowance will be made for repairs, replacement, or alterations made by Company unless with GUNDLE LINING SYSTEMS, INC.'S consent in writing. GUNDLE LINING SYSTEMS, INC. neither assumes nor authorizes any person other than an officer of GUNDLE LINING SYSTEMS, INC. to assume for it any other or additional liability in connection with the GUNDLINE HD liner.

This Material Warranty is limited to the installation for commercial, industrial, and/or municipal uses at the location described below and does not apply to consumer uses as defined by the Magnuson-Moss Warranty Act or any similar state-consumer-warranty statute. The parties expressly agree that the sale hereunder is for commercial, industrial, or municipal use only. This material warranty extends only to no person, entity or municipality other than (OWNER'S NAME).

This Material Warranty shall not be effective unless payment in full has been made to GUNDLE LINING SYSTEMS, INC. for all material provided.



The Material Warranty is extended to Company and is non-transferable and non-assignable. No rights against GUNDLE LINING SYSTEMS, INC. shall be created by any attempted transfer or assignment, nor shall any rights against GUNDLE LINING SYSTEMS, INC. survive any attempted transfer or assignment.

The laws of the State of Texas shall govern the rights and duties of the parties under this Agreement. Venue for all legal proceedings involving this Material Warranty or any matter contained within, shall be in Harris County, Texas.

THE FOREGOING MATERIAL WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES (EXCEPT OF TITLE), EXPRESS, IMPLIED, OR STATUTORY. IN NO EVENT SHALL GUNDLE LINING SYSTEMS, INC. BE LIABLE FOR LOSS OF PROFITS, OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSSES, RESULTING FROM ANY DEFECTS IN GUNDLE LINING SYSTEMS, INC.'S MATERIAL.

PURCHASER	(COMPANY):
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(OWNER'S NAME)

LOCATION OF INSTALLATION:

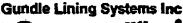
DESCRIPTION OF INTENDED USE:

GUNDLE LINING SYSTEMS, INC. 19103 GUNDLE ROAD HOUSTON, TEXAS 77073

S	A	M	IP	L	E
•					

Curtis H. Wolthuis Contracts Specialist

Date





19103 Gundle Ad. Houston, Texas 77073 U.S.A.

March 29, 1990

Phone: (713) 443-8564 Toll Free: (800) 435-2008 Telex: 4620281 GUNDLE HOU Fax: (713) 875-6010

Mr. Alan B. Morton **Purchasing Agent**

Re: Project No. 1482-90 City of Harrisburg Department of Incineration & Steam Generation

Dear Mr. Morton:

My comments on the results of the EPA Method 9090 chemical resistance testing connected with this project were in the report issued 6/29/88. Gundle has no reason to believe that any other interpretation should be made.

GUNDLE LINING

At the time the testing was started we were, as before, using the following resins:

Phillips TR400 Chevron 9642

To give a brief history of our resin usage, we started out using the Phillips TR400. During this time period, Phillips sold the manufacturing rights of the TR400 to Gulf Corp. Gulf was then purchased by Chevron, who is currently manufacturing the 9642 resin. In a company of our size and with the requirements placed on our ability to produce, it is imperative that we have two quality supplies in order to maintain our production standards. Both of the above mentioned resins are being used according to their availability. Since we were using both products at the time the testing took place, we have no documentation stating which of the two resins was used in manufacturing the tested material.

Currently we are using the Chevron resin, which we feel is the highest quality available for our process. We do have some access to Phillips resins, but they are limited in supplies and it is extremely difficult to guarantee shipping schedules.

The Phillips and Chevron products are equal in their qualities since the Chevron 9642 technology is licensed Phillips TR400 technology. The resins are therefore identical in chemical compatibility. This is also known through "fingerprinting" of the materials.

Very truly yours,

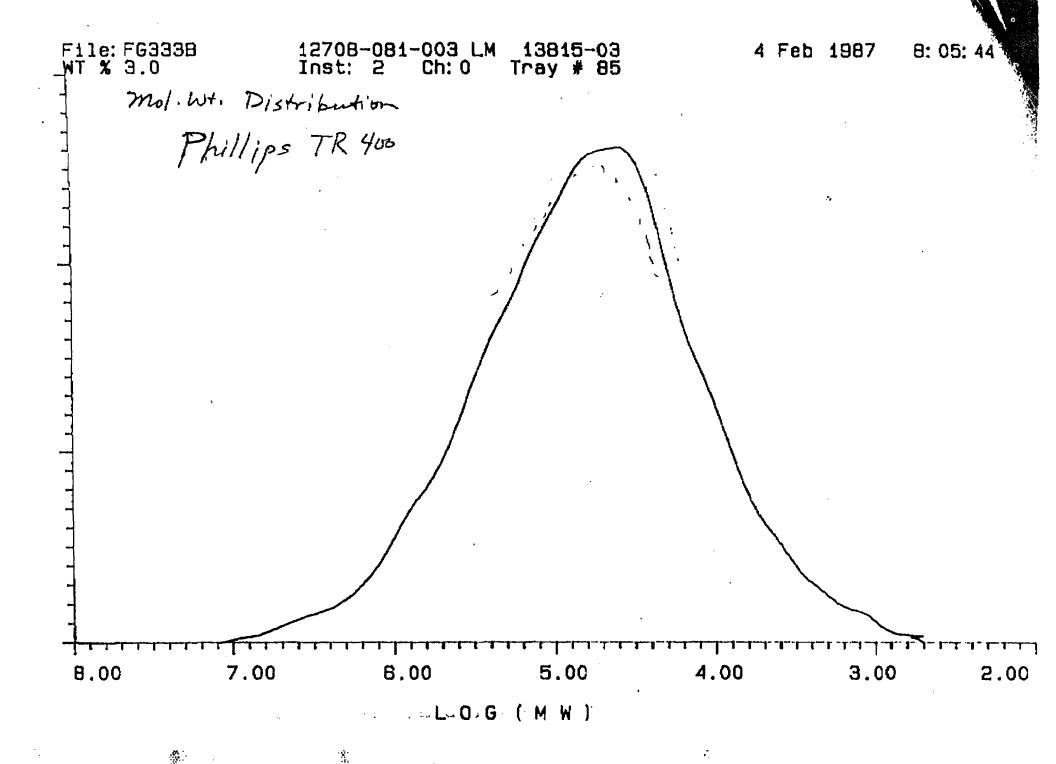
Mark Cadwallader Director of Research

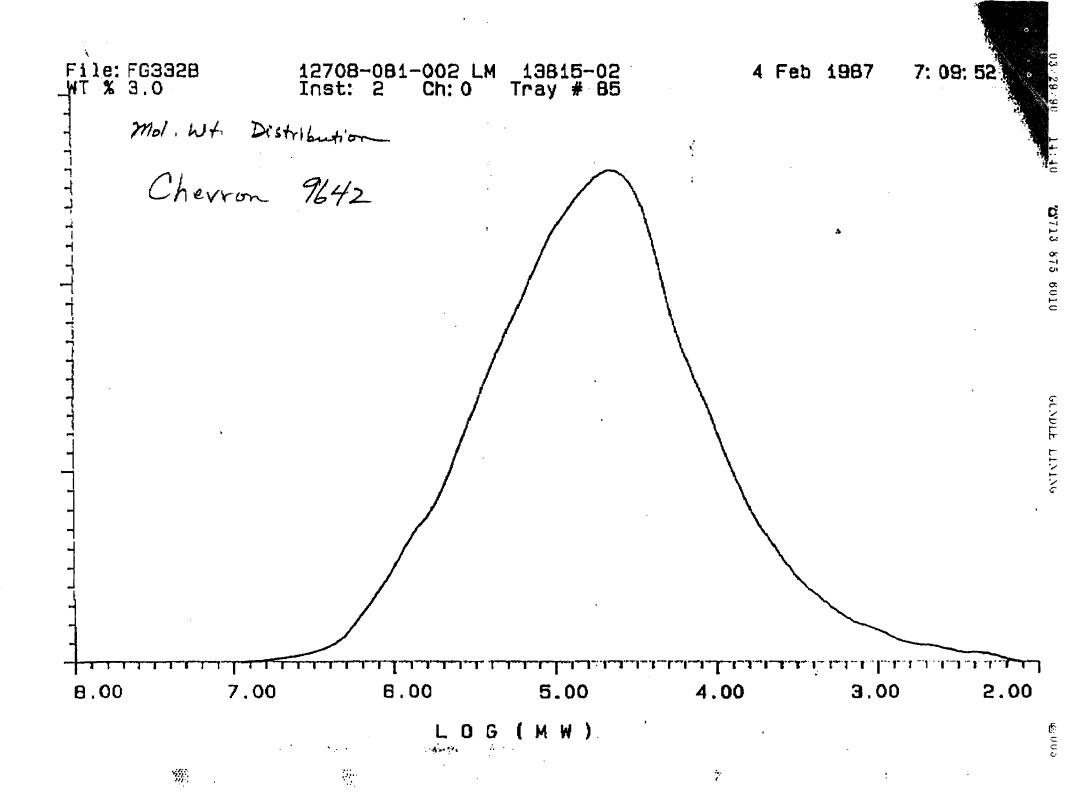
and Technical Development

Mark Cadwalladen

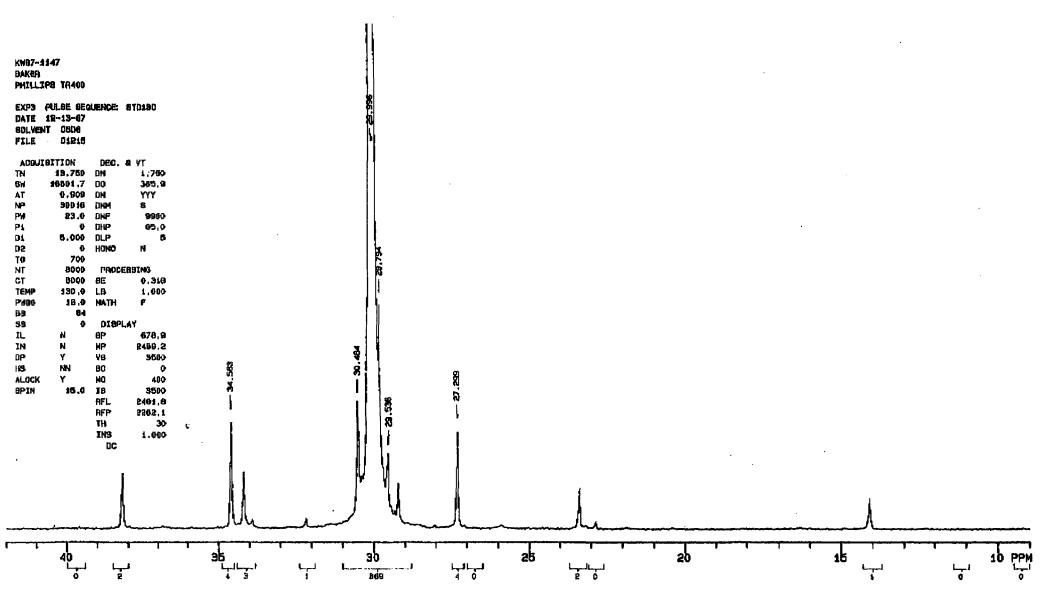
MC:jg

Attachments



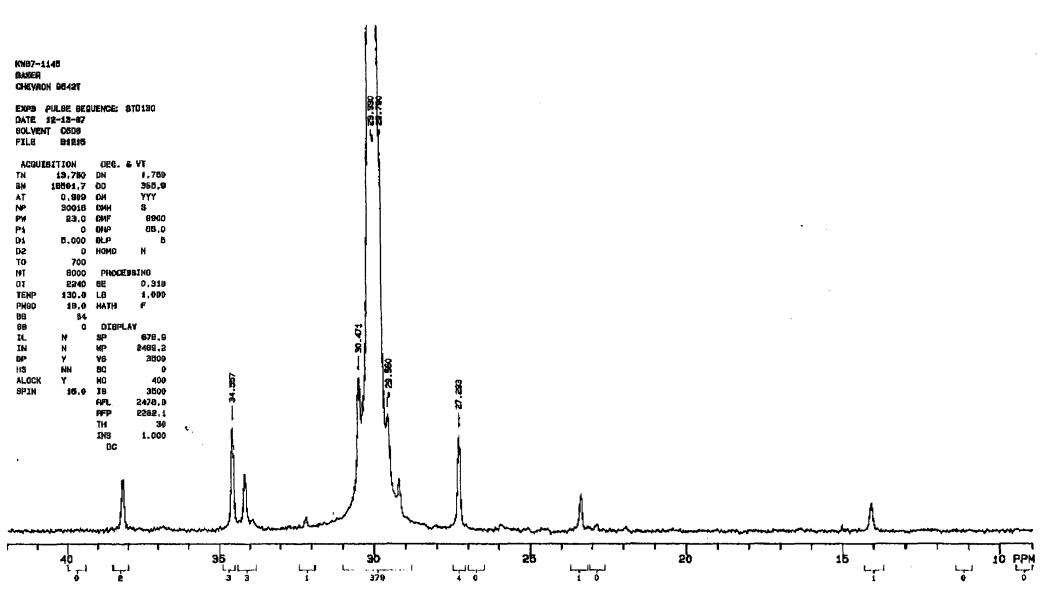












BRINJAC, KAMBIC & ASSOCIATES CONSULTING ENGINEERS

BRINJAC & ASSOCIATES CONSULTING ENGINEERS

May 17, 1990

Mr. Michael Steiner
Regional Solid Waste Manager
Harrisburg Regional Office
Bureau of Waste Management
Department of Environmental Resources
Commonwealth of Pennsylvania
One Ararat Boulevard
Harrisburg, PA 17110

DER WASTE MANAGEMENT

MAY 17 1990

HARRISBURG REGION

Re: Permit Modification
Permit No. 100992
Residue Disposal Area B-2

City of Harrisburg & Swatara Township

Dauphin County BKA No. 86019-01

Dear Mr. Steiner:

This letter serves as an amendment to the Groundwater Assessment for Residue Areas A and B-1 at the Harrisburg Steam Generating Facility which was submitted by John Lukens of the City of Harrisburg in correspondence dated September 22, 1990. This letter also serves to address Condition 10 of the above referenced permit.

Attached hereto, please find one (1) copy of the Laboratory Analysis Report for piezometers 4W, 5W, 6W, 6P, 7W, 8W, 9W and 10W. These analyses were performed in accordance with EPA Method 624 and 625. Please note that chloroform was deleted in all sampling points and bromodichloromethane was detected in four of the sampling points. Since these are trihalomethane compounds commonly found in chlorinated water systems, it is believed that these compounds are present as a result of the flushing of the piezometers with City water prior to sampling. To verify this theory, the organic chemist reviewed the chromatogram for the seven (7) site monitor wells and these compounds were not detected in the wells.

It should be stated that the BIS (2-ethylhexyl) phthalate found in piezometer 5W is believed due to field or laboratory contamination since it is a common plasticizer.

Mr. Michael Steiner May 17, 1990 Page Two

I trust that the information contained herein adequately addresses Condition 10 of the Permit Modification. Should you have any questions regarding this, please feel free to contact me at your convenience.

Sincerely,

BRINJAC, KAMBIC & ASSOCIATES, INC.

David A. Brinjac, P

DAB:glk Enclosure

c: John A. Lukens
Daniel R. Lispi
Howard Wein, Esquire
John W. Conrad
File

ANALYTICAL LABORATORIES

A DIVISION OF SKELLY AND LOY

2601 North Front Street

Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

DER WASTE MANAGEMENT

MAY 17 1990

HARRISBURG REGION

NAME: M900033 HSGF

PROJECT NO:

12700

CLIENT NO:

2207

ADDRESS: SKELLY AND LOY

SAMPLE NO:

47775

2601 NORTH FRONT STREET HARRISBURG, PA 17110

DATE RECVD: 3/14/90

ATTENTION: DAVID O. EBERLE REF. NO:

TUE, APR 10 1990

SAMPLE IDENTIFICATION: 4 W

DATE: 3/13/90

-TEST-	DETERMINATION	RESULTS	UNITS
ORIOA	ACID EXTRACTABLE'S (NPDES) PHENOL	<10	UG/L
OR TOH	2,4,6-TRICHLOROPHENOL	<10 <10	UG/L
		<10	UG/L
OR ZA	2-CHLOROPHENOL 2,4-DICHLOROPHENOL	C10	UG/L
		<10	UG/L
	4,6-DINITRO-O-CRESOL		UG/L
ONTH OPSA	2 A-DINITEOPHENO	C50	UG/L
	2,4-DINITROPHENOL 2-NITROPHENOL 4-NITROPHENOL P-CHLORO-M-CRESOL	(10	UG/L
ORGA ORZA	A-NITROPUENOL	CEO	UG/L
		<.50 <.10	UG/L
HONU	SENTACUI OGOGUENOI	<10 <50	
UKTA	PENTACHLOROPHENOL	<50	UG/L
	BASE NEUTRALS (NPDES)		
	BIS (2-CHLOROETHOXY) METHANE	<10	UG/L
OR11B	BIS (CHEOROETHYL) ETHER	<10	UG/L
08128	BIS (2-CHLOROISOPROPYL) ETHER	<10	UG/L
DR 13B	RIG / DETUVI DEVVI \ DUTUALATE	C10	UG/L
OR14B	4-BROMOPHENYL PHENYL ETHER	<10	UG/L
OR 158	RUTYL RENTE PHTHALATE	<10 <10	UG/L
ORIAB	BUTYL BENZL PHTHALATE 2-CHLORONAPHTHALENE	<10 <10 <10	UG/L
	4-CHLOROPHENYL PHENYL ETHER	<10	UG/L
OR 18B	CHRYSENE	<10	UG/L
	DIBENZO (a, h) ANTHRACENE	<10	UG/L
	ACENAPHTHENE	<10	UG/L
ORZOR	1.2-DICHLOROBENZENE	<10	UG/L
OR21B	1,3-DICHLOROBENZENE	<10	UG/L
OR22B	1, 4-DICHLOROBENZENE	<10	UG/L
OR23B	3, 3'-DICHLOROBENZIDINE	<50	UG/L
•	DIETHYL PHTHALATE	<10 <50 <20	UG/L
	DIMETHYL PHTHALATE	₹20	UG/L
	DI-N-BUTYL PHTHALATE	<50	UG/L
OR278	2, 4-DINITROTOLUENE	<10	UG/L
		<10	UG/L
	DI-N-OCTYL PHTHALATE	<20	UG/L
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ANALYTICAL LABORATORIES

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

PROJECT NO: 12700

ADDRESS: SKELLY AND LOY

CLIENT NO: 2207 SAMPLE NO: 47775

2601 NORTH FRONT STREET

HARRISBURG, PA 17110

DATE RECVD: 3/14/90

ATTENTION: DAVID O. EBERLE REF. NO:

TUE, APR 10 1990

SAMPLE IDENTIFICATION: 4 W

DATE: 3/13/90

	DETERMINATION		
	ACENAPHTYLENE	<10	UG/L
OR3OB	1,2-DIPHENYLHYDRAZINE	<10	UG/L
	FLUORANTHENE	<10	UG/L
OR32B		<10	UG/L
OR33B		<10	UG/L
OR34B	HEXACHLOROBUTADIENE	<10	UG/L
OR35B	HEXACHLOROCYCLOPENTADIENE	<10	UG/L
OR36B	HEXACHLOROETHANE	<10	UG/L
OR37B	INDENO (1,2,3-cd) PYRENE	<10	UG/L
OR38B	ISOPHORONE	<10	UG/L
OR39B	NAPTHALENE	<10	UG/L
OR3B	ANTHRACENE	<10	UG/L
DR40B	NITROBENZENE	<10	UG/L
OR41B	N-NITROSODIMETHYLAMINE	<20	UG/L
OR42B	N-NITROSODI-N-PROPYLAMINE	<20	UG/L
OR43B	N-NITROSODIPHENYLAMINE	<20	UG/L
OR44B	PHENANTHRENE	<10	UG/L
OR45B	PYRENE	<10	UG/L
OR46B	1, 2, 4-TRICHLOROBENZENE	<10	UG/L
OR4B	BENZIDINE	<50	UG/L
OR 5B	BENZO (a) ANTHRACENE	<10	UG/L
OR6B		<10	UG/L
OR7B	BENZO (b) FLUORANTHENE	<10	UG/L
ORBB	BENZO (ghi) PERYLENE	<10	UG/L
		<10	UG/L
	PRIORITY POLLUTANT VOC'S		
4M2P	4-METHYL-2-PENTANONE	<1.0	UG/L
OR111	1,1,1-TRICHLOROETHANE	<1.0	UG/L
OR112	1,1,2-TRICHLOROETHANE	<1.0	UG/L
OR1DCA	1,1-DICHLOROETHANE	<1.0	UG/L
DR1DCE	1,1-DICHLOROETHYLENE	<1.0	UG/L
OR2BUT	2-BUTANONE	<1.0	UG/L
OR2CEV	2-CHLOROETHYLVINYL ETHER	<1.0	UG/L
OR2DCA	1,2-DICHLOROETHANE	<1.0	UG/L

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

PROJECT NO:

12700

ADDRESS: SKELLY AND LOY

CLIENT NO:

2207

2601 NORTH FRONT STREET HARRISBURG, PA 17110

SAMPLE NO:

47775

ATTENTION: DAVID O. EBERLE

DATE RECVD: 3/14/90

REF. NO:

TUE, APR 10 1990

SAMPLE IDENTIFICATION: 4 W

DATE: 3/13/90

-TEST-	DETERMINATION	RESULTS	UNITS
OR2DCE	1.2-DICHLOROFTHYLENE	<1 O	UG/L
OR2HEX	2-HEXANONE	<1. 0	UG/L
ORACET	ACETONE	<1.0	UG/L
ORACRO	ACROLEIN	<1. 0	UG/L
DRACRY	ACRYLONITRILE	<1. 0	UG/L
ORBDCM	2-HEXANONE ACETONE ACROLEIN ACRYLONITRILE BROMODICHLOROMETHANE	<1. 0	UG/L
ORBENZ	BENZENE	<1. 0	UG/L
ORBROM	BROMOFORM	<1. 0 .	UG/L
ORCB	BENZENE BROMOFORM CHLOROBENZENE CARBON TETRACHLORIDE	<1. 0	UG/L
ORCCL4	CARBON TETRACHLORIDE	<1. 0	UG/L
ORCDIS	CARBON DISULFIDE CHLOROETHANE CHLOROFORM DIBROMOCHLOROMETHANE	<1.0	UG/L
ORCEA	CHLOROETHANE	<1. 0	UG/L
ORCHLO	CHLOROFORM	2.0	UG/L
ORDBCM	DIBROMOCHLOROMETHANE	<1.0	UG/L
ORDCDF	DICHLORODIFLUOROMETHANE	<1. O	UG/L
ORDCPA		<1. O	UG/L
ORDCPE	4	<1.0	UG/L
OREB	ETHYLBENZENE	<1. 0	UG/L
ORMB	METHYL BROMIDE	<1. 0	UG/L
ORMC	METHYLENE CHLORIDE	<1. 0	UG/L
DRMLC	METHYL CHLORIDE	<1. 0	UG/L
ORSTY	1,3-DICHLOROPROPYLENE ETHYLBENZENE METHYL BROMIDE METHYLENE CHLORIDE METHYL CHLORIDE STYRENE TRICHLOROETHYLENE	<1. 0	UG/L
ORTCE	INTURUEINTENE	₹1. 0	UG/L
ORTCFM	TRICHLOROFLUOROMETHANE		UG/L
ORTOL		<1.0	UG/L
ORTTCA	1, 1, 2, 2-TETRACHLOROETHANE	<1. 0	UG/L
ORTTCE	TETRACHLOROETHYLENE	<1. 0	UG/L
DRVACE	VINYL ACETATE VINYL CHLORIDE XYLENE	<1. 0	UG/L
DRVC	VINYL CHLORIDE	<1. 0	UG/L
ORXYL	XYLENE	<1.0	UG/L

Respectfully Submitted, Analytical Laboratories

MICHAEL S. FARLLING Laboratory Manager

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

PROJECT NO: 12701 CLIENT NO: 2207 SAMPLE NO: 47778

ADDRESS: SKELLY AND LOY

2601 NORTH FRONT STREET

HARRISBURG, PA 17110 TTENTION: DAVID O. EBERLE

DATE RECVD: 3/14/90

REF. NO:

MON, APR 23 1990

SAMPLE IDENTIFICATION: 5 W

DATE: 3/13/90

-TEST-	DETERMINATION	RESULTS	UNITS
	ACID EXTRACTABLE'S (NPDES)		
OR10A	PHENOL		UG/L
OR11A	2, 4, 6-TRICHLOROPHENOL	<10	UG/L
OR1A	2-CHLOROPHENOL 2,4-DICHLOROPHENOL	<10	UG/L
OR2A	2,4-DICHLOROPHENOL	<10	UG/L
OR3A	2,4-DIMETHYLPHENOL 4,6-DINITRO-O-CRESOL 2,4-DINITROPHENOL	<10	UG/L
OR4A	4,6-DINITRO-O-CRESOL	<10	UG/L
OR5A	2,4-DINITROPHENOL 2-NITROPHENOL 4-NITROPHENOL P-CHLORO-M-CRESOL	<50	UG/L
OR6A	2-NITROPHENOL	<10	UG/L
	4-NITROPHENOL	<50	UG/L
OR8A	4-NITROPHENOL P-CHLORO-M-CRESOL	<10	UG/L
	PENTACHLOROPHENOL	<50	UG/L
	BASE NEUTRALS (NPDES)		
	BIS (2-CHLOROETHOXY) METHANE		UG/L
	BIS (CHLOROETHYL) ETHER		UG/L
	BIS (2-CHLOROISOPROPYL) ETHER		UG/L
	BIS (2-ETHYLHEXYL) PHTHALATE		UG/L
	4-BROMOPHENYL PHENYL ETHER		UG/L
OR 1 5B			UG/L
		<10	UG/L
OR 1 7 B	4-CHLOROPHENYL PHENYL ETHER	<10	UG/L
OR 18B	CHRYSENE	<10	UG/L
OR19B	DIBENZO (a,h) ANTHRACENE	<10	UG/L
OR1B		<10	UG/L
ORZOB	1,2-DICHLOROBENZENE	<10	UG/L
OR21B	1,3-DICHLOROBENZENE	<10	UG/L
OR22B		<10	UG/L
OR23B			UG/L
		<20	UG/L
_			UG/L
OR26B	DI-N-BUTYL PHTHALATE		UG/L
OR27B	2,4-DINITROTOLUENE	<10	UG/L
		<10	UG/L
OR29B	DI-N-OCTYL PHTHALATE	<20	UG/L

