42-04

-Booklet-

Ash Data Report for Ash Disposal Petroleum Coke Test Burn, Unit 1 Roanoke Valley Energy Facility

1997

LG&EPOWER℠

LG&E Power Inc.
575 Anton Boulevard, Suite 250
Costa Mesa, California 92626
714-241-4700
714-241-4793 FAX

December 8, 1997

Ms. Sherri Coghill
Environmental Engineer
State of North Carolina
Department of Environment and Natural Resources
Division of Waste Management
Post Office. Box 29603
Raleigh, North Carolina 27611-9603

Subject: Ash Data Report for Ash Disposal
Petroleum Coke Test Burn, Unit I
Roanoke Valley Energy Facility

Dear Ms. Coghill:

Please find enclosed compiled laboratory ash data for the petroleum coke test burn performed on the Unit I boiler at the Roanoke Valley Energy Facility. Although the ash disposal data has previously been submitted to you in various other correspondences during the test burn, we are providing the information in this document for easy reference and for record keeping purposes. The data is appropriately categorized with each section specifically identified. Each unique sample is labeled and numbered, and the ash type and analysis performed is also indicated. We have also prepared and included a summary table of all the ash disposal data. In addition, we have included the beneficial reuse ash data summary table as you had requested. Mr. Bill Hocutt will receive the complete document with all the laboratory data for his review and determination of 12% mixed ash for beneficial reuse. We are also sending him a copy of the document we prepared for you for informational purposes only.

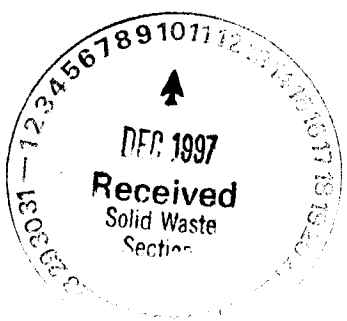
We appreciate all your efforts regarding this project. Should you have any questions or require additional information, do not hesitate to call me at (714) 241-4773.

Sincerely,

Maggie T. Estrada
Project Manager
Environmental Services

Enclosure

cc: C. Braun
B. Hamilton
Q. Morrison
B. Noble
G. Woods
esd/rvp.3.6



PET COKE

Disposal and Landfill Daily Cover
Summary Table

PETROLEUM COKE TEST BURN
SUMMARY OF ASH DATA RESULTS FOR DISPOSAL AND LANDFILL COVER
Roanoke Valley Energy Facility
Unit I

Parameter	Regulatory Level	Method Detection Limit	Pet Coke					
			5%		10%		12%	
			Fly Ash	Bottom Ash	Fly Ash	Bottom Ash	Fly Ash	Bottom Ash
			0	0	0	0	0	0
Metals								
TCLP (mg/l)								
Arsenic	5.0	0.002	0.070	0.021	<0.002	0.005	0.009	0.021
Barium	100.0	0.005	1.42	0.886	4.75	1.92	3.92	0.426
Cadmium	1.0	0.0005	0.0007	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Chromium	5.0	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Lead	5.0	0.005	<0.005	<0.005	<0.005	0.006	<0.005	<0.005
Mercury	0.2	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Selenium	1.0	0.005	0.164	0.009	0.026	0.007	0.038	<0.005
Silver	5.0	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	—	0.005	0.334	0.053	0.052	0.107	0.089	0.212
TCLP Organics								
Volatiles and Semi-volatiles (mg/l) (1)								
Benzene	0.5	0.005	<0.005	<0.005	<0.005	<0.005	—	<0.005
Carbon Tetrachloride	0.5	0.005	<0.005	<0.005	<0.005	<0.005	—	<0.005
Chlorobenzene	100.0	0.005	<0.005	<0.005	<0.005	<0.005	—	<0.005
Chloroform	6.0	0.005	<0.005	<0.005	<0.005	<0.005	—	<0.005
o-Cresol	200.0	0.050	<0.050	<0.050	<0.050	<0.050	—	<0.050
m-Cresol	200.0	0.050	<0.050	<0.050	<0.050	<0.050	—	<0.050
p-Cresol	200.0	0.050	<0.050	<0.050	<0.050	<0.050	—	<0.050
Cresol	200.0	0.050	<0.050	<0.050	<0.050	<0.050	—	<0.050
1,4-dichlorobenzene	7.5	0.005	<0.005	<0.005	<0.005	<0.005	—	<0.005
1,2-dichloroethane	0.5	0.005	<0.005	<0.005	<0.005	<0.005	—	<0.005
1,1-dichloroethylene	0.7	0.005	<0.005	<0.005	<0.005	<0.005	—	<0.005
2,4-dinitrotoluene	0.13	0.005	<0.005	<0.005	<0.005	<0.005	—	<0.005
Hexachlorobenzene	0.13	0.005	<0.005	<0.005	<0.005	<0.005	—	<0.005
Hexachloro-1,3-butadiene	0.5	0.005	<0.005	<0.005	<0.005	<0.005	—	<0.005

PETROLEUM COKE TEST BURN
SUMMARY OF ASH DATA RESULTS FOR DISPOSAL AND LANDFILL COVER
Roanoke Valley Energy Facility
Unit I

Parameter	Regulatory Level	Method Detection Limit	Pet Coke					
			5%		10%		12%	
			Fly Ash	Bottom Ash	Fly Ash	Bottom Ash	Fly Ash	Bottom Ash
			0	0	0	0	0	0
TCLP Organics (Continued) Volatiles and Semi-volatiles (mg/l) (1)								
Hexachloroethane	3.0	0.005	<0.005	<0.005	<0.005	<0.005	—	<0.005
Methyl ethyl ketone	200.0	0.100	<0.100	<0.100	<0.100	<0.100	—	<0.100
Nitrobenzene	2.0	0.005	<0.005	<0.005	<0.005	<0.005	—	<0.005
Pentachlorophenol	100.0	0.020	<0.020	<0.020	<0.020	<0.020	—	<0.020
Pyridine	5.0	0.500	<0.500	<0.500	<0.500	<0.500	—	<0.500
Tetrachloroethylene	0.7	0.005	<0.005	<0.005	<0.005	<0.005	—	<0.005
Trichloroethylene	0.5	0.005	<0.005	<0.005	<0.005	<0.005	—	<0.005
2,4,5-trichlorophenol	400.0	0.050	<0.050	<0.050	<0.050	<0.050	—	<0.050
2,4,6-trichlorophenol	2.0	0.050	<0.050	<0.050	<0.050	<0.050	—	<0.050
Vinyl Chloride	0.2	0.010	<0.010	<0.010	<0.010	<0.010	—	<0.010

Notes:

(1) No pesticides or herbicide.

5% PET COKE

5% PET COKE

Disposal Analysis (Fly Ash)

<u>Sample No. 0</u>
(97-9995)

TCLP Metals
TCLP Organics
Miscellaneous

CLIENT:	LG&E Partners - Westmoreland	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (757) 873-4703 phone (757) 873-1498 fax
ATTN:	Rob Reynolds		
ADDRESS:	Railroad Street, P.O. Box 351		
CITY:	Weldon, NC 27890		
PHONE:	919-536-3200	SAMPLE RECEIPT DATE:	9/15/97 TIME: 1550
FAX:			
		RECEIVED BY:	VAS
		GRAB COLLECTION DATE:	9/14/97 GRAB TIME: 0800
SPECIAL NOTES: **FINAL REPORT** RE: Disposal/Landcover 5% pet coke		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time
		COLLECTED BY:	LG&E Partners - Westmoreland
		PICKED UP BY:	
		NUMBER OF CONTAINERS:	4 Condition: (x)GOOD ( )OTHER
		EXPLAIN	

SAMPLE ID: Recycle Ash/Air Heater "Test 0"

SAMPLE NO: 97-9995

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		0.070	FPE-09/18/97 @ 1507
Barium	D005	6010A	0.005	100.0		1.42	FPE-09/18/97 @ 1507
Benzene	D018	8260	0.005	0.5		<0.005	TAG-09/22/97 @ 1629
Cadmium	D006	6010A	0.0005	1.0		0.0007	FPE-09/18/97 @ 1507
Carbon Tetrachloride	D019	8260	0.005	0.5		<0.005	TAG-09/22/97 @ 1629
Chlorobenzene	D021	8260	0.005	100.0		<0.005	TAG-09/22/97 @ 1629
Chloroform	D022	8260	0.005	6.0		<0.005	TAG-09/22/97 @ 1629
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-09/18/97 @ 1507
o-Cresol	D023	8270	0.050	200.0		<0.050	CLH-09/18/97 @ 1652
m-Cresol	D024	8270	0.050	200.0		<0.050	CLH-09/18/97 @ 1652
p-Cresol	D025	8270	0.050	200.0		<0.050	CLH-09/18/97 @ 1652

NOTES: cc: Maggie Estrada & LG&E

Samples composited in lab and analyzed - 98% Recycle Ash and 2% Air heater

RESPECTFULLY SUBMITTED BY:

Shirley E. Blanchard

Elaine Claiborne
Laboratory Director

DATE: September 22, 1997

RECEIVED
SEP 25 1997
ENVIRONMENTAL SERVICES

CLIENT: LG&E

SAMPLE ID: Recycle Ash/Air Heater "Test 0"

SAMPLE NO: 97-9995

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE (continued)							
Cresol	D026	8270	0.050	200.0		<0.050	CLH-09/18/97 @ 1652
1,4-dichlorobenzene	D027	8260	0.005	7.5		<0.005	TAG-09/22/97 @ 1629
1,2-dichloroethane	D028	8260	0.005	0.5		<0.005	TAG-09/22/97 @ 1629
1,1-dichloroethylene	D029	8260	0.005	0.7		<0.005	TAG-09/22/97 @ 1629
2,4-dinitrotoluene	D030	8270	0.005	0.13		<0.005	CLH-09/18/97 @ 1652
Hexachlorobenzene	D032	8270	0.005	0.13		<0.005	CLH-09/18/97 @ 1652
Hexachloro-1,3-butadiene	D033	8270	0.005	0.5		<0.005	CLH-09/18/97 @ 1652
Hexachloroethane	D034	8270	0.005	3.0		<0.005	CLH-09/18/97 @ 1652
Lead	D008	6010A	0.005	5.0		<0.005	FPE-09/18/97 @ 1507
Mercury	D009	7470	0.0002	0.2		<0.0002	SKH-09/18/97 @ 1500
Methyl ethyl ketone	D035	8260	0.100	200.0		<0.100	TAG-09/22/97 @ 1629
Nitrobenzene	D036	8270	0.005	2.0		<0.005	CLH-09/18/97 @ 1652
Pentachlorophenol	D037	8270	0.020	100.0		<0.020	CLH-09/18/97 @ 1652
Pyridine	D038	8270	0.500	5.0		<0.500	CLH-09/18/97 @ 1652
Selenium	D010	6010A	0.005	1.0		0.164	FPE-09/18/97 @ 1507
Silver	D011	6010A	0.001	5.0		<0.001	FPE-09/18/97 @ 1507
Tetrachloroethylene	D039	8260	0.005	0.7		<0.005	TAG-09/22/97 @ 1629
Trichloroethylene	D040	8260	0.005	0.5		<0.005	TAG-09/22/97 @ 1629
2,4,5-trichlorophenol	D041	8270	0.050	400.0		<0.050	CLH-09/18/97 @ 1652
2,4,6-trichlorophenol	D042	8270	0.050	2.0		<0.050	CLH-09/18/97 @ 1652
Vinyl Chloride	D043	8260	0.010	0.2		<0.010	TAG-09/22/97 @ 1629
Vanadium		6010A	0.005			0.334	FPE-09/18/97 @ 1507
Carbon (dry basis)		ASTM D3178	N/A			7.56%	JRM(HRT)-09/18/97
Sulphur (dry basis)		ASTM D4239	N/A			8.20%	JRM(HRT)-09/18/97
Nickel		6010A	0.249 mg/kg			34.8 mg/kg	FPE-09/18/97 @ 1400
Vanadium		6010A	0.249 mg/kg			178 mg/kg	FPE-09/18/97 @ 1400
pH		9045	N/A			12.1 @ 25°C	SKH-09/16/97 @ 0900

5% PET COKE

Disposal and Landfill Daily Cover Analysis (Bottom Ash)

<u>Sample No. 0</u>
(97-10294)

TCLP Metals
TCLP Organics
Miscellaneous

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (804) 873-4703 phone (804) 873-1498 fax		
ATTN:	Rob Reynolds				
ADDRESS:	P.O. Box 351, Railroad Street				
CITY:	Weldon, NC 27890				
PHONE:	(919) 536-3200	SAMPLE RECEIPT DATE:	09/18/97	TIME:	1700
FAX:					
		RECEIVED BY:	MEC		
		GRAB COLLECTION DATE:	09/14/97	GRAB TIME:	0800
SPECIAL NOTES: **FINAL REPORT** **Disposal/Landcover** **5% Pet Coke**		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time		
		COLLECTED BY:	LG&E Partners		
		PICKED UP BY:	S. Spears - LG&E Partners		
		NUMBER OF CONTAINERS:	1	Condition	(x)GOOD ( )OTHER
		EXPLAIN			
SAMPLE ID: Bottom Ash					
SAMPLE NO: 97-10294					

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		0.021	FPE-09/23/97 @ 1300
Barium	D005	6010A	0.005	100.0		0.886	FPE-09/23/97 @ 1300
Benzene	D018	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1244
Cadmium	D006	6010A	0.0005	1.0		<0.0005	FPE-09/23/97 @ 1300
Carbon Tetrachloride	D019	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1244
Chlorobenzene	D021	8240	0.005	100.0		<0.005	TAG-09/24/97 @ 1244
Chloroform	D022	8240	0.005	6.0		<0.005	TAG-09/24/97 @ 1244
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-09/23/97 @ 1300
o-Cresol	D023	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1339
m-Cresol	D024	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1339
p-Cresol	D025	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1339

NOTES:

RESPECTFULLY SUBMITTED BY:

Beverly E. Blanchard for

Elaine Claiborne
Laboratory Director

DATE: September 24, 1997

CLIENT: Westmoreland - LG&E Partners

SAMPLE ID: Bottom Ash - 5% Pet Coke

SAMPLE NO: 97-10294

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE (continued)							
Cresol	D026	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1339
1,4-dichlorobenzene	D027	8240	0.005	7.5		<0.005	TAG-09/24/97 @ 1244
1,2-dichloroethane	D028	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1244
1,1-dichloroethylene	D029	8240	0.005	0.7		<0.005	TAG-09/24/97 @ 1244
2,4-dinitrotoluene	D030	8270	0.005	0.13		<0.005	CLH-09/23/97 @ 1339
Hexachlorobenzene	D032	8270	0.005	0.13		<0.005	CLH-09/23/97 @ 1339
Hexachloro-1,3-butadiene	D033	8270	0.005	0.5		<0.005	CLH-09/23/97 @ 1339
Hexachloroethane	D034	8270	0.005	3.0		<0.005	CLH-09/23/97 @ 1339
Lead	D008	6010A	0.005	5.0		<0.005	FPE-09/23/97 @ 1300
Mercury	D009	7470	0.0002	0.2		<0.0002	SKH-09/24/97 @ 1500
Methyl ethyl ketone	D035	8240	0.100	200.0		<0.100	TAG-09/24/97 @ 1244
Nitrobenzene	D036	8270	0.005	2.0		<0.005	CLH-09/23/97 @ 1339
Pentachlorophenol	D037	8270	0.020	100.0		<0.020	CLH-09/23/97 @ 1339
Pyridine	D038	8270	0.500	5.0		<0.500	CLH-09/23/97 @ 1339
Selenium	D010	6010A	0.005	1.0		0.009	FPE-09/23/97 @ 1300
Silver	D011	6010A	0.001	5.0		<0.001	FPE-09/23/97 @ 1300
Tetrachloroethylene	D039	8240	0.005	0.7		<0.005	TAG-09/24/97 @ 1244
Trichloroethylene	D040	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1244
2,4,5-trichlorophenol	D041	8270	0.050	400.0		<0.050	CLH-09/23/97 @ 1339
2,4,6-trichlorophenol	D042	8270	0.050	2.0		<0.050	CLH-09/23/97 @ 1339
Vinyl Chloride	D043	8240	0.010	0.2		<0.010	TAG-09/24/97 @ 1244
Vanadium		6010A	0.005			0.053	FPE-09/23/97 @ 1300

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (757) 873-4703 phone (757) 873-1498 fax		
ATTN:	Bob Reynolds				
ADDRESS:	P.O. Box 351, Railroad Street				
CITY:	Weldon, NC 27890				
PHONE:	(919) 536-3200	SAMPLE RECEIPT DATE:	09/18/97	TIME:	1700
FAX:					
		RECEIVED BY:	MEC		
		GRAB COLLECTION DATE:	09/14/97	GRAB TIME:	0800
SPECIAL NOTES: Disposal/Land cover 5% Pet Coke		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time		
		COLLECTED BY:	LG&E Partners		
		PICKED UP BY:	S. Spears - LG&E Partners		
		NUMBER OF CONTAINERS:	1	Condition	(X)GOOD ( )OTHER
		EXPLAIN			

SAMPLE ID: Bottom Ash

SAMPLE NO: 97-10294

Pres.	Parameter	Method Number	Method Detection Limit (mg/kg)	Practical Quantitation Limit(mg/kg)	Result (mg/kg)	Analyst/Date/Time
	Carbon	ASTM D3178	N/A		8.46%	HRT-09/22/97 @ 0730
	Sulfur	ASTM D4239	N/A		0.15%	HRT-09/22/97 @ 0815
	pH	9045	N/A		10.1 @ 24°C	SKH-09/23/97 @ 0900
	Nickel	6010A	0.24		7.23	FPE-09/23/97 @ 1453
	Vanadium	6010A	0.24		19.9	FPE-09/23/97 @ 1453

NOTES: cc: Maggie Estrada @ LG&E

RESPECTFULLY SUBMITTED BY:

Elaine Claiborne

Elaine Claiborne
Laboratory Director

DATE: September 23, 1997

10% PET COKE

10% PET COKE

Disposal Analysis (Fly Ash)

Sample No. 0
(97-10292)

