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       50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylv      05000388  
 AUTH. NAME      AUTHOR AFFILIATION  
 FIELDS, J.S.      Pennsylvania Power & Light Co.  
 RECIP. NAME      RECIPIENT AFFILIATION  
 TOMAYKO, B.      Pennsylvania, Commonwealth of

SUBJECT: Forwards results of recent chemical analyses of cooling tower & spray pond sediment. Requests concurrence for continued disposal of sediment at const & demolation site 3, per 910712 telcon.

DISTRIBUTION CODE: C001D      COPIES RECEIVED: LTR 1      ENCL 1      SIZE: 9  
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	OGC/HDS2		1	0	<u>REG FILE</u> 01		1	1
	RGN1 DRSS/RPB		1	1				
EXTERNAL:	EG&G SIMPSON, F		2	2	NRC PDR		1	1
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**Pennsylvania Power & Light Company**

Two North Ninth Street • Allentown, PA 18101-1179 • 215/774-5151

August 9, 1991

Mr. Bill Tomayko  
Regional Facilities Manager  
Waste Management Program  
Northeast Regional Office  
Pennsylvania Department of Environmental Resources  
90 East Union Street, 2nd Floor  
Wilkes-Barre, PA 18701-3296

SUSQUEHANNA STEAM ELECTRIC STATION  
DISPOSAL OF COOLING TOWER  
AND SPRAY POND SEDIMENT  
CCN 741326 FILE R9-7  
PLE- 14577

Dear Mr. Tomayko:

As we discussed in our July 12, 1991 telephone conversation, Pennsylvania Power & Light Company plans on continuing to dispose of Cooling Tower and Spray Pond sediment on our Construction & Demolition Site #3 (permit #101363). We are attaching for your review, recent chemical analyses of the Cooling Tower and Spray Pond sediment. We request your written concurrence for continued disposal of this material at Construction & Demolition Site #3 since its impact to the environment should be negligible.

If you have any questions or concerns, please contact me at (215) 774-7889.

Sincerely,

Jerome S. Fields  
Sr. Environmental Scientist-Nuclear

lav/meg865b(25)

Attachment

cc: NRC Document-Control-Desk  
NRC Region I  
Mr. J. J. Raleigh, NRC Project Manager

9108140058 910809  
PDR ADOCK 05000387  
PDR

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PP&L Company - Hazleton  
Cedar & Buttonwood Streets  
Hazleton, PA 18201-0558

LLT Sample No. SW 1670872  
Date Reported 6/24/91  
Date Submitted 5/ 6/91  
Discard Date 8/24/91

Cooling Tower Basin Sludge and Sediment From Unit  
#1 Sample

P.O. B-21091  
Rel. 19-07-91

UNT-- ANALYSIS	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
Moisture	39.4	% by wt.	0.1	011101200
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.				
Arsenic	4.	mg/kg	1.	014503500
Selenium	< 0.5	mg/kg	0.5	016403500
pH	7.69		0.01	020000700
Barium	90.	mg/kg	20.	164601400
Cadmium	< 0.5	mg/kg	0.5	164901400
Chromium	7.	mg/kg	5.	165101400
Lead	7.	mg/kg	5.	165501400
Silver	< 1.	mg/kg	1.	166601400
Zinc	1,290.	mg/kg	2.	167201400

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ATTN: Mr. A. W. Snyder  
ATTN: Mr. David G. Ortiz - Chemist  
ATTN: Mr. John B. Hansell (A9-3)

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Our Standard Terms And Conditions

Respectfully Submitted  
Lancaster Laboratories, Inc.  
Reviewed and Approved by:

Timothy S. Oostdyk, B.A.  
Manager GC/MS



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PP&L Company - Hazleton  
Cedar & Buttonwood Streets  
Hazleton, PA 18201-0558

LLI Sample No. SW 1670872  
Date Reported 6/24/91  
Date Submitted 5/ 6/91  
Discard Date 8/24/91