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

PROJECT NO: 12701 CLIENT NO: 2207 SAMPLE NO: 47778

ADDRESS: SKELLY AND LOY

2601 NORTH FRONT STREET

HARRISBURG, PA 17110 ITTENTION: DAVID O. EBERLE

DATE RECVD: 3/14/90

REF. NO:

MON, APR 23 1990

SAMPLE IDENTIFICATION: 5 W

DATE: 3/13/90

-TEST-	DETERMINATION	RESULTS	UNITS
OR2B	DETERMINATIONACENAPHTYLENE	<10	UG/L
ORBOB	1,2-DIPHENYLHYDRAZINE	<10	UG/L
OR31B	FLUORANTHENE	<10	UG/L
OR32B	FLUORANTHENE FLUORENE	<10	UG/L
OR338	HEXACHLOROBENZENE	<10	UG/L
OR34B	HEXACHLOROBENZENE HEXACHLOROBUTADIENE	<10	UG/L
OR35B	HEXACHLOROCYCLOPENTADIENE	<10	UG/L
		<10	UG/L
OR378	INDENO (1,2,3-cd) PYRENE	<10	UG/L
	ISOPHORONE NAPTHALENE ANTHRACENE NITROBENZENE	<10	UG/L
	NAPTHALENE	<10	UG/L
	ANTHRACENE	<10	UG/L
OR40B	NITROBENZENE	<10	UG/L
OR41B	N-NITROSODIMETHYLAMINE	<20	UG/L
OR42B	N-NITROSODI-N-PROPYLAMINE	<20	UG/L
0R43B	N-NITROSODIPHENYLAMINE	<20	UG/L
OR44B	PHENANTHRENE	<10	UG/L
OR 45B	PYRENE	<10	UG/L
OR46B		<10	UG/L
OR4B	BENZIDINE	<50	UG/L
OR 5 B	BENZO (a) ANTHRACENE	<10	UG/L
OR6B	BENZO (&) PYRENE	<10	UG/L
0R7 B	BENZO (b) FLUORANTHENE	<10	UG/L
	BENZO (ghi) PERYLENE		
OR9B	BENZO (k) FLUORANTHENE	<10	UG/L
	PRIORITY POLLUTANT VOC'S		
4M2P	4-METHYL-2-PENTANONE	<1. 0	
	1, 1, 1-TRICHLOROETHANE		UG/L
UR112	1, 1, 2-TRICHLOROETHANE	<1. 0	UG/L
URIDCA	1,1-DICHLOROETHANE 1,1-DICHLOROETHYLENE 2-BUTANONE	<1. 0	UG/L
UKIDCE	1, 1-DICHLURUE I HYLENE	<1.0	UG/L
CINEDO	E DOTAIONE	V1. V	UG/L
	2-CHLOROETHYLVINYL ETHER		UG/L
OKEDCA	1,2-DICHLOROETHANE	<1. 0	UG/L

A DIVISION OF SKELLY AND LOY

2601 North Front Street

Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME:

M900033 HSGF

PROJECT NO: 12701

ADDRESS:

SKELLY AND LOY

CLIENT NO:

2207

2601 NORTH FRONT STREET HARRISBURG, PA 17110

SAMPLE NO:

47778

ATTENTION:

DAVID O. EBERLE

DATE RECVD:

3/14/90

REF. NO:

MON, APR 23 1990

SAMPLE IDENTIFICATION: 5 W

DATE: 3/13/90

-TEST- -----DETERMINATION-----

--RESULTS--- --UNITS---

NA

SODIUM, TOTAL

89 .

PH

MG/L

PH, LAB

7. 23

PH UNITS

504 TDS

SULFATE TOTAL DISSOLVED SOLIDS 84. 6 858

MG/L MG/L

Respectfully Submitted, Analytical Laboratories of SKELLY and LOY

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

ADDRESS: SKELLY AND LOY

PROJECT NO: 12701 CLIENT NO: 2207

2601 NORTH FRONT STREET

SAMPLE NO: 47778

DAVID O. EBERLE

SAMPLE IDENTIFICATION: 5 W

HARRISBURG, PA 17110

DATE RECVD: 3/14/90

DATE: 3/13/90

ATTENTION: REF. NO:

MON, APR 23 1990

SHILLE	IDENTIFIC	ATTOM. J W	ואט	E. 3/13/70
	-TEST-	DETERMINATION	RESULTS	UNITS
	OR2DCE	1,2-DICHLOROETHYLENE	<1.0 .	UG/L
	OR2HEX	2-HEXANONE	<1.0	UG/L
	DRACET	ACETONE	<1. 0	UG/L
	DRACRO	ACROLEIN	<1. 0	UG/L
	DRACRY	ACRYLONITRILE	<1. 0	UG/L
	ORBDCM	BROMODICHLOROMETHANE	2. 4	UG/L
	ORBENZ	BENZENE	<1. 0	UG/L
	ORBROM	BROMOFORM	<1. 0	UG/L
	ORCB	CHLOROBENZENE	<1. 0	UG/L
	DRCCL4	CARBON TETRACHLORIDE	<1. 0	UG/L
	ORCDIS	CARBON DISULFIDE	<1. 0	UG/L
	DRCEA	CHLOROETHANE	<1. 0	UG/L
	ORCHLO	CHLOROFORM	29 . 7	UG/L
	ORDBCM	DIBROMOCHLOROMETHANE	<1. O	UG/L
	ORDCDF	DICHLORODIFLUOROMETHANE	<1.0	UG/L
	ORDCPA	1,2-DICHLOROPROPANE	<1.0	UG/L
	ORDCPE	1.3-DICHLOROPROPYLENE	<1.0	UG/L
	OREB	ETHYLBENZENE	<1. O	UG/L
	ORMB	METHYL BROMIDE	<1.0	UG/L
	ORMC	METHYLENE CHLORIDE	<1. 0	UG/L
	DRMLC	METHYL CHLORIDE	<1. O	UG/L
	ORSTY	STYRENE	<1.0	UG/L
	ORTCE	TRICHLORGETHYLENE	<1.0	UG/L
	ORTCFM	TRICHLOROFLUOROMETHANE	<1.0	UG/L
	ORTOL	TOLUENE	<1. 0	UG/L
	ORTTCA	1, 1, 2, 2-TETRACHLOROETHANE	<1.0	UG/L
	ORTTCE	TETRACHLOROETHYLENE	<1. O	UG/L
	ORVACE	VINYL ACETATE	<1.0	UG/L
	ORVC	VINYL CHLORIDE	<1. 0	UG/L
	ORXYL	XYLENE	<1.0	UG/L
	ALD	ALUMINUM, DISSOLVED	<0. 1	MG/L
	ALKT	ALKALINITY, TOTAL (as CaCO3)	283	MG/L
	CL	CHLORIDE	505	MG/L
	FED	IRON, DISSOLVED	<0. 01	MG/L

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

PROJECT NO: 12700

ADDRESS: SKELLY AND LOY

CLIENT NO:

2207

2601 NORTH FRONT STREET HARRISBURG, PA 17110

SAMPLE NO: 47776

ATTENTION: DAVID O. EBERLE

DATE RECVD: 3/14/90

REF. NO:

TUE, APR 10 1990

SAMPLE IDENTIFICATION: 6 W

DATE: 3/13/90

-TEST-	DETERMINATION	RESULTS	UNITS
	ACID EXTRACTABLE'S (NPDES)		
OR10A		<10	UG/L
OR11A	2,4,6-TRICHLOROPHENOL	<10	UG/L
OR1A	2-CHLOROPHENOL	<10	UG/L
OR2A	2,4-DICHLOROPHENOL	<10	UG/L
OR3A	2,4-DIMETHYLPHENOL	<10	UG/L
OR4A	4,6-DINITRO-O-CRESOL	<10	UG/L
OR5A	2,4-DINITROPHENOL	<50	UG/L
ORAA	2-NITROPHENOL	<10	UG/L
OR7A	4-NITROPHENOL P-CHLORO-M-CRESOL	<50	UG/L
OR8A	P-CHLORO-M-CRESOL	<10	UG/L
OR9A	PENTACHLOROPHENOL	<50	UG/L
	BASE NEUTRALS (NPDES)		
	BIS (2-CHLOROETHOXY) METHANE		UG/L
	BIS (CHLORDETHYL) ETHER		UG/L
	BIS (2-CHLOROISOPROPYL) ETHER		UG/L
	BIS (2-ETHYLHEXYL) PHTHALATE		UG/L
	4-BROMOPHENYL PHENYL ETHER		UG/L
	25.	<10	UG/L
	2-CHLORONAPHTHALENE	<10	UG/L
	4-CHLOROPHENYL PHENYL ETHER		UG/L
	CHRYSENE	<10	UG/L
OR19B		<10	UG/L
		<10	UG/L
		<10	UG/L
		<10	UG/L
		<10	UG/L
OR238		<50	UG/L
OR24B		<20	UG/L
OR25B		<20	UG/L
OR26B		<20	UG/L
OR27B	2,4-DINITROTOLUENE	<10	UG/L
		<10	UG/L
0R29B	DI-N-OCTYL PHTHALATE	<20	UG/L

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

PROJECT NO: 12700

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SAMPLE NO:

47776

HARRISBURG, PA 17110

DATE RECVD: 3/14/90

ATTENTION: DAVID O. EBERLE REF. NO:

TUE, APR 10 1990

SAMPLE IDENTIFICATION: 6 W

DATE: 3/13/90

-TEST-	DETERMINATION	RESULTS	UNITS
	ACENAPHTYLENE		UG/L
DR3OB	1,2-DIPHENYLHYDRAZINE	<10	UG/L
	FLUORANTHENE	<10	UG/L
0R32B	FLUORENE	<10	UG/L
OR33B	HEXACHLOROBENZENE	<10	UG/L
OR34B	HEXACHLOROBUTADIENE	<10	UG/L
OR35B		<10	UG/L
OR36B	HEXACHLOROETHANE	<10	UG/L
OR37B	INDENO (1,2,3-cd) PYRENE	<10	UG/L
OR38B	ISOPHORONE	<10	UG/L
OR39B	NAPTHALENE	<10	UG/L
OR3B	ANTHRACENE	<10	UG/L
OR4OB	NITROBENZENE	<10	UG/L
OR41B	N-NITROSODIMETHYLAMINE	<20	UG/L
OR42B	N-NITROSODI-N-PROPYLAMINE	<20	UG/L
OR43B	N-NITROSODIPHENYLAMINE	<20	UG/L
OR44B			UG/L
OR 45B		<10	UG/L
OR 46B	1, 2, 4-TRICHLOROBENZENE	<10	UG/L
OR4B	BENZIDINE	<50	UG/L
OR 5B	BENZO (a) ANTHRACENE	<10	UG/L
OR6B			UG/L
		-	UG/L
ORBB	BENZO (ghi) PERYLENE	<10	UG/L
OR9B	BENZO (k) FLUORANTHENE	<10	UG/L
	PRIORITY POLLUTANT VOC'S		
4M2P		<1.0	UG/L
OR111	1,1,1-TRICHLOROETHANE	<1. 0	UG/L
UK 1 1 2	1, 1, 2-1KICHLURUETHANE	<1.0	UG/L
		<1. 0	UG/L
		<1.0	UG/L
		<1.0	UG/L
		<1.0	UG/L
OR2DCA	1,2-DICHLOROETHANE	<1. 0	UG/L

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

PROJECT NO: 12700

ADDRESS: SKELLY AND LOY

CLIENT NO:

2207

2601 NORTH FRONT STREET HARRISBURG, PA 17110

SAMPLE NO: 47776

ATTENTION: DAVID O. EBERLE

DATE RECVD: 3/14/90

REF. NO:

TUE, APR 10 1990

SAMPLE IDENTIFICATION: 6 W

DATE: 3/13/90

-TEST-	DETERMINATION	RESULTS	UNITS
OR2DCE	1,2-DICHLOROETHYLENE 2-HEXANONE ACETONE ACROLEIN ACRYLONITRILE BROMODICHLOROMETHANE	<1.0	UG/L
OR2HEX	2-HEXANONE	<1. 0	UG/L
ORACET	ACETONE	<1. 0	UG/L
ORACRO	ACROLEIN	<1. 0	UG/L
DRACRY	ACRYLONITRILE	<1. 0	UG/L
ORBDCM	BROMODICHLOROMETHANE	<1. 0	UG/L
ORBENZ	BENZENE	<1. 0	UG/L
ORBROM	BROMOFORM	<1. 0	UG/L
ORCB	CHLOROBENZENE	<1. 0	UG/L
ORCCL4	BENZENE BROMOFORM CHLOROBENZENE CARBON TETRACHLORIDE CARBON DISULFIDE CHLOROETHANE CHLOROFORM DIBROMOCHLOROMETHANE	<1. 0	UG/L
ORCDIS	CARBON DISULFIDE	<1. 0	UG/L
ORCEA	CHLOROETHANE	<1. 0	UG/L
ORCHLO	CHLOROFORM	6.8	UG/L
ORDBCM	DIBROMOCHLOROMETHANE	<1. 0	UG/L
ORDCDF	DICHEDRODIFLOORDHEIHANE	<1.0	UG/L
DRDCPA	1,2-DICHLOROPROPANE	<1. 0	UG/L
ORDCPE	1,3-DICHLOROPROPYLENE	<1. 0	UG/L
OREB	ETHYLBENZENE METHYL BROMIDE	<1. 0	UG/L
ORMB	METHYL BROMIDE	<1. 0	UG/L
ORMC	METHYLENE CHLORIDE METHYL CHLORIDE STYRENE TRICHLOROETHYLENE	<1. 0	UG/L
DRMLC	METHYL CHLORIDE	<1. 0	UG/L
ORSTY	STYRENE	<1. 0	UG/L
ORTCE	TRICHLOROETHYLENE	<1. 0	UG/L
URICEM	RICHLURUFLUURUMETHANE	<1.0	UG/L
ORTOL		<1.0	UG/L
ORTTCA	1, 1, 2, 2-TETRACHLOROETHANE	<1.0	UG/L
ORTICE	TETRACHLOROETHYLENE VINYL ACETATE VINYL CHLORIDE XYLENE	<1.0	UG/L
DRVACE	VINYL ACETATE	<1.0	UG/L
URVC	VINYL CHLORIDE	<1.0	UG/L
G11,7,112	N 1 4 2 1 1 2	-1.0	UG/L

Respectfully Submitted, Analytical Laboratories ne SKELLY and LOV

MICHAEL S. FARLLING Laboratory Manager

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

PROJECT NO: 12700

ADDRESS: SKELLY AND LOY

CLIENT NO:

2207

2601 NORTH FRONT STREET HARRISBURG, PA 17110

SAMPLE NO: 47777

ATTENTION: DAVID O. EBERLE

DATE RECVD: 3/14/90

REF. NO:

TUE, APR 10 1990

SAMPLE IDENTIFICATION: 6 P

DATE: 3/13/90

-TEST-			UNITS
	ACID EXTRACTABLE'S (NPDES)		110.71
OR10A	PHENOL 2,4,6-TRICHLOROPHENOL	<10	UG/L
OR11A		<10	UG/L
OR1A	2-CHLOROPHENOL 2,4-DICHLOROPHENOL	<10	UG/L
OR2A		<10	UG/L
OR3A		<10	UG/L
OR4A	4,6-DINITRO-O-CRESOL	<10	UG/L
OR5A	2,4-DINITROPHENOL 2-NITROPHENOL 4-NITROPHENOL P-CHLORO-M-CRESOL	<50	UG/L
DR6A	2-NITROPHENOL	<10	UG/L
OR7A	4-NITROPHENOL	<50	UG/L
ORBA	P-CHLORO-M-CRESOL	<10	UG/L
OR9A	PENTACHLOROPHENOL	<50	UG/L
	BASE NEUTRALS (NPDES)		
OR 1 OB	BIS (2-CHLOROETHOXY) METHANE	<10	UG/L
OR118	BIS (CHLOROETHYL) ETHER	<10	UG/L
OR 12B	BIS (2-CHLOROISOPROPYL) ETHER	<10	UG/L
OR 13B	BIS (2-ETHYLHEXYL) PHTHALATE	<10	UG/L
OR 14B	4-BROMOPHENYL PHENYL ETHER	<10	UG/L
OR 15B	BUTYL BENZL PHTHALATE	<10	UG/L
OR 16B	2-CHLORONAPHTHALENE	<10	UG/L
OR 1 7 B	4-CHLOROPHENYL PHENYL ETHER	<10	UG/L
OR 18B	CHRYSENE	<10	UG/L
OR19B	DIBENZO (a,h) ANTHRACENE	<10	UG/L
OR1B	ACENAPHTHENE	<10	UG/L
OR208	1,2-DICHLOROBENZENE	<10	UG/L
OR21B	1,3-DICHLOROBENZENE	<10	UG/L
OR22B	1,4-DICHLOROBENZENE	<10	UG/L
OR23B	3,3'-DICHLOROBENZIDINE	<50	UG/L
OR24B		<20	UG/L
OR25B	DIMETHYL PHTHALATE	<20	UG/L
OR268	DI-N-BUTYL PHTHALATE	<20	UG/L
OR27B	2,4-DINITROTOLUENE	<10	UG/L
0R28B	2,6-DINITROTOLUENE	<10	UG/L
0R29B	DI-N-OCTYL PHTHALATE	<20	UG/L

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

PROJECT NO: 12700

ADDRESS: SKELLY AND LOY

CLIENT NO:

2207

2601 NORTH FRONT STREET

SAMPLE NO: 47777

HARRISBURG, PA 17110 ATTENTION: DAVID O. EBERLE

DATE RECVD: 3/14/90

REF. NO:

TUE, APR 10 1990

SAMPLE IDENTIFICATION: 6 P

DATE: 3/13/90

TECT	DETERMINATION	DECLU TO	LINITTO
	DETERMINATION	<10	UG/L
	1,2-DIPHENYLHYDRAZINE		UG/L
	FLUORANTHENE		UG/L
	FLUORENE		UG/L
	HEXACHLOROBENZENE		
	· · · · · · · · · · · · · · · · · · ·		UG/L
	_	<10	UG/L
		<10	UG/L
		<10	UG/L
	INDENO (1,2,3-cd) PYRENE	<10	UG/L
	ISOPHORONE	<10	UG/L
OR398	NAPTHALENE	<10	UG/L
OR3B	ANTHRACENE	<10	UG/L
	NITROBENZENE	<10	UG/L
OR41B	N-NITROSODIMETHYLAMINE	<20	UG/L
OR42B	N-NITROSODI-N-PROPYLAMINE	<20	UG/L
OR43B	N-NITROSODIPHENYLAMINE	<20	UG/L
OR44B	PHENANTHRENE	<10	UG/L
OR45B	PYRENE	<10	UG/L
OR46B	1,2,4-TRICHLOROBENZENE	<10	UG/L
OR4B	BENZIDINE	<50	UG/L
OR 5B		<10	UG/L
OR6B	BENZO (a) PYRENE	<10	UG/L
OR7B	BENZO (b) FLUORANTHENE	<10	UG/L
OR8B	BENZO (ghi) PERYLENE	<10	UG/L
OR9B	BENZO (k) FLUORANTHENE	<10	UG/L
	PRIORITY POLLUTANT VOC'S		
4M2P		<1.0	UG/L
OR111	1,1,1-TRICHLOROETHANE	<1.0	UG/L
OR112	1, 1, 2-TRICHLOROETHANE	<1.0	UG/L
OR1DCA	1,1-DICHLOROETHANE	<1.0	UG/L
OR1DCE	1,1-DICHLOROETHYLENE	<1.0	UG/L
	2-BUTANONE	<1.0	UG/L
OR2CEV	2-CHLOROETHYLVINYL ETHER	<1.0	UG/L
OR2DCA	1,2-DICHLOROETHANE	<1. 0	UG/L

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

ADDRESS: SKELLY AND LOY

PROJECT NO: 12700 CLIENT NO: 2207 SAMPLE NO: 47777

2601 NORTH FRONT STREET HARRISBURG, PA 17110

ATTENTION: DAVID O. EBERLE

DATE RECVD: 3/14/90

REF. NO:

TUE, APR 10 1990

SAMPLE IDENTIFICATION: 6 P

DATE: 3/13/90

-TEST-	DETERMINATION	RESULTS	UNITS
OR2DCE			UG/L
OR2HEX	2-HEXANONE	<1.0	UG/L
ORACET	2-HEXANONE ACETONE	<1. 0	UG/L
ORACRO	ACROLEIN	<1.0	UG/L
ORACRY	ACRYLONITRILE	<1. 0	UG/L
ORBDCM	ACETONE ACROLEIN ACRYLONITRILE BROMODICHLOROMETHANE	<1. 0	UG/L
ORBENZ	BENZENE	<1. 0	UG/L
ORBROM	BROMOFORM	<1.0	UG/L
ORCB	BENZENE BROMOFORM CHLOROBENZENE	<1.0	UG/L
ORCCL4	CARBON TETRACHLORIDE	<1. O	UG/L
ORCDIS	CARBON DISULFIDE	<1.0	UG/L
ORCEA	CARBON DISULFIDE CHLORDETHANE CHLOROFORM	<1. 0	UG/L
ORCHLO	CHLOROFORM	13: 4	UG/L
ORDBCM	DIBROMOCHLOROMETHANE	<1. 0	UG/L
ORDCDF	DICHLORODIFLUOROMETHANE	<1.0	UG/L
ORDCPA	1,2-DICHLOROPROPANE	<1. 0	UG/L
ORDCPE	1,3-DICHLOROPROPYLENE	<1. 0	UG/L
OREB	ETHYLBENZENE METHYL BROMIDE	<1. 0	UG/L
ORMB	METHYL BROMIDE	<1. 0	UG/L
DRMC	METHYLENE CHLORIDE	<1. 0	UG/L
ORMLC	METHYL CHLORIDE	<1.0	UG/L
ORSTY	CIVERE	<1.0	UG/L
ORTCE	TRICHLOROETHYLENE	<1. 0	UG/L
ORTCFM	TRICHLOROFLUOROMETHANE	<1. 0	UG/L
ORTOL		<1. 0	UG/L
ORTTCA	1, 1, 2, 2-TETRACHLOROETHANE	<1. 0	UG/L
ORTICE	TETRACHLOROETHYLENE	<1. 0	UG/L
DRVACE	VINYL ACETATE VINYL CHLORIDE XYLENE	<1. 0	UG/L
ORVC	VINYL CHLORIDE	<1. 0	UG/L
ORXYL	XYLENE	<1.0	UG/L

Respectfully Submitted, Analytical Laboratories of SKELLY and LOY

MICHAEL S. FARLLING Laboratory Manager

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

PROJECT NO: 12701 CLIENT NO: 2207 SAMPLE NO: 47779

ADDRESS: SKELLY AND LOY

HARRISBURG, PA 17110

2601 NORTH FRONT STREET

ITTENTION: DAVID O. EBERLE

DATE RECVD: 3/14/90

REF. NO:

MON, APR 23 1990

SAMPLE IDENTIFICATION: 7 W

DATE: 3/13/90

-TEST-	DETERMINATION	RESULTS	UNITS
	ACID EXTRACTABLE'S (NPDES)		
DR 1 OA	PHENOL	<10	UG/L
OR11A	2,4,6-TRICHLOROPHENOL	<10	UG/L
OR1A		<10	UG/L
OR2A	2-CHLOROPHENOL 2,4-DICHLOROPHENOL	<10	UG/L
OR3A	2,4-DIMETHYLPHENOL	<10	UG/L
OR4A		<10	UG/L
OR5A	2,4-DINITROPHENOL	<50	UG/L
OR6A	2-NITROPHENOL	<10	UG/L
OR7A	4-NITROPHENOL	<50	UG/L
OR8A	P-CHLORO-M-CRESOL	<10	UG/L
		<50	UG/L
	BASE NEUTRALS (NPDES)		
OR 1 OB	BIS (2-CHLOROETHOXY) METHANE	<10	UG/L
	BIS (CHLOROETHYL) ETHER	<10	UG/L
OR128	BIS (2-CHLOROISOPROPYL) ETHER	<10	UG/L
	BIS (2-ETHYLHEXYL) PHTHALATE		UG/L
OR 148	4-BROMOPHENYL PHENYL ETHER	<10	UG/L
OR 158	BUTYL BENZL PHTHALATE	<10	UG/L
OR 1 6 B	2-CHLORONAPHTHALENE	<10	UG/L
OR 1 78	4-CHLOROPHENYL PHENYL ETHER	<10	UG/L
OR 188	CHRYSENE	<10	UG/L
OR198	DIBENZO (a,h) ANTHRACENE	<10	UG/L
OR1B	ACENAPHTHENE	<10	UG/L
OR2OB	1,2-DICHLOROBENZENE	<10	UG/L
OR21B	1,3-DICHLOROBENZENE	<10	UG/L
OR22B	1,4-DICHLOROBENZENE	<10	UG/L
0R23B	3,3'-DICHLOROBENZIDINE	<50	UG/L
OR24B		<20	UG/L
OR25B	DIMETHYL PHTHALATE	<20	UG/L
OR26B	DI-N-BUTYL PHTHALATE	<20	UG/L
OR27B	2,4-DINITROTOLUENE	<10	UG/L
OR28B	2,6-DINITROTOLUENE	<10	UG/L
OR298	DI-N-OCTYL PHTHALATE	<20	UG/L