TCLP Metals
TCLP Organics
Miscellaneous

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (804) 873-4703 phone (804) 873-1498 fax		
ATTN:	Rob Reynolds				
ADDRESS:	P.O. Box 351, Railroad Street				
CITY:	Weldon, NC 27890				
PHONE:	(919) 536-3200	SAMPLE RECEIPT DATE:	09/18/97	TIME:	1700
FAX:					
		RECEIVED BY:	MEC		
		GRAB COLLECTION DATE:	09/17/97	GRAB TIME:	0800
SPECIAL NOTES: **FINAL REVISED REPORT** Disposal/Landcover 10% Pet Coke		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time		
		COLLECTED BY:	LG&E Partners		
		PICKED UP BY:	S. Spears - LG&E Partners		
		NUMBER OF CONTAINERS:	4	Condition	(x)GOOD ( )OTHER
		EXPLAIN			

SAMPLE ID: Fly Ash Composite (98% Recycle Ash and 2% Air Heater Hopper)

SAMPLE NO: 97-10292

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		<0.002	FPE-09/23/97 @ 1246
Barium	D005	6010A	0.005	100.0		4.75	FPE-09/23/97 @ 1246
Benzene	D018	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1125
Cadmium	D006	6010A	0.0005	1.0		<0.0005	FPE-09/23/97 @ 1246
Carbon Tetrachloride	D019	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1125
Chlorobenzene	D021	8240	0.005	100.0		<0.005	TAG-09/24/97 @ 1125
Chloroform	D022	8240	0.005	6.0		<0.005	TAG-09/24/97 @ 1125
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-09/23/97 @ 1246
o-Cresol	D023	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1132
m-Cresol	D024	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1132
p-Cresol	D025	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1132

NOTES:

RESPECTFULLY SUBMITTED BY:

Elaine Claiborne
Laboratory Director

DATE: October 1, 1997

CLIENT: Westmoreland - LG&E Partners

SAMPLE ID: Fly Ash Composite (98% Recycle Ash and 2% Air Heater Hopper)

SAMPLE NO: 97-10292

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE (continued)							
Cresol	D026	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1132
1,4-dichlorobenzene	D027	8240	0.005	7.5		<0.005	TAG-09/24/97 @ 1125
1,2-dichloroethane	D028	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1125
1,1-dichloroethylene	D029	8240	0.005	0.7		<0.005	TAG-09/24/97 @ 1125
2,4-dinitrotoluene	D030	8270	0.005	0.13		<0.005	CLH-09/23/97 @ 1132
Hexachlorobenzene	D032	8270	0.005	0.13		<0.005	CLH-09/23/97 @ 1132
Hexachloro-1,3-butadiene	D033	8270	0.005	0.5		<0.005	CLH-09/23/97 @ 1132
Hexachloroethane	D034	8270	0.005	3.0		<0.005	CLH-09/23/97 @ 1132
Lead	D008	6010A	0.005	5.0		<0.005	FPE-09/23/97 @ 1246
Mercury	D009	7470	0.0002	0.2		<0.0002	SKH-09/24/97 @ 1500
Methyl ethyl ketone	D035	8240	0.100	200.0		<0.100	TAG-09/24/97 @ 1125
Nitrobenzene	D036	8270	0.005	2.0		<0.005	CLH-09/23/97 @ 1132
Pentachlorophenol	D037	8270	0.020	100.0		<0.020	CLH-09/23/97 @ 1132
Pyridine	D038	8270	0.500	5.0		<0.500	CLH-09/23/97 @ 1132
Selenium	D010	6010A	0.005	1.0		0.026	FPE-09/23/97 @ 1246
Silver	D011	6010A	0.001	5.0		<0.001	FPE-09/23/97 @ 1246
Tetrachloroethylene	D039	8240	0.005	0.7		<0.005	TAG-09/24/97 @ 1125
Trichloroethylene	D040	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1125
2,4,5-trichlorophenol	D041	8270	0.050	400.0		<0.050	CLH-09/23/97 @ 1132
2,4,6-trichlorophenol	D042	8270	0.050	2.0		<0.050	CLH-09/23/97 @ 1132
Vinyl Chloride	D043	8240	0.010	0.2		<0.010	TAG-09/24/97 @ 1125
Vanadium		6010A	0.005			0.052	FPE-09/23/97 @ 1246

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (757) 873-4703 phone (757) 873-1498 fax		
ATTN:	Bob Reynolds				
ADDRESS:	P.O. Box 351, Railroad Street				
CITY:	Weldon, NC 27890				
PHONE:	(919) 536-3200	SAMPLE RECEIPT DATE:	09/18/97	TIME:	1700
FAX:					
		RECEIVED BY:	MEC		
		GRAB COLLECTION DATE:	09/17/97	GRAB TIME:	0800
SPECIAL NOTES: Disposal/Landcover 10% Pet Coke		COMPOSITE COLLECTION:	Start Date / Start Time	End Date	End Time
		COLLECTED BY:	LG&E Partners		
		PICKED UP BY:	S. Spears - LG&E Partners		
		NUMBER OF CONTAINERS:	4	Condition	(X)GOOD ( )OTHER
		EXPLAIN			

SAMPLE ID: Fly Ash Composite (98% Recycle Ash and 2% Air Heater Hopper)

SAMPLE NO: 97-10292

Pres.	Parameter	Method Number	Method Detection Limit (mg/kg)	Practical Quantitation Limit(mg/kg)	Result (mg/kg)	Analyst/Date/Time
	Carbon	ASTM D3178	N/A		7.91%	HRT-09/22/97 @ 0730
	Sulfur	ASTM D4239	N/A		7.70%	HRT-09/22/97 @ 0828
	pH	9045	N/A		12.1 @ 24°C	SKH-09/23/97 @ 0900
	Nickel	6010A	0.24		29.3	FPE-09/23/97 @ 1448
	Vanadium	6010A	0.24		229	FPE-09/23/97 @ 1448

NOTES: cc: Maggie Estrada @ LG&E

RESPECTFULLY SUBMITTED BY:

Elaine Claiborne

Elaine Claiborne
Laboratory Director

DATE: September 23, 1997

10% PET COKE

Disposal and Landfill Daily Cover Analysis (Bottom Ash)

Sample No. 0
(97-10293)

TCLP Metals
TCLP Organics
Miscellaneous

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (804) 873-4703 phone (804) 873-1498 fax			
ATTN:	Rob Reynolds					
ADDRESS:	P.O. Box 351, Railroad Street					
CITY:	Weldon, NC 27890					
PHONE:	(919) 536-3200	SAMPLE RECEIPT DATE:	09/18/97	TIME:	1700	
FAX:						
		RECEIVED BY:	MEC			
		GRAB COLLECTION DATE:	09/17/97	GRAB TIME:	0800	
SPECIAL NOTES: **FINAL REPORT REVISED** **Disposal/Landcover** **10% Pet Coke**		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time			
		COLLECTED BY:	LG&E Partners			
		PICKED UP BY:	S. Spears - LG&E Partners			
		NUMBER OF CONTAINERS:	3	Condition	(x)GOOD ( )OTHER	
		EXPLAIN				

SAMPLE ID: Bottom Ash

SAMPLE NO: 97-10293

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		0.005	FPE-09/23/97 @ 1254
Barium	D005	6010A	0.005	100.0		1.92	FPE-09/23/97 @ 1254
Benzene	D018	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1204
Cadmium	D006	6010A	0.0005	1.0		<0.0005	FPE-09/23/97 @ 1254
Carbon Tetrachloride	D019	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1204
Chlorobenzene	D021	8240	0.005	100.0		<0.005	TAG-09/24/97 @ 1204
Chloroform	D022	8240	0.005	6.0		<0.005	TAG-09/24/97 @ 1204
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-09/23/97 @ 1254
o-Cresol	D023	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1249
m-Cresol	D024	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1249
p-Cresol	D025	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1249

NOTES: cc: Maggie Estrada @ LG&E

RESPECTFULLY SUBMITTED BY:

Beverly E. Blanchard

Elaine Claiborne
Laboratory Director

DATE: October 7, 1997

CLIENT: Westmoreland - LG&E Partners

SAMPLE ID: Bottom Ash - 10% Pet Coke

SAMPLE NO: 97-10293

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE (continued)							
Cresol	D026	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1249
1,4-dichlorobenzene	D027	8240	0.005	7.5		<0.005	TAG-09/24/97 @ 1204
1,2-dichloroethane	D028	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1204
1,1-dichloroethylene	D029	8240	0.005	0.7		<0.005	TAG-09/24/97 @ 1204
2,4-dinitrotoluene	D030	8270	0.005	0.13		<0.005	CLH-09/23/97 @ 1249
Hexachlorobenzene	D032	8270	0.005	0.13		<0.005	CLH-09/23/97 @ 1249
Hexachloro-1,3-butadiene	D033	8270	0.005	0.5		<0.005	CLH-09/23/97 @ 1249
Hexachloroethane	D034	8270	0.005	3.0		<0.005	CLH-09/23/97 @ 1249
Lead	D008	6010A	0.005	5.0		0.006	FPE-09/23/97 @ 1254
Mercury	D009	7470	0.0002	0.2		<0.0002	SKH-09/24/97 @ 1500
Methyl ethyl ketone	D035	8240	0.100	200.0		<0.100	TAG-09/24/97 @ 1204
Nitrobenzene	D036	8270	0.005	2.0		<0.005	CLH-09/23/97 @ 1249
Pentachlorophenol	D037	8270	0.020	100.0		<0.020	CLH-09/23/97 @ 1249
Pyridine	D038	8270	0.500	5.0		<0.500	CLH-09/23/97 @ 1249
Selenium	D010	6010A	0.005	1.0		0.007	FPE-09/23/97 @ 1300
Silver	D011	6010A	0.001	5.0		<0.001	FPE-09/23/97 @ 1300
Tetrachloroethylene	D039	8240	0.005	0.7		<0.005	TAG-09/24/97 @ 1204
Trichloroethylene	D040	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1204
2,4,5-trichlorophenol	D041	8270	0.050	400.0		<0.050	CLH-09/23/97 @ 1249
2,4,6-trichlorophenol	D042	8270	0.050	2.0		<0.050	CLH-09/23/97 @ 1249
Vinyl Chloride	D043	8240	0.010	0.2		<0.010	TAG-09/24/97 @ 1204
Vanadium		6010A	0.005			0.107	FPE-09/23/97 @ 1300

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James [illegible]ed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (757) 873-4703 phone (757) 873-1498 fax			
ATTN:	Bob Reynolds					
ADDRESS:	P.O. Box 351, Railroad Street					
CITY:	Weldon, NC 27890					
PHONE:	(919) 536-3200	SAMPLE RECEIPT DATE:	09/18/97	TIME:	1700	
FAX:						
		RECEIVED BY:	MEC			
		GRAB COLLECTION DATE:	09/17/97	GRAB TIME:	0800	
SPECIAL NOTES: Disposal/ Land cover 10% Pet Coke		COMPOSITE COLLECTION:	Start Date	Start Time	End Date	End Time
		COLLECTED BY:	LG&E Partners			
		PICKED UP BY:	S. Spears - LG&E Partners			
		NUMBER OF CONTAINERS:	3	Condition	(X)GOOD ( )OTHER	
		EXPLAIN				
SAMPLE ID: Bottom Ash						
SAMPLE NO: 97-10293						

Pres.	Parameter	Method Number	Method Detection Limit (mg/kg)	Practical Quantitation Limit(mg/kg)	Result (mg/kg)	Analyst/Date/Time
	Carbon	ASTM D3178	N/A		3.54%	HRT-09/22/97 @ 0730
	Sulfur	ASTM D4239	N/A		0.10%	HRT-09/22/97 @ 0815
	pH	9045	N/A		10.5 @ 24°C	SKH-09/23/97 @ 0900
	Nickel	6010A	0.24		7.07	FPE-09/23/97 @ 1440
	Vanadium	6010A	0.24		26.8	FPE-09/23/97 @ 1440

NOTES: cc: Maggie Estrada @ LG&E

RESPECTFULLY SUBMITTED BY:

Elaine Claiborne

Elaine Claiborne
Laboratory Director

DATE: September 23, 1997

12% PET COKE

12% PET COKE

Disposal Analysis (Fly Ash)

Sample No. 0
(97-10728)

TCLP Metals
Miscellaneous

SAMPLE ID: Air Heater Hopper 2%/Recycle Ash 98%

SAMPLE NO: 97-10728

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit(mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		0.009	FPE-10/01/97 @ 1316
Barium	D005	6010A	0.005	100.0		3.92	FPE-10/01/97 @ 1316
Cadmium	D006	6010A	0.0005	1.0		<0.0005	FPE-10/01/97 @ 1316
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-10/01/97 @ 1316
Lead	D008	6010A	0.005	5.0		<0.005	FPE-10/01/97 @ 1316
Mercury	D009	7470	0.0002	0.2		<0.0002	SKH-09/30/97 @ 1430
Selenium	D010	6010A	0.005	1.0		0.038	FPE-10/01/97 @ 1316
Silver	D011	6010A	0.001	5.0		<0.001	FPE-10/01/97 @ 1316
Vandium		6010A	0.005			0.089	FPE-10/01/97 @ 1316

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (757) 873-4703 phone (757) 873-1498 fax			
ATTN:	Rob Reynolds					
ADDRESS:	P.O. Box 351, Railroad Street					
CITY:	Weldon, NC 27890					
PHONE:	(919) 536-3200 ext 234	SAMPLE RECEIPT DATE:	9/26/97	TIME:	1530	
FAX:	(919) 536-4448					
		RECEIVED BY:	VAS			
		GRAB COLLECTION DATE:	9/24/97	GRAB TIME:	0800	
SPECIAL NOTES: RE: 12% Disposal		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time			
		COLLECTED BY:	LG&E Partners			
		PICKED UP BY:	LG&E Partners			
		NUMBER OF CONTAINERS:	4	Condition	(X)GOOD ( )OTHER	
		EXPLAIN				

SAMPLE ID: Air Heater Hopper 2%/Recycle Ash 98%

SAMPLE NO: 97-10728

Pres.	Parameter	Method Number	Method Detection Limit (mg/kg)	Practical Quantitation Limit(mg/kg)	Result (mg/kg)	Analyst/Date/Time
	Carbon	ASTM D3178	N/A		8.10%	HRT(PL)-10/01/97
	Sulfur	ASTM D4239	N/A		7.28%	HRT(PL)-10/01/97
	Nickel	6010A	0.24		50.9	FPE-10/01/97 @ 1358
	Vanadium	6010A	0.24		424	FPE-10/01/97 @ 1358
	pH	9045	N/A		12.11 @ 20°C	SKH-10/01/97 @ 1300

NOTES: cc: Maggie Estrada @ LG&E

RESPECTFULLY SUBMITTED BY:

Barry E. Blanchard

Elaine Claiborne
Laboratory Director

DATE: October 1, 1997

12% PET COKE

Disposal and Landfill Daily Cover Analysis (Bottom Ash)

Sample No. 0
(97-10734)

TCLP Metals
TCLP Organics
Miscellaneous

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (804) 873-4703 phone (804) 873-1498 fax			
ATTN:	Rob Reynolds					
ADDRESS:	P.O. Box 351, Railroad Street					
CITY:	Weldon, NC 27890					
PHONE:	(919) 536-3200	SAMPLE RECEIPT DATE:	9/26/97	TIME:	1530	
FAX:						
		RECEIVED BY:	MEC			
		GRAB COLLECTION DATE:	9/25/97	GRAB TIME:	0800	
SPECIAL NOTES: RE: 12%		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time			
		COLLECTED BY:	LG&E Partners			
		PICKED UP BY:	LG&E Partners			
		NUMBER OF CONTAINERS:	3	Condition	(x)GOOD ( )OTHER	
		EXPLAIN				

SAMPLE ID: Bottom Ash (Disposal/Land Cover)

SAMPLE NO: 97-10734

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		0.021	FPE-10/01/97 @ 1321
Barium	D005	6010A	0.005	100.0		0.426	FPE-10/01/97 @ 1321
Benzene	D018	8240	0.005	0.5		<0.005	TAG-10/02/97 @ 1640
Cadmium	D006	6010A	0.0005	1.0		<0.0005	FPE-10/01/97 @ 1321
Carbon Tetrachloride	D019	8240	0.005	0.5		<0.005	TAG-10/02/97 @ 1640
Chlorobenzene	D021	8240	0.005	100.0		<0.005	TAG-10/02/97 @ 1640
Chloroform	D022	8240	0.005	6.0		<0.005	TAG-10/02/97 @ 1640
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-10/01/97 @ 1321
o-Cresol	D023	8270	0.050	200.0		<0.050	CLH-10/01/97 @ 1720
m-Cresol	D024	8270	0.050	200.0		<0.050	CLH-10/01/97 @ 1720
p-Cresol	D025	8270	0.050	200.0		<0.050	CLH-10/01/97 @ 1720

NOTES: cc: Maggie Estrada @ LG&E

RESPECTFULLY SUBMITTED BY:

Elaine Claiborne

Elaine Claiborne
Laboratory Director

DATE: October 2, 1997

RECEIVED

OCT 07 1997

ENVIRONMENTAL SERVICES

CLIENT: Westmoreland - LG&E Partners

SAMPLE ID: Bottom Ash - 12%

SAMPLE NO: 97-10734

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE (continued)							
Cresol	D026	8270	0.050	200.0		<0.050	CLH-10/01/97 @ 1720
1,4-dichlorobenzene	D027	8240	0.005	7.5		<0.005	TAG-10/02/97 @ 1640
1,2-dichloroethane	D028	8240	0.005	0.5		<0.005	TAG-10/02/97 @ 1640
1,1-dichloroethylene	D029	8240	0.005	0.7		<0.005	TAG-10/02/97 @ 1640
2,4-dinitrotoluene	D030	8270	0.005	0.13		<0.005	CLH-10/01/97 @ 1720
Hexachlorobenzene	D032	8270	0.005	0.13		<0.005	CLH-10/01/97 @ 1720
Hexachloro-1,3-butadiene	D033	8270	0.005	0.5		<0.005	CLH-10/01/97 @ 1720
Hexachloroethane	D034	8270	0.005	3.0		<0.005	CLH-10/01/97 @ 1720
Lead	D008	6010A	0.005	5.0		<0.005	FPE-10/01/97 @ 1321
Mercury	D009	7470	0.0002	0.2		<0.0002	SKH-09/30/97 @ 1430
Methyl ethyl ketone	D035	8240	0.100	200.0		<0.100	TAG-10/02/97 @ 1640
Nitrobenzene	D036	8270	0.005	2.0		<0.005	CLH-10/01/97 @ 1720
Pentachlorophenol	D037	8270	0.020	100.0		<0.020	CLH-10/01/97 @ 1720
Pyridine	D038	8270	0.500	5.0		<0.500	CLH-10/01/97 @ 1720
Selenium	D010	6010A	0.005	1.0		<0.005	FPE-10/01/97 @ 1321
Silver	D011	6010A	0.001	5.0		<0.001	FPE-10/01/97 @ 1321
Tetrachloroethylene	D039	8240	0.005	0.7		<0.005	TAG-10/02/97 @ 1640
Trichloroethylene	D040	8240	0.005	0.5		<0.005	TAG-10/02/97 @ 1640
2,4,5-trichlorophenol	D041	8270	0.050	400.0		<0.050	CLH-10/01/97 @ 1720
2,4,6-trichlorophenol	D042	8270	0.050	2.0		<0.050	CLH-10/01/97 @ 1720
Vinyl Chloride	D043	8240	0.010	0.2		<0.010	TAG-10/02/97 @ 1640
Vandium		6010A	0.005			0.212	FPE-10/01/97 @ 1321

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (757) 873-4703 phone (757) 873-1498 fax			
ATTN:	Rob Reynolds					
ADDRESS:	P.O. Box 351, Railroad Street					
CITY:	Weldon, NC 27890					
PHONE:	(919) 536-3200 ext 234	SAMPLE RECEIPT DATE:	9/26/97		TIME:	1530
FAX:	(919) 536-4448					
		RECEIVED BY:	VAS			
		GRAB COLLECTION DATE:	9/24/97		GRAB TIME:	0800
SPECIAL NOTES: RE: 12%		COMPOSITE COLLECTION:	Start Date	Start Time	End Date	End Time
		COLLECTED BY:	LG&E Partners			
		PICKED UP BY:	LG&E Partners			
		NUMBER OF CONTAINERS:	4		Condition	(X)GOOD ( )OTHER
		EXPLAIN				
SAMPLE ID: Bottom Ash (Disposal/Land Cover)						
SAMPLE NO: 97-10734						

Pres.	Parameter	Method Number	Method Detection Limit (mg/kg)	Practical Quantitation Limit(mg/kg)	Result (mg/kg)	Analyst/Date/Time
	Carbon	ASTM D3178	N/A		6.51%	HRT(PL)-10/02/97
	Sulfur	ASTM D4239	N/A		0.13%	HRT(PL)-10/02/97
	Nickel	6010A	0.24		5.24	FPE-10/01/97 @ 1352
	Vanadium	6010A	0.24		24.2	FPE-10/01/97 @ 1352
	pH	9045	N/A		10.40 @ 20°C	SKH-10/01/97 @ 1300

NOTES: cc: Maggie Estrada @ LG&E

RESPECTFULLY SUBMITTED BY:

Elaine Claiborne

Elaine Claiborne
Laboratory Director

DATE: October 2, 1997

PET COKE

Beneficial Reuse
Summary Table

PET COKE

Beneficial Reuse
Summary Table

PETROLEUM COKE TEST BURN
SUMMARY OF ASH DATA RESULTS FOR BENEFICIAL REUSE
Roanoke Valley Energy Facility
Unit I

Parameter	Regulatory Level	Method Detection Limit	(Pre) 100% Coal Sample No.			12% Pet Coke Sample No.			(Post) 100% Coal Sample No.		
			1	3	5	1	3	5	1	3	5
Metals											
TCLP (mg/l)											
Arsenic	5.0	0.002	0.284	0.203	0.241	0.144	0.183	0.387	0.012	0.013	0.177
Barium	100.0	0.005	1.28	1.47	1.61	2.75	2.42	2.94	3.73	3.12	2.83
Cadmium	1.0	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0006	0.0007	<0.0005	<0.0005	<0.0005
Chromium	5.0	0.005	<0.005	0.005	0.009	<0.005	0.020	0.031	0.005	0.005	<0.005
Lead	5.0	0.005	<0.005	0.017	<0.005	0.005	0.006	0.005	0.032	0.015	0.011
Mercury	0.2	0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Selenium	1.0	0.005	0.131	0.247	0.101	0.072	0.229	0.309	0.073	0.064	0.084
Silver	5.0	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	---	0.005	0.084	0.053	0.080	0.872	0.946	1.84	0.039	0.043	0.057
Total (mg/kg)									(1)	(1)	(1)
Aluminum	---	2.50	15,000 (1.5%)	14,000 (1.4%)	13,200 (1.32%)	11,100 (1.11%)	11,500 (1.15%)	13,000 (1.3%)	7,330 (0.73%)	11,700 (1.17%)	10,100 (1.0%)
Antimony	---	0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	0.333	0.520	<0.23
Arsenic	---	0.10	77.3	85.7	82.9	59.0	65.1	68.7	53.0	76.1	64.5
Barium	---	0.25	190	109	187	268	147	167	114	54.4	66.8
Beryllium	---	0.025	5.33	5.23	5.05	3.92	3.83	4.25	2.50	4.08	3.41
Cadmium	---	0.025	<0.025	<0.025	<0.025	0.1791	0.1973	0.2274	0.2000	0.1750	0.2059
Calcium	---	0.50	96,600 (9.66%)	95,100 (9.51%)	98,700 (9.87%)	107,000 (10.7%)	114,000 (11.4%)	110,000 (11%)	46,600 (4.67%)	126,000 (12.6%)	74,100 (7.41%)
Chromium	---	0.25	21.0	20.4	19.3	15.6	16.2	18.3	10.7	17.5	14.5
Cobalt	---	0.25	8.92	8.47	7.94	7.99	7.84	8.80	4.76	8.09	6.54
Copper	---	0.25	40.5	40.7	39.1	33.6	34.2	37.9	25.1	34.5	31.5
Iron	---	1.25	11,700 (1.17%)	10,400 (1.04%)	10,200 (1.02%)	8,130	8,630	9,140	4,240	7,330	6,220
Lead	---	0.25	23.9	2.29	21.4	16.6	16.7	18.2	10.2	11.3	13.3
Magnesium	---	1.25	1,880	1,920	1,980	1,850	1,990	1,970	1,300	2,280	1,810
Manganese	---	0.25	32.2	34.1	40.6	29.8	35.2	37.2	19.5	31.9	25.9
Mercury	---	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PETROLEUM COKE TEST BURN
SUMMARY OF ASH DATA RESULTS FOR BENEFICIAL REUSE
Roanoke Valley Energy Facility
Unit I

Parameter	Regulatory Level	Method Detection Limit	(Pre) 100% Coal Sample No.			12% Pet Coke Sample No.			(Post) 100% Coal Sample No.		
			1	3	5	1	3	5	1	3	5
Metals (Continued)											
Total (mg/kg)											
Molybdenum	—	0.25	4.79	5.08	4.60	4.07	4.93	5.24	2.90	4.73	3.57
Nickel	—	0.25	21.5	19.9	18.5	53.7	55.3	68.2	9.57	16.6	13.5
Potassium	—	1.25	1,770	1,680	1,550	1,260	1,390	1,530	1,110	1,610	1,430
Selenium	—	0.25	16.0	16.3	17.4	11.7	14.0	15.6	10.8	14.9	13.2
Silver	—	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sodium	—	24.9	658	637	604	557	602	652	340	563	420
Thallium	—	0.25	2.44	2.49	2.10	1.02	1.13	1.09	0.952	1.99	1.37
Titanium	—	0.25	573	558	539	420	424	467	280	458	368
Vanadium	—	0.25	49.4	49.8	48.5	430	463	573	27.7	42.1	35.7
Zinc	—	0.25	27.8	27.7	27.7	24.2	22.7	28.3	15.6	24.7	20.1
TCLP Organics											
Volatiles and Semi-volatiles (mg/l) (2)											
Benzene	0.5	0.005	—	<0.005	—	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbon Tetrachloride	0.5	0.005	—	<0.005	—	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlorobenzene	100.0	0.005	—	<0.005	—	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloroform	6.0	0.005	—	<0.005	—	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
o-Cresol	200.0	0.050	—	<0.050	—	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
m-Cresol	200.0	0.050	—	<0.050	—	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
p-Cresol	200.0	0.050	—	<0.050	—	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cresol	200.0	0.050	—	<0.050	—	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,4-dichlorobenzene	7.5	0.005	—	<0.005	—	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,2-dichloroethane	0.5	0.005	—	<0.005	—	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-dichloroethylene	0.7	0.005	—	<0.005	—	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2,4-dinitrotoluene	0.13	0.005	—	<0.005	—	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	0.13	0.005	—	<0.005	—	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachloro-1,3-butadiene	0.5	0.005	—	<0.005	—	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachloroethane	3.0	0.005	—	<0.005	—	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

PETROLEUM COKE TEST BURN
SUMMARY OF ASH DATA RESULTS FOR BENEFICIAL REUSE
Roanoke Valley Energy Facility
Unit I

Parameter	Regulatory Level	Method Detection Limit	(Pre) 100% Coal Sample No.			12% Pet Coke Sample No.			(Post) 100% Coal Sample No.		
			1	3	5	1	3	5	1	3	5
TCLP Organics (Continued)											
Volatiles and Semi-volatiles (mg/l) *											
Methyl ethyl ketone	200.0	0.100	—	<0.100	—	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Nitrobenzene	2.0	0.005	—	<0.005	—	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Pentachlorophenol	100.0	0.020	—	<0.020	—	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Pyridine	5.0	0.500	—	<0.500	—	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Tetrachloroethylene	0.7	0.005	—	<0.005	—	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Trichloroethylene	0.5	0.005	—	<0.005	—	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2,4,5-trichlorophenol	400.0	0.050	—	<0.050	—	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
2,4,6-trichlorophenol	2.0	0.050	—	<0.050	—	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Vinyl Chloride	0.2	0.010	—	<0.010	—	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
8240 (8260) Scan											
Volatiles (mg/kg)						(3)	(4)	(4)	(8)	(8)	(8)
Dichlorodifluoromethane	—	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloromethane	—	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	—	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromomethane	—	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroethane	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Trichlorofluoromethane	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethene	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Acetone	—	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Iodomethane	—	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Disulfide	—	0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Methylene Chloride	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Trans-1,2-Dichloroethene	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Vinyl Acetate	—	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
2,2-Dichloropropane	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
2-Butanone (MEK)	—	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

PETROLEUM COKE TEST BURN
SUMMARY OF ASH DATA RESULTS FOR BENEFICIAL REUSE
Roanoke Valley Energy Facility
Unit I

Parameter	Regulatory Level	Method Detection Limit	(Pre) 100% Coal Sample No.			12% Pet Coke Sample No.			(Post) 100% Coal Sample No.		
			1	3	5	1	3	5	1	3	5
8240 (8260) Scan (Continued)											
Volatiles (mg/kg)											
Bromochloromethane	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroform	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1,1-Trichloroethane	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Carbon Tetrachloride	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloropropene	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Benzene	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichloroethane	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Trichloroethene	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichloropropane	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Dibromomethane	—	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromodichloromethane	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
2-Chloroethyl Vinyl Ether	—	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,3-Dichloropropene	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
4-Methyl-2-Pentanone (MIBK)	—	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	—	0.025	<0.025	<0.025	<0.025	0.125	0.075	0.050	0.275	0.375	0.600
Trans-1,3-Dichloropropene	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1,2-Trichloroethane	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Tetrachloroethene	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.250	0.050	<0.025
1,3-Dichloropropane	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
2-Hexanone	—	0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Dibromochloromethane	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chlorobenzene	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Ethylbenzene	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1,1,2-Tetrachlorethane	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
m&p-Xylene	—	0.025	<0.025	<0.025	<0.025	<0.125	0.075	0.075	0.100	0.05	0.075
o-Xylene	—	0.025	<0.025	<0.025	<0.025	<0.05	<0.025	<0.025	<0.050	<0.025	<0.025
Styrene	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Bromoform	—	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025

PETROLEUM COKE TEST BURN
SUMMARY OF ASH DATA RESULTS FOR BENEFICIAL REUSE
Roanoke Valley Energy Facility
Unit I

Parameter	Regulatory Level	Method Detection Limit	(Pre) 100% Coal Sample No.			12% Pet Coke Sample No.			(Post) 100% Coal Sample No.		
			1	3	5	1	3	5	1	3	5
8240 (8260) Scan (Continued) Volatiles (mg/kg)											
Isopropylbenzene	---	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Bromobenzene	---	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.075	<0.025	<0.025
1,1,2,2-Tetrachloroethane	---	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
n-Propylbenzene	---	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2,3-Trichloropropane	---	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
2-Chlorotoluene	---	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,3,5-Trimethylbenzene	---	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
4-Chlorotoluene	---	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.050	<0.025	<0.025
Tert-Butylbenzene	---	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2,4-Trimethylbenzene	---	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Sec-Butylbenzene	---	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.075	<0.025	<0.025
1,3-Dichlorobenzene	---	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.125	<0.025	<0.025
4-Isopropyltoluene	---	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,4-Dichlorobenzene	---	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
N-Butylbenzene	---	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichlorobenzene	---	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.125	<0.025	<0.025
1,2,3-Trichlorobenzene	---	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.450	<0.025	<0.025
Naphthalene	---	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2,4-Trichlorobenzene	---	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.450	<0.025	<0.025
8270 Scan Semi-volatiles (mg/kg)			(5)			(6)	(7)	(7)	(8)	(8)	(8)
Pyridine	---	0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
N-Nitrosodimethylamine	---	0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
2-Picoline	---	0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
Methyl Methanesulfonate	---	0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
Ethyl Methanesulfonate	---	0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
Aniline	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Phenol	---	0.17	<0.17	<0.17	<0.17	0.57	<0.17	<0.17	<0.17	<0.17	<0.17

PETROLEUM COKE TEST BURN
SUMMARY OF ASH DATA RESULTS FOR BENEFICIAL REUSE
Roanoke Valley Energy Facility
Unit I

Parameter	Regulatory Level	Method Detection Limit	(Pre) 100% Coal Sample No.			12% Pet Coke Sample No.			(Post) 100% Coal Sample No.		
			1	3	5	1	3	5	1	3	5
8270 Scan (Continued)											
Semi-volatiles (mg/kg)											
2-Chlorophenol	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bis(2-Chloroethyl)Ether	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
1,3-Dichlorobenzene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
1,4-Dichlorobenzene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
1,2-Dichlorobenzene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Benzyl Alcohol	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
O-Cresol	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bis(2-Chloroisopropyl)Ether	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Hexachloroethane	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Nitrobenzene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Acetophenone	—	0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
m,p-Cresol	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
N-Nitroso-di-n-Propylamine	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
N-Nitrosopiperidine	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Isophorone	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
2-Nitrophenol	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
2,4-Dimethylphenol	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bis(2-Chloroethoxy) Methane	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
2,4-Dichlorophenol	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
1,2,4-Trichlorobenzene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Benzoic Acid	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Naphthalene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
2,6-Dichlorophenol	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
4-Chloroaniline	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Hexachlorobutadiene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
a,a-Dimethylphenethylamine	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
n-Nitrosodibutylamine	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
4-Chloro 3-Methylphenol	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17

PETROLEUM COKE TEST BURN
SUMMARY OF ASH DATA RESULTS FOR BENEFICIAL REUSE
Roanoke Valley Energy Facility
Unit I

Parameter	Regulatory Level	Method Detection Limit	(Pre) 100% Coal Sample No.			12% Pet Coke Sample No.			(Post) 100% Coal Sample No.		
			1	3	5	1	3	5	1	3	5
8270 Scan (Continued) Semi-volatiles (mg/kg)											
2-Methylnapthalene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
1,2,4,5-Tetrachlorobenzene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Hexachlorocyclo-pentadiene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
2,4,6-Trichlorophenol	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
2,4,5-Trichlorophenol	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
2-Chloronaphthalene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
1-Chloronaphthalene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
2-Nitroaniline	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Acenaphthylene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Dimethyl Phthalate	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
2,6-Dinitrotoluene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Acenaphthene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
3-Nitroaniline	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
3,4-Dinitrophenol	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
4-Nitrophenol	—	0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68
Pentachlorobenzene	—	0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
2-Naphthylamine	—	0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
Dibenzofuran	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
2,4-Dinitrotoluene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
1-Naphthylamine	—	0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
2,3,4,6-Tetrachlorophenol	—	0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
Diethyl Phthalate	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
4-Chlorophenyl Phenylether	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Fluorene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Thionazin	—	0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
4,6-Dinitro-2-Methylphenol	—	0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68
Diphenylamine & Nitrosodiphenylamine	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
4-Nitroaniline	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17

PETROLEUM COKE TEST BURN
SUMMARY OF ASH DATA RESULTS FOR BENEFICIAL REUSE
Roanoke Valley Energy Facility
Unit I

Parameter	Regulatory Level	Method Detection Limit	(Pre) 100% Coal Sample No.			12% Pet Coke Sample No.			(Post) 100% Coal Sample No.		
			1	3	5	1	3	5	1	3	5
8270 Scan (Continued) Semi-volatiles (mg/kg)											
1,2-Diphenylhydrazine	---	0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68
Sulfotepp	---	0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
4-Bromophenyl Phenylether	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Diallate	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Phlorate	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Hexachlorobenzene	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Phenacetin	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Dimethoate	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
2,4-D	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
4-Aminobiphenyl	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Pentachlorophenol	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Pentachloronitrobenzene	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Phenanthrene	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Pronamide	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Anthracene	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Disulfoton	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Dinoseb	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Parathion	---	0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68
di-n-Butyl Phthalate	---	0.17	<0.17	<0.17	<0.17	<0.17	0.56	<0.17	<0.17	<0.17	<0.17
Methyl Parathion	---	0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68
Fluoranthene	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Benzidine	---	0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68
Pyrene	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Aramite	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Chlorobenzilate	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
p-Dimethylaminoazo-benzene	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Famphur	---	0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68
Butylbenzylphthalate	---	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17

PETROLEUM COKE TEST BURN
SUMMARY OF ASH DATA RESULTS FOR BENEFICIAL REUSE
Roanoke Valley Energy Facility
Unit I

Parameter	Regulatory Level	Method Detection Limit	(Pre) 100% Coal Sample No.			12% Pet Coke Sample No.			(Post) 100% Coal Sample No.		
			1	3	5	1	3	5	1	3	5
8270 Scan (Continued) Semi-volatiles (mg/kg)											
3,3'-Dichlorobenzidine	—	0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68
Bis(2-ethylhexyl) Phthalate	—	0.17	<0.17	<0.17	<0.17	1.53	0.63	1.90	<0.17	<0.17	<0.17
Benzo[a]Anthracene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Chrysene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
di-n-Octylphthalate	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Benzo[k]Fluoranthene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
7,12-Dimethylbenz[a] Anthracene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Benzo[b]Fluoranthene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Benzo[a]Pyrene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
3-Methylcholanthrene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Dibenz[a,J]Acridine	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Indeno[1,2,3-c,d]Pyrene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Dibenz[a,h]Anthracene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Benzo[g,h,i]Perylene	—	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17

Notes:

(1) For the Total Metals analysis (mg/kg) performed on the (post) 100% coal samples 1, 3 and 5, the Method Detection Limits varied slightly from the Method Detection Limits shown on this summary table. For exact detection limits refer to laboratory data.