Cooling Tower Basin Sludge and Sediment From Unit  
#1 Sample

P.O. B-21091  
Rel. 19-07-91

UNT--	RESULT	LIMIT OF	LAB CODE
ANALYSIS	DRY WT. BASIS	QUANTITATION	
Moisture *AS RECEIVED*	39.4 % by wt.	0.1	011100000
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.			
Arsenic	6. mg/kg	2.	014500000
Selenium	< 0.8 mg/kg	0.8	016400000
Barium	160. mg/kg	30.	164600000
Cadmium	< 0.8 mg/kg	0.8	164900000
Chromium	11. mg/kg	8.	165100000
Lead	12. mg/kg	8.	165500000
Silver	< 2. mg/kg	2.	166600000
Zinc	2,130. mg/kg	3.	167200000

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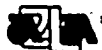
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ATTN: Mr. David G. Ortiz - Chemist  
ATTN: Mr. John B. Hansell (A9-3)

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PP&L Company - Hazleton
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Hazleton, PA 18201-0558

LLI Sample No. TL 1670873
Date Reported 6/24/91
Date Submitted 5/ 6/91
Discard Date 8/24/91

TCLP Non-volatile Extraction of Cooling Tower
Basin Sludge and Sediment From Unit #1 Sample

P.O. B-21091
Rel. 19-07-91

Table with columns: ANALYSIS, RESULT AS RECEIVED, LIMIT OF QUANTITATION, LAB CODE. Rows include Arsenic, Selenium, Barium, Cadmium, Chromium, Lead, Silver, and Zinc.

The reported results for metals were corrected for the matrix spike recovery as specified in June 29, 1990 Federal Register, p. 26993. The metal analyses were performed on a non-volatile leachate prepared according to the procedure specified in the June 29, 1990 Federal Register. A sample is considered to have failed the Toxicity Characteristic (TC) test and is considered a hazardous waste if any of the metal concentrations (mg/l) in the leachate exceed the following maxima (100 times the Primary Drinking Water Standards):

Table listing maxima for Arsenic (5.0), Barium (100.0), Cadmium (1.0), Chromium (5.0), Lead (5.0), Mercury (0.2), Selenium (1.0), and Silver (5.0).

The limits are published in March 29, 1990 Federal Register, pp. 11845-6.

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ATTN: Mr. John B. Hansell (A9-3)

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PP&L Company - Hazleton  
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LLR Sample No. ~~1670868~~  
Date Reported 7/ 5/91  
Date Submitted 5/ 6/91  
Discard Date 9/ 4/91

Cooling Tower Basin Sludge and Sediment From Unit  
#2 Sample

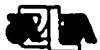
P.O. B-21091  
Rel. 18-07-91

C00-- ANALYSIS	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
Moisture	50.5	% by wt.	0.1	011101200
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.				
Arsenic	3.	mg/kg	1.	014503500
Selenium	< 0.5	mg/kg	0.5	016403500
pH	8.41		0.01	020000700
Barium	130.	mg/kg	20.	164601400
Cadmium	< 0.5	mg/kg	0.5	164901400
Chromium	5.	mg/kg	5.	165101400
Lead	9.	mg/kg	5.	165501400
Silver	< 1.	mg/kg	1.	166601400
Zinc	1,640.	mg/kg	2.	167201400

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Manager GC/MS



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PP&L Company - Hazleton  
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Hazleton, PA 18201-0558

LLI Sample No: SW-1670868  
Date Reported 7/ 5/91  
Date Submitted 5/ 6/91  
Discard Date 9/ 4/91

Cooling Tower Basin Sludge and Sediment From Unit  
#2 Sample

P.O. B-21091  
Rel. 18-07-91

COO-- ANALYSIS	RESULT	DRY WT. BASIS	LIMIT OF QUANTITATION	LAB CODE
Moisture *AS RECEIVED*	50.5	% by wt.	0.1	011100000
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.				
Arsenic	7.	mg/kg	2.	014500000
Selenium	< 1.	mg/kg	1.	016400000
Barium	260.	mg/kg	40.	164600000
Cadmium	< 1.	mg/kg	1.	164900000
Chromium	10.	mg/kg	10.	165100000
Lead	20.	mg/kg	10.	165500000
Silver	< 2.	mg/kg	2.	166600000
Zinc	3,310.	mg/kg	4.	167200000

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Hazleton, PA 18201-0558

LLP Sample No. ~~TE-1670869~~  
Date Reported 7/ 5/91  
Date Submitted 5/ 6/91  
Discard Date 9/ 4/91