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

PROJECT NO: 12701 CLIENT NO: 2207 SAMPLE NO: 47779

ADDRESS: SKELLY AND LOY

HARRISBURG, PA 17110

2601 NORTH FRONT STREET

TTENTION: DAVID O. EBERLE

DATE RECVD: 3/14/90

REF. NO:

MON, APR 23 1990

SAMPLE IDENTIFICATION: 7 W

DATE: 3/13/90

-TEST-	DETERMINATIONACENAPHTYLENE	RESULTS	UNITS
OR2B	ACENAPHTYLENE	<10 ⋅	UG/L
OR3OB	1,2-DIPHENYLHYDRAZINE	<10	UG/L
OR31B	FLUORANTHENE	<10	UG/L
OR32B	FLUORENE	<10	UG/L
OR33B	HEXACHLOROBENZENE	<10	UG/L
OR34B	FLUORENE HEXACHLOROBENZENE HEXACHLOROBUTADIENE HEXACHLOROCYCLOPENTADIENE	<10	UG/L
OR35B	HEXACHLOROCYCLOPENTADIENE	<10	UG/L
OR36B	HEXACHLOROETHANE	<10	UG/L
0R37B	INDENO (1,2,3-cd) PYRENE	<10	UG/L
		_	UG/L
OR39B	NAPTHALENE	<10	UG/L
OR3B	ISOPHORONE NAPTHALENE ANTHRACENE NITROBENZENE	<10	UG/L
OR4OB	NITROBENZENE	<10	UG/L
OR41B	N-NITROSODIMETHYLAMINE	<20	UG/L
	N-NITROSODI-N-PROPYLAMINE		
OR43B	N-NITROSODIPHENYLAMINE PHENANTHRENE PYRENE	<20	UG/L
OR 44B	PHENANTHRENE	<10	UG/L
	* * 1 1 time * *	7. O	~~ ~
OR 46B	1, 2, 4-TRICHLOROBENZENE	<10	UG/L
		<50	
OR 5B	BENZO (a) ANTHRACENE	<10	UG/L
OR6B	BENZO (a) PYRENE	<10	UG/L
OR7B	BENZO (b) FLUORANTHENE	<10	UG/L
OR8B	BENZO (ghi) PERYLENE	<10	UG/L
OR 9B	BENZO (k) FLUORANTHENE	<10	UG/L
	PRIORITY POLLUTANT VOC'S		
4M2P	4-METHYL-2-PENTANONE	<1. 0	UG/L
OR111	1,1,1-TRICHLOROETHANE	<1.0	UG/L
OR112	1, 1, 2-TRICHLOROETHANE 1, 1-DICHLOROETHANE	<1.0	UG/L
OR1DCA	1, 1-DICHLOROETHANE	<1. 0	UG/L
ORIDCE	1, 1-DICHLOROETHYLENE	<1.0	UG/L
OKSBUT	2-BUTANONE	<1.0	UG/L
	2-CHLOROETHYLVINYL ETHER		
URZDCA	1,2-DICHLOROETHANE	<1. 0	UG/L

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

ADDRESS: SKELLY AND LOY

PROJECT NO: 12701 CLIENT NO: 2207 SAMPLE NO: 47779

2601 NORTH FRONT STREET HARRISBURG, PA 17110

ATTENTION: DAVID O. EBERLE

DATE RECVD: 3/14/90

REF. NO:

MON, APR 23 1990

SAMPLE IDENTIFICATION: 7 W

DATE: 3/13/90

TEST		DCC # TC	! INITE
UBSDCE	1,2-DICHLOROETHYLENE	KESUL 13	
DROHEY	2-HEYANONE	C1. 0	UG/L
ORACET	ACETONE	C1. 0	HC/L
ORACRO	2-HEXANONE ACETONE ACROLEIN ACRYLONITRILE BROMODICHLOROMETHANE	C1.0	UG/L
ORACRY	ACRYLONITRILE	C1. O	UG/L
SERDOM	RROMODICHI OROMETHANE	<1. 0 <1. 0	UG/L
ORBEN7	RENZENE	(1.0	UG/L
ORBROM	BROMOFORM	<1.0	UG/L
ORCB	CHLOROBENZENE	<1.0	UG/L
ORCCL4	CARBON TETRACHLORIDE	<1.0	UG/L
ORCDIS	CARBON DISULFIDE	<1.0	UG/L
ORCEA	CHLOROETHANE	<1.0	UG/L
ORCHLO	BROMODICHLOROMETHANE BENZENE BROMOFORM CHLOROBENZENE CARBON TETRACHLORIDE CARBON DISULFIDE CHLOROETHANE CHLOROFORM DIBROMOCHLOROMETHANE DICHLORODIFLUOROMETHANE 1,2-DICHLOROPROPANE 1,3-DICHLOROPROPYLENE ETHYLBENZENE METHYL BROMIDE	4.9	UG/L
ORDBCM	DIBROMOCHLOROMETHANE	<1.0	UG/L
ORDCDF	DIBROMOCHLOROMETHANE DICHLORODIFLUOROMETHANE 1,2-DICHLOROPROPANE 1,3-DICHLOROPROPYLENE ETHYLBENZENE METHYL BROMIDE METHYLENE CHLORIDE METHYL CHLORIDE STYRENE TRICHLOROETHYLENE TRICHLOROETHYLENE	C1. 0	UG/L
ORDCPA	1, 2-DICHLOROPROPANE	<1. 0	UG/L
ORDCPE	1,3-DICHLOROPROPYLENE	<1. 0	UG/L
OREB	ETHYLBENZENE	<1.0	UG/L
ORMB	METHYL BROMIDE	<1.0	UG/L
ORMC	METHYLENE CHLORIDE	<1. 0	UG/L
ORMLC	METHYL CHLORIDE	<1.0	UG/L
ORSTY	STYRENE	<1. 0	UG/L
ORTCE	TRICHLOROETHYLENE	<1. 0	UG/L
ORTCFM	TRICHLOROFLUOROMETHANE	<1. 0	UG/L
			UG/L
ORTTCA	1, 1, 2, 2-TETRACHLOROETHANE	<1. 0	UG/L
ORTTCE	TETRACHLOROETHYLENE	<1. 0	UG/L
ORVACE	VINYL ACETATE	<1. O	UG/L
ORVC	VINYL CHLORIDE	<1. 0	UG/L
ORXYL	TETRACHLOROETHYLENE VINYL ACETATE VINYL CHLORIDE XYLENE	<1.0	UG/L
	ALUMINUM, DISSOLVED		MG/L
ALKT	ALKALINITY, TOTAL (as CaCO3)		
CL	CHLORIDE	46	MG/L
FED	CHLORIDE IRON, DISSOLVED	<0. 01	MG/L

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME:

REF. NO:

M900033 HSGF

ADDRESS:

SKELLY AND LOY

2601 NORTH FRONT STREET

HARRISBURG, PA 17110

ATTENTION:

DAVID O. EBERLE

PROJECT NO:

12701

CLIENT NO:

2207

SAMPLE NO:

47779

DATE RECVD:

3/14/90

MON, APR 23 1990

SAMPLE IDENTIFICATION: 7 W

DATE: 3/13/90

-TEST- -----DETERMINATION-----

--RESULTS--- --UNITS---

NA

SODIUM, TOTAL

PH S04 PH, LAB SULFATE

TDS

TOTAL DISSOLVED SOLIDS

52

MG/L PH UNITS

7. 50 72.6

392

MG/L MG/L

Respectfully Submitted,

Analytical Laboratori of SKELLY7 and/LOY

MICHAEL S. FARLLI

Laboratory Mai

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

PROJECT NO: 12701 CLIENT NO: 2207 SAMPLE NO: 47780

ADDRESS: SKELLY AND LOY

HARRISBURG, PA 17110

2601 NORTH FRONT STREET

ITTENTION: DAVID D. EBERLE

DATE RECVD: 3/14/90

REF. NO:

MON, APR 23 1990

SAMPLE IDENTIFICATION: 8 W

DATE: 3/13/90

	DETERMINATIONACID EXTRACTABLE'S (NPDES)	RESULTS	UNITS
	PHENOL	<10	UG/L
		<10	UG/L
OR1A		<10	UG/L
DR2A		<10	UG/L
ORSA		<10	UG/L
		<10	UG/L
OR5A		<50	UG/L
OR6A	2-NITROPHENOL	<10	UG/L
		<50	UG/L
OR8A		<10	UG/L
OR9A	PENTACHLOROPHENOL	<50	UG/L
	· · · · · · · · · · · · · · · · · · ·		
	BASE NEUTRALS (NPDES)		
OR 1 OB	BIS (2-CHLOROETHOXY) METHANE	<10	UG/L
OR11B	BIS (CHLOROETHYL) ETHER	<10	UG/L
OR 12B	BIS (2-CHLOROISOPROPYL) ETHER		UG/L
OR 138	BIS (2-ETHYLHEXYL) PHTHALATE	<10	UG/L
OR 14B		<10	UG/L
OR 1 5B	BUTYL BENZL PHTHALATE 2-CHLORONAPHTHALENE	<10	UG/L
OR 1 6B		<10	UG/L
OR 1 7 B		<10	UG/L
OR 188	CHRYSENE	<10	UG/L
OR 19B		<10	UG/L
OR1B	ACENAPHTHENE	<10	UG/L
OR2OB		<10	UG/L
OR21B		<10	UG/L
0822B		<10	UG/L
OR23B		<50	UG/L
OR24B		<20	UG/L
OR25B		<20	UG/L
OR26B		<20	UG/L
OR27B		<10	UG/L
0R28B	2,6-DINITROTOLUENE	<10	UG/L
OR29B	DI-N-OCTYL PHTHALATE	<20	UG/L

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

ADDRESS: SKELLY AND LOY

PROJECT NO: 12701 CLIENT NO: 2207 SAMPLE NO: 47780

HARRISBURG, PA 17110

2601 NORTH FRONT STREET

TTENTION: DAVID O. EBERLE

DATE RECVD: 3/14/90

REF. NO:

MON, APR 23 1990

SAMPLE IDENTIFICATION: 8 W

DATE: 3/13/90

	DETERMINATION		
OR2B	ACENAPHTYLENE	<10 ⋅	UG/L
ORBOB	1,2-DIPHENYLHYDRAZINE	<10	UG/L
OR318	FLUORANTHENE	<10	UG/L
OR32B	FLUORENE	<10	UG/L
OR338		<10	UG/L
OR34B	HEXACHLOROBUTADIENE	<10	UG/L
OR35B	HEXACHLOROCYCLOPENTADIENE	<10	UG/L
OR36B	HEXACHLOROETHANE	<10	UG/L
OR37B	INDENO (1,2,3-cd) PYRENE	<10	UG/L
	ISOPHORONE	<10	UG/L
	NAPTHALENE	<10	UG/L
ORSB	ANTHRACENE	<10	UG/L
OR4OB	NITROBENZENE	<10	UG/L
OR41B	N-NITROSODIMETHYLAMINE	<20	UG/L
OR42B	N-NITROSODI-N-PROPYLAMINE	<20	UG/L
OR438	N-NITROSODIPHENYLAMINE	<20	UG/L
OR44B		<10	UG/L
OR458	PHENANTHRENE PYRENE	<10	UG/L
OR 468	1, 2, 4-TRICHLOROBENZENE	<10	UG/L
OR 4 B		<50	UG/L
0R 5 B	BENZO (a) ANTHRACENE	<10	UG/L
OR6 B	BENZO (a) PYRENE	<10	UG/L
OR 7B	BENZO (a) PYRENE BENZO (b) FLUORANTHENE	<10	UG/L
ORSB	BENZO (ghi) PERYLENE	<10	UG/L
OR9B	BENZO (k) FLUORANTHENE	<10	UG/L
		-	
	PRIORITY POLLUTANT VOC'S		
4M2P	4-METHYL-2-PENTANONE 1,1,1-TRICHLOROETHANE	<1. 0	UG/L
OR111	1,1,1-TRICHLOROETHANE	<1. 0	UG/L
OR112		<1. O	UG/L
OR1DCA	1,1-DICHLOROETHANE	<1. Ø	UG/L
OR 1 DCE		<1. 0	UG/L
OR2BUT	2-BUTANONE	<1. 0	UG/L
OR2CEY	2-CHLOROETHYLVINYL ETHER	<1. 0	UG/L
OR2DCA	1,2-DICHLOROETHANE	<1.0	UG/L

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

ADDRESS: SKELLY AND LOY

PROJECT NO: 12701 CLIENT NO: 2207 SAMPLE NO: 47780

2601 NORTH FRONT STREET

HARRISBURG, PA 17110 ATTENTION: DAVID O. EBERLE

DATE RECVD: 3/14/90

REF. NO:

MON, APR 23 1990

SAMPLE IDENTIFICATION: 8 W

DATE: 3/13/90

-TEST-	DETERMINATION	RESULTS	
OR2DCE	1,2-DICHLORGETHYLENE 2-HEXANONE ACETONE ACROLEIN ACRYLONITRILE BROMODICHLOROMETHANE	<1.0 ⋅	UG/L
ORZHEX	2-HEXANONE	C1.0	UG/L
DRACET	ACETONE	<1.0	UG/L
ORACRO	ACROLEIN	<1.0	UG/L
ORACRY	ACRYLONITRILE	<1.0	UG/L
ORBDCM	BROMODICHLOROMETHANE	1. 5	UG/L
ORBENZ	BENZENE	<1. 0	UG/L
ORBROM	BROMOFORM	<1.0	UG/L
DRCB	CHLOROBENZENE	<1.0	UG/L
ORCCL4	CARBON TETRACHLORIDE	<1.0	UG/L
ORCDIS	BENZENE BROMOFORM CHLOROBENZENE CARBON TETRACHLORIDE CARBON DISULFIDE CHLOROETHANE CHLOROFORM DIBROMOCHLOROMETHANE	<1. 0	UG/L
DRCEA	CHLOROETHANE	<1.0	UG/L
ORCHLO	CHLOROFORM	14. 5	UG/L
ORDBCM	DIBROMOCHLOROMETHANE	<1.0	UG/L
ORDCDF	DICHLORODIFLUOROMETHANE 1,2-DICHLOROPROPANE	<1.0	UG/L
DRDCPA	1,2-DICHLOROPROPANE	<1.0	UG/L
ORDCPE	1.3-DICHLOROPROPYLENE	<1.0	UG/L
OREB	ETHYLBENZENES	<1.0	UG/L
ORMB	METHYL BROMIDE	<1.0	UG/L
ORMC	1,2-DICHLOROPROPANE 1,3-DICHLOROPROPYLENE ETHYLBENZENE METHYL BROMIDE METHYLENE CHLORIDE METHYL CHLORIDE STYRENE TRICHLOROFLUOROMETHANE	<1.0	UG/L
ORMLC	METHYL CHLORIDE	<1.0	UG/L
ORSTY	STYRENE	<1.0	UG/L
DRTCE	TRICHLORGETHYLENE	<1.0	UG/L
ORTCFM	TRICHLOROFLUOROMETHANE	<1.0	UG/L
			UG/L
ORTTCA	1,1,2,2-TETRACHLORDETHANE TETRACHLOROETHYLENE VINYL ACETATE VINYL CHLORIDE XYLENE	<1.0	UG/L
ORTTCE	TETRACHLOROETHYLENE	<1.0	UG/L
DRVACE	VINYL ACETATE	<1.0	UG/L
DRVC	VINYL CHLORIDE	<1.0	UG/L
ORXYL	XYLENE	<1.0	UG/L
ALD	ALUMINUM, DISSOLVED	<0. 1	MG/L
ALKT	ALKALINITY, TOTAL (as CaCO3)		MG/L
CL		230	MG/L
FED	CHLORIDE IRON, DISSOLVED	0. 57	MG/L
- 		_ · • ·	

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

REF. NO:

NAME: M900033 HSGF

ADDRESS:

SKELLY AND LOY

2601 NORTH FRONT STREET

HARRISBURG, PA 17110

TTENTION: DAVID O. EBERLE

PROJECT NO: 12701 CLIENT NO: 2207

SAMPLE NO:

47780

DATE RECVD: 3/14/90

MON, APR 23 1990

SAMPLE IDENTIFICATION: 8 W

DATE: 3/13/90

-TEST- -----DETERMINATION-----

SODIUM, TOTAL

NA PH, LAB

PH 504

SULFATE

TDS

TOTAL DISSOLVED SOLIDS

--RESULTS--- --UNITS---

MG/L

250

7.11 376

PH UNITS

MG/L

1170

MG/L

Respectfully Submitted. Analytical Laboratories of SWELLY and LOY

MICHAEL S. FARLLING Laboratory Manage

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

, •

ADDRESS: SKELLY AND LOY

PROJECT NO: 12701 CLIENT NO: 2207 SAMPLE NO: 47781

2601 NORTH FRONT STREET

HARRISBURG, PA 17110 ATTENTION: DAVID O. EBERLE

DATE RECVD: 3/14/90

REF. NO:

MON, APR 23 1990

SAMPLE IDENTIFICATION: 9 W

DATE: 3/13/90

	DETERMINATION		UNITS
OR10A	ACID EXTRACTABLE'S (NPDES) PHENDL	<10	UG/L
OR11A		<10	UG/L
OR1A		<10	UG/L
	2-CHLOROPHENOL 2,4-DICHLOROPHENOL		UG/L
OR2A OR3A			UG/L
	2,4-DIMETHYLPHENOL 4,6-DINITRO-O-CRESOL		UG/L
CREA	4, O-DINITRO-U-CREBUL	<.10	UG/L
URDA	2,4-DINITROPHENOL 2-NITROPHENOL 4-NITROPHENOL P-CHLORO-M-CRESOL	<.50	=
URSA	Z-N1 IKUPHENUL	<10	UG/L
UR/A	4-NI IROPHENUL	<50	UG/L
URBA	P-CHLORO-M-CRESOL	<10	UG/L
		<50	UG/L
	BASE NEUTRALS (NPDES)		
	BIS (2-CHLOROETHOXY) METHANE	<i>2</i> 10	UG/L
		<10	UG/L
	BIS (2-CHLOROISOPROPYL) ETHER		UG/L
	BIS (2-ETHYLHEXYL) PHTHALATE		UG/L
	· · · · · · · · · · · · · · · · · · ·	<10	UG/L
		<10	UG/L
001/0		<10	UG/L
OR17B		<10	UG/L
OR188	CHRYSENE	<10	UG/L
OR 19B		<10	UG/L
OR1B		<10	UG/L
OR20B	1,2-DICHLOROBENZENE	<10	UG/L
OR21B		<10	UG/L
OR22B		<10	UG/L
OR23B	3,3'-DICHLOROBENZIDINE	<50	UG/L
OR24B		<20	UG/L
OR25B		<20	UG/L
OR26B		<50	UG/L
OR27B		<10	UG/L
OR28B		<10	UG/L
OR298	DI-N-OCTYL PHTHALATE	<50	UG/L

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

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ADDRESS: SKELLY AND LOY

PROJECT NO: 12701 CLIENT NO: 2207

2601 NORTH FRONT STREET

SAMPLE NO:

47781

ATTENTION: DAVID O. EBERLE

HARRISBURG, PA 17110

DATE RECVD: 3/14/90

REF. NO:

MON, APR 23 1990

SAMPLE IDENTIFICATION: 9 W

DATE: 3/13/90

-TEST-	DETERMINATION	RESULTS	UNITS
OR2B	DETERMINATION	<10 .	UG/L
DR3OB	4 O BIBLISHUR DVDDAZINE	24A	UG/L
OR31B	FLUORANTHENE FLUORENE HEXACHLOROBENZENE	<10	UG/L
OR32B	FLUORENE	<10	UG/L
OR33B		<10	UG/L
OR34B	HEXACHLOROBUTADIENE	<10	UG/L
OR35B		<10	UG/L
OR36B	HEXACHLOROETHANE	<10	UG/L
OR37B	INDENO (1,2,3-cd) PYRENE	<10	UG/L
ORSAB	ISOPHORONE	<10	UG/L
OR39B	NAPTHALENE	<10	UG/L
	ANTHRACENE	<10	UG/L
OR4OB	ISOPHORONE NAPTHALENE ANTHRACENE NITROBENZENE	<10	UG/L
OR41B	N-NITROSODIMETHYLAMINE	<20	UG/L
OR42B	N-NITROSODI-N-PROPYLAMINE	<20	UG/L
0R43B	N-NITROSODIPHENYLAMINE	<20	UG/L
OR44B	PHENANTHRENE	<10	UG/L
OR 45B	PYRENE	<10	UG/L
OR46B	1, 2, 4-TRICHLÔROBENZENE	<10	UG/L
OR4B	BENZIDINE	<50	UG/L
OR 5B	BENZO (a) ANTHRACENE	<10	UG/L
OR6B	BENZO (a) PYRENE	<10	UG/L
0R7 B	BENZO (b) FLUORANTHENE	<10	UG/L
ORSB	BENZO (ghi) PERYLENE	<10	UG/L
OR9B	BENZO (k) FLUORANTHENE	<10	UG/L
	PRIORITY POLLUTANT VOC'S 4-METHYL-2-PENTANONE 1,1,1-TRICHLOROETHANE		
4M2P	4-METHYL-2-PENTANONE	<1.0	UG/L
OR111	1,1,1-TRICHLOROETHANE	<1.0	UG/L
DP112	1.1.2-TRICH DROFTHANE	C1 0	UG/L
ORIDCA	1,1-DICHLOROETHANE 1,1-DICHLOROETHYLENE 2-RUTANONE	<1.0	UG/L
ORIDCE	1,1-DICHLOROETHYLENE	<1.0	UG/L
OKEDOI	5-00 HI4014E	~1. U	UG/L
	2-CHLOROETHYLVINYL ETHER		UG/L
OR2DCA	1,2-DICHLOROETHANE	<1.0	UG/L

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

ADDRESS: SKELLY AND LOY

PROJECT NO: 12701 CLIENT NO: 2207 SAMPLE NO: 47781

2207

2601 NORTH FRONT STREET HARRISBURG, PA 17110

TTENTION: DAVID O. EBERLE

DATE RECVD: 3/14/90

REF. NO:

MON, APR 23 1990

SAMPLE IDENTIFICATION: 9 W

DATE: 3/13/90

	DETERMINATION		
OR2DCE	1,2-DICHLOROETHYLENE	<1.0	
OR2HEX	2-HEXANONE	<1.0	UG/L
DRACET	ACETONE	<1. O	UG/L
ORACRO	ACROLEIN	<1. 0	UG/L
DRACRY	ACRYLONITRILE	<1. 0	UG/L
ORBDCM	2-HEXANONE ACETONE ACROLEIN ACRYLONITRILE BROMODICHLOROMETHANE	3. 0	UG/L
ORBENZ	BENZENE	<1. O	UG/L
ORBROM	BENZENE BROMOFORM CHLOROBENZENE	<1. 0	UG/L
ORCB	CHLOROBENZENE	<1. 0	UG/L
ORCCL4	CARBON TETRACHLORIDE	<1.0	UG/L
ORCDIS	CARBON DISULFIDE	<1. 0	UG/L
ORCEA	CHLORDETHANE	<1.0	UG/L
ORCHLO	CARBON TETRACHLORIDE CARBON DISULFIDE CHLOROETHANE CHLOROFORM DIBROMOCHLOROMETHANE	32. 3	UG/L
ORDBCM	DIBROMOCHLOROMETHANE	<1.0	UG/L
ORDCDF	DICHLORODIFLUOROMETHANE	<1.0	UG/L
ORDCPA	1,2-DICHLOROPROPANE	<1. 0	UG/L
ORDCPE		<1.0	UG/L
OREB	ETHYLBENZENE:	<1.0	UG/L
ORMB	METHYL BROMIDE	<1. 0	UG/L
ORMC	ETHYLBENZENE: METHYL BROMIDE METHYLENE CHLORIDE METHYL CHLORIDE STYRENE TRICHLOROETHYLENE	<1.0	UG/L
ORMLC	METHYL CHLORIDE	<1. 0	UG/L
ORSTY	STYRENE	<1.0	UG/L
ORTCE	TRICHLOROETHYLENE	<1.0	UG/L
ORTCFM	TRICHLOROFLUOROMETHANE	<1. 0	UG/L
ORTOL		<1. O	UG/L
ORTTCA	1, 1, 2, 2-TETRACHLOROETHANE	<1. O	UG/L
ORTTCE	TETRACHLOROETHYLENE VINYL ACETATE VINYL CHLORIDE	<1. 0	UG/L
DRVACE	VINYL ACETATE	<1. 0	UG/L
DRVC	VINYL CHLORIDE	<1. 0	UG/L
ORXYL	XYLENE	<1. 0	UG/L
ALD	ALUMINUM, DISSOLVED	1.8	MG/L
	ALKALINITY, TOTAL (as CaCO3)		MG/L
			MG/L
	CHLORIDE IRON, DISSOLVED	0. 01	MG/L
		_	