(2) No pesticides or herbicide.

(3) Library Search showed some identifiable peaks as follows: Sulfur dioxide; Propane, 2-methyl-1-nitro-; Benzene, 1-ethyl-2-methyl-

(4) Library Search showed some identifiable peaks as follows: Cyclotrisiloxane; hexamethyl-; Benzene, 1,2-dimethyl-

(5) Library Search showed some identifiable peaks as follows: Octane, 2,5,6-trimethyl-; Hexane, 2,3,4-trimethyl-; Heptane, 2,2,4,6; 6-pentamethyl-; Octane, 2,4,6-trimethyl-; Decane, 2,6,7-trimethyl-

(6) Library Search showed some identifiable peaks as follows: 1-Decane; 2,4-dimethyl-; 3-Tert-butylphenol

(7) Library Search showed some identifiable peaks as follows: Ethanol; 2,2'-oxybis-

(8) Library Search showed no identifiable peaks.

LG&EPOWER℠

LG&E Power Inc.
575 Anton Boulevard, Suite 250
Costa Mesa, California 92626
714-241-4700
714-241-4793 FAX

November 7, 1997

Ms. Sherri Coghill
Environmental Engineer
State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Waste Management
P. O. Box 29603
Raleigh, North Carolina 27611-9603

Subject: Postponement of Petroleum Coke Test Burn, Unit I
Roanoke Valley Energy Facility

Dear Ms. Coghill:

The scheduled maintenance outage for Roanoke Valley Energy Facility, Unit I has been completed. As stated in previous correspondence, the petroleum coke test burn for Unit I was to resume on October 30, 1997 after completion of the outage. Due to boiler equipment problems that occurred after Unit I was brought online, it was decided to postpone the petroleum coke test burn. The problems are associated with the superheater attemperator spray system within the boiler. During the post outage startup, there was a sudden loss of attemperation spray flow through one of the superheater attemperator nozzles (used to control the superheater steam outlet temperature). This flow reduction has limited the operational flexibility of the unit because of the limited superheater steam temperature control. The Unit I boiler continues to be operational; however, the current operational status diminishes the tuning flexibility needed to burn petroleum coke. Because the attemperator is located in the penthouse of the boiler it will take at least three days to cool, pull and inspect the nozzle. Depending on the cause of the problem, additional time will be required to repair the system. A new nozzle has been ordered in case there is damage to the existing nozzle, but it will not be on site until December. Due to these limitations, the second portion of the petroleum coke test burn has been postponed until after the attemperator spray system is evaluated and corrected during the Spring maintenance outage in 1998. The Spring outage is currently scheduled for April of 1998.

The NCDEHNR will be contacted prior to the commencement of the second part of the petroleum coke test burn. When the test burn resumes, the same testing protocols previously established will be followed. At that time we hope to increase the petroleum coke percentage greater than 12%, which should be possible after adjustments were made to the lime feed system during this recent fall maintenance outage.

We appreciate your assistance throughout this test burn process and look forward to its completion in the Spring of 1998. If you have any questions or require additional information, please do not hesitate to call me at (714) 241-4773 or Mr. Rob Reynolds at (919) 536-3200.

Sincerely

Maggie T. Estrada

Maggie T. Estrada
Project Manager
Environmental Services

cc: C. Braun
B. Hamilton
Q. Morrison
D. Ray
esd file/RV.3.6

LG&E Power, Inc.
575 Anton Boulevard, Suite 250
Costa Mesa, CA 92626
714-241-4700
714-241-4793 (FAX)

LG&E POWER INC.
Environmental Services

Fax

Date: 10-10-97

To: Sherri Coghill

Company: NC DEHNR

Fax #: (919) 733-4810

From: Maggie T. Estrada

Tel #: (714) 241-4773

Pages including cover: 3

- **Message:**

Attached are the corrected benzene numbers for 10% flyash and 15% bottom ash. Please replace the previously submitted pages with these two corrected sheets (Sample nos. 97-10292 and 97-10293, respectively). We apologize for the inconvenience.

Maggie

If you have difficulty receiving this transmission, please call Dee at (714) 241-4707

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (804) 873-4703 phone (804) 873-1498 fax		
ATTN:	Rob Reynolds				
ADDRESS:	P.O. Box 351, Railroad Street				
CITY:	Weldon, NC 27890				
PHONE:	(919) 536-3200	SAMPLE RECEIPT DATE:	09/18/97	TIME:	1700
FAX:					
		RECEIVED BY:	MEC		
		GRAB COLLECTION DATE:	09/17/97	GRAB TIME:	0800
SPECIAL NOTES: FINAL REVISED REPORT Disposal/Landcover 10% Pet Coke		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time		
		COLLECTED BY:	LG&E Partners		
		PICKED UP BY:	S. Spears - LG&E Partners		
		NUMBER OF CONTAINERS:	4	Condition	(x)GOOD ( )OTHER
		EXPLAIN			

SAMPLE ID: Fly Ash Composite (98% Recycle Ash and 2% Air Heater Hopper)

SAMPLE NO: 97-10292

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		<0.002	FPE-09/23/97 @ 1246
Barium	D005	6010A	0.005	100.0		4.75	FPE-09/23/97 @ 1246
Benzene	D018	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1125
Cadmium	D006	6010A	0.0005	1.0		<0.0005	FPE-09/23/97 @ 1246
Carbon Tetrachloride	D019	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1125
Chlorobenzene	D021	8240	0.005	100.0		<0.005	TAG-09/24/97 @ 1125
Chloroform	D022	8240	0.005	6.0		<0.005	TAG-09/24/97 @ 1125
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-09/23/97 @ 1246
o-Cresol	D023	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1132
m-Cresol	D024	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1132
p-Cresol	D025	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1132

NOTES:

RESPECTFULLY SUBMITTED BY

Elaine Claiborne
Laboratory Director

DATE: October 1, 1997

CLIENT:	Westmoreland - LG&E Partners
ATTN:	Rob Reynolds
ADDRESS:	P.O. Box 351, Railroad Street
CITY:	Weldon, NC 27890
PHONE:	(919) 536-3200
FAX:	

SUBMITTED BY:

James R. Read & Associates
11864 Canon Blvd., Suite 103
Newport News, VA 23606
(804) 873-4703 phone
(804) 873-1498 fax

SAMPLE RECEIPT DATE:	09/18/97	TIME:	1700
RECEIVED BY:	MEC		
GRAB COLLECTION DATE:	09/17/97	GRAB TIME:	0800

COMPOSITE COLLECTION:	Start Date	Start Time	End Date	End Time

COLLECTED BY:	LG&E Partners		
PICKED UP BY:	S. Spears - LG&E Partners		
NUMBER OF CONTAINERS:	3	Condition	(x)GOOD ( )OTHER
EXPLAIN			

SPECIAL NOTES: **FINAL REPORT REVISED**

Disposal/Landcover
10% Pet Coke

SAMPLE ID: Bottom Ash

SAMPLE NO: 97-10293

Parameter	EPA RW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		0.005	FPE-09/23/97 @ 1254
Barium	D005	6010A	0.005	100.0		1.92	FPE-09/23/97 @ 1254
Benzene	D018	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1204
Cadmium	D006	6010A	0.0005	1.0		<0.0005	FPE-09/23/97 @ 1254
Carbon Tetrachloride	D019	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1204
Chlorobenzene	D021	8240	0.005	100.0		<0.005	TAG-09/24/97 @ 1204
Chloroform	D022	8240	0.005	6.0		<0.005	TAG-09/24/97 @ 1204
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-09/23/97 @ 1254
o-Cresol	D023	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1249
m-Cresol	D024	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1249
p-Cresol	D025	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1249

NOTES: cc: Maggie Estrada @ LG&E

RESPECTFULLY SUBMITTED BY:

Beverly E. Blanchard

Elaine Claiborne
Laboratory Director

DATE: October 7, 1997

LG&EPOWER SM

LG&E Power Inc.
575 Anton Boulevard, Suite 250
Costa Mesa, California 92626
714-241-4700
714-241-4793 FAX

October 2, 1997

Ms. Sherri Coghill
Environmental Engineer
State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Waste Management
P.O. Box 29603
Raleigh, North Carolina 27611-9603

Subject: Submittal of 12% Mixed Ash Testing Results
Petroleum Coke Test Burn, Unit I
Roanoke Valley Energy Facility

Dear Ms. Coghill:

As required per your August 26, 1997 letter regarding disposal of the mixed ash generated from the Unit I petroleum coke test burn at the Roanoke Valley Energy Facility, we are submitting the next set of petroleum coke/coal mixed ash TCLP test results. This ash data set is for a 12% mixture. Due to limitations encountered with the lime feeding system utilized for SO_2 emission controls, the 15% fuel mixture could not be maintained. Therefore, the petroleum coke/coal mixture was reduced to 12%. Disposal and beneficial reuse testing was performed at this percentage, for it was determined to be the highest that can be achieved and will be considered at this time. If after the maintenance outage the percentage can be increased due to equipment adjustments, testing will be performed at the higher percentage levels.

The fly ash generated from 12% fuel mixture was tested for the required TCLP metals for disposal purposes. The 12% bottom ash was tested for TCLP metals and organics (volatiles and semivolatiles) for disposal purposes and landfill daily cover determination, respectively. The laboratory test data is attached for your review and record. Further analysis is currently in process for beneficial reuse per the ash testing protocol. Upon completion, the information will be submitted to Bill Hocutt for his review and determination.

Since the TCLP test results of the petroleum coke/coal ash at 12% are below the toxic characteristic regulatory levels, demonstrating non-toxic characteristics, the mixed fly ash and bottom ash can be designated nonhazardous. Due to this designation, the 12% mixed fly ash and bottom ash are acceptable for disposal and can be permanently disposed of in the Halifax County Landfill. We will submit these test results to the Halifax County as was stated in our previous correspondences. The 12% generated bottom ash data is provided for your review and determination of continued use as landfill daily cover.

As mentioned in previous correspondences, the petroleum coke test burn has been interrupted for the scheduled maintenance outage which started on September 27, 1997. After the maintenance outage, the petroleum coke test burn will resume and beneficial reuse testing will continue. Should you have any questions, do not hesitate to call me or Mr. Rob Reynolds, Plant Engineer, at the plant at (919) 536-3200.

Sincerely,

Maggie T. Estrada
Project Manager
Environmental Services

Enclosure
cc: B. Hamilton
Q. Morrison
D. Ray
H. Blodgett, Halifax County
B. Hocutt, Beneficial Reuse
esd/file/rvp.3.6

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CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (757) 873-4703 phone (757) 873-1498 fax
ATTN:	Rob Reynolds		
ADDRESS:	P.O. Box 351, Railroad Street		
CITY:	Weldon, NC 27890		
PHONE:	(919) 536-3200 ext 234	SAMPLE RECEIPT DATE:	9/26/97 TIME: 1530
FAX:	(919) 536-4448		
		RECEIVED BY:	VAS
		GRAB COLLECTION DATE:	9/24/97 GRAB TIME: 0800
SPECIAL NOTES: RE: 12% Disposal		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time
		COLLECTED BY:	LG&E Partners
		PICKED UP BY:	LG&E Partners
		NUMBER OF CONTAINERS:	4 Condition (X)GOOD ( )OTHER
		EXPLAIN	

SAMPLE ID: Air Heater Hopper 2%/Recycle Ash 98%

SAMPLE NO: 97-10728

Pres.	Parameter	Method Number	Method Detection Limit (mg/kg)	Practical Quantitation Limit(mg/kg)	Result (mg/kg)	Analyst/Date/Time
	Carbon	ASTM D3178	N/A		8.10%	HRT(PL)-10/01/97
	Sulfur	ASTM D4239	N/A		7.28%	HRT(PL)-10/01/97
	Nickel	6010A	0.24		50.9	FPE-10/01/97 @ 1358
	Vanadium	6010A	0.24		424	FPE-10/01/97 @ 1358
	pH	9045	N/A		12.11 @ 20°C	SKH-10/01/97 @ 1300

NOTES: cc: Maggie Estrada @ LG&E

RESPECTFULLY SUBMITTED BY:

Beverly E. Blanchard

Elaine Claiborne
Laboratory Director

DATE: October 1, 1997

SAMPLE ID: Air Heater Hopper 2%/Recycle Ash 98%

SAMPLE NO: 97-10728

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit(mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		0.009	FPE-10/01/97 @ 1316
Barium	D005	6010A	0.005	100.0		3.92	FPE-10/01/97 @ 1316
Cadmium	D006	6010A	0.0005	1.0		<0.0005	FPE-10/01/97 @ 1316
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-10/01/97 @ 1316
Lead	D008	6010A	0.005	5.0		<0.005	FPE-10/01/97 @ 1316
Mercury	D009	7470	0.0002	0.2		<0.0002	SKH-09/30/97 @ 1430
Selenium	D010	6010A	0.005	1.0		0.038	FPE-10/01/97 @ 1316
Silver	D011	6010A	0.001	5.0		<0.001	FPE-10/01/97 @ 1316
Vandium		6010A	0.005			0.089	FPE-10/01/97 @ 1316

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (804) 873-4703 phone (804) 873-1498 fax			
ATTN:	Rob Reynolds					
ADDRESS:	P.O. Box 351, Railroad Street					
CITY:	Weldon, NC 27890					
PHONE:	(919) 536-3200	SAMPLE RECEIPT DATE:	9/26/97	TIME:	1530	
FAX:						
		RECEIVED BY:	MEC			
		GRAB COLLECTION DATE:	9/25/97	GRAB TIME:	0800	
SPECIAL NOTES: RE: 12%		COMPOSITE COLLECTION:	Start Date	Start Time	End Date	End Time
		COLLECTED BY:	LG&E Partners			
		PICKED UP BY:	LG&E Partners			
		NUMBER OF CONTAINERS:	3	Condition	(x)GOOD ( )OTHER	
		EXPLAIN:				

OCT 1997
Received
Solid Waste
Section

SAMPLE ID: Bottom Ash (Disposal/Land Cover)

SAMPLE NO: 97-10734

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0	✓	0.021	FPE-10/01/97 @ 1321
Barium	D005	6010A	0.005	100.0	✓	0.426	FPE-10/01/97 @ 1321
Benzene	D018	8240	0.005	0.5		<0.005	TAG-10/02/97 @ 1640
Cadmium	D006	6010A	0.0005	1.0		<0.0005	FPE-10/01/97 @ 1321
Carbon Tetrachloride	D019	8240	0.005	0.5		<0.005	TAG-10/02/97 @ 1640
Chlorobenzene	D021	8240	0.005	100.0		<0.005	TAG-10/02/97 @ 1640
Chloroform	D022	8240	0.005	6.0		<0.005	TAG-10/02/97 @ 1640
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-10/01/97 @ 1321
o-Cresol	D023	8270	0.050	200.0		<0.050	CLH-10/01/97 @ 1720
m-Cresol	D024	8270	0.050	200.0		<0.050	CLH-10/01/97 @ 1720
p-Cresol	D025	8270	0.050	200.0		<0.050	CLH-10/01/97 @ 1720

NOTES: cc: Maggie Estrada @ LG&E

RESPECTFULLY SUBMITTED BY:

Elaine Claiborne

Elaine Claiborne
Laboratory Director

DATE: October 2, 1997

CLIENT: Westmoreland - LG&E Partners

SAMPLE ID: Bottom Ash - 12%

SAMPLE NO: 97-10734

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE (continued)							
Cresol	D026	8270	0.050	200.0		<0.050	CLH-10/01/97 @ 1720
1,4-dichlorobenzene	D027	8240	0.005	7.5		<0.005	TAG-10/02/97 @ 1640
1,2-dichloroethane	D028	8240	0.005	0.5		<0.005	TAG-10/02/97 @ 1640
1,1-dichloroethylene	D029	8240	0.005	0.7		<0.005	TAG-10/02/97 @ 1640
2,4-dinitrotoluene	D030	8270	0.005	0.13		<0.005	CLH-10/01/97 @ 1720
Hexachlorobenzene	D032	8270	0.005	0.13		<0.005	CLH-10/01/97 @ 1720
Hexachloro-1,3-butadiene	D033	8270	0.005	0.5		<0.005	CLH-10/01/97 @ 1720
Hexachloromethane	D034	8270	0.005	3.0		<0.005	CLH-10/01/97 @ 1720
Lead	D008	6010A	0.005	5.0		<0.005	FPE-10/01/97 @ 1321
Mercury	D009	7470	0.0002	0.2		<0.0002	SKH-09/30/97 @ 1430
Methyl ethyl ketone	D035	8240	0.100	200.0		<0.100	TAG-10/02/97 @ 1640
Nitrobenzene	D036	8270	0.005	2.0		<0.005	CLH-10/01/97 @ 1720
Pentachlorophenol	D037	8270	0.010	100.0		<0.010	CLH-10/01/97 @ 1720
Pyridine	D038	8270	0.500	5.0		<0.500	CLH-10/01/97 @ 1720
Selenium	D010	6010A	0.005	1.0		<0.005	FPE-10/01/97 @ 1321
Silver	D011	6010A	0.001	5.0		<0.001	FPE-10/01/97 @ 1321
Tetrachloroethylene	D039	8240	0.005	0.7		<0.005	TAG-10/02/97 @ 1640
Trichloroethylene	D040	8240	0.005	0.5		<0.005	TAG-10/02/97 @ 1640
2,4,5-trichlorophenol	D041	8270	0.050	400.0		<0.050	CLH-10/01/97 @ 1720
2,4,6-trichlorophenol	D042	8270	0.050	2.0		<0.050	CLH-10/01/97 @ 1720
Vinyl Chloride	D043	8240	0.010	0.2		<0.010	TAG-10/02/97 @ 1640
Vandium		6010A	0.005			0.212	FPE-10/01/97 @ 1321