TCLP Non-volatile Extraction of Cooling Tower  
Basin Sludge and Sediment From Unit #2 Sample

P.O. B-21091  
Rel. 18-07-91

COONV ANALYSIS	RESULT AS RECEIVED	LIMIT OF QUANTITATION	LAB CODE
Arsenic	< 0.5 mg/l	0.5	133501400
Selenium	< 0.5 mg/l	0.5	133601400
Barium	5. mg/l	2.	174601400
Cadmium	< 0.05 mg/l	0.05	174901400
Chromium	< 0.5 mg/l	0.5	175101400
Lead	< 0.5 mg/l	0.5	175501400
Silver	< 0.1 mg/l	0.1	176601400
Zinc	35.8 mg/l	0.2	177201400

The reported results for metals were corrected for the matrix spike recovery as specified in June 29, 1990 Federal Register, p. 26993. The metal analyses were performed on a non-volatile leachate prepared according to the procedure specified in the June 29, 1990 Federal Register. A sample is considered to have failed the Toxicity Characteristic (TC) test and is considered a hazardous waste if any of the metal concentrations (mg/l) in the leachate exceed the following maxima (100 times the Primary Drinking Water Standards):

Arsenic	5.0	Cadmium	1.0	Lead	5.0	Selenium	1.0
Barium	100.0	Chromium	5.0	Mercury	0.2	Silver	5.0

The limits are published in March 29, 1990 Federal Register, pp. 11845-6.

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Manager GC/MS





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PP&L Company - Hazleton  
Cedar & Buttonwood Streets  
Hazleton, PA 18201-0558

LLT Sample No. SW 1670856  
Date Reported 7/ 5/91  
Date Submitted 5/ 6/91  
Discard Date 9/ 4/91

Sediment From The Emergency Service Water Spray  
Pond Sample

P.O. B-21091  
Rel: 17-07-91

SED-- ANALYSIS	RESULT AS RECEIVED		LIMIT OF QUANTITATION	LAB CODE
Moisture	85.6	% by wt.	0.1	011101200
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.				
Arsenic	3.	mg/kg	1.	014503500
Selenium	< 0.5	mg/kg	0.5	016403500
pH	7.42		0.01	020000700
Barium	40.	mg/kg	20.	164601400
Cadmium	< 0.5	mg/kg	0.5	164901400
Chromium	6.	mg/kg	5.	165101400
Lead	11.	mg/kg	5.	165501400
Silver	< 1.	mg/kg	1.	166601400
Zinc	428.	mg/kg	2.	167201400

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PP&L Company - Hazleton  
Cedar & Buttonwood Streets  
Hazleton, PA 18201-0558

LLI Sample No. TL 1670857  
Date Reported 7/ 5/91  
Date Submitted 5/ 6/91  
Discard Date 9/ 4/91

TCLP Non-volatile Extraction of Sediment From The  
Emergency Service Water Spray Pond Sample

P.O. B-21091  
Rel. 17-07-91

SEDNV ANALYSIS	RESULT AS RECEIVED	LIMIT OF QUANTITATION	LAB CODE
Arsenic	< 0.5 mg/l	0.5	133501400
Selenium	< 0.5 mg/l	0.5	133601400
Barium	< 2. mg/l	2.	174601400
Cadmium	< 0.05 mg/l	0.05	174901400
Chromium	< 0.5 mg/l	0.5	175101400
Lead	< 0.5 mg/l	0.5	175501400
Silver	< 0.1 mg/l	0.1	176601400
Zinc	19.6 mg/l	0.2	177201400

The reported results for metals were corrected for the matrix spike recovery as specified in June 29, 1990 Federal Register, p. 26993. The metal analyses were performed on a non-volatile leachate prepared according to the procedure specified in the June 29, 1990 Federal Register. A sample is considered to have failed the Toxicity Characteristic (TC) test and is considered a hazardous waste if any of the metal concentrations (mg/l) in the leachate exceed the following maxima (100 times the Primary Drinking Water Standards):

Arsenic 5.0	Cadmium 1.0	Lead 5.0	Selenium 1.0
Barium 100.0	Chromium 5.0	Mercury 0.2	Silver 5.0

The limits are published in March 29, 1990 Federal Register, pp. 11845-6.

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