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

ADDRESS: SKELLY AND LOY 2601 NORTH FRONT STREET

HARRISBURG, PA 17110

REF. NO:

ATTENTION: DAVID O. EBERLE

PROJECT NO: 12701

CLIENT NO:

2207

SAMPLE NO:

47781

DATE RECVD:

3/14/90

MON, APR 23 1990

SAMPLE IDENTIFICATION: 9 W

DATE: 3/13/90

-TEST- -----DETERMINATION----- -- -- RESULTS--- -- UNITS---

SODIUM, TOTAL

NA PH S04

PH, LAB

TDS

SULFATE TOTAL DISSOLVED SOLIDS

12

7. 27 17.8

184

MG/L PH UNITS

MG/L

MG/L

Respectfully Submitted, Analytical Laboratories of SKÆLLY and LOY

Laboratory Manage

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

PROJECT NO: 12701 CLIENT NO: 2207 SAMPLE NO: 47782

ADDRESS: SKELLY AND LOY

2601 NORTH FRONT STREET HARRISBURG, PA 17110

TTENTION: DAVID O. EBERLE

DATE RECVD: 3/14/90

REF. NO:

MON, APR 23 1990

SAMPLE IDENTIFICATION: 10 W

DATE: 3/13/90

	DETERMINATIONACID EXTRACTABLE'S (NPDES)		UNITS
			UG/L
CP11A	D. A. A-TRICHI OPOPHENOI	C10	UG/L
ORIA	2-CHLOROPHENOL 2,4-DICHLOROPHENOL 2,4-DIMETHYLPHENOL 4,6-DINITRO-O-CRESOL 2,4-DINITROPHENOL 2-NITROPHENOL	<10	UG/L
ORZA	2. 4-DICHI OROPHENDI	<10	UG/L
DRBA	2. 4-DIMETHYL PHENOL	<10	UG/L
OR4A	4. A-DINITRO-O-CRESO	<10	UG/L
DR5A	2. 4-DINITROPHENDI	<50	UG/L
ORAA	2-NITROPHENOI	<10	UG/L
ORZA	4-NITROPHENOI	<50	UG/L
ORBA	P-CHI ORO-M-CRESOL	<10	UG/L
ORGA	2,4-DINITROPHENOL 2-NITROPHENOL 4-NITROPHENOL 4-NITROPHENOL P-CHLORO-M-CRESOL PENTACHLOROPHENOL	<50	UG/L
	· · · · · · · · · · · · · · · · · · ·		00, E
	BASE NEUTRALS (NPDES)		
ORIOB	BIS (2-CHLOROETHOXY) METHANE	<10	UG/L
		<10	UG/L
	BIS (2-CHLOROISOPROPYL) ETHER		UG/L
	BIS (2-ETHYLHEXYL) PHTHALATE		UG/L
	4-BROMOPHENYL PHENYL ETHER		UG/L
OR 15B	BUTYL BENZL PHTHALATE	<10	UG/L
OR 16B		<10	UG/L
OR 1 7 B	4-CHLOROPHENYL PHENYL ETHER	<10	UG/L
OR 188	CHRYSENE	<10	UG/L
OR 19B	DIBENZO (a,h) ANTHRACENE	<10	UG/L
OR1B		<10	UG/L
OR2OB	1,2-DICHLOROBENZENE	<10	UG/L
OR21B	1,3-DICHLOROBENZENE	<10	UG/L
OR22B		<10	UG/L
0R23B	3,3,-DICHFOLOBENZIDINE	<50	UG/L
OR24B		<20	UG/L
		<20	UG/L
OR26B	DI-N-BUTYL PHTHALATE	<20	UG/L
		<10	UG/L
		<10	UG/L
OR29B	DI-N-OCTYL PHTHALATE	<20	UG/L

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

PROJECT NO: 12701 CLIENT NO: 2207 SAMPLE NO: 47782

ADDRESS: SKELLY AND LOY

HARRISBURG, PA 17110

2601 NORTH FRONT STREET

ATTENTION: DAVID O. EBERLE

DATE RECVD: 3/14/90

REF. NO:

MON, APR 23 1990

SAMPLE IDENTIFICATION: 10 W

DATE: 3/13/90

-TEST-	DETERMINATION	RESULTS	UNITS
OR2B	DETERMINATION	<10	UG/L
ORBOR	1. 2-DIPHENYLHYDRAZINE	<10	UG/L
OR31B	FLUORANTHENE	<10	UG/L
	FLUORENE	<10	UG/L
OR33B	HEXACHLOROBENZENE	<10	UG/L
0R34B		<10	UG/L
OR35B		<10	UG/L
OR36B		<10	UG/L
OR37B	INDENO (1,2,3-cd) PYRENE	<10	UG/L
OR38B	ISOPHORONE	<10	UG/L
OR398	NAPTHALENE	<10	UG/L
OR3B	ANTHRACENE	<10	UG/L
OR4OB	ISOPHORONE NAPTHALENE ANTHRACENE NITROBENZENE	<10	UG/L
OR41B	N-NITROSODIMETHYLAMINE	<20	UG/L
OR42B	N-NITROSODI-N-PROPYLAMINE	<20	UG/L
OR43B	N-NITROSODIPHENYLAMINE	<20	UG/L
OR44B	PHENANTHRENE	<10	UG/L
	PYRENE	<10	UG/L
OR46B	1, 2, 4-TRICHLOROBENZENE	<10	UG/L
OR4B	BENZIDINE	<50	UG/L
OR5B	BENZO (a) ANTHRACENE BENZO (a) PYRENE	<10	UG/L
OR6 B	RENZO (=) PYRENE	<10	UG/L
0R7 B	BENZO (b) FLUORANTHENE	<10	UG/L
OR8B	BENZO (ghi) PERYLENE	<10	UG/L
OR9B	BENZO (k) FLUORANTHENE	<10	UG/L
	PRIORITY POLLUTANT VOC'S		
	4-METHYL-2-PENTANONE		UG/L
		<1.0	UG/L
	1, 1, 2-TRICHLOROETHANE		UG/L
		<1.0	UG/L
	1, 1-DICHLOROETHYLENE		UG/L
		<1.0	UG/L
	2-CHLOROETHYLVINYL ETHER		UG/L
UKZDCA	1,2-DICHLORDETHANE	<1.0	UG/L

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: M900033 HSGF

ADDRESS: SKELLY AND LOY

PROJECT NO: 12701 CLIENT NO: 2207 SAMPLE NO: 47782

2601 NORTH FRONT STREET HARRISBURG, PA 17110

ATTENTION: DAVID O. EBERLE

DATE RECVD: 3/14/90

REF. NO:

MON, APR 23 1990

SAMPLE IDENTIFICATION: 10 W

DATE: 3/13/90

-TEST-	DETERMINATION	RESULTS	UNITS
OR2DCE	1,2-DICHLOROETHYLENE 2-HEXANONE ACETONE ACROLEIN ACRYLONITRILE BROMODICHLOROMETHANE	<1.0	UG/L
OR2HEX	2-HEXANONE	<1.0	UG/L
ORACET	ACETONE	<1.0	UG/L UG/L
DRACRO	ACROLEIN	<1.0	UG/L
DRACRY	ACRYLONITRILE	<1. 0	UG/L
ORBDCM	BROMODICHLOROMETHANE	3. 8	UG/L
ORBENZ	BENZENE	<1.0	UG/L
ORBROM	BROMOFORM	<1.0	UG/L
ORCB	CHLOROBENZENE	<1.0	UG/L
DRCCL4	CARBON TETRACHLORIDE	<1.0	UG/L.
ORCDIS	BROMODICHLOROMETHANE BENZENE BROMOFORM CHLOROBENZENE CARBON TETRACHLORIDE CARBON DISULFIDE CHLOROETHANE CHLOROFORM DIBROMOCHLOROMETHANE DICHLORODIFLUOROMETHANE 1,2-DICHLOROPROPANE 1,3-DICHLOROPROPYLENE ETHYLBENZENE METHYL BROMIDE METHYL BROMIDE METHYL CHLORIDE STYRENE TRICHLOROFLUOROMETHANE TOLUENE	<1.0	UG/L
ORCEA	CHLOROETHANE	<1. 0	UG/L
ORCHLO	CHLOROFORM	25. 0	UG/L
ORDBCM	DIBROMOCHLOROMETHANE	<1.0	UG/L
ORDCDF	DICHLORODIFLUOROMETHANE	<1.0	UG/L
ORDCPA	1,2-DICHLOROPROPANE	<1. 0	UG/L
ORDCPE	1,3-DICHLOROPROPYLENE	<1.0	UG/L
OREB	ETHYLBENZENE	<1.0	UG/L
ORM B	METHYL BROMIDE	<1.0	UG/L
ORMC	METHYLENE CHLORIDE	<1.0	UG/L
ORMLC	METHYL CHLORIDE	<1.0	UG/L
ORSTY	STYRENE	<1. 0	UG/L
ORTCE	TRICHLORDETHYLENE	<1. 0	UG/L
ORTCFM	TRICHLOROFLUOROMETHANE	<1.0	UG/L
ORTOL	TOLUENE	<1.0	UG/L
ORTTCA	1, 1, 2, 2-TETRACHLORDETHANE	<1.0	UG/L
ORTTCE	TETRACHLOROETHYLENE	<1. O	UG/L
ORVACE	VINYL ACETATE	<1.0	UG/L
DRVC	VINYL CHLORIDE	<1.0	UG/L
ORXYL	TETRACHLOROETHYLENE VINYL ACETATE VINYL CHLORIDE XYLENE	<1.0	UG/L
	ALUMINUM, DIŞSOLVED	12. 0	MG/L
ALKT	ALKALINITY, TOTAL (as CaCO3)	130	MG/L
FED	CHLORIDE IRON, DISSOLVED	<0. 01	MG/L

A DIVISION OF SKELLY AND LOY

2601 North Front Street Harrisburg, PA 17110 (717) 232-0593

LABORATORY ANALYSIS REPORT

NAME: ADDRESS:

M900033 HSGF

SKELLY AND LOY

2601 NORTH FRONT STREET

HARRISBURG, PA 17110

TENTION: REF. NO:

DAVID O. EBERLE

PROJECT NO:

12701

CLIENT NO:

2207

SAMPLE NO:

47782

DATE RECVD:

3/14/90

MON, APR 23 1990

AMPLE IDENTIFICATION: 10 W

DATE: 3/13/90

-TEST-

-----DETERMINATION-----

TOTAL DISSOLVED SOLIDS

170

--RESULTS--- --UNITS---

NA PH SODIUM, TOTAL

7.14

MG/L PH UNITS

S04 TDS PH, LAB

SULFATE

280 680

MG/L MG/L

Respectfully Submitted, Analytical Laboratories

of SKELLY and LOY

MICHAEL S. Laboratory

FARL Manager

UNSUITABLE MATERIAL

QA/QC REPORT

FOR

CITY OF HARRISBURG
DEPARTMENT OF INCINERATION
AND
STEAM GENERATION

PROJECT NO. 1482-90

CONSTRUCTION OF RESIDUE AREA B-2

-PRELIMINARY-

JANUARY 1991

NH

NASSAUX-HEMSLEY, INCORPORATED

INTRODUCTION

The Construction of the B-2 Residue Area for the City of Harrisburg's Steam Generation Facility involved the excavation of approximately 30 feet of soil to reach subgrade. During this excavation, material consisting of a mixture of soil, municipal waste and incinerator ash was encountered at varying locations. Approximately 23,000 cubic yards of "unsuitable material" was removed from the B-2 site and separately stockpiled for later evaluation.

GENERAL

The B-2 Residue Area is located along Gibson Street 650 feet west of the steam generating facility. The excavation for this site unearthed areas of what appeared to be dumping sites for municipal waste and incinerator ash. This material was removed and stockpiled.

To determine the composition of this material and its potential to cause environmental degradation, six (6) test pits were completed within the stockpile on June 6, 1990. Each pit was logged and samples collected for testing. These test pit logs are presented in Appendix 1.

At the request of the Pennsylvania Department of Environmental Resources a Module 1- leachate analysis was completed on each sample. The results of this analysis, presented in Appendix II, show the material to be non-hazardous and relatively innoxious.

An effort was made to quantify the amount and type of refuse mixed with the soil. It appears that besides the soil the major component is incinerator ash. Most of the test pits were found to be banded with separate layers of soil and ash as shown in the photos in Appendix 1. In test pit #6 minimal amounts of any type of waste was encountered.

A site map has been enclosed showing the stockpile and the location of the test pits.

Conclusions

Due to the quantity of ash co-mingled with the soil the disposition of this material will be regulated by the Pennsylvania Department of Environmental Resources Municipal Waste Regulations. Since the leachate analysis has shown the material to be non-hazardous, the "unsuitable material" can be classified as a special handling, Municipal Waste. The classification leads to two (2) suitable disposal methods:

- Disposal of the waste at a permitted municipal waste disposal facility, off-site.
- 2. Disposal of the waste in the B-2 Residue area during its development.

Alternative #1 incurs the cost of transportation and a tipping fee. Alternative #2 would entail free disposal but would use much needed ash space.

In addition, soil samples previously obtained from the test pits were tested to determine the representative soil characteristics of this material. The gradation results, which are found in Appendix III, indicate that this material will be suitable as intermediate cover.

APPENDIX I

	1.1		. \			OFILE DESCR.				
Prope	rty Lo	cation _	HARRISBUI	26 IN	CINERAT	OR	_ Township	Co	unty <u>UAU</u>	PAIN
Test	Pit Nu	mber	Z_{-} Soil	Type	CAVATEL	MATERIA	C Slope	D	ate	90
				rk.	om B-	2 Sife	C SlopeDes	cription by	W.F.B.	RUCK
	ı (in)				cture		Mottles		· ·	[
		Color	Texture	Grade	Type	Consistence	Abundance, size contrast, color(s	Boundary	1 Coarse Fragments	Mn Coating
upper	Lower	026.	CH.	class	Abe	 				Coacing
0	57"	BRM.	_		İ	Y. FIRM	APPEARS Som	EWHAT MIC	AEOUS	ł
	7	1	SICL.		 		73/6.	5016		
	4 .4 6	BLK	Ac II d						1	
<i>5</i> 7	64	000	MSH 4 OR	BANIC A	MATERIAL	(DECAYED A	EAUES, WOOD)	SMALL P.	ECES OF	SLASS.
			& Plastic	BARS	[GIASS	1 PLASTIC	41% 90%	ASH		
64	72	ORG. Ben.	CH. SICL		1	V. FIRM.		-	}	
<u> </u>	1.6		3,00		 	<u> </u>	·			
					 				 	
72	80	BLK	ASH							
		1							}	
					SOTT. PRO	OFILE DESCR	IPTION			
Mama	City	OF F	ARRISHU					. Pho	ne Number	
Name.	<u> </u>		LARR T	Add	4	· · · · · · · · · · · · · · · · · · ·			me number	aui.
Prope	erty Lo	cation 2	THERE. INC	<u>्राङ्क्ष्यम्</u> व	- 20	2-2.24	Township		unty <u>/2/4/4/</u>	100 100
Test	Pit Nu	mber <u> </u>	Soil	Type F	zom B.	-Z SIJE	Township	cription by	ate <u> 6767</u> W.F. Bl	ZUNK
Donak	ı (in)		Ţ	Chan		T		scriberon 21		
Depti	1 (1/1/	Color	Texture	Grade	cture	Consistence	Mottles Abundance, size	Boundary	* Coarse	Mn .
Upper	Lower			class	Type	<u>]</u>	contrast, color(Fragments	Coating
0	64"	BEN.	CH. SICL			V. FIRM				
		7272.	3/56			,				
		ORG.	5161	MIXED	410511	(20,000,00				- \
64	84"	Ben 4 B	LK.		7.437	BRICK	MOUNTS OF PL	ASTIC BAGS	COPPER W	RE,)
		}							<u> </u>	
						 	·	 		
•		-							 	
	1	ł	1		1	Y	1	1	1	l

A. No limiting zone in this profile

B. Limiting zone in this profile is at ____ inches due to the presence of

SAMPLED 0-84" COMMENTS:

SOIL PROFILE DESCRIPTION

Name	City	OF H	ARRISBU	IRL Add	ress	-		Pho	ne Number	
Prope	erty Lo	cation _	HARR. IN	I CINIER A	TOK-		Township	Co	unty DAU	HIN
Test	Pit Nu	mber3	Soil	Type <u>Ex</u>	c. MA	TERIAL	Slope	Da	ate_ <i>6/6/</i>	190
				FR	iom B	-2 SITE	Desc	ription by	W.F. BE	zyck.
	(in)	Color	Texture	Stru Grade class	Cture Type		Mottles Abundance, size, contrast, color(s)	Boundary	1 Coarse	Mn
0	36	STEG. Brn	CH. SIL		Fri (n	1015T) 30%	CF. MIXED W	70 % A.	s H	
36	66	BLK	ASH					·		
66	90	OCL. BRN.	CH. SIC.			Y. Firm			30	
		Throug Sample	n 0-6	0; †. 6″	SOIL PRO	OFILE DESCRI		· Pho	ne Number	
Name.		1	HARR. IV	AC IN A						
							Township			
1656	FIL NO	moer ——	5011	FE	om B-2	SITE		ription by	W.F. BR	uck
Depth	(in)			Stru	cture		Mottles	Tiperon by		
Upper		Color	Texture	Grade class	Type	Consistence		Boundary Conditions	1 Coarse Fragments	Mn Coati
0	33	ORG. BEN.	Sic.			FIRM		 	10-20	<u> </u>
33	87''	OZG.	ay CL 1	DIXED W	170%	ASH				
		BEN. 46R	14		7 70 76					
							,			
										
A. NO		1%	in this p	PIECE		due to	ing zone in this		s at	inche

SOIL PROFILE DESCRIPTION

Namo	Cita	OF H	APRISE			JETHE BESCKI		· Pho	ne Number	
Name .			HARR TA	CILIFE	. TOP		Township		.neDAUE	HIN
Prope	erty Lo	cation _	<u> </u>		-101- M	101	rownsnip	co	G C I	0.0
Test	Pit Nu	mber	Soll	Type <u>= /</u>	om B-	1 SITE	Slope	Da	ate <u>Gran</u>	70.
		,					Desc	ription by.	W.F. DK	ucz
Depti	h (in)		1	Struc	ture		Mottles	•		ļ
Upper	Lower	Color	Texture	Grade class	Type	Consistence	Abundance, size, contrast, color(s)	Boundary Conditions	* Coarse Fragments	Mn Coatings
0	30	BEN.	CH. SICL.			FRI (Mois	T) MIXED W/Z	0-30% /	SH.	
	ļ							,		
30	41	OLG. BLN.	CH. SILL			FRI. (Moi	s ₇)	•	20	
ļ 										<u> </u>
41	55	BRN.	SICL.			Fri. MI	XED W/ 20% A	SH		
	ļ <u>.</u>									
ļ										
					SOIL PRO	OFILE DESCRI	<u>IPTION</u>			
Name	City	OF 1-	ARRISBU	RS Add	ress			· Pho	ne Number	·
							Township			
Prope	arcy re	cation _	<u> </u>		C Ada		_ lownsnip		unty 2202	/OC
Test	Pit Nu	mber	<u>9</u> 5011	Type Ex	m B-2	2 SIJE	Slope	ription by	W.F. B.	RUCK
Depti	h (in)			Struc	cture	1	Mottles	<u> </u>		
Upper		Color	Texture	Grade class	Type	Consistence		Boundary Conditions	\ Coarse Fragments	Mn Coatings
0	33	ORG. BRN.	CH. SICL.			FRI.			30-40	
33	93	BRN.	SICL.	- -		FRI		•	20-30	
ů.										
			<u> </u>							
	1	į.	1 .	I	I	l	(1	1	i .

COMMENTS: <1% OF ANY REFUSE

Sampled 0-93"

A. No limiting zone in this profile

B. Limiting zone in this profile is at _____ inches due to the presence of

HARRISBURG INCINERATOR



Test Pit #1



Test Pit #2

N:

NASSAUX-HEMSLEY, INCORPORATED

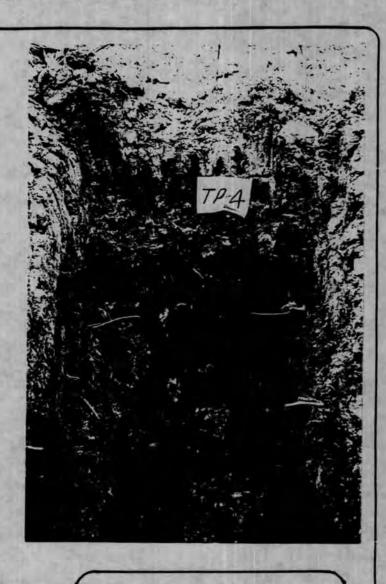
ENGINEERING / PLANNING CONSULTANTS

CHAMBERSBURG, PA.

HARRISBURG INCINERATOR



Test Pit #3



Test Pit #4

NH

NASSAUX-HEMSLEY, INCORPORATED

ENGINEERING / PLANNING CONSULTANTS

CHAMBERSBURG, PA.

HARRISBURG INCINERATOR



Test Pit #5



Test Pit #6

NH

NASSAUX-HEMSLEY, INCORPORATED

ENGINEERING / PLANNING CONSULTANTS

CHAMBERSBURG, PA.

APPENDIX II

ANALYTICAL LARGRATURIES

A DIVISION OF SKELLY AND LOV

2601 North Front Street - Harrisourg, PA 17110

(1717) GBR-G541

LABORATORY ANALYSIS REPORT

NAME.

CITY OF HARRISBURG

PROJECT NO:

13549

ADDRESS:

HARRICOURC STEAM GENERATING FA

-TEST- -----DETERMINATION----

CLIENT NO

160

1670 SOUTH 19TH STREET HARRISBURG, PA 17104

SAMPLE NO:

50231

ATTENTION:

JOHN A. LUKENS

DATE RECVD:

6/13/90

REF. NO:

MON. JUL 16 1990

SAMPLE IDENTIFICATION: TP #1

DATE:

	Control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the contro	11000000000000	
	DER MODULE 1-LEACHATE ANALYSIS		
	SILVER, TOTAL	€0. 01	MG/L
AS	ARSENIC. TOTAL	<0. 1	MG/L
BA	BARIUM, TOTAL	0.08	MQ/L
CD	CADMIUM, TOTAL	0.01	MG/L
CNT	CYANIDE, TOTAL	€0. 002	MG/L
COD	CHEMICAL DXYGEN DEMAND	163	MG/L
ÇR	CHROMIUM, TOTAL	<0. 0ì	MG/L
CRA	CHROMIUM, HEXAVALENT	CO 01	MG/L
CU	COPPER, TOTAL	0. 07	MG/L
HG		CO. Q1	MG/L
MO	MOLYBDENUM, TOTAL	<0. 01	MG/L
NH3	AMMONIA NITROGEN	9. 752	MG/L
NI	NICKEL, TOTAL	0. 11	MG/L
OG	DIL AND GREASE	0. 4	MG/L
PB		CO. 1	MQ/L
PH	PH, LAB	4, 9	PH UNITS
PHEN	PHENOL, DISTILLED	<0.05°	MG/L
SB	ANTIMONY, TOTAL	CO. 1	MO/L
SE	SELENIUM, TOTAL	<0.1	MG/L
TDS	TOTAL DISSULVED SOLIDS	290	MG/L
TOC	TOTAL DRGANIC CARBON	4. 3	MG/L
TOX -	TOTAL ORGANIC HALOGEN	CO, O5	MG/L
TVS	TOTAL VOLATILE SOLIDS	161	MG/L
ZN	ZINC, TOTAL	0. 50	MG/L
	ادر هیا است. در هیا است که در در به می در در در در در در در در در در در در در		
	MOD. 1-TOTAL ANALYSIS OF SOLID		MG/KG
AGDWS	SILVER, DRY WEIGHT	CO. O1	MOZKO
	ARSENIC. DRY WEIGHT	€0. 1	MG/KG
BADWS		89	BTU/LB
BTU	HEATING VALUE (DRY WEIGHT)		
CDDWS		5.3	MG/KG
CHIB	CYANIDE, TOTAL (DRY WEIGHT)		MC/KG
CHUMB	CHROMIUM, DRY WEIGHT	31	MQ/KG
CODMR	COPPER, DRY WEIGHT	· 58	MG/KG

ANALYTICAL LABORATORIES

A DIVIDION OF EXELLY AND LOY. Harrisburg PA 17110

It'l Warth Front Street

LABORATORY ANALYSIS REPORT

NAME.

CITY OF HARRISBURG

PROJECT NO

13549

ADDRESS

HARRISBURG STEAM GENERATING FA

CLIENT NO:

160-

1670 SOUTH 19TH STREET HARRISBURG, PA 17104

SAMPLE NO.

20231

ATTENTION:

JOHN A. LUKENS

DATE RECVD.

6/15/90

REF. NO.