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Received
Waste
Section

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (757) 873-4703 phone (757) 873-1498 fax			
ATTN:	Rob Reynolds					
ADDRESS:	P.O. Box 351, Railroad Street					
CITY:	Weldon, NC 27890					
PHONE:	(919) 536-3200 ext 234	SAMPLE RECEIPT DATE:	9/26/97		TIME:	1530
FAX:	(919) 536-4448					
		RECEIVED BY:	VAS			
		GRAB COLLECTION DATE:	9/24/97		GRAB TIME:	0800
SPECIAL NOTES: RE: 12%		COMPOSITE COLLECTION:	Start Date	Start Time	End Date	End Time
		COLLECTED BY:	LG&E Partners			
		PICKED UP BY:	LG&E Partners			
		NUMBER OF CONTAINERS:	4		Condition	(X)GOOD ( )OTHER
		EXPLAIN				

OCT 1997
Received
Solid Waste
Section

SAMPLE ID: Bottom Ash (Disposal/Land Cover)

SAMPLE NO: 97-10734

Pres.	Parameter	Method Number	Method Detection Limit (mg/kg)	Practical Quantitation Limit(mg/kg)	Result (mg/kg)	Analyst/Date/Time
	Carbon	ASTM D3178	N/A		6.51%	HRT(PL)-10/02/97
	Sulfur	ASTM D4239	N/A		0.13%	HRT(PL)-10/02/97
	Nickel	6010A	0.24		5.24	FPE-10/01/97 @ 1352
	Vanadium	6010A	0.24		24.2	FPE-10/01/97 @ 1352
	pH	9045	N/A		10.40 @ 20°C	SKH-10/01/97 @ 1300

NOTES: cc: Maggie Estrada @ LG&E

RESPECTFULLY SUBMITTED BY:

Elaine Claiborne

Elaine Claiborne
Laboratory Director

DATE: October 2, 1997

LG&EPOWER SM

LG&E Power Inc.
575 Anton Boulevard, Suite 250
Costa Mesa, California 92626
714-241-4700
714-241-4793 FAX

September 24, 1997

Ms. Sherri Coghill
Environmental Engineer
State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Waste Management
P.O. Box 29603
Raleigh, North Carolina 27611-9603

Subject: Submittal of 5% and 10% Mixed Ash Testing Results
Petroleum Coke Test Burn, Unit I
Roanoke Valley Energy Facility

Dear Ms. Coghill:

As required per your August 26, 1997 letter regarding disposal of the mixed ash generated from the Unit I petroleum coke test burn at the Roanoke Valley Energy Facility, we are submitting the remainder of the 5% petroleum coke/coal mixed ash TCLP test results and all of the 10% petroleum coke/coal mixed ash TCLP test results. The fly ash generated from 5% fuel mixture was tested for the required TCLP metals for disposal purposes (previously submitted), in addition, it was tested for TCLP organics (volatiles and semivolatiles). The 5% bottom ash was tested for TCLP metals and organics (volatiles and semivolatiles) for disposal purposes and landfill daily cover determination, respectively. The 10% generated fly and bottom mixed ash were also tested for these same parameters. The laboratory test data for the 5% and 10% petroleum coke/coal generated ash is attached for your review and record.

Since the TCLP test results of the petroleum coke/coal ash at blends of 5% and 10% are below the toxic characteristic regulatory levels, demonstrating non-toxic characteristics, the mixed fly ash and bottom ash can be designated nonhazardous. Due to this designation, the 5% and 10% mixed fly ash and bottom ash are acceptable for disposal and can be permanently disposed of in the Halifax County Landfill. We will submit these test results to the Halifax County as was stated in our previous correspondences. The 5% and 10% generated bottom ash data is provided for your review and determination of continued use as landfill daily cover.

The petroleum test burn is continuing and when the 15% and 20% mixed ash test results become available, they will be submitted to you and the County. Should you have any questions, do not hesitate to call me or Mr. Rob Reynolds, Plant Engineer, at the plant at (919) 536-3200.

Sincerely,

Maggie T. Estrada

Maggie T. Estrada
Project Manager
Environmental Services

Enclosure
cc: B. Hamilton
Q. Morrison
D. Ray
H. Blodgett, Halifax County
B. Hocutt, Beneficial Reuse
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CLIENT:	LG&E Partners - Westmoreland	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (757) 873-4703 phone (757) 873-1498 fax
ATTN:	Rob Reynolds		
ADDRESS:	Railroad Street, P.O. Box 351		
CITY:	Weldon, NC 27890		
PHONE:	919-536-3200	SAMPLE RECEIPT DATE:	9/15/97 TIME: 1550
FAX:		RECEIVED BY:	VAS
		GRAB COLLECTION DATE:	9/14/97 GRAB TIME: 0800
SPECIAL NOTES: FINAL REPORT RE: Disposal/Landcover 5% pet coke		COMPOSITE COLLECTION:	Start Date: / Start Time: / End Date: / End Time:
		COLLECTED BY:	LG&E Partners - Westmoreland
		PICKED UP BY:	
		NUMBER OF CONTAINERS:	4 Condition: (x)GOOD ( )OTHER
		EXPLAIN:	

SAMPLE ID: Recycle Ash/Air Heater "Test 0" Grab composite

SAMPLE NO: 97-9995

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		0.070	FPE-09/18/97 @ 1507
Barium	D005	6010A	0.005	100.0		1.42	FPE-09/18/97 @ 1507
Benzene	D018	8260	0.005	0.5		<0.005	TAG-09/22/97 @ 1629
Cadmium	D006	6010A	0.0005	1.0		0.0007	FPE-09/18/97 @ 1507
Carbon Tetrachloride	D019	8260	0.005	0.5		<0.005	TAG-09/22/97 @ 1629
Chlorobenzene	D021	8260	0.005	100.0		<0.005	TAG-09/22/97 @ 1629
Chloroform	D022	8260	0.005	6.0		<0.005	TAG-09/22/97 @ 1629
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-09/18/97 @ 1507
o-Cresol	D023	8270	0.050	200.0		<0.050	CLH-09/18/97 @ 1652
m-Cresol	D024	8270	0.050	200.0		<0.050	CLH-09/18/97 @ 1652
p-Cresol	D025	8270	0.050	200.0		<0.050	CLH-09/18/97 @ 1652

OCT 1997 Received Solid Waste Section

NOTES: cc: Maggie Estrada & LG&E

Samples composited in lab and analyzed - 98% Recycle Ash and 2% Air heater

RESPECTFULLY SUBMITTED BY:

Beverley E. Blanchard

Elaine Claiborne
Laboratory Director

DATE: September 22, 1997

CLIENT: LG&E

SAMPLE ID: Recycle Ash/Air Heater "Test 0"

SAMPLE NO: 97-9995

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE (continued)							
Cresol	D026	8270	0.050	200.0		<0.050	CLH-09/18/97 @ 1652
1,4-dichlorobenzene	D027	8260	0.005	7.5		<0.005	TAG-09/22/97 @ 1629
1,2-dichloroethane	D028	8260	0.005	0.5		<0.005	TAG-09/22/97 @ 1629
1,1-dichloroethylene	D029	8260	0.005	0.7		<0.005	TAG-09/22/97 @ 1629
2,4-dinitrotoluene	D030	8270	0.005	0.13		<0.005	CLH-09/18/97 @ 1652
Hexachlorobenzene	D032	8270	0.005	0.13		<0.005	CLH-09/18/97 @ 1652
Hexachloro-1,3-butadiene	D033	8270	0.005	0.5		<0.005	CLH-09/18/97 @ 1652
Hexachloroethane	D034	8270	0.005	3.0		<0.005	CLH-09/18/97 @ 1652
Lead	D008	6010A	0.005	5.0		<0.005	FPE-09/18/97 @ 1507
Mercury	D009	7470	0.0002	0.2		<0.0002	SKH-09/18/97 @ 1500
Methyl ethyl ketone	D035	8260	0.100	200.0		<0.100	TAG-09/22/97 @ 1629
Nitrobenzene	D036	8270	0.005	2.0		<0.005	CLH-09/18/97 @ 1652
Pentachlorophenol	D037	8270	0.020	100.0		<0.020	CLH-09/18/97 @ 1652
Pyridine	D038	8270	0.500	5.0		<0.500	CLH-09/18/97 @ 1652
Selenium	D010	6010A	0.005	1.0		0.164	FPE-09/18/97 @ 1507
Silver	D011	6010A	0.001	5.0		<0.001	FPE-09/18/97 @ 1507
Tetrachloroethylene	D039	8260	0.005	0.7		<0.005	TAG-09/22/97 @ 1629
Trichloroethylene	D040	8260	0.005	0.5		<0.005	TAG-09/22/97 @ 1629
2,4,5-trichlorophenol	D041	8270	0.050	400.0		<0.050	CLH-09/18/97 @ 1652
2,4,6-trichlorophenol	D042	8270	0.050	2.0		<0.050	CLH-09/18/97 @ 1652
Vinyl Chloride	D043	8260	0.010	0.2		<0.010	TAG-09/22/97 @ 1629
Vanadium		6010A	0.005			0.334	FPE-09/18/97 @ 1507
Carbon (dry basis)		ASTM D3178	N/A			7.56%	JRM(HRT)-09/18/97
Sulphur (dry basis)		ASTM D4239	N/A			8.20%	JRM(HRT)-09/18/97
Nickel		6010A	0.249 mg/kg			34.8 mg/kg	FPE-09/18/97 @ 1400
Vanadium		6010A	0.249 mg/kg			178 mg/kg	FPE-09/18/97 @ 1400
pH		9045	N/A			12.1 @ 25°C	SKH-09/16/97 @ 0900

OCT 1997
Received
Solid Waste
Section

[illegible]	W. Christopher - LG&E Partners
ATTN:	Bob Reynolds
ADDRESS:	P.O. Box 351, Railroad Street
CITY:	Weldon, NC 27890
PHONE:	(919) 536-3200
FAX:	

SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (757) 873-4703 phone (757) 873-1498 fax
SAMPLE RECEIPT DATE:	09/18/97
TIME:	1700
RECEIVED BY:	MEC
GRAB COLLECTION DATE:	09/14/97
GRAB TIME:	0800
COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time
COLLECTED BY:	LG&E Partners
PICKED UP BY:	S. Spears - LG&E Partners
NUMBER OF CONTAINERS:	1
Condition	(X)GOOD ( )OTHER
EXPLAIN:	

SPECIAL NOTES:

Disposal/Land cover
5% Pet Coke

SAMPLE ID: Bottom Ash

SAMPLE NO: 97-10294

Prep.	Parameter	Method Number	Method Detection Limit (mg/kg)	Practical Quantitation Limit (mg/kg)	Result (mg/kg)	Analyst/Date/Time
	Carbon	ASTM D3178	N/A		8.46%	HRT-09/22/97 @ 0730
	Sulfur	ASTM D4239	N/A		0.15%	HRT-09/22/97 @ 0815
	pH	9045	N/A		10.1 @ 24°C	SKH-09/23/97 @ 0900
	Nickel	6010A	0.24		7.23	FPE-09/23/97 @ 1453
	Vanadium	6010A	0.24		19.9	FPE-09/23/97 @ 1453

NOTES: cc: Maggie Estrada @ LG&E

RESPECTFULLY SUBMITTED BY:

Elaine Claiborne
Laboratory Director

DATE: September 23, 1997

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (804) 873-4703 phone (804) 873-1498 fax
ATTN:	Rob Reynolds		
ADDRESS:	P.O. Box 351, Railroad Street		
CITY:	Weldon, NC 27890		
PHONE:	(919) 536-3200	SAMPLE RECEIPT DATE:	09/18/97 TIME: 1700
FAX:			
		RECEIVED BY:	MEC
		GRAB COLLECTION DATE:	09/14/97 GRAB TIME: 0800
SPECIAL NOTES: FINAL REPORT Disposal/Landcover 5% Pet Coke		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time
		COLLECTED BY:	LG&E Partners
		PICKED UP BY:	S. Spears - LG&E Partners
		NUMBER OF CONTAINERS:	1 Condition (x)GOOD ( )OTHER
		EXPLAIN	

SAMPLE ID: Bottom Ash

SAMPLE NO: 97-10294

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		0.021	FPE-09/23/97 @ 1300
Barium	D005	6010A	0.005	100.0		0.886	FPE-09/23/97 @ 1300
Benzene	D018	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1244
Cadmium	D006	6010A	0.0005	1.0		<0.0005	FPE-09/23/97 @ 1300
Carbon Tetrachloride	D019	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1244
Chlorobenzene	D021	8240	0.005	100.0		<0.005	TAG-09/24/97 @ 1244
Chloroform	D022	8240	0.005	6.0		<0.005	TAG-09/24/97 @ 1244
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-09/23/97 @ 1300
o-Cresol	D023	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1339
m-Cresol	D024	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1339
p-Cresol	D025	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1339

OCT 1997
Received
Solid Waste
Section

NOTES:

RESPECTFULLY SUBMITTED BY:

Beverly E. Blanchard for

Elaine Claiborne
Laboratory Director

DATE: September 24, 1997

CLIENT: Westmoreland - LG&E Partners

SAMPLE ID: Bottom Ash - 5% Pet Coke

SAMPLE NO: 97-10294

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE (continued)							
Cresol	D026	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1339
1,4-dichlorobenzene	D027	8240	0.005	7.5		<0.005	TAG-09/24/97 @ 1244
1,2-dichloroethane	D028	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1244
1,1-dichloroethylene	D029	8240	0.005	0.7		<0.005	TAG-09/24/97 @ 1244
2,4-dinitrotoluene	D030	8270	0.005	0.13		<0.005	CLH-09/23/97 @ 1339
Hexachlorobenzene	D032	8270	0.005	0.13		<0.005	CLH-09/23/97 @ 1339
Hexachloro-1,3-butadiene	D033	8270	0.005	0.5		<0.005	CLH-09/23/97 @ 1339
Hexachloroethane	D034	8270	0.005	3.0		<0.005	CLH-09/23/97 @ 1339
Lead	D008	6010A	0.005	5.0		<0.005	FPE-09/23/97 @ 1300
Mercury	D009	7470	0.0002	0.2		<0.0002	SKH-09/24/97 @ 1500
Methyl ethyl ketone	D035	8240	0.100	200.0		<0.100	TAG-09/24/97 @ 1244
Nitrobenzene	D036	8270	0.005	2.0		<0.005	CLH-09/23/97 @ 1339
Pentachlorophenol	D037	8270	0.010	100.0		<0.010	CLH-09/23/97 @ 1339
Pyridine	D038	8270	0.500	5.0		<0.500	CLH-09/23/97 @ 1339
Selenium	D010	6010A	0.005	1.0		0.009	FPE-09/23/97 @ 1300
Silver	D011	6010A	0.001	5.0		<0.001	FPE-09/23/97 @ 1300
Tetrachloroethylene	D039	8240	0.005	0.7		<0.005	TAG-09/24/97 @ 1244
Trichloroethylene	D040	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1244
2,4,5-trichlorophenol	D041	8270	0.050	400.0		<0.050	CLH-09/23/97 @ 1339
2,4,6-trichlorophenol	D042	8270	0.050	2.0		<0.050	CLH-09/23/97 @ 1339
Vinyl Chloride	D043	8240	0.010	0.2		<0.010	TAG-09/24/97 @ 1244
Vanadium		6010A	0.005			0.053	FPE-09/23/97 @ 1300

CLIENT:	WESTVACO - LABLE FALLS
ATTN:	Bob Reynolds
ADDRESS:	P.O. Box 351, Railroad Street
CITY:	Weldon, NC 27890
PHONE:	(919) 536-3200
FAX:	

SUBMITTED BY:
John R. Reed & Associates
11864 Canon Blvd., Suite 103
Newport News, VA 23606
(757) 873-4703 phone
(757) 873-1498 fax

SAMPLE RECEIPT DATE:	09/18/97	TIME:	1700
RECEIVED BY:	MEC		
GRAB COLLECTION DATE:	09/17/97	GRAB TIME:	0800

COMPOSITE COLLECTION:	Start Date	Start Time	End Date	End Time

COLLECTED BY:	LG&E Partners		
PICKED UP BY:	S. Spears - LG&E Partners		
NUMBER OF CONTAINERS:	4	Condition:	(X)OOOO ( )OTHER
EXPLAIN:			

SPECIAL NOTES:

Disposal/Landcover
10% Pet Coke

SAMPLE ID: **Fly Ash Composite (98% Recycle Ash and 2% Air Heater Hopper)**

SAMPLE NO: 97-10292

Prep.	Parameter	Method Number	Method Detection Limit (mg/kg)	Practical Quantitation Limit (mg/kg)	Result (mg/kg)	Analyst/Date/Time
	Carbon	ASTM D3178	N/A		7.91%	HRT-09/22/97 @ 0730
	Sulfur	ASTM D4239	N/A		7.70%	HRT-09/22/97 @ 0828
	pH	9045	N/A		12.1 @ 24°C	SKH-09/23/97 @ 0900
	Nickel	6010A	0.24		29.3	FPE-09/23/97 @ 1448
	Vanadium	6010A	0.24		229	FPE-09/23/97 @ 1448

OCT 1997
Received
Solid Waste
Section

NOTES: cc: Maggie Estrada @ LG&E

RESPECTFULLY SUBMITTED BY:

Elaine Claiborne
Laboratory Director

DATE: September 23, 1997

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (804) 873-4703 phone (804) 873-1498 fax
ATTN:	Rob Reynolds		
ADDRESS:	P.O. Box 351, Railroad Street		
CITY:	Weldon, NC 27890		
PHONE:	(919) 536-3200	SAMPLE RECEIPT DATE:	09/18/97 TIME: 1700
FAX:			
		RECEIVED BY:	MEC
		GRAB COLLECTION DATE:	09/17/97 GRAB TIME: 0800
SPECIAL NOTES: FINAL REPORT Disposal/Landcover 10% Pet Coke		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time
		COLLECTED BY:	LG&E Partners
		PICKED UP BY:	S. Spears - LG&E Partners
		NUMBER OF CONTAINERS:	4 Condition: (x)GOOD ( )OTHER
		EXPLAIN	

SAMPLE ID: Fly Ash Composite (98% Recycle Ash and 2% Air Heater Hopper)

SAMPLE NO: 97-10292

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		<0.002	FPE-09/23/97 @ 1246
Barium	D005	6010A	0.005	100.0		4.75	FPE-09/23/97 @ 1246
Benzene	D018	8240	0.005	0.5		<0.5	TAG-09/24/97 @ 1125
Cadmium	D006	6010A	0.0005	1.0		<0.0005	FPE-09/23/97 @ 1246
Carbon Tetrachloride	D019	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1125
Chlorobenzene	D021	8240	0.005	100.0		<0.005	TAG-09/24/97 @ 1125
Chloroform	D022	8240	0.005	6.0		<0.005	TAG-09/24/97 @ 1125
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-09/23/97 @ 1246
o-Cresol	D023	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1132
m-Cresol	D024	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1132
p-Cresol	D025	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1132

OCT 1997 RECEIVED

NOTES:

RESPECTFULLY SUBMITTED BY:

Beverly E. Blanchard

Elaine Claiborne
Laboratory Director

DATE: September 24, 1997

CLIENT: Westmoreland - LG&E Partners

SAMPLE ID: Fly Ash Composite (98% Recycle Ash and 2% Air Heater Hopper)

SAMPLE NO: 97-10292

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE (continued)							
Cresol	D026	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1132
1,4-dichlorobenzene	D027	8240	0.005	7.5		<0.005	TAG-09/24/97 @ 1125
1,2-dichloroethane	D028	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1125
1,1-dichloroethylene	D029	8240	0.005	0.7		<0.005	TAG-09/24/97 @ 1125
2,4-dinitrotoluene	D030	8270	0.005	0.13		<0.005	CLH-09/23/97 @ 1132
Hexachlorobenzene	D032	8270	0.005	0.13		<0.005	CLH-09/23/97 @ 1132
Hexachloro-1,3-butadiene	D033	8270	0.005	0.5		<0.005	CLH-09/23/97 @ 1132
Hexachloroethane	D034	8270	0.005	3.0		<0.005	CLH-09/23/97 @ 1132
Lead	D008	6010A	0.005	5.0		<0.005	FPE-09/23/97 @ 1246
Mercury	D009	7470	0.0002	0.2		<0.0002	SKH-09/24/97 @ 1500
Methyl ethyl ketone	D035	8240	0.100	200.0		<0.100	TAG-09/24/97 @ 1125
Nitrobenzene	D036	8270	0.005	2.0		<0.005	CLH-09/23/97 @ 1132
Pentachlorophenol	D037	8270	0.010	100.0		<0.010	CLH-09/23/97 @ 1132
Pyridine	D038	8270	0.500	5.0		<0.500	CLH-09/23/97 @ 1132
Selenium	D010	6010A	0.005	1.0		0.026	FPE-09/23/97 @ 1246
Silver	D011	6010A	0.001	5.0		<0.001	FPE-09/23/97 @ 1246
Tetrachloroethylene	D039	8240	0.005	0.7		<0.005	TAG-09/24/97 @ 1125
Trichloroethylene	D040	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1125
2,4,5-trichlorophenol	D041	8270	0.050	400.0		<0.050	CLH-09/23/97 @ 1132
2,4,6-trichlorophenol	D042	8270	0.050	2.0		<0.050	CLH-09/23/97 @ 1132
Vinyl Chloride	D043	8240	0.010	0.2		<0.010	TAG-09/24/97 @ 1125
Vanadium		6010A	0.005			0.052	FPE-09/23/97 @ 1246

14

ATTN:	Bob Reynolds
ADDRESS:	P.O. Box 351, Railroad Street
CITY:	Weldon, NC 27890
PHONE:	(919) 536-3200
FAX:	

SUBMITTED BY: James R. Reed & Associates
11864 Canon Blvd., Suite 103
Newport News, VA 23606
(757) 873-4703 phone
(757) 873-1498 fax

SAMPLE RECEIPT DATE:	09/18/97	TIME:	1700
RECEIVED BY:	MEC		
GRAB COLLECTION DATE:	09/17/97	GRAB TIME:	0800

COMPOSITE COLLECTION:	Start Date	Start Time	End Date	End Time

COLLECTED BY:	LG&E Partners		
PICKED UP BY:	S. Spears - LG&E Partners		
NUMBER OF CONTAINERS:	3	Condition:	(X)GOOD ( )OTHER
EXPLAIN:			

SPECIAL NOTES:

Disposal/ Land cover
10% Pet Coke

SAMPLE ID: Bottom Ash

SAMPLE NO: 97-10293

Prep.	Parameter	Method Number	Method Detection Limit (mg/kg)	Practical Quantitation Limit(mg/kg)	Result (mg/kg)	Analyst/Date/Time
	Carbon	ASTM D3178	N/A		3.54%	HRT-09/22/97 @ 0730
	Sulfur	ASTM D4239	N/A		0.10%	HRT-09/22/97 @ 0815
	pH	9045	N/A		10.5 @ 24°C	SKH-09/23/97 @ 0900
	Nickel	6010A	0.24		7.07	FPE-09/23/97 @ 1440
	Vanadium	6010A	0.24		26.8	FPE-09/23/97 @ 1440

OCT 1997
Received
Solid Waste
Section

NOTES: cc: Maggie Estrada @ LG&E

RESPECTFULLY SUBMITTED BY:

Elaine Claiborne
Elaine Claiborne
Laboratory Director

DATE: September 23, 1997

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (804) 873-4703 phone (804) 873-1498 fax
ATTN:	Rob Reynolds		
ADDRESS:	P.O. Box 351, Railroad Street		
CITY:	Weldon, NC 27890		
PHONE:	(919) 536-3200	SAMPLE RECEIPT DATE:	09/18/97 TIME: 1700
FAX:			
		RECEIVED BY:	MEC
		GRAB COLLECTION DATE:	09/17/97 GRAB TIME: 0800
SPECIAL NOTES: **FINAL REPORT** Disposal/Landcover 10% Pet Coke		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time
		COLLECTED BY:	LG&E Partners
		PICKED UP BY:	S. Spears - LG&E Partners
		NUMBER OF CONTAINERS:	3 Condition: (x)GOOD ( )OTHER
		EXPLAIN	

SAMPLE ID: Bottom Ash

SAMPLE NO: 97-10293

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		0.005	FPE-09/23/97 @ 1254
Barium	D005	6010A	0.005	100.0		1.92	FPE-09/23/97 @ 1254
Benzene	D018	8240	0.005	0.5		<0.5	TAG-09/24/97 @ 1204
Cadmium	D006	6010A	0.0005	1.0		<0.0005	FPE-09/23/97 @ 1254
Carbon Tetrachloride	D019	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1204
Chlorobenzene	D021	8240	0.005	100.0		<0.005	TAG-09/24/97 @ 1204
Chloroform	D022	8240	0.005	6.0		<0.005	TAG-09/24/97 @ 1204
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-09/23/97 @ 1254
o-Cresol	D023	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1249
m-Cresol	D024	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1249
p-Cresol	D025	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1249

OCT 1997 RECEIVED Solid Waste Section

NOTES: cc: Maggie Estrada @ LG&E

RESPECTFULLY SUBMITTED BY:

Beverley E. Blanchard

Elaine Claiborne
Laboratory Director

DATE: September 24, 1997

CLIENT: Westmoreland - LG&E Partners

SAMPLE ID: Bottom Ash - 10% Pet Coke

SAMPLE NO: 97-10293

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE (continued)							
Cresol	D026	8270	0.050	200.0		<0.050	CLH-09/23/97 @ 1249
1,4-dichlorobenzene	D027	8240	0.005	7.5		<0.005	TAG-09/24/97 @ 1204
1,2-dichloroethane	D028	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1204
1,1-dichloroethylene	D029	8240	0.005	0.7		<0.005	TAG-09/24/97 @ 1204
2,4-dinitrotoluene	D030	8270	0.005	0.13		<0.005	CLH-09/23/97 @ 1249
Hexachlorobenzene	D032	8270	0.005	0.13		<0.005	CLH-09/23/97 @ 1249
Hexachloro-1,3-butadiene	D033	8270	0.005	0.5		<0.005	CLH-09/23/97 @ 1249
Hexachloroethane	D034	8270	0.005	3.0		<0.005	CLH-09/23/97 @ 1249
Lead	D008	6010A	0.005	5.0		0.006	FPE-09/23/97 @ 1254
Mercury	D009	7470	0.0002	0.2		<0.0002	SKH-09/24/97 @ 1500
Methyl ethyl ketone	D035	8240	0.100	200.0		<0.100	TAG-09/24/97 @ 1204
Nitrobenzene	D036	8270	0.005	2.0		<0.005	CLH-09/23/97 @ 1249
Pentachlorophenol	D037	8270	0.010	100.0		<0.010	CLH-09/23/97 @ 1249
Pyridine	D038	8270	0.500	5.0		<0.500	CLH-09/23/97 @ 1249
Selenium	D010	6010A	0.005	1.0		0.007	FPE-09/23/97 @ 1300
Silver	D011	6010A	0.001	5.0		<0.001	FPE-09/23/97 @ 1300
Tetrachloroethylene	D039	8240	0.005	0.7		<0.005	TAG-09/24/97 @ 1204
Trichloroethylene	D040	8240	0.005	0.5		<0.005	TAG-09/24/97 @ 1204
2,4,5-trichlorophenol	D041	8270	0.050	400.0		<0.050	CLH-09/23/97 @ 1249
2,4,6-trichlorophenol	D042	8270	0.050	2.0		<0.050	CLH-09/23/97 @ 1249
Vinyl Chloride	D043	8240	0.010	0.2		<0.010	TAG-09/24/97 @ 1204
Vanadium		6010A	0.005			0.107	FPE-09/23/97 @ 1300

LG&EPOWER SM

LG&E Power Inc.
575 Anton Boulevard, Suite 250
Costa Mesa, California 92626
714-241-4700
714-241-4793 FAX

September 19, 1997

Ms. Sherri Coghill
Environmental Engineer
State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Waste Management
P.O. Box 29603
Raleigh, North Carolina 27611-9603

Subject: Submittal of 5% Mixed Ash Testing Results
Petroleum Coke Test Burn, Unit I
Roanoke Valley Energy Facility

Dear Ms. Coghill:

As required per your August 26, 1997 letter regarding disposal of the mixed ash generated from the Unit I petroleum coke test burn at the Roanoke Valley Energy Facility, we are submitting the 5% petroleum coke/coal mixed ash TCLP metals test results. The mixed fly ash generated from 5% fuel mixture was tested for TCLP metals. The bottom ash was tested for TCLP metals and organics (volatiles and semivolatiles) for disposal purposes and landfill daily cover determination, respectively. Since the analysis for the bottom ash is not completed, the bottom ash results will be submitted next week. The laboratory test data for the fly ash is attached for your review and record. As approved by Mr. Bill Hocutt, the 20% mixed fly ash blend will be analyzed for TCLP organics as part of the beneficial reuse testing protocol. When available, these test results will also be submitted to you for your review and record.

Since the TCLP test results of the petroleum coke/coal ash at blends of 5% are below the toxic characteristic regulatory levels, demonstrating non-toxic characteristics, the mixed fly ash can be designated nonhazardous. Due to this designation, the 5% mixed fly ash is acceptable for disposal and can be permanently disposed of in the Halifax County Landfill. We will submit these test results to the Halifax County as was stated in our previous correspondences. Upon receipt and review of the bottom ash test results, we will determine the waste designation.

The petroleum test burn is continuing and when the 10%, 15% and 20% mixed ash test results become available, they will be submitted to you and the County. Should you have any questions, do not hesitate to call me or Mr. Rob Reynolds, Plant Engineer, at the plant at (919) 536-3200.

Sincerely,

Maggie T. Estrada
Project Manager
Environmental Services

Enclosure
cc: B. Hamilton
Q. Morrison
D. Ray
esd/file/rvp.3.6
H. Blodgett, Halifax County
B. Hocutt, Beneficial Reuse

CLIENT:	LG&E Partners - Westmoreland
ATTN:	Rob Reynolds
ADDRESS:	Railroad Street, P.O. Box 351
CITY:	Weldon, NC 27890
PHONE:	919-536-3200
FAX:	

SUBMITTED BY: James R. Reed & Associates
11864 Canon Blvd., Suite 103
Newport News, VA 23606
(757) 873-4703 phone
(757) 873-1498 fax

SAMPLE RECEIPT DATE:	9/15/97	TIME:	1550
RECEIVED BY:	VAS		
GRAB COLLECTION DATE:	9/14/97	GRAB TIME:	0800

SPECIAL NOTES: **PARTIAL REPORT**

RE: Disposal/Landcover 5% pet coke

COMPOSITE COLLECTION	Start Date	Start Time	End Date	End Time

COLLECTED BY:	LG&E Partners - Westmoreland		
PICKED UP BY:			
NUMBER OF CONTAINERS:	4	Condition:	(x)GOOD ( )OTHER
EXPLAIN:			

SAMPLE ID: Recycle Ash/Air Heater "Test 0"

SAMPLE NO: 97-9995

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		0.070	FPE-09/18/97 @ 1507
Barium	D005	6010A	0.005	100.0		1.42	FPE-09/18/97 @ 1507
Benzene	D018	8260	0.005	0.5			
Cadmium	D006	6010A	0.0005	1.0		0.0007	FPE-09/18/97 @ 1507
Carbon Tetrachloride	D019	8260	0.005	0.5			
Chlorobenzene	D021	8260	0.005	100.0			
Chloroform	D022	8260	0.005	6.0			
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-09/18/97 @ 1507
o-Cresol	D023	8270	0.050	200.0			
m-Cresol	D024	8270	0.050	200.0			
p-Cresol	D025	8270	0.050	200.0			

NOTES: IN-HOUSE USE ONLY

NOTES: cc: Maggie Estrada & LG&E

Samples composited in lab and analyzed - 98% Recycle Ash and 2% Air heater

REPORT REVIEWED BY:

Micro/Biomssay:

Inorganics/Metals/TOC-TOX:

Organics:

RESPECTFULLY SUBMITTED BY:

Elaine Claiborne

Elaine Claiborne
Laboratory Director

DATE: September 19, 1997

SEP 1997
Received
Solid Waste
Section

CLIENT: LG&E

SAMPLE ID: Recycle Ash/air Heater "Test 0"

SAMPLE NO: 97-9995

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE (continued)							
Cresol	D026	8270	0.050	200.0			
1,4-dichlorobenzene	D027	8260	0.005	7.5			
1,2-dichloroethane	D028	8260	0.005	0.5			
1,1-dichloroethylene	D029	8260	0.005	0.7			
2,4-dinitrotoluene	D030	8270	0.005	0.13			
Hexachlorobenzene	D032	8270	0.005	0.13			
Hexachloro-1,3-butadiene	D033	8270	0.005	0.5			
Hexachloroethane	D034	8270	0.005	3.0			
Lead	D008	6010A	0.005	5.0		<0.005	FPE-09/18/97 @ 1507
Mercury	D009	7470	0.0002	0.2		<0.2	
Methyl ethyl ketone	D035	8260	0.100	200.0			
Nitrobenzene	D036	8270	0.005	2.0			
Pentachlorophenol	D037	8270	0.020	100.0			
Pyridine	D038	8270	0.500	5.0			
Selenium	D010	6010A	0.005	1.0		0.164	FPE-09/18/97 @ 1507
Silver	D011	6010A	0.001	5.0		<0.001	FPE-09/18/97 @ 1507
Tetrachloroethylene	D039	8260	0.005	0.7			
Trichloroethylene	D040	8260	0.005	0.5			
2,4,5-trichlorophenol	D041	8270	0.050	400.0			
2,4,6-trichlorophenol	D042	8270	0.050	2.0			
Vinyl Chloride	D043	8260	0.010	0.2			
Vanadium		6010A	0.005			0.334	FPE-09/18/97 @ 1507
Carbon (dry basis)		ASTM D3178	N/A			7.56%	JRM(HRT)-09/18/97
Sulphur (dry basis)		ASTM D4239	N/A			8.20%	JRM(HRT)-09/18/97
Nickel		6010A	0.249 mg/kg			34.8 mg/kg	FPE-09/18/97 @ 1400
Vanadium		6010A	0.249 mg/kg			178 mg/kg	FPE-09/18/97 @ 1400
pH		9045	N/A			12.1 @ 25°C	SKH-09/16/97 @ 0900

ASH TESTING PROTOCOL
RVEF Unit 1
September 9, 1997

GENERAL:

- Mixed ash (coal and pet coke) samples are to be taken from Unit I at the various pet coke percentages:

Fly Ash/Spent Lime	Bottom Ash
5%	5%
10%	10%
15%	15%
20%	20%

- Samples to be taken 24 hours after each percentage is introduce into boiler. Each petroleum coke percentage (5%, 10%, 15% and 20%) is to be burned for four days to allow stabilization of equipment and data collection.

- The laboratory will combine the fly ash/spent lime samples in the proper proportions (98% from Ash Surge Bin and 2% from the Air Heater Hopper). The lab will provide the glass bottles, sent to the plant.

- **All samples taken are to be immediately kept cold at 4C.** The samples sent to lab are to be kept cold during transit. Extra samples are to be stored on-site in a refrigerator at 4C. The different tests have varying sample shelf lives. The most stringent is the TCLP extraction, which is 14 days.

- The results of the testing for TCLP (metals and organics) will also provide information to determine the continued use of bottom ash as daily cover at the landfill.