MUN, JUL 16 1990

SAMPLE IDENTIFICATION:

TP #1

DATE: 6/15/90

-TEST-	DETERMINATION	RESULTS	UNITS
HGDWS	MERCURY, DRY WEIGHT	<0.01	NG/KG
MODWS	MOLYBDENUM, DRY WEIGHT	<0.01	MG/KG
NIDWS	NICKEL, DRY WEIGHT	21	MG/KG
OCSOX	DIL AND GREASE BY SOXHLET EXT.	22. 04	MG/KG
PBDWS	LEAD, DRY WEIGHT	62	MC/KC
PPH	PASTE PH	7 59	
SBDWS	ANTIMONY, DRY WEIGHT	<0. 1	MG/KG
SEDWS	SELENIUM, DRY WEIGHT	<0.1	MG/KG -
TRP	TOTAL RESIDUE	80. 5	7
TVRP	TOTAL VOLATILE RESIDUE	5. 04	*
ZNDWS	ZINC, DRY WEIGHT	207	MG/MG
	REACTIVITY	of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the	
CNTPPM	CYANIDE, REACTIVE	<0. 24	PPM
SO2PPM	SULFIDE, REACTIVE	<100	MG/KG
~~~~~~~			х.
CORROS	CORROSIVITY (PH)	7. 59	
IGN	IGNITABILITY	>1B0	DEGREES F

Respectfully Submitted. Analytical Laboratories of SKELLY and LOY

MICHAEL S. FARLLING Laboratory Markad

# ANALYTICAL CABERATERIES

#### 4 COVERED OF FARILY AND LEV

Madi North Frant Street . Harrisburg, P4 17110

## LABURATORY ANALYHIS REPORT

NAME.

CITY OF HARRISBURG

ADDRESS:

HARRISBURG STEAM CENERATING FA

CLIENT NO

160

1570 SOUTH 19TH STREET HARRISBURG, PA 17104

SAMPLE NO:

50232

ATTENTION:

JOHN A. LUKENS

DATE RECVD:

6/15/90

REF. NO:

MDN, JUL 16 1990

SAMPLE	IDENTI	FICATION.	TP	#2
--------	--------	-----------	----	----

DATE: 6/15/90

	DE FERMINATION-		UNITS
	DER MODULE 1-LEACHATE ANALYSIS		MO //
	SILVER, TOTAL	<b>CO. 01</b>	M9/L
	ARSENIC, TOTAL	<0. 1	MG/L
BA	BARIUM, TOTAL	0. 15	MG/L
CD		CO 01	MOZL
	CYANIDE, TOTAL	<0. 002	MO/L
	CHEMICAL DXYGEN DEMAND	311	MQ/L
	CHROMIUM, TOTAL CHROMIUM, HEXAVALENT	<0. 01	MO/L
CRA	CHROMIUM, HEXAVALENT	<0, 01	MG/L
cu :	COPPER, TOTAL MERCURY, TOTAL	0.03	MG/L
HG		<0. 01	MG/L
MO		<b>40.01</b>	MG/L
NH3	AMMONIA NITROGEN	0. 535	MG/L
NI	NICKEL, TOTAL	0.01	MOYL
DG	OIL AND GREASE		MG/L
PB ·	LEAD, TOTAL	<0. 1	MG/L
PH	PH. LAB	4. 9	PH UNITS
PHEN	PHENOL, DISTILLED	<0. 05	MG/L
28	ANTIMONY, TOTAL	<0. 1	MG/L
SE	SELENIUM, TOTAL	₹0 1	MG/L
TDS	TOTAL DISSOLVED SOLIDS	231	MO/L
TOC		8. 1	MG/L
TOX	TOTAL ORGANIC HALDGEN .	<0. 05	MG/L
TVS	TOTAL VOLATILE SOLIDS	174	MG/L
	ZINC. TOTAL	0. 59	MG/L
	MOD. 1-TOTAL ANALYSIS OF SOLID	å GBST-GPT-STPE-Lungi, payttödisk-reser-	
		<0.01	MG/KG
AGUNG AGUNG	SILVER, DRY WEIGHT ARSENIC, DRY WEIGHT	<0.01 <0.1	MC/KC
PADUS	BARIUM. DRY WEIGHT	8. 2	MG/KO
NTI I	HEATING VALUE (DRY WEIGHT)		BTU/LB
פשממה	CADMIUM, DRY WEIGHT	<0. 01	MO/KG
CNTS	CYANIDE, TOTAL (DRY WEIGHT)		MC/KG
CRDMG	CHROMIUM, DRY WEIGHT	<0.01	METKE
	COPPER, DRY WEIGHT	24	MG/KG
	where it was a first to the district	<del></del>	. · · · · · · · · · · · · · · · · · · ·

## AMAL/TICAD LABORATORIES

# AUDITOR OF EXECUT AND FOA

IEC: North Front Street

Hammissong MA 10110

# LABORATORY ANALYSIS PEPONT

NAME:

CITY OF HARRISBURG

PROJECT NO.

ADDRESS

HARRISBURG STEAM GENERATING FA

CLIENT NO:

160

HARRISSURG, PA 17104

1670 SOUTH 19TH STREET

SAMPLE NO:

50232

ATTENTION:

JOHN A. LUKENS

DATE RECVD:

6/15/90

REF. NO:

MON, JUL 16 1990

SAMPLE IDENTIFICATION:

DATE.

- 1EST-	DETERMINATION	RESULTS	BTIM
HGDW5	MERCURY, DRY WEIGHT	<0. 01	MG/KG
MODWS	MOLYBDENUM, DRY WEIGHT	CO. Q1	MG/KG
NIDWS	NICKEL, DRY WEIGHT	19	MOVKG
OGSOX	OIL AND GREASE BY SOXHLET EXT.	152. 3	MG/KG
PEDWS	LEAD, DRY WEIGHT	<b>&lt;0.</b> 1	MOZKG
PPH	PASTE PH	7. 61	
Sedws	ANTIMONY, DRY WEIGHT	€0. 1	MG/KG
SEDWS	SELENIUM. DRY WEIGHT	<0. 1	MO/KG
TRP	TOTAL RESIDUE	82. 4	%
TVRP	TOTAL VOLATILE RESIDUE	1. 27	%
ZNDWS	ZINC, DRY WEIGHT	120	MG/KG
	REACTIVITY		
CNTPPM	CYANIDE, REACTIVE	<0. 24	PPM
SUZPPM	SULFIDE. REACTIVE	<100	MC/KG
CORROS	CORROSIVITY (PH)	7. 61	
IGN	IGNITABILITY	2180	DECREES F

Respectfully Submitted, Analytical Laboratories of SKELLY and LOY

MICHAEL S. FARLLING Laboratory Mark

WIND TO SELECT OF CHEEK WIND TOA

IsOl North Wront Street CHATTER TO TAKE

NAME.

CITY OF HARRISBURG

PROJECT NO

17110

13549

ADDRESS:

HARRISTURG STEAM GENERATING FA

160

1670 SOUTH 19TH STREET

CLIENT NO: SAMPLE NO: 50233

ATTENTION.

HARRISBURG, FA 17104 JOHN A. LUKENS

DATE RECVD:

REF. NO

MON, JUL 16 1990

SAMPLE IDENTIFICATION

	DETERMINATION		OM I. I B
	DER MODULE 1-LEACHATE ANALYSIS		
AC	SILVER, TOTAL	CO O1	MG/L
	ARSENIC. TOTAL	<0. 1	MG/L
BA	BARIUM, TOTAL	0. <b>38</b>	MG/L
CD	CADMIUM, TOTAL	0. 08	MOZL
CNT	CYANIDE, TOTAL	CO. 002	MG/L
CUD	CHEMICAL DXYGEN DEMAND	326	MG/L
CR	CHROMIUM, TOTAL	CO. O1	MG/L
CR6	CHROMIUM, TOTAL CHROMIUM, HEXAVALENT	<0. 01	MG/L
CU	COPPER, TOTAL	0.06	MOZL
HG	MERCURY, TOTAL	<0. 01	MG/L
MO	MOLYBDENUM, TOTAL	<0. 01	MC/L
NH3	AMMONIA NITROGEN	0. 0543	MC/L
NI	NICKEL, TOTAL	0 16	MG/L
O.C	DIL AND GREASE	4.6	MG/L
28	LEAD, TOTAL	₹0. 1.	MG/L
	PH, LAB		PH UNITS
PHEN	PHENOL, DISTILLED		MOAL
	ARTTMONY TOTAL	<b>40.1</b>	MG/L
	SELENIUM, TOTAL	<0. 1	MG/L
	TOTAL DISSOLVED SOLIDS		MG/L
	TOTAL ORGANIC CARBON	9.4	MG/L
TOX	TOTAL ORGANIC HALDGEN	CO. <b>O5</b>	MG/L
		516	MG/L
	ZINC, TOTAL	4. 5	MQ/L
	and any substance of the substance and the substance and the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of the substance of	apar titri diliki isan tirin yan enya .	A. S. S. S. S. S. S. S. S. S. S. S. S. S.
	MOD 1-TOTAL ANALYSIS OF SULID	CO 01	MG/KG
VCDITO	SILVER, DRY WEIGHT ARSENIC, DRY WEIGHT	(0. 01	MO/KG
ASDWS	AKSENIC, DRY WEIGHT	CO. 1	MG/KG
			· · · · · · · · · · · · · · · · · · ·
	HEATING VALUE (DRY WEIGHT)		BTU/LB
			MOVE
	CYANIDE, TOTAL (DRY WEIGHT)		MG/KG
	CHROMIUM, DRY WEIGHT		MG/KG
CUDWS	COPPER, DRY WEIGHT	140	MC/KG

## AMALYTICAL ARCHAOLERS

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# LABORATORY ANALYSIS REPORT

MAME

COTY OF HARRISBURG

PROJECT NO.

13549

ADDRESS

HARRISBURG SIEAM SENERATING FA

CLIENT NO.

160

HARRISBURG, PA 17104

1570 SOUTH 19TH STREET

SAMPLE NO:

50233

ATTENTION:

JOHN A LUKENS

DATE RECVO:

6/15/90

REF. NO.

MON, JUL 16 1990

SAMPLE IDENTIFICATION: TP # :

DATE: 6/15/90

-TEST-	DETERMINATION	RESULTS	UNITS
HCDWS	MERCURY, DRY WEIGHT	<0. 01	MG/KG
MCIDWS	MOLYBDENUM, DRY WEIGHT	(0 01	MG/KG
NIDWS	NICKEL, DRY WEIGHT	47	-MC/KG
OGSQX	DIL AND GREASE BY SOXHLET EXT.	404, 2	MQ/KG
PBDWS	LEAD, DRY WEIGHT	400	MG/KG
FPH	PASTE PH	7. 84	
SBDWS	ANTIMONY, DRY WEIGHT	<0. L	MG/KG
SEDUS	SELENIUM, DRY WEIGHT	<0 i	MG/KG
TRP	TOTAL RESIDUE	77. 8	7.
LABB	TOTAL VOLATILE RESIDUE	5. 49	7.
ZNDWS	ZINC, DRY WEIGHT	740	MO/KO
	REACTIVITY		
CNTPPM	CYANIDE, REACTIVE	<b>&lt;0.24</b>	PPM
SO2PPM	SULFIDE, REACTIVE	<100	MO/KG
CORROS	CORROSIVITY (PH)	7. 84	
IGN	IGNITABILITY	>180	DEGREES F

Respectfully Submitted.
Analytical Laboratories

of SKELLY and LOY

MICHAEL S. FARLLING Laboratory Manager

### 2014年1月 4日 - ANGA (GROSS)

### w Division in Institut And Lun

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# LABURATURY ANALYSIS REPORT

NAME	TITY OF HARRISBURG	PROJECT NO.	13549
ADDRESS	MARRICUUNG STEAM GENERATING FA	CLIENT NO	160
* * *	1570 SOUTH 19TH STREET	SAMPLE NO.	50234
	HARPISBURG, PA 17104		
ATTENTION	JOHN A. LUKENS	DATE RECVD.	6/15/90
REF NO.	6.5.		

MUN, JUL 16 1990

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-TEST-	DETERMINATION	RESULTS	BTINU
	DER MODULE 1-LEACHATE ANALYSIS	-	\$. **
AG	SILVER, TOTAL	<0.01	MG/L
AS	ARSENIC. TOTAL	<0. 1	MC/L
BA	BARTUM, TOTAL	0. 23	MG/L
cp	CADMIUM, TOTAL	0. 02	MG/L
CNI	CYANIDE, TOTAL	<0.002	MG/L
CDD	CHEMICAL DXYGEN DEMAND	457	MO/L
CR .	CHROMIUM, TOTAL	<0 01	MG/L
CR6	CHROMIUM, HEXAVALENT	<0.01	MG/L
CU	COPPER, TOTAL	<0. Q1	MC/L
HG	MERCURY, TOTAL	<0.01	MG/L
MO	MOLYBDENUM, TOTAL	CO. 01	MC/L
EHM	AMMONIA NITROGEN	<b>CO 100</b>	MG/L
NI	NICKEL, TOTAL	0.02	MG/L
DG	DIL AND GREASE	4. 2	MG/L
PB	LEAD, TOTAL	0. 12	MC/L
PH	PH, LAB	4. 8	PH UNITS
PHEN	PHENOL, DISTILLED	CO. 05	MG/L
SB	ANTIMONY, TOTAL	<0.1	MG/L
SE	SELENIUM, TOTAL	CO. 1	MC/L
TDS	TOTAL DISSOLVED SOLIDS	1064	MG/L
TOC	TOTAL DROANIC CARBON	28. 4	MG/L
TOX	TOTAL DROANIC HALDGEN	<005 €	MG/L
TVS	TOTAL VOLATILE SCLIDS	417	MG/L
ZN	ZINC, TOTAL	0. 97	MO/L
	MOD. 1-TOTAL ANALYSIS OF SOLID		
AGDWS		<0.01	MO/KO
	ARSENIC, DRY WEIGHT	<0. 01 <0. 1	MG/KG
BADWS	BARIUM, DRY WEIGHT	95	MG/KG
BTU	HEATING VALUE (DRY WEIGHT)	450 450	BTU/LE
77.	CADMIUM, DRY WEIGHT	2. 9	MG/KG
CNTS		0 <b>20</b> 0	MG/KG
CRDWS		17	MC/KG
	COPPER, DRY WEIGHT	87	MG/KG
2 A Plan 12	course. Thi MCIGH.	• · · · · · · · · · · · · · · · · · · ·	1197 TIM

# ANALYTICAL LABORATORILE

A DISTRICT OF BRELLY AND LOY

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# LABORATORY ANALYSIS REPORT

NAME

CITY OF HARRISBURG

PROJECT NO.

13549

ADDRESS

HARRISBURG STEAM GENERALING FA

CLIENT NO.

160

1070

LATO SOUTH 19TH STREET HARRISBURG, PA 17104 SAMPLE NO:

50234

ATTENTION

JOHN A LUKENS

DATE RECVE:

6/15/90

REF. NO:

MON. JUL 16 1990

SAMPLE IDENTIFICATION: TP # 4

DATE: 6/15/90

-TEST-	DETERMINATION	RESULTS	UNITS
HGDWS	MERCURY, DRY WEIGHT	<b>40.01</b>	MG/KG
MODWS	MOLYBDENUM, DRY WEIGHT	CO 01	MG/KG
NIDWS	NICKEL, DRY WEIGHT	33	MG/KG
CCSCX	DIL AND GREASE BY SOXHLET EXT.	181 2	MG/KG
PEDWS	LEAD, DRY WEIGHT	200	MG/KG
PPH	PASTE PH	8. 18	
Sedws	ANTIMONY, DRY WEIGHT	CO. 1	MG/KG
SEDWS	SELENIUM, DRY WEIGHT	CO. 1	MG/KG
TRP	TOTAL RESIDUE	84 1	*
TVRP	TOTAL VOLATILE RESIDUE	5. 84	%
ZNDWS	ZINC, DRY WEIGHT	740	MC/KO
	REACTIVITY		
CNTPPM	CYANIDE, REACTIVE	CO. 24	PPM
SO2PPM	SULFIDE, REACTIVE	<100	MG/KG
CORROS	CORROSIVITY (PH)	8. 18	
IGN	YTIJIBATINDI	>180	DEGNEES F

Respectfully Submitted, Analytical Laboratories of SKELLY and LOY

MICHAEL S. FARLLING Laboratory Manager

# ANALYTICAL LABORATORIES

#### A DIVISION OF PREFER AND FOX

#aC: North Frant atreet . January PA 17:10

# LABORATORY ANALYSIS REPORT

NAME: CITY OF HARRISBURG

PROJECT NO:

ADDRESS

HARRISBURG STEAM GENERATING FA

CLIENT NO:

160

1670 SOUTH 19TH STREET HARRISBURG, PA 17104

SAMPLE NO:

ATTENT LUN

JOHN A: LUKENS

DATE RECVD:

6/15/90

REF. NO.

MUN. JUL 16 1990

SAMPLE IDENTIFICATION: TP #	CATTON TP #	CA	CIET	DENT	E 1	SAMP
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-TEST-	DETERMINATION	-RESULTS	UNITS
	DER MODULE 1-LEACHATE ANALYSIS	-	$F_{ij} = F_{ij} = F_{ij}$
AG	SILVER, TOTAL	<0.01	MG/L
AS	ARSENIC, TOTAL	<b>CO. 1</b>	MG/L
BA	BARIUM, TOTAL	0. 11	MO/L
CD	CADMIUM, TOTAL	<0.01	MG/L
· CNT	CYANIDE, TOTAL	CO 002	MG/L
COD	CHEMICAL DXYGEN DEMAND	321	MC/L
CR .	CHROMIUM, TOTAL	₹ <b>0</b> . 01	MG/L
CR6	CHROMIUM, HEXAVALENT	<0.01	MG/L
CU	COPPER, TOTAL	€0. 01	MG/L
HG	MERCURY, TOTAL	<b>CO. O1</b>	MC/L
MO	MOLYBDENUM, TOTAL	<0.01	MO/L
NH3	AMMONIA NITROGEN	CD. 100	MG/L
NI	MOLYBDENUM, TOTAL AMMONIA NITROGEN NICKEL, TOTAL	0. 25	MG/L
OG	OIL AND GREASE	3. 4	MG/L
PB		CD. 1.	MG/L
PH	PH. LAB	4. 8	PH UNITS
PHEN		₹0. 05°	MOVL
SB	ANTIMONY, TOTAL	<0.1	MO/L
SE	SELENIUM TOTAL	~(0. 1:	MG/L
TDS	TOTAL DISSULVED SOLIDS	922	MG/L
TOC	TOTAL ORGANIC CARBON	18. 4	MG/L
TOX	TOTAL DROANIC HALDGEN	<0. Q5	MG/L
TVS	TOTAL VOLATILE SOLIDS	378	MG/L
ZN	ZING, TOTAL	0. 25	MG/L
	and applications and the second second second second second second second second second second second second se	AND THE COST WAS AND AND SHIP THE PARTY.	
	MOD. 1-TOTAL ANALYSIS OF SOLID		
AGDWS	SILVER, DRY WEIGHT	<0.01	MC/KG
ASUWS			MG/KO
	BARIUM, DRY WEIGHT	102	MG/KC
BTU		<50	BTU/LB
CDDWS		1.4	MG/KG
CNTS		0. 350	MG/KG
	CHROMIUM, DRY WEIGHT	16	MG/KG
CUDWS	COPPER, DRY WEIGHT	34	MG/KG

## ANALYTICAL LABORATERIES

A DIVITION OF THE LY AND LOY

Maria North Frant Street

Hammidburg PA 17110

# LABORATORY ANALYSIS REPORT

NAME

CITY OF HARRISBURG

PROJECT NO:

13549

ADDRESS:

HARRISBURG STEAM GENERATING FA

CLIENT NO.

160

1670 GOUTH 19TH STREET HARRISBURG, PA 17104

SAMPLE NO:

50235

ATTENTION:

JOHN A. LUKENS

DATE RECVD:

6/15/90

REF. NO:

MON, JUL 16 1990

SAMPLE IDENTIFICATION TP # 5 DATE: 6/15/90

-TEST-	DETERMINATION	RESULTS	UNITS
HGDWS	MERCURY, DRY WEIGHT	<0.01	MG/KG
MODWS	MOLYSDENUM, DRY WEIGHT	<0.01	MG/KG
NIDWS	NICKEL, DRY WEIGHT	22	MC/KG
DCEOX	OIL AND GREASE BY SOXHLET EXT.	224. 6	MG/KG
PBDWS	LEAD, DRY WEIGHT	93	MG/KG
PPH	PASTE PH	7. 75	
SBDWS	ANTIMONY. DRY WEIGHT	<0. 1	MG/KG
SEDWS	SELENIUM, DRY WEIGHT	CO 1	MC/KC
TRP	TOTAL RESIDUE	<b>83.</b> 2	%
TVRP	TOTAL VOLATILE RESIDUE	3. 44	7.
ZNDWS	ZINC, DRY WEIGHT	210	MG/KG
	REACTIVITY	100 (00) (00) (00) (00) (00) (00) (00) (00)	
CNTPPM	CYANIDE, REACTIVE	<0, 24	PPM
SOZPPM	SULFIDE, REACTIVE	<100	MG/KG
CORROS	CORROSIVITY (PH)	7. 75	•
IGN	IGNITABILITY	<b>&gt;180</b>	DEGREES F

Respectfully Submitted. Analytical Laboratories

of SKELLY and LOY

MICHAEL S. FARL

Laboratory Managh/

#### 4 DIVISION OF SKELLY 445 LOY

Mall North Front Street Harmistone PA 17010

# LABORATORY ANALYSIS REPORT

CITY OF HARRISBURG

ADDRESS

HARRISBURG STEAM GENERATING FA

CLIENT NO:

1670 SOUTH 19TH STREET HARRISBURG, PA 17104

SAMPLE NO.

50236

ATTENTION:

JOHN A LUKENS

DATE RECVO

6/15/90

REF. NO:

#### MON, JUL 16 1990

CAMPIE	IDENTIFICATION.	TO W L
	LUCKILLE LUMBILKU.	) r 🕶 🙃

DATE: 6/15/90

-TEST-			UNITS
***		3.1	State No. 25
AG	SILVER, TOTAL	(0, 01	MG/L
AS	ARSENIC, TOTAL	<0.1	MG/L
-BA	BARIUM, TOTAL	0. 13	MC/L
CD	CADMIUM, TOTAL	0.05	MG/L
CNT	CYANIDE, TOTAL	<0.002	MC/L
COD	CHEMICAL UXYGEN DEMAND	305	Me/L
CR	CHROMIUM. TOTAL	<0.01	MC/L
CR6	CHROMIUM, HEXAVALENT	<0. 01	HO/L
cu	COPPER, TOTAL	0. 12	MG/L
HG	MERCURY, TOTAL	<0.01	MO/L
MO	MOLYBDENUM, TOTAL	co or	MG/L
EHM	AMMONIA NITROCEN	<0.100	MO/L
NI	NICKEL, TOTAL	0.08	MG/L
OG	DIL AND GREASE	2. 2	MG/L
PB	LEAD, TOTAL	CO. 1.	MG/L
PH	PH, LAB	48	PH UNITE
PHEN	PHENOL, DISTILLED	<0.05	MG/L
SB	ANTIMONY, TOTAL	<0. 1	MG/L
SE	SELENIUM, TOTAL	(O. 1	MG/L
ZOT	TOTAL DISSOLVED SOLIDS	394	MG/L
TOC	TOTAL ORGANIC CARBON	12.7	MG/L
TOX	TOTAL ORGANIC HALDGEN	<0. 05	H9/L
TVS	TOTAL VOLATILE SOLIDS '	217	HG/L
ZN	ZINC, TOTAL	2. 6	MG/L
	والمراهبة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة		
	MOD. 1-TOTAL ANALYSIS OF SOLID	-	
ACDWS	SILVER, DRY WEIGHT	<0.01	MG/KG
ASDWS	ARSENIC, DRY WEIGHT	<0. i	MG/KG
BADWS	BARIUM, DRY WEIGHT	130	MG/KG
BTU	HEATING VALUE (DRY WEIGHT)	<50	BTUYLB
CDDM8	CADMIUM, DRY WEIGHT	4. 5	MG/KG
CNTS	CYANIDE, TOTAL (DRY WEIGHT)	0 150	MG/KG
CRDWS	CHROMIUM, DRY WEIGHT	14	MG/KG
CUDWS	COPPER. DRY WEIGHT	108	MG/KG

# ANALYTICAL LABORATORIES

A DIVISION OF SKELLY AND LOY

2601 North Front Street

Harrisburg. FA 17110

17179 202-0593

# LABORATORY ANALYSIS REPORT

NAME.

CITY OF HARRISBURG

PROJECT NO:

13549

ADDRESS:

HARRISBURG STEAM GENERATING FA

CLIENT NO:

160

1670 SOUTH 19TH STREET HARRISBURG, PA 17104

SAMPLE NO:

50236

ATTENTION

JOHN A. LUKENS

DATE RECVD:

6/15/90

REF. NO:

MON: JUL 16 1990.

SAMPLE IDENTIFICATION: TP # 6

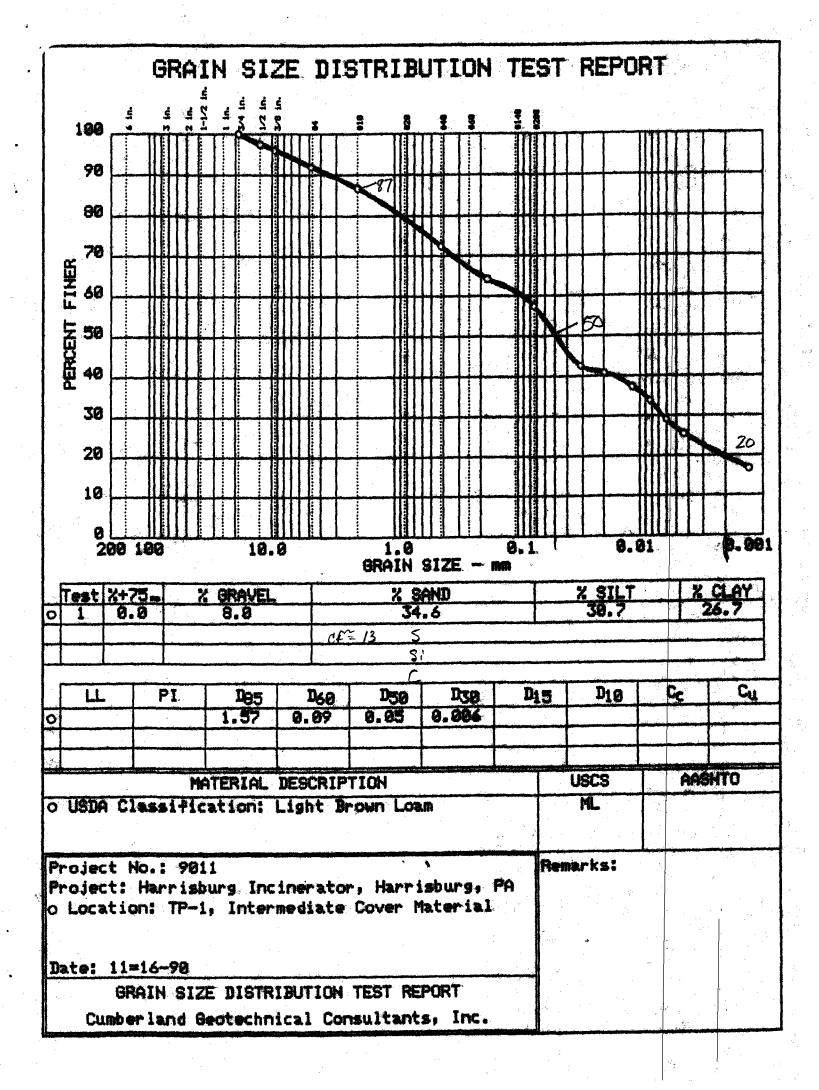
DATE: 6/15/90

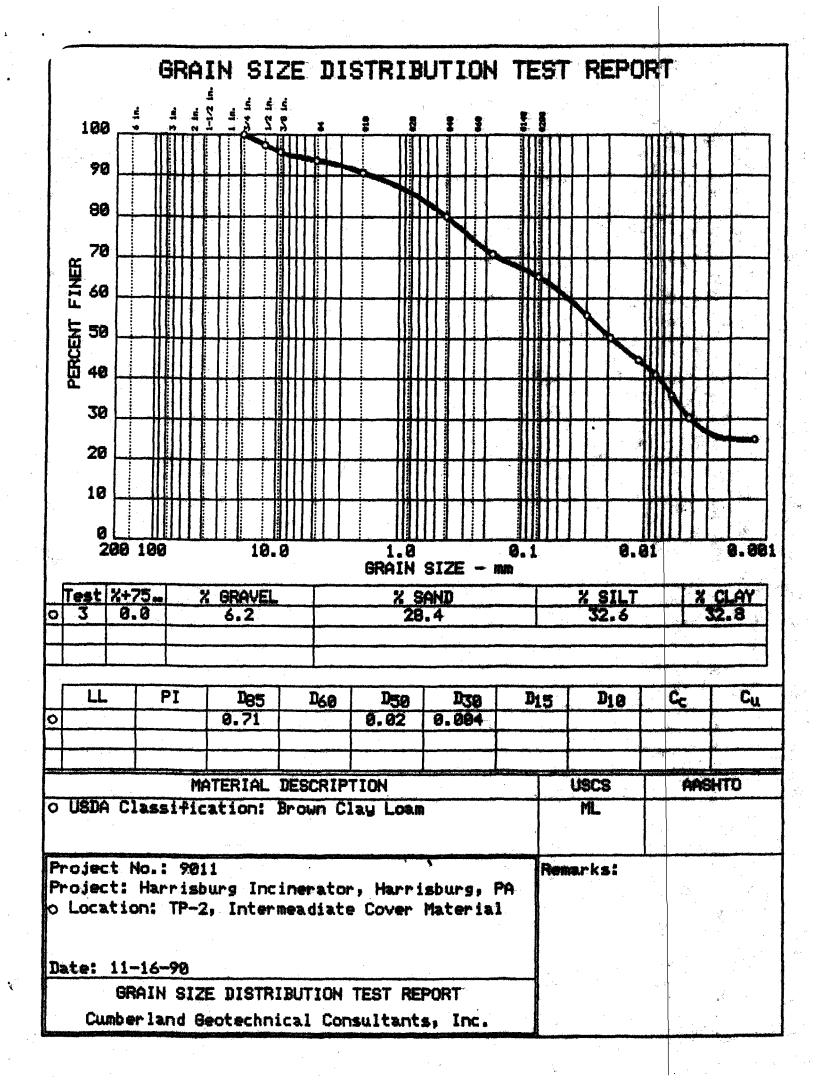
-TEST-	DETERMINATION	RESULTS	UNITS
HCDWS .	MERCURY, DRY WEIGHT	<0.01	MC/NO
MODWS	MOLYBDENUM, DRY WEIGHT	<0.01	MG/KC
NIDWS	NICKEL, DRY WEIGHT	32	MO/KG
OGSOX	OIL AND GREASE BY SOXHLET EXT.	234. 8	M8/K0
PBDWS	LEAD, DRY WEIGHT	95	MC/KC
PPH	PASTE PH	7.74	
SEDWS	ANTIMONY, DRY WEIGHT	<0. 1	MG/KG
SEDWS	SELENIUM, DRY WEIGHT	CO 1	MG/KG
TRP	TOTAL RESIDUE	83. 3	*
TVRP	TOTAL VOLATILE RESIDUE	3.08	<b>%</b>
ZNDWS	ZINC. DRY WEIGHT	590	MOVKO
	REACTIVITY		
CNTPPM	CYANIDE, REACTIVE	<0. 24	PPM
SO2PPM	SULFIDE, REACTIVE	C100	MG/KG
CORROS	CORROSIVITY (PH)	7. 74	
IGN	IONITABILITY	>180	DEGREES F

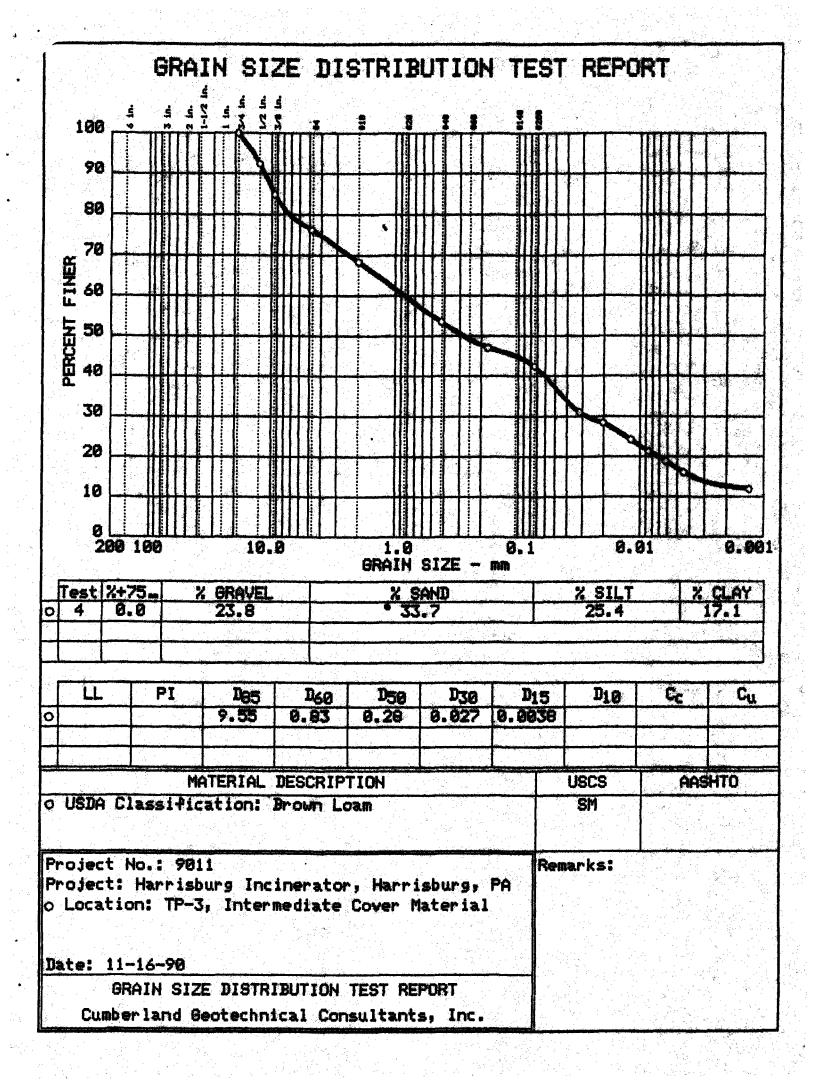
Respectfully Submitted, Analytical Laboratories of SKELLY and LOY

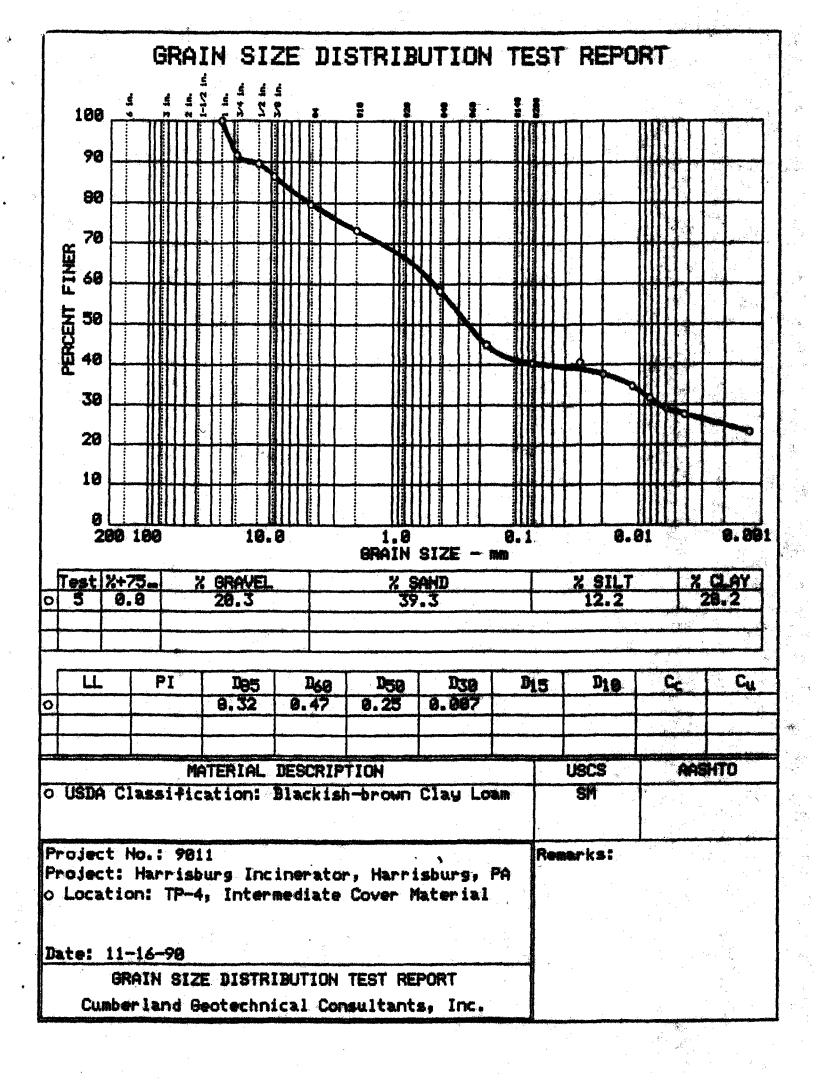
MICHAEL S. FARILL Laboratory Manager

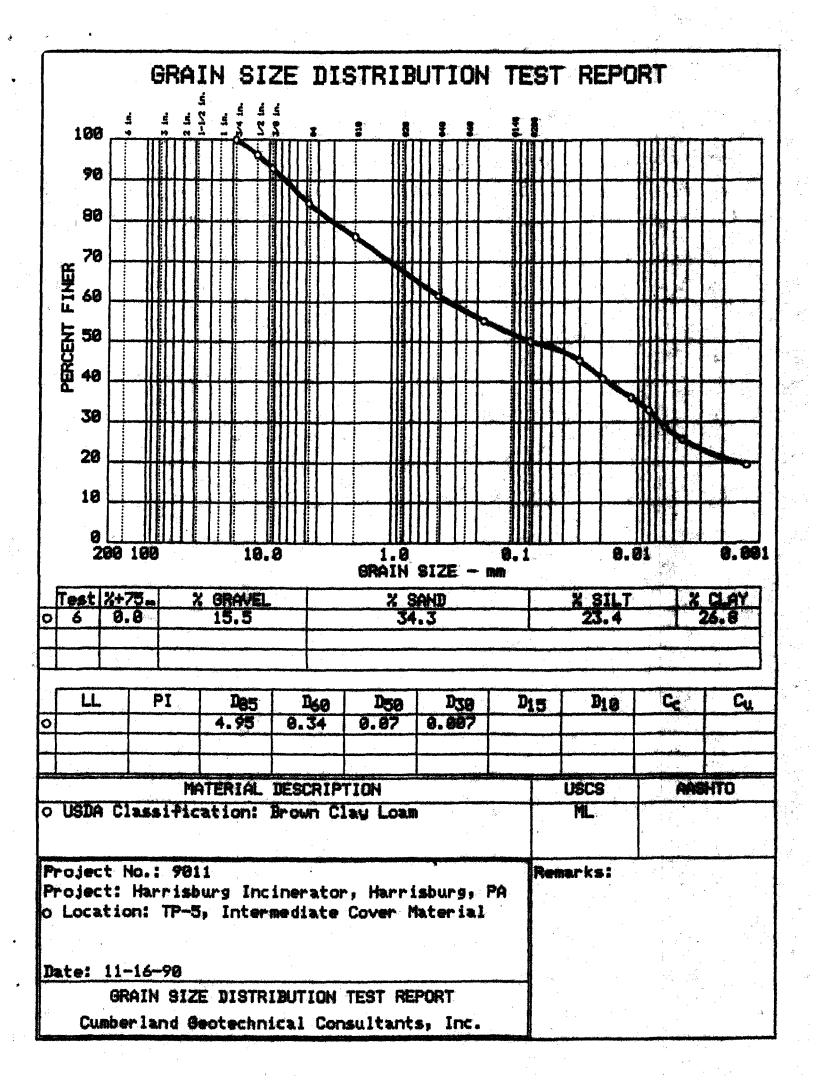
# APPENDIX III

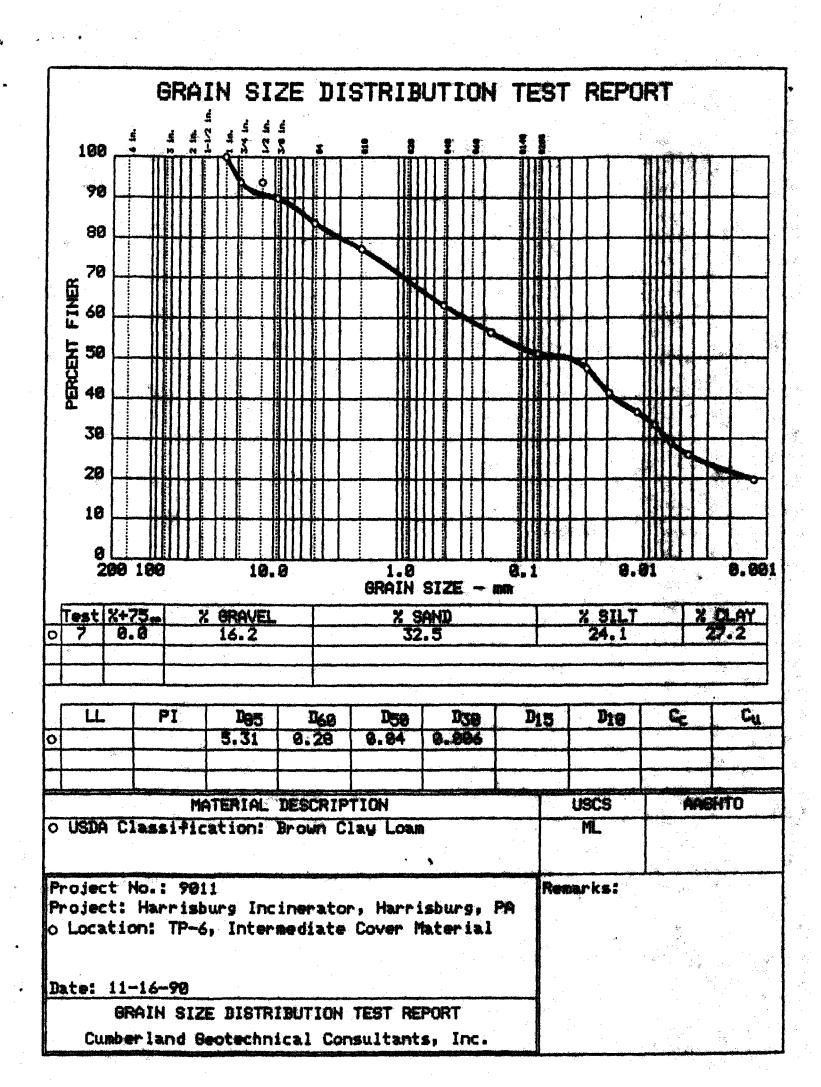












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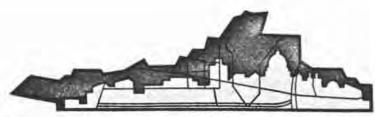
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# The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

February 23, 1994

Mr. Anthony L. Rathfon
Operations Supervisor
Commonwealth of Pennsylvania
Department of Environmental Resources
Southcentral Region - Field Operations
Waste Management Program
One Ararat Boulevard
Harrisburg, PA 17110

Re: Meeting of January 13, 1994 Violations of Municipal Waste Regulations

Dear Mr. Rathfon:

This letter is in response to your January 18, 1994 correspondence regarding the above-referenced meeting.

From reviewing the Department's 1993 inspection history for the B-2 site, the resource recovery facility, and those items discussed in our January 13th meeting, the outline below was developed to represent those items that the Department has expressed concerns about.

#### SECTION 1 - LANDFILL

#### A. GENERAL PROVISIONS:

 25 Pa Code §273.201(c)(2) - Operation in accordance with approved plans and permit.

#### B. COVER/SLOPES/REVEGETATION:

- 25 Pa Code §273.232(a) Uniform six inch daily cover compacted on waste at the end of working day or at the end of each 24 hour period, whichever is less.
- 25 Pa Code §273.232(b), (c) & 273.233(b), (c) Daily/intermediate cover meets performance and design requirements.
- 25 Pa Code §273.233(a) 12 inches intermediate cover applied within time limits.

Mr. Anthony L. Rathfon February 23, 1994 Page Two

- 25 Pa Code §273.233(e) Intermediate cover temporarily revegetated as required.
- 25 Pa Code \$273.233(f) Intermediate slopes covered, revegetated, and do not exceed 50%.
- 25 Pa Code §273.235(a)-(e) & 273.236(a), (b) Minimum revegetation and successful revegetation requirements adhered to.

#### C. WATER QUALITY PROTECTION:

25 Pa Code §273.242(a)-(c) - Soil erosion and sedimentation controls designed and implemented as per approved plans; gullies over nine inches repaired.

#### D. SPECIAL HANDLING AND RESIDUAL WASTES:

 25 Pa Code §273.514(c) - Ash Residue covered immediately or as approved by the Department.

It is the City's understanding from conversations with the Department that most of the items outlined above are interrelated and may be distilled down to the following four issues:

#### 1) Timely Application of Daily Cover

Response: During the B-2 site permit application review, the City questioned the six inch daily cover requirement's applicability and/or practicability to an ash monofill. Among other things, the City argued that relative to an ash monofill this requirement would take up valuable landfill space while providing little or no environmental benefit (i.e. vector control, odor control, litter control, methane gas control, and other concerns relative to to a typical municipal solid waste landfill, but not an ash monofill.). The City proposed using tarps, then, as now in the God permit application for Residue Disposal Area B-3, in lieu of six ' inch cover material as a more practical alternative that would still be protective of the environment. Because of the regulations in place at that time, the Department stated that the tarps con would have to be six inch thick and required same in Condition we No. 19 of the B-2 site permit. The City timely appealed a number of conditions in the B-2 permit, including Condition No. 19.

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Mr. Anthony L. Rathfon February 23, 1994 Page Three

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The City understands that the Department's regulations that Qwere approved on October 10, 1992 do now allow alternatives to the six inches of soil. Because responsible conservation of STUF valuable landfill space remains one of the City's highest solid-added waste management objectives, the City has again proposed alternatives to the six inch daily cover requirement in its B-3 permit number application. The City has requested the Department to approve & Af the use of foam, tarps or soil to meet the daily cover requirements. These methods will allow the City to meet the requirement with greater efficiency and convenience while also conserving Municipality landfill space. We propose to operate in a 100 by 100 foot area which would remain uncovered to permit ferrous separation and equipment deployment. The remaining areas of the landfill would be covered on a daily basis with foam, tarps or soil or any combination of the three as approved by the Department.

To facilitate the implementation of the daily operations of the landfill, the City is in the process of hiring an additional heavy equipment operator and two additional laborers. positions have been approved by the Mayor and City Council and the required posting and hiring requirements have been initiated. The heavy equipment operator will be dedicated to the landfill and the laborers will be shared between the landfill and the resource recovery facility to address the permit conditions and other requirements. Management staff will be available to accompany the Department's inspector(s) to assure environmental compliance matters are addressed in a timely fashion. The City understands that inspections are not announced, but will make every effort to have a management employee available to accompany the Department inspector at such times when inspections are conducted. Training of employees will be conducted in the manner described in the B-3 permit application and in the technical review response. There a placem w/ Then thereing? Refer to comments on 33 App

Timely Application of Intermediate Cover

Response: As soon as weather conditions permit, this spring, the City will repair the gullies nine inches or greater on the side slopes of Residue Disposal Area B-2 and apply temporary seeding. This seeding will serve to stabilize the side slopes on B-2 and prevent any additional erosion. The City anticipates that this work will be completed no later than May 1, 1994, weather permitting.

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INTERMEDIATE COVER MUST BE.
Applied!
What chout Elevation ?

Mr. Anthony L. Rathfon February 23, 1994 Page Four

With respect to the intermediate cover, the upcoming construction of Residue Disposal Area B-3 will also involve a major rework of B-2 as well. Once the liner is installed in B-3, ash from B-2 will be removed, screened and relocated to B-3. It is our intent to begin operation of the landfill by "filling the bowl" created by the embankment around the periphery of the new Area B-3. In connection with the relocation of the select ash, the cover material on the side slopes of B-2 will be stripped off and stockpiled for reuse later as intermediate cover. The ash will be placed in B-3 using level lifts until such time as the bowl is filled. This will require moving approximately 90,000 cubic yards of ash from B-2 and installing it within the bowl of the B-3 site. Once the bowl is filled, normal operations can begin with the refilling of B-2 beginning at the Cameron Street side and working eastward.

The configuration of Residue Disposal Area B-2 will change dramatically from the ash relocation. As shown on the plans appended hereto, the remaining volume in B-2 will be much smaller than presently exists. The remaining ash in B-2 will be reshaped in accordance with the requirements of the major modification for the site. At this point the remaining berm areas and side slopes of B-2 will be redressed to provide the required amount of intermediate cover using the stockpiled material and such other material as necessary to meet the regulations. Once the intermediate cover is placed, the area will be revegetated in accordance with Department regulations. The plans appended hereto include cross sections of the B-2 landfill that illustrate the originally permitted area and the cross-sectional area to be approved under the presently pending major modification application. intermediate cover removal, reapplication, and revegetation of the fide slopes is anticipated to be complete by October 1994. This assumes a timely receipt of the B-3 major modification approval and a successful construction season.

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#### 3) Timely Revegetation

Response: As described in item 2) above, the City will repair the side slopes on B-2 as soon as weather permits this spring and revegetate and mulch as necessary.

#### 4) Soil Erosion and Sedimentation Controls

It is the City's understanding that the Department is particularly concerned with stormwater runoff from the haul road into the swale. The City will apply intermediate cover to the slopes on either side of the haul road and apply seed. We will also deploy No. 4 stone on the haul road and install silt fence on each side of the haul road to minimize the migration of solids into the swale. This work will begin in March, or as soon as weather conditions permit, be completed no later than May 1, 1994.

Mr. Anthony L. Rathfon February 23, 1994 Page Five

The City will repair the gullies nine inches or greater on the side slopes of B-2 and apply temporary seeding, as described in item 2) above.

#### SECTION 2 - RESOURCE RECOVERY FACILITY

In reviewing the Department's 1993 inspection history for the resource recovery facility and those items discussed in our January 18th meeting, I developed the outline below to represent those items most often listed:

#### A. GENERAL PROVISIONS:

 25 Pa Code §283.201(b) - Operation in accordance with approved plans and permit.

Mesponse: It is the City's understanding that compliance with the below listed items would result in compliance with this general requirement.

#### B. DAILY OPERATIONS:

 25 Pa Code §283.216(c) - Wheel curb and tie downs at unloading pits.

Response: In normal operations, vehicles do not dump directly into the storage pit. Vehicles unload waste directly onto the tipping floor and a front end loader is used to push the waste into the pit. Unloading onto the tipping floor is necessary in order to effect periodic inspections of the waste, remove any non-processible waste, or detect the existence of any potentially hazardous materials in the load. In addition, the Facility is now permitted to accept certain residual wastes for disposal. Good operating practice for certain residual wastes involves blending the residual waste with the municipal waste to maintain acceptable Btu value as well as acceptable chemical compositions. From time to time, this necessitates tipping the waste in segregated areas on the floor and using the loader to assist in obtaining the desired mix in the storage and charging pit. In lieu of the wheel curbs and tie downs, the City proposes to paint a warning stripe on the floor and post warning signs to keep trucks in a safe distance from the pit.

Wheel curbs or tie downs would damage the loader or be damaged by the loader and disrupt the operation described above. It is the City's position that the pit is not an unloading pit, but was designed and is operated solely as a storage and charging pit. In consideration of the foregoing, the City does not believe the lack of wheel curbs or tie downs constitutes a violation of Section 283.216 (c).

2. 25 Pa Code §283.216(f) - Solid waste confined to

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- Clarify Figures

Mr. Anthony L. Rathfon February 23, 1994 Page Six

Response: Based on conversations with the Department, it is our understanding that the Department has several concerns related to the above captioned regulation. We treat these separately below.

Department personnel allege that the City is in violation of this section because waste stored exceeds permit requirements. However, 25 Pa Code §283.216(h) requires that the facility have a storage capacity equivalent to the waste that can be processed at the facility in three days, unless otherwise specified by the Department. Condition No. 11 of the Facility's permit caps storage to no more than 2400 tons of municipal solid waste. Appended hereto as Exhibit A is a description and the volumes of the Facility's storage pit. The storage pit has a maximum capacity of 1180 tons, leaving a storage capacity of 1220 the tipping floor. This amount of waste approximately 6927 cubic the equivalent. Therefore, the City maintains that the Facility is not storing waste in excess of its permitted capacity.

> In summary, the Facility is allowed three days storage by 25 Pa Code §283.216(h) and the Department has permitted the Facility to allow storage up to 2400 tons. Based on the calculations above, the City asserts that it has not stored more than the 2400 tons allowed by its permit, nor has it violated 25 Pa Code §283.216(h).

b) Solid Waste Not Confined To Approved Storage Area

The City understands from its conversations with Department personnel that solid waste is escaping the tipping building. City agrees to make repairs to and replace missing sections of the east wall of the tipping building and other such measures as may be necessary to confine the waste to the storage area. missing windows over the storage pit at the charging floor level will also be repaired and/or replaced as necessary. The above listed repairs will begin in March, or as soon as weather permits, and be completed no later than May 1, 1994. As previously mentioned, the City is also in the process of hiring two additional laborers to be shared between the landfill and the resource recovery facility to address the permit conditions and other requirements. The laborers duties shall include litter control in the area of the tipping building as well as other areas on the site. In the interim, until these laborers are hired, the City will address litter control with available personnel.

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Complete Wall Rebuilding

Mr. Anthony L. Rathfon February 23, 1994 Page Seven

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 25 Pa Code \$283.217(c) - Plumbing properly maintained, floors well drained.

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a) Poorly Drained Floors in Basement

The floors in the basement of the Facility were originally equipment with 2.5" diameter floor drains. After only a few years of operation, these drains became blocked to the point where professional plumbers were unable to open them. Therefore, the 2.5" drains were abandoned and the existing trough drains were installed. However, there is an area on the basement floor directly between and under the furnaces where standing water accumulates in the depression of one of the abandoned 2.5" drains. To correct this situation, the City will level the floor in this area by filling the depression with concrete, allowing water to flow freely to adjacent trough drains. This work will begin in March, or as soon as weather permits, and be completed no later than May 1, 1994.

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Mr. Anthony L. Rathfon February 23, 1994 Page Eight

#### RECORDKEEPING/REPORTING:

25 Pa Code §283.271(a), (b) - Alternate facility available during temporary shutdown.

Response: The City has completed a request for proposals (RFP) for alternate permitted solid waste capacity in the event of an extended shut down of the Facility. The RFP responses are Currently under review by the City and The Harrisburg Authority.

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The City hopes that the above responses adequately and comprehensively address the concerns raised by the Department in the January 13th meeting. If the Department would like another is County flow meeting to discuss these items, please let me know.

John A. Lukens Director

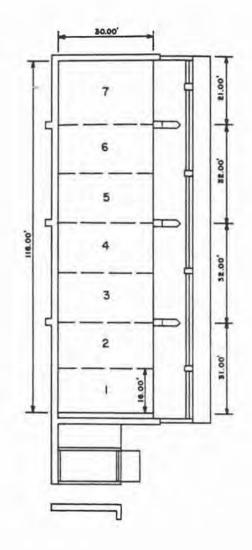
JAL/jal enclosures cc:

> Thomas J. Mealy, Executive Director - THA Daniel R. Lispi, Project Manager John E. Reinard, Operations Supervisor Eugene Kohles, Facilities Engineer Michael Steiner, DER Robert Benvin, DER File

GANNETT FLEMING CORDDRY AND CARPENTER, INC.

4.06 - STORAGE PIT (see Figures 1 and 2)

Its function is to accommodate delivery of refuse, mostly collected during the day shift, five and six working days per week. Its normal capacity (level with charging floor) of 4,350 c.y. (about 760 tons) will provide sufficient fuel, without any further concurrent deliveries, to operate one furnace at its maximum rate of 360 TPD, for 50 hours, and two furnaces for 25 hours. However, to permit a continuous 168 hours per week operation or to bridge over any emergency or bad weather conditions, the stored capacity can be increased by piling up high against the west pit wall in each of the seven dumping bays except No. 1, where the top level of stored refuse must be maintained below an elevation of 360.0 -- the approximate level of shredder discharge chute. This maximum capacity approximates 6,700 c.y. (about 1,180 tons) accommodating one furnace at its maximum rate of 360 TPD for about 80 hours and two furnaces for 40 hours without any refuse deliveries during these periods. Should nondeliveries extend beyond these periods, the choice is either a plant shutdown or, in the event of obligatory steam deliveries, burning of auxiliary fuel oil.



#### MAXIMUM VOLUMES

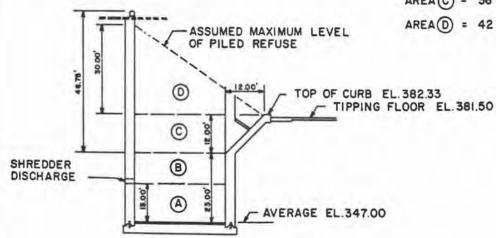
AREA (A) = 30 X 13 X 116 ÷ 27 = 1680 CU.YD.

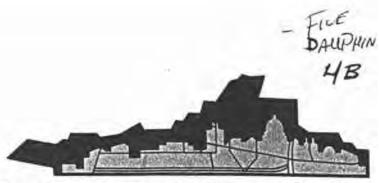
AREA (B) = 30 X 10 X 100 ÷ 27 = 1110 CU.YD.

AREA (C) = 36 X 12 X 100 ÷ 27 = 1600 CU.YD.

AREA(D) = 42 X 30 X 100+27 = 2330 CU.YD.

TOTAL = 6720 CU.YD.





# The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

HARRISBURG STEAM GENERATING FACILITY
DEPARTMENT OF INCINERATION AND STEAM GENERATION

February 23, 1994

Mr. Anthony L. Rathfon
Operations Supervisor
Commonwealth of Pennsylvania
Department of Environmental Resources
Southcentral Region - Field Operations
Waste Management Program
One Ararat Boulevard
Harrisburg, PA 17110

Re: Meeting of January 13, 1994 Violations of Municipal Waste Regulations

Dear Mr. Rathfon:

This letter is in response to your January 18, 1994 correspondence regarding the above-referenced meeting.

From reviewing the Department's 1993 inspection history for the B-2 site, the resource recovery facility, and those items discussed in our January 13th meeting, the outline below was developed to represent those items that the Department has expressed concerns about.

# SECTION 1 - LANDFILL

#### A. GENERAL PROVISIONS:

 25 Pa Code §273.201(c)(2) - Operation in accordance with approved plans and permit.

# B. COVER/SLOPES/REVEGETATION:

- 25 Pa Code §273.232(a) Uniform six inch daily cover compacted on waste at the end of working day or at the end of each 24 hour period, whichever is less.
- 25 Pa Code §273.232(b), (c) & 273.233(b), (c) Daily/intermediate cover meets performance and design requirements.
- 25 Pa Code §273.233(a) 12 inches intermediate cover applied within time limits.

Mr. Anthony L. Rathfon February 23, 1994 Page Two

- 4. 25 Pa Code §273.233(e) Intermediate cover temporarily revegetated as required.
- 5. 25 Pa Code §273.233(f) Intermediate slopes covered, revegetated, and do not exceed 50%.
- 6. 25 Pa Code §273.235(a)-(e) & 273.236(a), (b) Minimum revegetation and successful revegetation requirements adhered to.

#### C. WATER QUALITY PROTECTION:

25 Pa Code §273.242(a)-(c) - Soil erosion and sedimentation controls designed and implemented as per approved plans; gullies over nine inches repaired.

#### D. SPECIAL HANDLING AND RESIDUAL WASTES:

1. 25 Pa Code §273.514(c) - Ash Residue covered immediately or as approved by the Department.

It is the City's understanding from conversations with the Department that most of the items outlined above are interrelated and may be distilled down to the following four issues:

1) Timely Application of Daily Cover

Response: During the B-2 site permit application review, the City questioned the six inch daily cover requirement's applicability and/or practicability to an ash monofill. Among other things, the City argued that relative to an ash monofill this requirement would take up valuable landfill space while providing little or no environmental benefit (i.e. vector control, odor control, litter control, methane gas control, and other concerns relative to a typical municipal solid waste landfill, but not an ash monofill.). The City proposed using tarps, then, as now in the permit application for Residue Disposal Area B-3, in lieu of six inch cover material as a more practical alternative that would still be protective of the environment. Because of the regulations in place at that time, the Department stated that the tarps would have to be six inch thick and required same in Condition No. 19 of the B-2 site permit. The City timely appealed a number of conditions in the B-2 permit, including Condition No. 19.

Ultimately, in the Partial Consent Adjudication approved by the Environmental Hearing Board on October 8, 1991, the City and the Department agreed that a 50 by 50 foot area would remain uncovered at all times where ash could be placed and the ferrous separated. The other areas of the landfill were to be covered

Mr. Anthony L. Rathfon February 23, 1994 Page Three

with six inch tarps made of synthetic material or six inches of soil or other material as approved by the Department. The City purchased approximately \$20,000 worth of six inch tarps to use in lieu of soil. However, these tarps proved to be impractical to use and were eventually discarded. Application of six inches of soil to the small amount of ash produced on a daily basis has at times also proved problematic due to weather conditions and site limitations.

The City understands that the Department's regulations that were approved on October 10, 1992 do now allow alternatives to the six inches of soil. Because responsible conservation of valuable landfill space remains one of the City's highest solid waste management objectives, the City has again proposed alternatives to the six inch daily cover requirement in its B-3 permit The City has requested the Department to approve application. the use of foam, tarps or soil to meet the daily cover require-These methods will allow the City to meet the requirement with greater efficiency and convenience while also conserving landfill space. We propose to operate in a 100 by 100 foot area which would remain uncovered to permit ferrous separation and equipment deployment. The remaining areas of the landfill would be covered on a daily basis with foam, tarps or soil or any combination of the three as approved by the Department.

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### 2) Timely Application of Intermediate Cover

Response: As soon as weather conditions permit, this spring, the City will repair the gullies nine inches or greater on the side slopes of Residue Disposal Area B-2 and apply temporary seeding. This seeding will serve to stabilize the side slopes on B-2 and prevent any additional erosion. The City anticipates that this work will be completed no later than May 1, 1994, weather permitting.

Mr. Anthony L. Rathfon February 23, 1994 Page Four

With respect to the intermediate cover, the upcoming construction of Residue Disposal Area B-3 will also involve a major rework of B-2 as well. Once the liner is installed in B-3, ash from B-2 will be removed, screened and relocated to B-3. It is our intent to begin operation of the landfill by "filling the bowl" created by the embankment around the periphery of the new Area B-3. In connection with the relocation of the select ash, the cover material on the side slopes of B-2 will be stripped off and stockpiled for reuse later as intermediate cover. The ash will be placed in B-3 using level lifts until such time as the bowl is filled. This will require moving approximately 90,000 cubic yards of ash from B-2 and installing it within the bowl of the B-3 site. Once the bowl is filled, normal operations can begin with the refilling of B-2 beginning at the Cameron Street side and working eastward.

The configuration of Residue Disposal Area B-2 will change dramatically from the ash relocation. As shown on the plans appended hereto, the remaining volume in B-2 will be much smaller than presently exists. The remaining ash in B-2 will be reshaped in accordance with the requirements of the major modification for the site. At this point the remaining berm areas and side slopes of B-2 will be redressed to provide the required amount of intermediate cover using the stockpiled material and such other material as necessary to meet the regulations. Once the intermediate cover is placed, the area will be revegetated in accordance with Department regulations. The plans appended hereto include cross sections of the B-2 landfill that illustrate the originally permitted area and the cross-sectional area to be approved under presently pending major modification application. intermediate cover removal, reapplication, and revegetation of the side slopes is anticipated to be complete by October 1994. This assumes a timely receipt of the B-3 major modification approval and a successful construction season.

#### 3) Timely Revegetation

Response: As described in item 2) above, the City will repair the side slopes on B-2 as soon as weather permits this spring and revegetate and mulch as necessary.

#### 4) Soil Erosion and Sedimentation Controls

It is the City's understanding that the Department is particularly concerned with stormwater runoff from the haul road into the swale. The City will apply intermediate cover to the slopes on either side of the haul road and apply seed. We will also deploy No. 4 stone on the haul road and install silt fence on each side of the haul road to minimize the migration of solids into the swale. This work will begin in March, or as soon as weather conditions permit, be completed no later than May 1, 1994.

Mr. Anthony L. Rathfon February 23, 1994 Page Five

The City will repair the gullies nine inches or greater on the side slopes of B-2 and apply temporary seeding, as described in item 2) above.

# SECTION 2 - RESOURCE RECOVERY FACILITY

In reviewing the Department's 1993 inspection history for the resource recovery facility and those items discussed in our January 18th meeting, I developed the outline below to represent those items most often listed:

#### A. GENERAL PROVISIONS:

1. 25 Pa Code §283.201(b) - Operation in accordance with approved plans and permit.

Response: It is the City's understanding that compliance with the below listed items would result in compliance with this general requirement.

#### B. DAILY OPERATIONS:

1. 25 Pa Code §283.216(c) - Wheel curb and tie downs at unloading pits.

In normal operations, vehicles do not dump directly Response: into the storage pit. Vehicles unload waste directly onto the tipping floor and a front end loader is used to push the waste into the pit. Unloading onto the tipping floor is necessary in order to effect periodic inspections of the waste, remove any non-processible waste, or detect the existence of any potentially hazardous materials in the load. In addition, the Facility is now permitted to accept certain residual wastes for disposal. Good operating practice for certain residual wastes involves blending the residual waste with the municipal waste to maintain acceptable Btu value as well as acceptable chemical compositions. From time to time, this necessitates tipping the waste in segregated areas on the floor and using the loader to assist in obtaining the desired mix in the storage and charging pit. lieu of the wheel curbs and tie downs, the City proposes to paint a warning stripe on the floor and post warning signs to keep trucks in a safe distance from the pit.