- The ash from the designated Unit I ash silo containing fly ash/spent lime and the bottom ash will be delivered to the Halifax County landfill in separate trucks.

ASH TESTING PROTOCOL
RVEF Unit 1
September 9, 1997

TESTING for DISPOSAL:

1. After burning **5% fuel mixture** for 24 hours, take two (2) samples each of ash surge bin fly ash, air heater hopper fly ash, and bottom ash at 5% petroleum coke fuel mixture for disposal purposes. Fed Ex or deliver one (1) set of ash samples to laboratory, hold one set of samples on-site for backup purposes. Lab to combined fly ash sample to proper percentages (noted in General Section). Lab to analyze only one (1) fly ash sample and only one (1) bottom ash sample. Request 3-day turn around time. Lab to perform the TCLP tests (RCRA metals) for the following constituents:

Arsenic	Lead	Vanadium
Barium	Mercury	
Cadmium	Selenium	
Chromium	Silver	

   In addition, analyze for Total:

   Carbon, Nickel, Vanadium, pH and Sulfur

   Upon receipt of faxed 5% test results, fax and mail data to NCDEHNR and Halifax County.

2. After burning **10% fuel mixture** for 24 hours, take two (2) samples each of surge bin fly ash, air heater hopper fly ash, and bottom ash at 10% petroleum coke fuel mixture for disposal purposes. Fed Ex or deliver one (1) set of ash samples to laboratory, hold one set of samples on-site for backup purposes. Lab to combined fly ash sample to proper percentages (noted in General Section). Lab to analyze only one (1) sample of fly ash and one (1) sample of bottom ash, the others are for backup. Request 3 day turn around time. Lab to perform the TCLP tests (RCRA metals) as listed above.

   Upon receipt of faxed 10% test results, fax and mail data to NCDEHNR and Halifax County.

3. After burning **15% fuel mixture** for 24 hours, take two (2) samples each of surge bin fly ash, air heater hopper fly ash, and bottom ash at 15% petroleum coke fuel mixture for disposal purposes. Fed Ex or deliver one (1) set of ash samples to laboratory, hold one set of samples on-site for backup purposes. Lab to combined fly ash sample to proper percentages (noted in General Section). Lab to analyze only one (1) sample of fly ash and one (1) sample of bottom ash, the others are for backup. Request 3 day turn around time. Lab to perform the TCLP tests (RCRA metals) as listed above.

   Upon receipt of faxed 15% test results, fax and mail data to NCDEHNR and Halifax County.

4. After burning **20% fuel mixture** for 24 hours, take two (2) samples each of surge bin fly ash, air heater hopper fly ash, and bottom ash at 20% petroleum coke fuel mixture for disposal purposes. Fed Ex or deliver one (1) set of ash samples to laboratory, hold one set of samples on-site for backup purposes. Lab to combined fly ash sample to proper percentages (noted in General Section). Lab to analyze only one (1) sample of fly ash and one (1) sample of bottom ash, the others are for backup. Request 3 day turn around time. Lab to perform the TCLP tests (RCRA metals) as listed above.

   Upon receipt of faxed 20% test results, fax and mail data to NCDEHNR and Halifax County.

To ensure the proper quantity of ash for analysis at the lab, for **each separate percentage** (5%, 10%, 15%, and 20%) fill **3 bottles of ash surge bin, 1 bottle of air heater hopper, and 3 bottles of bottom ash**. After the initial analysis, the lab may determine that the number of bottles may be reduced.

ASH TESTING PROTOCOL
RVEF Unit 1
September 9, 1997

TESTING for DAILY LANDFILL COVER:

1. Concurrent with the disposal sampling at **5% fuel mixture**, the bottom ash at 5% petroleum coke fuel mixture will also be analyzed for daily cover purposes. Lab to analyze a portion of the one (1) sample of bottom ash collected for disposal purposes for TCLP organics tests (volatiles and semi-volatiles). The test results to be sent as soon as practical.

   Upon receipt of faxed 5% test results for bottom ash, fax and mail data to NCDEHNR and Halifax County.

2. Concurrent with the disposal sampling at **10% fuel mixture**, the bottom ash at 10% petroleum coke fuel mixture will also be analyzed for daily cover purposes. Lab to analyze a portion of the one (1) sample bottom ash collected for disposal purposes for TCLP organics tests (volatiles and semi-volatiles). The test results to be sent as soon as practical.

   Upon receipt of faxed 10% test results for bottom ash, fax and mail data to NCDEHNR and Halifax County.

3. Concurrent with the disposal sampling at **15% fuel mixture**, the bottom ash at 15% petroleum coke fuel mixture will also be analyzed for daily cover purposes. Lab to analyze a portion of the one (1) sample of bottom ash collected for disposal purposes for TCLP organics tests (volatiles and semi-volatiles). The test results to be sent as soon as practical.

   Upon receipt of faxed 15% test results for bottom ash, fax and mail data to NCDEHNR and Halifax County.

4. Concurrent with the disposal sampling at **20% fuel mixture**, the bottom ash at 20% petroleum coke fuel mixture will also be analyzed for daily cover purposes. Lab to analyze portion of the one (1) sample bottom ash collected for disposal purposes for TCLP organics tests (volatiles and semi-volatiles). The test results to be sent as soon as practical.

   Upon receipt of faxed 20% test results for bottom ash, fax and mail data to NCDEHNR and Halifax County.

5. No herbicides and/or pesticides testing is required.

ASH TESTING PROTOCOL
RVEF Unit 1
September 9, 1997

TESTING for BENEFICIAL REUSE:

1. Take ten (10) samples of **"100% coal" fly ash** from Unit I under normal operating conditions. This to be performed prior to pet coke test burn for comparison purposes. Five (5) **fly ash** samples are to taken at the air heater hopper and five (5) samples are to be taken at the ash surge bin.

   At each location, the five (5) samples are to be taken over a 24 hr period, approximately every four (4) hours, starting four (4) hours after stabilization (within 24 hours prior to the fuel mixture being introduced into boiler).

   Place ash samples in appropriate labeled (date, time, ash type, and sample number) glass bottles (3 ash surge bin and 1 air heater hopper). Completely fill the bottles to ensure enough sample is available for testing. Keep samples cool at 4C. After samples are collected, immediately **send or deliver fly ash samples to lab** to ensure meeting EPA Method sample time limitation.

   For back up purposes only, take an extra sample of fly ash (at surge bin and air heater hopper) during sample times 1, 3, and 5 only. Retain on-site in refrigerator at 4C for possible future analysis. Sample retention time is 14 days.

   The laboratory will combine the fly ash samples in the proper proportions (98% from ash surge bin and 2% from the air heater hopper).

   The lab will analyze specific **100% coal fly ash** samples for the particular tests as noted in attached Table 1.

2. Take ten (10) samples of the **fly ash** generated at **5% fuel mixture**. Five (5) **fly ash** samples are to taken at the air heater hopper and five (5) samples are to be taken at the ash surge bin.

   At each location, the five (5) samples are to be taken over a 24 hr period, approximately every four (4) hours, starting four (4) hours after stabilization (at least 24 hours after fuel mixture is introduced into boiler).

   Place ash samples in appropriate labeled (date, time, ash type, sample number) glass bottles (3 ash surge bin and 1 air heater hopper). Completely fill the bottles to ensure enough sample is available for possible testing. After samples are collected, immediately store in refrigerator. **Do not send fly ash samples to lab,** retain on-site for possible future analysis per Table 1. Sample retention time is 14 days.

3. Take ten (10) samples of the **fly ash** generated at **10% fuel mixture**. Five (5) **fly ash** samples are to be taken at the air heater hopper and five (5) samples are to be taken at the ash surge bin.

   At each location, five (5) samples are to be taken over a 24 hr period, approximately every four (4) hours, starting four (4) after stabilization (at least 24 hours after fuel mixture is introduced into boiler).

   Place ash samples in appropriate labeled (date, time, ash type, sample number) glass bottles (3 ash surge bin and 1 air heater hopper). Completely fill the bottles to ensure enough sample is available for possible testing. After samples are collected, immediately store in refrigerator. **Do not send fly ash samples to lab**, retain on-site for possible future analysis per Table 1. Sample retention time is 14 days.

4. Take ten (10) samples of the **fly ash** generated at **15% fuel mixture**. Five (5) **fly ash** samples are to taken at the air heater hopper and five (5) samples are to be taken at the ash surge bin.

   At each location, five (5) samples are to be taken over a 24 hr period, approximately every four (4) hours, starting four (4) hours after stabilization (at least 24 hours after fuel mixture is introduced into boiler).

   Place ash samples in appropriate labeled (date, time, ash type, sample number) glass bottles (3 ash surge bin and 1 air heater hopper). Completely fill the bottles to ensure enough sample is available for possible testing. After samples are collected, immediately store in refrigerator. **Do not send fly ash samples to lab**, retain on-site for possible future analysis per Table 1. Sample retention time is 14 days.

5. Take ten (10) samples of the **fly ash** generated at **20% fuel mixture**. Five (5) **fly ash** samples are to taken at the air heater hopper and five (5) samples are to be taken at the ash surge bin.

   At each location, five (5) samples are to be taken over a 24 hr period, approximately every four (4) hours, starting four (4) hours after stabilization (at least 24 hours after fuel mixture is introduced into boiler).

   Place ash samples in appropriate labeled (date, time, ash type, sample number) glass bottles (3 ash surge bin and 1 air heater hopper). Completely fill the bottles to ensure enough sample is available for possible testing. Keep samples cool at 4C. After samples are collected, immediately **send or deliver fly ash samples to lab** to ensure meeting EPA Method sample time limitation.

For back up purposes only, take an extra sample of fly ash (at surge bin and air heater hopper) during sample times 1, 3, and 5 only. Retain on-site in refrigerator at 4C for possible future analysis. Sample retention time is 14 days.

The laboratory will combine the ash samples in the proper proportions (98% from ash surge bin and 2% from the air heater hopper).

The lab will analyze specific **20% fly ash** samples for the particular tests as noted in attached Table 1.

6. Take ten (10) samples of **"100% coal" fly ash** and from Unit I under normal operating conditions. This to be performed after test burn for comparison purposes. Five (5) **fly ash** samples are to taken at the air heater hopper and five (5) samples are to be taken at the ash surge bin.

   At each location, five (5) samples are to be taken over a 24 hr period, approximately every four (4) hours, starting four (4) hours after stabilization (within 24 hours after coal fuel only is introduced into the boiler).

   Place ash samples in appropriate labeled (date, time ash type, and sample number) glass bottles (3 ash surge bin and 1 air heater hopper). Completely fill the bottles to ensure enough sample is available for testing. Keep samples cool at 4C. After samples are collected, immediately **send or deliver fly ash samples to lab** to ensure meeting EPA Method sample time limitation.

   For back up purposes only, take an extra sample of fly ash (at surge bin and air heater hopper) during sample times 1, 3, and 5 only. Retain on-site in refrigerator at 4C for possible future analysis. Sample retention time is 14 days.

   The laboratory will combine the fly ash samples in the proper proportions (98% from ash surge bin and 2% from the air heater hopper).

   The lab will analyze specific **100% coal fly ash** samples for the particular tests as noted in attached Table 1.

7. Additionally, the lab will analyze each **fly ash sample (pre-test 100% coal, 20%, post-test 100% coal)** for the following:

   Carbon, Total
   Nickel, Total
   Vanadium, Total and TCLP

Revised Table 1
Beneficial Reuse Procedure
RVEF, Unit 1

ANALYSIS REQUIRED	100% COAL BEFORE TEST	5% PETROLEUM COKE	10% PETROLEUM COKE	15% PETROLEUM COKE	12% PETROLEM COKE	100% COAL AFTER TEST
SAMPLE NUMBERS TO BE ANALYZED						
8240 Scan	1,3,5	Sample Only	Sample Only	Sample Only	1,3,5	1,3,5
8270 Scan	1,3,5				1,3,5	1,3,5
Totals, (Metals only*) and Vanadium	1,3,5				1,3,5	1,3,5
TCLP, (Metals only*) and Vanadium	1,3,5				1,3,5	1,3,5
Full TCLP (No herbicides or pesticides required)**	3				1,3,5	3,5

Notes:

* Analyses for Total (Metals only) must be a search for and quantification for any detected. The TCLP (Metals only) analyses must be for any metals detected in the Total (Metals only) search.

** The full TCLP analysis must be for the above detected Metals, the TCLP regulated organics (except for herbicides and pesticides) plus any additional organics which exhibit significant peaks in the 8240 and 8270 scans.

*** If organics are detected either in running this TCLP or in conducting the 8240 or 8270 scans, then additional full TCLP analyses must be performed on samples 2 and 4, in conjunction with sample 3. **NOT NECESSAY PER BILL HOCUTT.**

The detection levels utilized in the TCLP analyses must be the lowest practical reporting limits attainable by the analytical laboratory. **DETECTION LIMITS ARE ACCEPTABLE PER BILL HOCUTT'S REVIEW OF DATA**

Table 2
POTENTIAL Beneficial Reuse Procedure
RVEF, Unit 1
Only if have to sample lower percentage

ANALYSIS REQUIRED	100% COAL BEFORE TEST	5% PETROLEUM COKE	10% PETROLEUM COKE	15% PETROLEUM COKE	20% PETROLEM COKE	100% COAL AFTER TEST
SAMPLE NUMBERS TO BE ANALYZED						
8240 Scan	1,3,5	1,3,5	1,3,5	1,3,5	1,3,5	1,3,5
8270 Scan	1,3,5	1,3,5	1,3,5	1,3,5	1,3,5	1,3,5
Totals, (Metals only*)	1,3,5	1,3,5	1,3,5	1,3,5	1,3,5	1,3,5
TCLP, (Metals only*)	1,5	1,5	1,5	1,5	1,5	1,5
Full TCLP (No herbicides or pesticides required)**	3***	3***	3***	3***	3***	3***

Notes:

*Analyses for Total (Metals only) must be a search for and quantification for any detected. The TCLP (Metals only) analyses must be for any metals detected in the Total (Metals only) search.

**The full TCLP analysis must be for the above detected Metals, the TCLP regulated organics (except for herbicides and pesticides) plus any additional organics which exhibit significant peaks in the 8240 and 8270 scans.

***If organics are detected either in running this TCLP or in conducting the 8240 or 8270 scans, then additional full TCLP analyses must be performed on samples 2 and 4, in conjunction with sample 3.

The detection levels utilized in the TCLP analyses must be the lowest practical reporting limits attainable by the analytical laboratory.

LG&EPOWER SM

LG&E Power Inc.
575 Anton Boulevard, Suite 250
Costa Mesa, California 92626
714-241-4700
714-241-4793 FAX

September 5, 1997

Ms. Sherri Coghill
Environmental Engineer
State of North Carolina
Department of Environment, Health and Natural Resources
Division of Waste Management
P.O Box 29603
Raleigh, North Carolina 27611-9603

Subject: Ash Testing Protocol and Test Burn Schedule
Petroleum Coke Test Burn, Unit 1
Roanoke Valley Energy Facility

Dear Ms. Coghill:

For your information, please find enclosed a copy of the ash testing protocol and the test burn schedule for the petroleum coke test burn to be performed in the Unit I boiler at the Roanoke Valley Energy Facility.

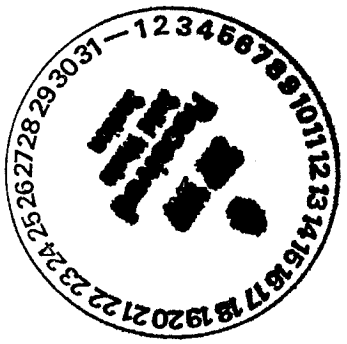
Should you have any questions, do not hesitate to call me at (714) 241-4773.

Sincerely,

Maggie T. Estrada
Project Manager
Environmental Services

Enclosures

cc: C. Braun
B. Hamilton
Q. Morrison
D. Ray
esd/rvp.3.6



Esd/rvef/petcoke/SC_Sch&Prtcl_1.doc

SAMPLING AND ANALYSIS SCHEDULE RVEF, UNIT 1					
Sample Day	**Mixture**	**Test Parameters**	**Test Purpose**	**Date Delivered to Lab**	**No. of Samples for Analysis**
Sunday 9-7-97	100% coal	fly ash - 24 hr bottom ash - 24 hr	Reuse Reuse- hold samples on-site	Monday 9-8-97	5 fly ash ----
Tuesday 9-9-97	5% pet coke	fly ash- grab bottom ash -grab	Disposal Disposal and Daily Cover	Wednesday 9-10-97	1 fly ash 1 bottom ash
Tuesday 9-9-97	5% pet coke	fly ash - 24 hr bottom ash - 24 hr	Reuse Reuse - hold samples on-site	Thursday 9-11-97	5 fly ash ----
Saturday 9-13-97	10% pet coke	fly ash- grab bottom ash - grab	Disposal Disposal and Daily Cover	Monday 9-15-97	1 fly ash 1 bottom ash
Saturday 9-13-97	10% pet coke	fly ash - 24 hr bottom ash - 24 hr	Reuse Reuse - hold samples on-site	Monday 9-15-97	5 fly ash ----
Wednesday 9-17-97	15% pet coke	fly ash - grab bottom ash - grab	Disposal Disposal and Daily Cover	Thursday 9-18-97	1 fly ash 1 bottom ash
Wednesday 9-17-97	15% pet coke	fly ash - 24 hr bottom ash - 24 hr	Reuse Reuse - hold samples on-site	Friday 9-19-97	5 fly ash ----
Sunday 9-21-97	20% pet coke	fly ash - grab Bottom ash - grab Wastewater - grab	Disposal Disposal and Daily Cover Wastewater permit limits	Monday 9-22-97	1 fly ash 1 bottom ash 1 wastewater
Saturday 9-27-97	----	Outage	Outage	----	----
Tuesday 10-28-97	100% Coal	----	----	----	----
Saturday 11-29-97	20% pet coke	fly ash - 24 hr bottom ash - 24 hr	Reuse Reuse - hold samples on-site	Monday 12-1-97	5 fly ash ----
Tuesday 12-2-97	100% coal	fly ash - 24 hr bottom ash - 24 hr	Reuse Reuse - hold samples on-site	Thursday 12-4-97	5 fly ash ----

ASH TESTING PROTOCOL
RVEF Unit 1
September 5, 1997

GENERAL:

- Mixed ash (coal and pet coke) samples are to be taken from Unit I at the various pet coke percentages:

Fly Ash/Spent Lime	Bottom Ash
5%	5%
10%	10%
15%	15%
20%	20%

- Samples to be taken 24 hours after each percentage is introduce into boiler. Each petroleum coke percentage (5%, 10%, 15% and 20%) is to be burned for four days to allow stabilization of equipment and data collection.