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2. 25 Pa Code §283.216(f) - Solid waste confined to

Mr. Anthony L. Rathfon February 23, 1994 Page Six

Response: Based on conversations with the Department, it is our understanding that the Department has several concerns related to the above captioned regulation. We treat these separately below.

#### a) Permitted Storage Capacity

Department personnel allege that the City is in violation of this section because waste stored exceeds permit requirements. However, 25 Pa Code §283.216(h) requires that the facility have a storage capacity equivalent to the waste that can be processed at the facility in three days, unless otherwise specified by the Department. Condition No. 11 of the Facility's permit caps storage to no more than 2400 tons of municipal solid waste. Appended hereto as Exhibit A is a description and the volumes of the Facility's storage pit. The storage pit has a maximum capacity of 1180 tons, leaving a storage capacity of 1220 tons on the tipping floor. This amount of waste would occupy a volume of approximately 6927 cubic yards or an area on the tipping floor the equivalent of 120 feet long, 120 feet wide and 13 feet high. Therefore, the City maintains that the Facility is not storing waste in excess of its permitted capacity.

In summary, the Facility is allowed three days storage by 25 Pa Code §283.216(h) and the Department has permitted the Facility to allow storage up to 2400 tons. Based on the calculations above, the City asserts that it has not stored more than the 2400 tons allowed by its permit, nor has it violated 25 Pa Code §283.216(h).

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The City understands from its conversations with Department personnel that solid waste is escaping the tipping building. City agrees to make repairs to and replace missing sections of the east wall of the tipping building and other such measures as may be necessary to confine the waste to the storage area. missing windows over the storage pit at the charging floor level will also be repaired and/or replaced as necessary. The above listed repairs will begin in March, or as soon as weather permits, and be completed no later than May 1, 1994. As previously mentioned, the City is also in the process of hiring two additional laborers to be shared between the landfill and the resource recovery facility to address the permit conditions and other requirements. The laborers duties shall include litter control in the area of the tipping building as well as other areas on the site. In the interim, until these laborers are hired, the City will address litter control with available personnel.

3. 25 Pa Code §283.217(a), (b), (d), (e) - Areas within building kept clean.

Mr. Anthony L. Rathfon February 23, 1994 Page Seven

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4. 25 Pa Code \$283.217(c) - Plumbing properly maintained, floors well drained.

Response: Based on conversations with the Department, it is our understanding that the Department has several concerns related to the above captioned regulation. We treat these separately below.

a) Poorly Drained Floors in Basement

The floors in the basement of the Facility were originally equipment with 2.5" diameter floor drains. After only a few years of operation, these drains became blocked to the point where professional plumbers were unable to open them. Therefore, the 2.5" drains were abandoned and the existing trough drains were installed. However, there is an area on the basement floor directly between and under the furnaces where standing water accumulates in the depression of one of the abandoned 2.5" drains. To correct this situation, the City will level the floor in this area by filling the depression with concrete, allowing water to flow freely to adjacent trough drains. This work will begin in March, or as soon as weather permits, and be completed no later than May 1, 1994.

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Please refer to response to B.2.b) above.

Mr. Anthony L. Rathfon February 23, 1994 Page Eight

# C. RECORDKEEPING/REPORTING:

 25 Pa Code §283.271(a), (b) - Alternate facility available during temporary shutdown.

Response: The City has completed a request for proposals (RFP) for alternate permitted solid waste capacity in the event of an extended shut down of the Facility. The RFP responses are currently under review by the City and The Harrisburg Authority. Pursuant to Condition No. 13 of the Facility's permit the contracts or letters of intent will be forwarded to the Department once they are secured.

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COMMONWEALTH OF PENNSYLVANIA

#### **ENVIRONMENTAL HEARING BOARD**

101 SOUTH SECOND STREET SUITES THREE FIVE HARRISBURG, PA 17101-0105 717-787-3483 TELECOPIER 717-783-4738 By

M. DIANE SMITH SECRETARY TO THE BOARD

CITY OF HARRISBURG

EHB Docket No. 92-279-W

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES

ORDER

AND NOW, this 27th day of August, 1992, upon receipt of the Department of Environmental Resources' letter of August 17, 1992, informing the Board that the parties have agreed to partial settlement of the above-captioned appeal, and with the expectation that the Notice of Settlement will be published in accordance with the requirements of 25 Pa.Code §21.120, it is ordered that:

1. The partial settlement is approved by the Board.

**ENVIRONMENTAL HEARING BOARD** 

MAXINE WOELFLING

Administrative Law Judge

Chairman

ROBERT D. MYERS

Administrative Law Judge

Member

Timanes J. Fritzettiel

TERRANCE J. FITZPATRICK Administrative Law Judge Member

RICHARD SAMANNE Toman Administrative Law Judge

Member

JØSEPH N. MACK

Administrative Law Judge

Member

DATED: August 27, 1992

cc: For the Commonwealth, DER: Dennis A. Whitaker, Esq.

Central Region For Appellant:

Howard J. Wein, Esq. KLETT LIEBER ROONEY & SCHORLING

Pittsburgh, PA

bl

#### COMMONWEALTH OF PENNSYLVANIA

# ENVIRONMENTAL HEARING BOARD

101 South Second Street Suites 3-5, Executive House Harrisburg, Pennsylvania 17101 (717) 787-3483

TO:

PENNSYLVANIA BULLETIN Legislative Reference Bureau 647-B Main Capitol Building

Harrisburg, PA 17120

FROM:

MAXINE WOELFLING, Chairman -:

Transper - --

Environmental Hearing Board 101 South Second Street Suites 3-5, Executive House

Harrisburg, PA 17101

Re:

Environmental Hearing Board

Rules 21.36 and 21.120

In accordance with the above rules, we request you publish the following in the next edition of the Pennsylvania Bulletin:

City of Harrisburg v. Commonwealth of Pennsylvania. Department of Environmental Resources. EHB Docket No. 92-279-W

The parties have agreed to a Partial Settlement, the major provisions of which include:

The City and the Department agree that Permit Condition No. 3 shall be deleted. The City agrees to submit to the Department a minor permit modification for Conditions 3, 9, 11, 14, 16, 20 and 23. The Department agrees to those modifications upon receipt, and the City agrees not to appeal those modifications when issued.

Copies of the full Agreement are in the hands of:

Dennis A. Whitaker. Esquire
Assistant Counsel, DER
City Towers Building, 3rd FL
n
301 Chestnut Street
Harrisburg, PA 17101-2702
(717) 787-8790

Howard J. Wein, Esquire Klett Lieber Rooney & Schorling 40th Floor, One Oxford Centre Pittsburgh, PA 15219-6438

and at the office of the Environmental Hearing Board and may be reviewed by any interested party on request during normal business hours.

Any person believing himself aggrieved by the above Settlement has a right to appeal to the Environmental Hearing Board, 101 South Second Street, Suites 3-5, Executive House, Harrisburg, Pennsylvania 17101.

Appeals must be filed within twenty (20) days of this publication.

The Environmental Hearing Board is empowered to approve this Settlement if no objection is timely made.

DATED: August 27, 1992

# COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES



In the Matter of:

City of Harrisburg

**Appellant** 

. :

EHB Docket No. 92-279-W

Commonwealth of Pennsylvania

Department of Environmental Resources

Appellee

# PARTIAL CONSENT ORDER AND ADJUDICATION

This Partial Consent Order and Adjudication is entered into this ///day of August, 1992, by and between the Commonwealth of Pennsylvania, Department of Environmental Resources ("Department") and the City of Harrisburg ("the City").

#### **FINDINGS**

The Environmental Hearing Board ("Board") has found and determined the following findings which the Department and the City agree are true and correct.

- A. The Department is the agency with the duty and authority to administer and enforce the Solid Waste Management Act, Act of July 7, 1980, P.L. 380, as amended, 35 P.S. § 6018.101 et seq.; the Municipal Waste Recycling and Waste Reduction Act, Act of July 28, 1988, P.L. 566, 53 P.S. §4000.101 et seq. ("Act 101"); The Clean Streams Law, Act of June 22, 1937, P.L. 1987, as amended, 35 P.S. § 691.1 et seq. ("Clean Streams Law"); Section 1917-A of the Administrative Code of 1929, Act of April 9, 1929, P.L. 177, as amended, 71 P.S. § 510-17 ("Administrative Code") and the rules and regulations promulgated thereunder.
- B. The City is a municipality within the meaning of that term as used in the Solid Waste Management Act, with rights and obligations under that Act.

- C. The City owns and operates the Harrisburg Materials, Energy, Recycling and Resource Recovery Facility, formerly known as the Harrisburg Steam Generating Facility.

  The Harrisburg Steam Generating Facility disposed of municipal waste through incineration pursuant to Permit No. 100758.
- D. On June 30, 1992, the Department renewed Permit No. 100758. Pursuant to this renewal, the name of the facility was changed to the Harrisburg Materials, Energy, Recycling and Resource Recovery Facility ("Facility"). Under the renewed permit, the Facility will operate as a resource recovery facility and will incinerate municipal solid waste, tires, and sewage sludge.
- E. On July 30, 1992, the City filed a Notice of Appeal with the Board through which the City challenged Conditions 3, 4 and 23 of the renewed permit. This appeal is docketed as above-captioned.
- F. The Department and the City have reached agreement on Conditions 3 and 23 and have agreed that these conditions will be modified as set forth in the Order below.

# <u>ORDER</u>

After full and complete negotiation of all matters set forth in this Partial Consent

Order and Adjudication and upon mutual exchange of covenants contained herein, the parties
intending to be legally bound, it is hereby ORDERED by the Board and AGREED to by
the Department and the City as follows:

1. The City agrees to submit to the Department a minor permit modification for the conditions set forth below. Upon receipt, the Department agrees to the following

modifications of those conditions as set forth in paragraphs 2 through 8 below. The City agrees not to appeal these modifications.

- 2. Permit Condition 3 shall be deleted. The following permit condition shall be substituted for the deleted condition:
  - 3. a. Prior to the operation of the source-separated recycling plant and the front end separation plant to be constructed at the Facility, the City shall submit to the Department a study designed to evaluate the City's Recycling and Waste Reduction Plan ("Plan") as approved by the Department as of the date of this permit. The Plan shall be evaluated as follows:
  - 1. For each recyclable material identified in the Plan, and for any other recyclable material identified in Section 1502(c) of the Municipal Waste Recycling and Reduction Act (Act 101), Act of July 28, 1988, P.L. 566, 53 P.S. §4000.1502(c), the study shall evaluate the environmental impact, and the technical and economic practicability of a program to recover and recycle those materials. For those recyclable materials which the study concludes are not technically and/or economically practicable, the study shall provide justification for that conclusion.
  - 2. For each hazardous material identified in the Plan, and for any other hazardous material identified in Section 1502(d) of Act 101, 53 P.S. §4000.1502(d), the study shall evaluate the environmental impact, and the technical and economic practicability of a program to recover and recycle those materials. For those hazardous materials which the study concludes are not technically and/or economically practicable, the study shall provide justification for that conclusion.
  - 3. The environmental, technical and economic practicability of the development by the City of a program for the residents of the City of Harrisburg, to segregate from the waste stream for recycling, reuse or separate disposal, special wastes such as household hazardous wastes, tires, anti-freeze, lead acid batteries, paints, and waste oil.
  - b. Upon review of the Study, the Department may, by permit amendment, require the implementation of any such recommendation or may impose its own requirements upon the City that are consistent with Sections 1502(c) & (d) and 1512 of Act 101.
  - c. The City shall review and update the Plan every two years thereafter as set forth in paragraphs a. 1-3 above, The updated Plan shall be submitted to the Department as set forth in paragraph 3.b. above.

- 3. Condition 9 of the Permit Renewal shall be amended by substituting the following language for the existing Condition No. 9:
  - 9. Two sets of As-Built Engineering drawings must be submitted within 90 days of completion of construction of the second new incinerator unit.
- 4. Condition No. 11 of the Permit Renewal shall be amended by substituting the following language for the existing Condition No. 11:
  - 11. No more than 2,400 tons of MSW may be stored in the refuse pit. This includes processed tires added to the MSW. Recyclables separated out of the MSW are not restricted by this storage limitation.
- 5. Condition No. 14 of the Permit Renewal shall be amended by substituting the following language for the existing Condition No. 14:
  - 14. Upon generation of ash from the first new incinerator on line, Form 41, Municipal Incinerator Ash Residue Monitoring Report must be submitted to the Department at the following frequency:
    - Once a week for the first ten weeks
    - Once a month for the following six months
    - Quarterly thereafter
- 6. Condition No. 16 of the Permit Renewal shall be amended by substituting the following language for the existing Condition No. 16:
  - 16. Any final operation, design or other plan developed subsequent to permit issuance which exhibits changes in the structures, locations, specifications, control measures or changes affecting the operation of the facility herein approved shall be submitted to the Department for subsequent permit action. Any deviation of plans affecting the operation of the facility herein approved and shall not be implemented before first obtaining a permit amendment or written approval from the Department.
- 7. Condition No. 20 of the Permit Renewal shall be amended by substituting the following language for the existing Condition No. 20:

- 20. Specifications for the tire processing equipment must be submitted to the Department for review and approval prior to installation. A building layout must be submitted, including locations of any related equipment, emergency shut down controls, fire extinguishers, and first aid supplies.
- 8. Condition No. 23 of the Permit Renewal shall be amended by substituting the following language for the existing Condition No. 23:
  - 23. The facility shall accept for disposal no more than 630 tons per day average daily volume (calculated for each calendar quarter) of municipal waste. For purposes of this condition only, "disposal" is defined as waste which is incinerated and does not include waste which is removed and recycled. The facility shall accept no more than 359,525 tons per year total of all wastes (calculated for each calendar quarter). The facility shall accept for disposal no more than 292,000 tons per year of municipal waste, sewage sludge, and/or tires (calculated for each calendar quarter), and the facility shall accept for disposal no more than 800 tons per day average daily volume (calculated for each calendar quarter) of municipal waste, sewage sludge, and/or tires so long as the facility complies with all limitations and provisions of the Air Quality Plan Approval. For the purposes of this condition only, municipal waste shall not be considered to include sewage sludge.
- 9. Existing Obligations Unaffected. Nothing set forth in this Partial Consent Order and Adjudication is intended, nor shall be construed, to relieve or limit the City's obligation to comply with any existing or subsequent statute, regulation, permit or order. In addition, nothing set forth in this Partial Consent Order and Adjudication is intended, nor shall be construed, to authorize any violation of any statute, regulation, order, or permit issued or administered by the Department.
- 10. Correspondence with Department. All correspondence with the Department concerning this Consent Order and Adjudication shall be addressed to:

Francis P. Fair
Regional Environmental Protection Manager
Southcentral Regional Office
One Ararat Boulevard
Harrisburg, PA 17110

With a copy to:
Dennis A. Whitaker, Esquire
Central Region Litigation
3rd Floor City Towers
301 Chestnut Street
Harrisburg, PA 17101-2702

11. Correspondence with the City. All correspondence with the City concerning this Consent Order and Adjudication shall be addressed to:

John Lukens
City of Harrisburg
Dept. of Incineration & Steam Generation
1670 South 19th Street
Harrisburg, PA 17104

With a copy to:
Howard J. Wein, Esquire

Klett Lieber Rooney & Schorling
40th Floor, One Oxford Centre
Pittsburgh, PA 15219-6498

Daniel Lispi
Vance McCormick Public
Services Building
123 Walnut Street
Harrisburg, PA 17101

In addition, the City agrees that service of any notice or any legal process for any purpose under this Consent Order and Adjudication, including its enforcement, may be made by mailing a copy by first class mail to its attorney or to the above address.

- 12. Severability. The paragraphs of this Partial Consent Order and Adjudication shall be severable and should any part hereof be declared invalid or unenforceable, the remainder shall continue in full force and effect between the parties.
- 13. Entire Agreement. This Partial Consent Order and Adjudication shall constitute the entire integrated agreement of the parties. No prior or contemporaneous communications or prior drafts shall be relevant or admissible for purposes of determining the meaning or extent of any provisions herein in any litigation or any other proceeding.

- 14. Modifications. No changes, additions, modifications, or amendments of this

  Partial Consent Order and Adjudication shall be effective unless they are set out in writing
  and signed by the parties hereto.
- 15. Attorney Fees. The parties agree to bear their respective attorney fees, expenses and other costs in the prosecution or defense of this matter or any related matters, arising prior to execution of this Partial Consent Order and Adjudication.
- 16. Titles. A title used at the beginning of any paragraph of this Partial Consent Order and Adjudication is provided solely for the purpose of identification and shall not be used to interpret that paragraph.

IN WITNESS WHEREOF, the parties hereto have caused this Consent Order and Adjudication to be executed by their duly authorized representatives. The undersigned representatives of the City certify under penalty of law, as provided by 18 Pa.C.S. § 4904, that they are authorized to execute this Consent Order and Adjudication on behalf of the City; that the City consents to the entry of this Consent Order and Adjudication and the foregoing Findings as an ORDER of the Department; and that the City hereby knowingly waives its right to appeal this Consent Order and Adjudication and the foregoing Findings, which rights may be available under Section 4 of the Environmental Hearing Board Act, the Act of July 13,

1988, P.L. 530, No. 1988-94, 35 P.S. § 7514; the Administrative Agency Law, 2 Pa.C.S.

§ 103(a); and Chapters 5A and 7A, or any other provision of law.

FOR THE

COMMONWEALTH OF PENNSYLVANIA,

DEPARTMENT OF ENVIRONMENTAL

RESOURCES:

Stephen R. Reed

FOR THE CITY OF HARRISBURG:

Mayor

Francis P. Fair

Regional Environmental, Protection Manager

James McCarthy, Jr.

Controller

Dennis A. Whitaker

Assistant Counsel

Jill Devine, Esquire Acting City Solicitor

Howard J. Wein, Esquire

Klett Lieber Rooney & Schorling Attorney for the City of Harrisburg Approved by the Commonwealth of Pennsylvania, Environmental Hearing Board this 27th day of August 1992

maxine Wolfing

Maxine Woelfling, Chairman Administrative Law Judge

Robert D. Myers, Member Administrative Law Judge

Tenance J. Fritzetick

Terrance J. Fitzpatrick, Member Administrative Law Judge

Richard S. Ehmann, Member Administrative Law Judge

Joseph N. Mack, Member Administrative Law Judge

DATE: August 27, 1992



EPA REG. III APD

1650 Arch Street Philadelphia, Pennsylvania 19103-2029

2 0 2000

Honorable Stephen R. Reed Mayor . The City of Harrisburg City Government Center Harrisburg, PA 17101-1678

Dear Mayor Reed:

The purpose of this letter is to inform you that the United States Environmental Protection Agency (EPA) has determined that the City of Harrisburg's (the City's) latest proposal to derate the Harrisburg Materials Energy, Recycling and Recovery Facility (HMERRF), as described in Evergreen Environmental, Inc.'s September 13, 2000 letter to the Pennsylvania Department of Environmental (DEP), is not approvable. This decision was made after a careful review of the City's proposal and discussions between your staff and representatives of EPA and DEP at a meeting held on October 24, 2000 in DEP's Conshohocken, Pennsylvania office. The basis for this determination is detailed in the enclosed letter to Secretary James M. Seif, Pennsylvania DEP.

As a result of our disapproval of the City's derate proposal and the impossibility of a timely retrofit of the required air pollution control equipment, the two HMERRF combustion units must cease operation on or before December 19, 2000, the statutory compliance date under the provisions of the Clean Air Act. This is consistent with the EPA-approved Pennsylvania 111(d)/129 plan for large municipal waste combustors and your December 7, 1998 Cease Operation Notice to the DEP. .

If you believe a meeting would be useful to discuss the City's plan for timely compliance, please contact either Cynthia Yu-Robinson, Pennsylvania Liaison Officer at (215) 814-5557, or Judith M. Katz, Director, Air Protection Division at (215) 814-2654.

OPTIONAL FORM 99 (7-90)

Sincerely.

7 Chile

Bradley M. Campbell Regional Administrator

Enclosure



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION III 1650 Arch Street Philadelphia, Pennsylvania 19103-2029

NOV 2 0 2000

Honorable James M. Seif, Secretary Pennsylvania Department of Environmental Protection Rachel Carson State Office Building, 16th Floor P.O. Box 2063 Harrisburg, PA 17105-2063

Dear Secretary Seif:

The purpose of this letter is to inform you that the United States Environmental Protection Agency (EPA) has determined that the City of Harrisburg's (the City's) latest proposal to derate the Harrisburg Materials Energy, Recycling and Recovery Facility (HMERRF), as described in Evergreen Environmental, Inc.'s September 13, 2000 letter to the Pennsylvania Department of Environmental Protection (PADEP), is not approvable. EPA received the proposal on October 2, 2000 under a cover letter from John F. Slade of your office. On October 24, 2000, staff and managers from both of our respective agencies met with City of Harrisburg representatives. The purpose of that meeting was to gather additional information from City representatives so we could make a more informed decision regarding the derate proposal.

Considering that the final statutory compliance date for the HMERRF is December 19, 2000, it has been our goal to provide your office with a prompt and complete response to the City's derate proposal. This disapproval determination was made after a careful review of the proposal by this office, the Office of Air Quality Planning and Standards, the Office of Enforcement and Compliance Assurance, and the Office of General Counsel. Our reasons for this disapproval determination are explained in detail below.

In addition to this derate proposal determination, we believe it is important to express our concerns regarding the HMERRF's environmental impacts, and its tenuous 111(d)/l29 Plan compliance status. These concerns are also provided below.

# HMERRF Derate Proposal - EPA Evaluation

As you know, in our March 16, 2000 letter to the PADEP, we disapproved the City's initial derate request and outlined the minimum requirements that must be met before EPA would consider a derate proposal as approvable. In summary, a derate proposal must be based upon a permanent physical change of the municipal waste combustor (MWC) unit capacity. A self-imposed operating restriction, such as limiting the MWC boiler steam flow rate through the use of a facility computerized process control system, is not considered a permanent physical change. A somewhat similar proposal was made in the past by the Bay County, Florida MWC

owners/operators; however, that proposal was disapproved by the Florida Department of Environmental Protection and EPA Region IV. A subsequent Bay County proposal met the general derate requirements, as outlined in our March 2000 letter to the PADEP and previous EPA guidance, by including a physical modification to its MWC unit combustion air fans. That proposal was approved by EPA Region IV. Implementation of the derate plan required approximately five (5) months from the time of initial design to construction completion, not including the time for derate verification testing.

In order to derate a combustor unit below the MWC 111(d)/129 plan applicability threshold, the derate must be a permanent physical change. Derating a MWC unit below the EPA emissions guidelines' (EG) applicability threshold (a charge rate greater than 250 tons/day of municipal solid waste) was not considered a compliance option during the development of the EG. However, as a matter of policy, the derate option is reflected in various new source performance standards (NSPS) applicability determinations for boilers, and was provided for consideration as a compliance option in the Federal MWC 111(d)/129 plan promulgated by EPA on November 12, 1998 (63FR63191). Currently, only one large MWC facility, as noted above, has received EPA approval for a derate. The Bay County, Florida MWC units were derated from 255 tons per day (tpd) to 245 tpd. This is a four (4) percent reduction in MWC unit capacity achieved through a physical modification of the impeller blades of the forced draft fans used for combustion air supply. As a result, the waste combustion capacity, and thus steam production rates, are now limited for each MWC unit. It is important to note that steam production rates are limited because of the physical change at the facility and not a self-imposed operating restriction or change.

In contrast, the Harrisburg derate proposal is a self-imposed operating restriction that limits MWC unit charge and boiler steam flow rates by electronically modifying the HMERRF's process control system. As proposed, this would be accomplished by installing new programmable logic control (PLC) hardware and software packages with several levels of security. Modifications of the municipal waste combustor's PLC system is not considered a physical change, because such a change does not physically alter the combustion capacity of the MWC units. As stated in EPA's initial letter denying the City's derate request, "... applicability is based upon unit capacity, not self-imposed operating restrictions." [Emphasis added.] Also, EPA's March 16, 2000 letter, clearly states that a derate must be accomplished through a permanent physical change. At a minimum, the following must be established in order to support a claim of permanent physical change:

- 1) The physical change cannot be easily undone;
- 2) There is the need for a full MWC plant closure and/or MWC unit closure to make the physical change, or to reverse it;
- 3) There is a reduction of the full load maximum continuous rating of the MWC unit, and not just a reduction in the operating level (feed rate); and

4) There must be verification of the proposed derate through vendor submitted design, and construction documents; any other information EPA may require to verify to derate.

Evergreen Environmental, Inc.'s September 13, 2000 letter fails to show that the combustion capacity of the units will be reduced and that the revised derate proposal meets the requirements of items 1 and 3, above. Accordingly, the City's latest derate proposal is not approvable. Evergreen Environmental, Inc.'s responses to the derate requirements and EPA's comments are provided below:

Evergreen Environmental, Inc.'s Response to Item 1 - "It cannot be easily undone. It would require an estimated 24 hours to reverse and would be outside the capabilities of any person directly associated with the HMERRF, requiring the assistance of an outside contractor."

EPA Comment - The Evergreen Environmental, Inc. letter does not describe the "It" as a physical change to the combustion capacity of the MWC unit, which is necessary for EPA consideration of a proposed claim of permanent physical change. Rather, the letter states, "It is based on limiting the maximum capacity of the combustors based on limiting steam production." [Emphasis added.] Limiting steam production though the use of the PLC system, even with several layers of security, is considered a self-imposed operating restriction, not a permanent physical change. This alone is cause for disapproval of the derate proposal.

Furthermore, we question the permanency of a proposed change that could be reversed in an estimated 24 hours, even if the proposed PLC software package is only accessible and capable of being modified by the PLC contractor. Although a short shutdown of the MWC units may be required to allow modification of the PLC software program(s) to increase the maximum steam production rate (corresponding to a waste charge or feed rate that exceeds the 250 ton per day 111(d)/129 applicability threshold), the reversal of the derate process can be accomplished rather easily by modifying only the PLC software package. This would not involve any physical change of a MWC unit component that determines or limits combustion capacity. Our determination is based upon statements made by both Evergreen Environmental, Inc., and Applied Control Engineering, the proposed PLC vendor, in the derate proposal. Even if this were not an EPA concern, based upon our review of the submitted derate proposal and conversations with City representatives, the City intends to operate the facility with derated MWC units only as long as it takes to complete construction on each of the two upgraded 360 tpd MWC units. Therefore, the City's derate request does not represent a legitimate proposal to derate the HMERRF permanently. This is a second cause for disapproval of the derate proposal.

Evergreen Environmental, Inc.'s Response to Item 3 - "There will be a reduction in the maximum continuous rating of the MWC unit, based on steam generation and not feed rate. . . . In anticipation that EPA may argue that point number 3 is not adequately addressed, I would emphasize that this point of policy, established in response to questions of boiler de-ratings, is in direct conflict with the MWC regulations at 40 CFR §60.58b(j)(ii). These regulations specifically establish maximum capacity as the maximum design charging-rate for those MWCs designed on this basis."

EPA Comment - Evergreen Environmental, Inc. states that the maximum continuous rating of the MWC unit is "... based on steam generation and not feed rate." This statement conflicts with a statement made by Applied Control Engineering in section 4.1 (second paragraph, first sentence). EPA considers both steam generation and feed rates as operational parameters. The operating limits of these two parameters are determined by the physical constraints reflected in the MWC unit design capacity. EPA's requirement is that there be a reduction of the full load maximum continuous rating (MCR) of the MWC unit, and not just a reduction of the operating level (e.g., feed rate and steam generation rate). The City's proposal does not meet this requirement. This is a third cause for disapproval of the derate proposal.

Evergreen Environmental, Inc.'s reference to 40 CFR 60.58b(j)(ii) appears to be a typographical error; the correct reference for determining maximum charging rate is 40 CFR 60.58(j)(1)(ii). More importantly, 40 CFR 60.58(j)(1)(ii) states that the maximum charging rate shall be the maximum design charge rate. [Emphasis added.] The design charge rate for each HMERRF combustor is 400 tpd. It was EPA's intent that permit limits, operating schedules, or physical limits of parts of the MWC other than the affected facility (which is the combustor) would not be considered in defining the size category (i.e., small or large).

Evergreen Environmental, Inc. cites the Bay County, Florida, MWC derate approval by EPA, and then argues that EPA appears to be advocating a reduction in combustion air which could cause combustion problems in the Harrisburg units. By definition, full load MCR is that level of boiler steam production that is normally expected for extended periods of operating time. Accordingly, no operational problems would be expected while the unit is operating at full load MCR. EPA is not advocating any particular derate approach or measures. As we stated in our March 16, 2000 letter to PADEP, "EPA will not identify a list of specific measures or type of measures. Such measures must be evaluated on a case-by-case basis."

We recognize that a permanent physical change at one MWC facility may not be appropriate at another facility. The appropriateness of such a change depends, for example, upon the type of combustor design, the magnitude of the proposed derate, and the time available to make the proposed design modification. Therefore, the Bay County MWC derate proposal was not suggested in our initial denial letter as a possible solution or option for Harrisburg. Such recommendations must come from the City's consulting engineers, or other appropriate City representatives, and not from EPA. Furthermore, we recognize that while the derated capacity of each of the Bay County MWC units is four (4) percent less than its original unit design capacity, an approvable derate for each of the Harrisburg MWC units would be an approximately thirty-nine (39) percent reduction from its design capacity. This is based upon the fact that the Harrisburg MWC design capacity is 400 tpd for each unit, and not the permitted capacity of 360 tpd. In a letter dated April 19, 1991, Ogden Martin System, Inc. states that each of the two Martin combustion systems (stoker/boiler) installed at the Harrisburg facility are designed to

process "400 tons per day of municipal solid waste." The letter is part of the City's 1991 Application for a Plan Approval to construct a modernized MWC plant to meet the EPA emission guidelines for existing combustors under 40 CFR part 60, subpart Ca.

It is important for the City to recognize that, at this point in time, it is highly unlikely that it will be able to submit and receive EPA approval of a viable derate proposal that could be initiated and completed before the statutory December 19, 2000 compliance date.

# EPA Environmental Concerns/Issues

In addition to the deficiencies we have noted with regard to the City's derate proposal, EPA has serious environmental concerns about the continued operation of the existing HMERRF. Based upon our review of the City's October 1999 stack test report for dioxins/furans emissions, the HMERRF average dioxins/furans emissions rates for both units is approximately 1,170 ng/dscm. This is 39 times higher than the EG requirement of 30 ng/dscm for a facility utilizing a fabric filter for particulate matter control, and 20 times higher than the EG requirement of 60 ng/dscm for a facility utilizing an electrostatic precipitator (ESP) for particulate matter control. The level of dioxins/furans emissions control required under the EG for large MWCs is the same level proposed in the August 30, 1999 EG for Class A small MWC units with an aggregate plant capacity greater than 250 tpd. (See 64 FR 47234.) In other words, if EPA were to approve the proposed Harrisburg MWC unit derate, it is likely that the derated facility would continue to emit dioxins/furans at a rate substantially above the applicable EG requirement for Class A small MWC units. Furthermore, approval of the Harrisburg derate may allow the HMERRF to legally operate as a small MWC plant until the fall of 2005, or later, depending upon the date EPA promulgates the EG requirements for small MWCs.

Even at a lower steam production rate (corresponding to a MWC charge rate just below 250 tpd), the continued operation of the Harrisburg MWC beyond December 19, 2000 would result in high levels of MWC emissions as compared to the EG requirements. These emissions include acid gases (sulfur dioxide, hydrogen chloride, and nitrogen oxides), heavy metals (lead, cadmium, and mercury), and organics (dioxins/furans). As you know, the Harrisburg incinerator was recently identified in an Associated Press news release as one of the largest North American sources of dioxins/furans emissions that adversely impact Broughton Island, just north of the Arctic Circle on Baffin Bay. Although one may challenge the validity of the study that concludes the HMERRF is a significant source of dioxins/furans on Broughton Island, there is no doubt that the HMERRF is one of, and perhaps, the most significant single source of dioxins/furans emissions in the United States. Human epidemiological studies have shown a positive association between dioxin exposure and cancer. The International Agency of Cancer Research (IARC) has classified 2,3,7,8 - TCDD, the most toxic form of dioxins, as a known human carcinogen.

# MWC 111(d)/l 29 Plan Compliance Concerns

In 1992, it appeared that the City was well on its way in an effort to modernize the HMERRF. This statement is based upon the following information:

- 1) The 1991 City submittal of a Plan Approval Application to the PADEP that included detailed preliminary design specifications, and drawings for the installation of pollution control equipment for acid gases, metals, and dioxins/furans,
- 2) The June 1991 public advertisement for HMERRF modernization project proposals, and
- 3) The June 1992 PADEP plan approval for two upgraded MWC units at the HMERRF, each controlled by a combination of acid gas scrubbers, selective noncatalytic reduction system, and fabric filters.

Even after considering possible HMERRF modernization delays caused by the 1990 Clean Air Act amendments, the 1994 Supreme Court <u>Carbone</u> decision, EPA's December 19, 1995 promulgation of maximum achievable control technology-based EG requirements (Subpart Cb) for existing large MWC units, and the 1997 U.S. Court of Appeals <u>Davis County</u> decision, the City of Harrisburg should still not be in its current tenuous position with respect to meeting the statutory December 19, 2000 compliance date through the submittal of an "eleventh hour" derate proposal. Based upon information we have received from a variety of sources, it appears that there are only two large MWC facilities, out of a total of sixty-five nationwide, that have not initiated and/or completed construction of an acid gas control system, as required under the EG and 111(d)/129 plans. Installation of an acid gas control system is an important part of an effective reduction and control plan for dioxins/furans emissions from a MWC unit.

As you know, after the HMERRF was identified in 1997 as a significant source of dioxins/furans emissions, EPA worked closely with the City in an attempt to mitigate, as expeditiously as possible, the high levels of dioxins/furans through an appropriate EPA enforcement mechanism. At the same time, we tried to mitigate potential adverse financial impacts that allegedly would have been caused by a Resource Conservation and Recovery Act enforcement action against the City. As a result of our cooperative efforts with the City, EPA issued the May 1997 Agreement by Consent Order (AOC) under the Clean Air Act. The AOC required the City to immediately implement timely emission reduction measures for dioxins/furans. Our discussions with City representatives, leading up to the issuance of the AOC, should have been considered a "wake-up call" for the City with respect to the urgency of its need to take expeditious steps towards the upgrade of its HMERRF by December 19, 2000.

Considering the 1992 HMERRF modernization plan approval (i.e., construction permit) issued by the PADEP, the other relevant events noted above, and EPA's approval of Pennsylvania's 111(d)/129 MWC plan in August 1999 (64 FR 45880), again, it is not clear why the City is now in such a tenuous position with respect to meeting the December 19, 2000

statutory compliance date. Economic infeasibility, because competing waste disposal facilities offer a lower tipping fee to customers, is not just cause for the City's failure to meet the air pollution control retrofit requirements of the Pennsylvania large MWC 111(d)/129 plan.

Considering our disapproval of the submitted derate proposal and the impossibility of a timely retrofit of the required air pollution control equipment by the City, the two MWC units at the HMERRF must cease operation on or before December 19, 2000. This is required under the approved Pennsylvania large MWC 111(d)/129 plan, and is stipulated in Mayor Stephen R. Reeds' December 7, 1998 Cease Operation Notice to the PADEP.

If you believe a meeting would be useful to discuss the City's plan for timely compliance, please contact either Cynthia Yu-Robinson, Pennsylvania Liaison Officer at (215) 814-5557, or Judith M. Katz, Director, Air Protection Division at (215) 814-2654.

Sincerely,

Bradley M. Campbell Regional Administrator

cc: Mayor Stephen R. Reed, City of Harrisburg
James Salvaggio, PADEP
Leif Ericson, PADEP
John Slade, PADEP