- The laboratory will combine the fly ash/spent lime samples in the proper proportions (98% from Ash Surge Bin and 2% from the Air Heater Hopper). The lab will provide the glass bottles, sent to the plant.

- Extra samples stored on-site are to be placed in a refrigerator at 4C. The different tests have varying sample shelf life. The most stringent is the TCLP extraction, which is 14 days.

- The results of the testing for TCLP (metals and organics) will also provide information to determine the continued use of bottom ash as daily cover at the landfill.

- The ash from the designated Unit I ash silo containing fly ash/spent lime and the bottom ash will be delivered to the Halifax County landfill in separate trucks.

ASH TESTING PROTOCOL
RVEF Unit 1
September 5, 1997

TESTING for DISPOSAL:

1. After burning **5% fuel mixture** for 24 hours, take two (2) samples each of ash surge bin fly ash, air heater hopper fly ash, and bottom ash at 5% petroleum coke fuel mixture for disposal purposes. Fed Ex or deliver one (1) set of ash samples to laboratory, hold one set of samples on-site for backup purposes. Lab to combined fly ash sample to proper percentages (noted in General Section). Ask lab to analyze only one (1) fly ash sample and only one (1) bottom ash sample. Request 3-day turn around time. Lab to perform the TCLP tests (RCRA metals) for the following constituents:

Arsenic	Lead	Vanadium
Barium	Mercury	
Cadmium	Selenium	
Chromium	Silver	

   In addition, analyze for Total:

   Carbon, Nickel, Vanadium, pH and Sulfur

   Upon receipt of faxed 5% test results, fax and mail data to NCDEHNR and Halifax County.

2. After burning **10% fuel mixture** for 24 hours, take two (2) samples each of surge bin fly ash, air heater hopper fly ash, and bottom ash at 10% petroleum coke fuel mixture for disposal purposes. Fed Ex or deliver one (1) set of ash samples to laboratory, hold one set of samples on-site for backup purposes. Lab to combined fly ash sample to proper percentages (noted in General Section). Ask lab to analyze only one (1) sample of fly ash and one (1) sample of bottom ash, the others are for backup. Request 3 day turn around time. Lab to perform the TCLP tests (RCRA metals) as listed above.

   Upon receipt of faxed 10% test results, fax and mail data to NCDEHNR and Halifax County.

3. After burning **15% fuel mixture** for 24 hours, take two (2) samples each of surge bin fly ash, air heater hopper fly ash, and bottom ash at 15% petroleum coke fuel mixture for disposal purposes. Fed Ex or deliver one (1) set of ash samples to laboratory, hold one set of samples on-site for backup purposes. Lab to combined fly ash sample to proper percentages (noted in General Section). Ask lab to analyze only one (1) sample of fly ash and one (1) sample of bottom ash, the others are for backup. Request 3 day turn around time. Lab to perform the TCLP tests (RCRA metals) as listed above.

   Upon receipt of faxed 15% test results, fax and mail data to NCDEHNR and Halifax County.

4. After burning **20% fuel mixture** for 24 hours, take two (2) samples each of surge bin fly ash, air heater hopper fly ash, and bottom ash at 20% petroleum coke fuel mixture for disposal purposes. Fed Ex or deliver one (1) set of ash samples to laboratory, hold one set of samples on-site for backup purposes. Lab to combined fly ash sample to proper percentages (noted in General Section). Ask lab to analyze only one (1) sample of fly ash and one (1) sample of bottom ash, the others are for backup. Request 3 day turn around time. Lab to perform the TCLP tests (RCRA metals) as listed above.

   Upon receipt of faxed 20% test results, fax and mail data to NCDEHNR and Halifax County.

ASH TESTING PROTOCOL
RVEF Unit 1
September 5, 1997

TESTING for DAILY LANDFILL COVER:

1. Concurrent with the disposal sampling at **5% fuel mixture**, the bottom ash at 5% petroleum coke fuel mixture will also be analyzed for daily cover purposes. Lab to analyze a portion of the one (1) sample of bottom ash collected for disposal purposes for TCLP organics tests (volatiles and semi-volatiles). The test results to be sent as soon as practical.

   Upon receipt of faxed 5% test results for bottom ash, fax and mail data to NCDEHNR and Halifax County.

2. Concurrent with the disposal sampling at **10% fuel mixture**, the bottom ash at 10% petroleum coke fuel mixture will also be analyzed for daily cover purposes. Lab to analyze a portion of the one (1) sample bottom ash collected for disposal purposes for TCLP organics tests (volatiles and semi-volatiles). The test results to be sent as soon as practical.

   Upon receipt of faxed 10% test results for bottom ash, fax and mail data to NCDEHNR and Halifax County.

3. Concurrent with the disposal sampling at **15% fuel mixture**, the bottom ash at 15% petroleum coke fuel mixture will also be analyzed for daily cover purposes. Lab to analyze a portion of the one (1) sample of bottom ash collected for disposal purposes for TCLP organics tests (volatiles and semi-volatiles). The test results to be sent as soon as practical.

   Upon receipt of faxed 15% test results for bottom ash, fax and mail data to NCDEHNR and Halifax County.

4. Concurrent with the disposal sampling at **20% fuel mixture**, the bottom ash at 20% petroleum coke fuel mixture will also be analyzed for daily cover purposes. Lab to analyze portion of the one (1) sample bottom ash collected for disposal purposes for TCLP organics tests (volatiles and semi-volatiles). The test results to be sent as soon as practical.

   Upon receipt of faxed 20% test results for bottom ash, fax and mail data to NCDEHNR and Halifax County.

5. No herbicides and/or pesticides testing is required.

ASH TESTING PROTOCOL
RVEF Unit 1
September 5, 1997

TESTING for BENEFICIAL REUSE:

1. Take ten (10) samples of **"100% coal" fly ash** from Unit I under normal operating conditions. This to be performed prior to pet coke test burn for comparison purposes. Five (5) **fly ash** samples are to taken at the air heater hopper and five (5) samples are to be taken at the ash surge bin. Take five (5) samples of **bottom ash** at **100% coal.**

   At each location, the five (5) samples are to be taken over a 24 hr period, approximately every four (4) hours, starting four (4) hours after stabilization (within 24 hours prior to the fuel mixture being introduced into boiler).

   Place ash samples in appropriate pre-labeled glass bottles (number of bottles to be determined by lab, __ ash surge bin, ___ air heater hopper, ___ bottom ash). Completely fill the one liter bottles to ensure enough sample is available for testing. After samples are collected, immediately **send or deliver fly ash samples to lab** to ensure meeting EPA Method sample time limitation. **Do not send bottom ash samples to lab**, retain on-site in refrigerator for possible future analysis.

   The laboratory will combine the fly ash samples in the proper proportions (98% from ash surge bin and 2% from the air heater hopper).

   The lab will analyze specific **100% coal fly ash** samples for the particular tests as noted in attached Table 1.

2. Take ten (10) samples of the **fly ash** generated at **5% fuel mixture.** Five (5) **fly ash** samples are to taken at the air heater hopper and five (5) samples are to be taken at the ash surge bin. Take five (5) samples of **bottom ash** at **5% fuel mixture.**

   At each location, the five (5) samples are to be taken over a 24 hr period, approximately every four (4) hours, starting four (4) hours after stabilization (at least 24 hours after fuel mixture is introduced into boiler).

   Place ash samples in appropriate pre-labeled glass bottles. Completely fill the one liter bottles to ensure enough sample is available for testing. After samples are collected, immediately store in refrigerator. **Do not send fly ash or bottom ash samples to lab,** retain on-site for possible future analysis per Table 1. Sample retention time is 14 days.

3. Take ten (10) samples of the **fly ash** generated at **10% fuel mixture.** Five (5) **fly ash** samples are to be taken at the air heater hopper and five (5) samples are to be taken at the ash surge bin. Take five (5) samples of **bottom ash at 10% fuel mixture.**

At each location, five (5) samples are to be taken over a 24 hr period, approximately every four (4) hours, starting four (4) after stabilization (at least 24 hours after fuel mixture is introduced into boiler).

Place ash samples in appropriate pre-labeled glass bottles. Completely fill the one liter bottles to ensure enough sample is available for testing. After samples are collected, immediately store in refrigerator. **Do not send fly ash or bottom ash samples to lab,** retain on-site for possible future analysis per Table 1. Sample retention time is 14 days.

4. Take ten (10) samples of the **fly ash** generated at **15% fuel mixture.** Five (5) **fly ash** samples are to taken at the air heater hopper and five (5) samples are to be taken at the ash surge bin. Take five (5) samples of **bottom ash** at **15% fuel mixture.**

   At each location, five (5) samples are to be taken over a 24 hr period, approximately every four (4) hours, starting four (4) hours after stabilization (at least 24 hours after fuel mixture is introduced into boiler).

   Place ash samples in appropriate pre-labeled glass bottles. Completely fill the one liter bottles to ensure enough sample is available for testing. After samples are collected, immediately store in refrigerator. **Do not send fly ash or bottom ash samples to lab,** retain on-site for possible future analysis per Table 1. Sample retention time is 14 days.

5. Take ten (10) samples of the **fly ash** generated at **20% fuel mixture.** Five (5) **fly ash** samples are to taken at the air heater hopper and five (5) samples are to be taken at the ash surge bin. Take five (5) samples of **bottom ash** at **20% fuel mixture.**

   At each location, five (5) samples are to be taken over a 24 hr period, approximately every four (4) hours, starting four (4) hours after stabilization (at least 24 hours after fuel mixture is introduced into boiler).

   Place ash samples in appropriate pre-labeled glass bottles. Completely fill the one liter bottles to ensure enough sample is available for testing. After samples are collected, immediately **send or deliver fly ash samples to lab** to ensure meeting EPA Method sample time limitation. **Do not send bottom ash samples to lab,** retain on-site in refrigerator for possible future analysis.

   The laboratory will combine the ash samples in the proper proportions (98% from ash surge bin and 2% from the air heater hopper).

   The lab will analyze specific **20% fly ash** samples for the particular tests as noted in attached Table 1.

6. Take ten (10) samples of **"100% coal" fly ash** and from Unit I under normal operating conditions. This to be performed after test burn for comparison purposes. Five (5) **fly ash** samples are to taken at the air heater hopper and five (5) samples are to be taken at the ash surge bin. Take five (5) samples of **bottom ash** at **100% coal.**

   At each location, five (5) samples are to be taken over a 24 hr period, approximately every four (4) hours, starting four (4) hours after stabilization (within 24 hours after coal fuel only is introduced into the boiler).

   Place ash samples in appropriate pre-labeled glass bottles. Completely fill the one liter bottles to ensure enough sample is available for testing. After samples are collected, immediately **send or deliver fly ash samples to lab** to ensure meeting EPA Method sample time limitation. **Do not send bottom ash samples to lab**, retain on-site in refrigerator for possible future analysis.

   The laboratory will combine the fly ash samples in the proper proportions (98% from ash surge bin and 2% from the air heater hopper).

   The lab will analyze specific **100% coal fly ash** samples for the particular tests as noted in attached Table 1.

7. Additionally, the lab will analyze each **fly ash sample (pre-test 100% coal, 20%, post-test 100% coal)** for the following:

   Carbon, Total
   Nickel, Total
   Vanadium, Total and TCLP

Table 1
Beneficial Reuse Procedure
RVEF, Unit 1

ANALYSIS REQUIRED	100% COAL BEFORE TEST	5% PETROLEUM COKE	10% PETROLEUM COKE	15% PETROLEUM COKE	20% PETROLEM COKE	100% COAL AFTER TEST
SAMPLE NUMBERS TO BE ANALYZED						
8240 Scan	1,3,5	**Sample Only**	**Sample Only**	**Sample Only**	1,3,5	1,3,5
8270 Scan	1,3,5				1,3,5	1,3,5
Totals, (Metals only*) and Vanadium	1,3,5				1,3,5	1,3,5
TCLP, (Metals only*) and Vanadium	1,5				1,5	1,5
Full TCLP (No herbicides or pesticides required)**	3***				3***	3***

Notes:

* Analyses for Total (Metals only) must be a search for and quantification for any detected. The TCLP (Metals only) analyses must be for any metals detected in the Total (Metals only) search.

** The full TCLP analysis must be for the above detected Metals, the TCLP regulated organics (except for herbicides and pesticides) plus any additional organics which exhibit significant peaks in the 8240 and 8270 scans.

*** If organics are detected either in running this TCLP or in conducting the 8240 or 8270 scans, then additional full TCLP analyses must be performed on samples 2 and 4, in conjunction with sample 3.

The detection levels utilized in the TCLP analyses must be the lowest practical reporting limits attainable by the analytical laboratory.

LG&EPOWER℠

LG&E Power Inc.
575 Anton Boulevard, Suite 250
Costa Mesa, California 92626
714-241-4700
714-241-4793 FAX

September 4, 1997

Mr. Hazen Blodgett
Assistant County Manager
County of Halifax
P. O. Box 38
Halifax, North Carolina 27839

Subject: Time Extension for Potential Ash Removal
Petroleum Coke Test Burn, Unit 1
Roanoke Valley Energy Facility

Dear Mr. Blodgett:

We have received your letter giving approval for the Roanoke Valley Energy Facility (RVEF) Unit 1 petroleum coke test burn ash to be temporarily stored at the landfill pending the three conditions listed in the letter. As we discussed on the telephone regarding Condition No. 3, Westmoreland-LG&E Partners requested that the time period of 48 hours to remove the ash be extended (if the ash is deemed hazardous from the results of the TCLP tests.) As we verbally agreed, if the TCLP tests indicate toxic characteristics RVEF will begin as soon as possible to remove the identified ash (at least within 72 hours to allow time for completing transportation/storage arrangements.) If we fail to begin removal with 72 hours, we understand that the County will have the ash removed by an ash transportation company at our expense.

We know it is our responsibility to remove the identified ash from the landfill and we commit to completing the ash removal process in the most expeditious manner possible. If you have any questions, do not hesitate to call me at (714) 241-4773.

Sincerely,

Maggie T. Estrada
Project Manager
Environmental Services

cc: C. Braun
B. Hamilton
Q. Morrison
D. Ray
S. Coghill, DEHNR
esd/rvp.3.6

Sheri

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Waste Management

James B. Hunt, Jr., Governor
Wayne McDevitt, Secretary
William L. Meyer, Director

DEHNR

September 3, 1997

Ms. Maggie Estrada
LG&E POWER
3200 Park Center Drive, Suite 400
Costa Mesa, CA 92626

Subject: Sampling and testing protocols for the pending Weldon, NC Unit # 1 burning trials using blends of coal/petroleum coke fuels.

Dear Ms. Estrada:

The purpose of this letter is to confirm the NC DEHNR, Division of Waste Management (DWM) Beneficial Use sampling and analysis protocol requirements for the subject pending fuel blend trials. The requirements specified in my December 11, 1996 and December 19, 1996 letters to you pertaining to the Weldon Unit # 2 trials continue to be appropriate. The only changes which are necessary to specify are that Unit # 1 is to be the boiler used, what blend levels you have selected to evaluate, to specify the addition of **at least** vanadium in the list of metals to be quantified and to agree with your proposed testing of only the samples generated with the twenty percent blend level of coke (with the understanding that the 20% blend level must prove to be a viable mixture, operating stably). Also. a listing of EPA's maximum storage times allowed prior to chemical analysis is included as a reminder.

Your August 18, 1997 letter states that you had difficulties with ammonium bisulfates causing baghouse blinding during the Unit #2 trial . You state that this was probably attributable to the presence of vanadium in the petroleum coke. The theory is that the vanadium caused increased sulfate concentrations in the boiler which in turn reacted with free ammonia in the NOx control system. Since Unit #1 does not have urea injection for NOx control, this hypothesis can be confirmed with Unit #1 trials. The DWM has no reason to alter the sampling protocol because of this change. Likewise, increasing the number of blend levels to be evaluated does not necessitate altering the sampling protocol. The development of detecting vanadium in the coke does cause the Division to require that total and TCLP leachable vanadium be added to the analyses.

Your August 18 letter also requested that LG&E POWER be allowed to only analyze the 100% coal ash (before and after the test burn) samples plus those samples generated while burning the **eighty/twenty blend of coal and coke.** The justification is that this blend would be the worst case scenario. The DWM has no objection to this approach provided that the

eighty/twenty blend proves to be a stable operating mixture. We do recommend that the samples for lower levels of coke be collected to allow their being analyzed should the higher coke content blend have to be abandoned. This presumes that the lower coke contents will be evaluated first.

I want to again emphasize that the detection limits utilized (especially in the case of TCLP analyses) be made as low as possible. It is preferred that the detection limits be the 2L ground water limit whenever one exists. When 2L limits do not exist, the lowest possible detection limits should be utilized. Because the maximum storage time allowed by the US EPA prior to TCLP analysis for volatile and semi-volatile organics is only fourteen days, it will probably be necessary to concentrate initial analytical efforts on the organics. The maximum storage times for the inorganics are 28 days for mercury and 180 days for all others. These storage limits should not be violated.

Please contact me at 919-733-0692, ext. 260 if you have any questions.

Sincerely,

William R. Hocutt

William R. Hocutt
Waste Determination Coordinator
Solid Waste Section

cc: Dexter R. Matthews
James C. Coffey
Terry Dover
Sherri Coghill

c:wp6doc/letter/lgepwr03.96

LG&E Power, Inc.
575 Anton Boulevard, Suite 250
Costa Mesa, CA 92626
714-241-4700
714-241-4793 (FAX)

LG&E POWER INC.
Environmental Services

Fax

Date: 8-21-97

To: Sherri Cochill

Company: NCDEHNR

Fax #: (919) 733-4810

From: Maggie T. Estrada

Tel #: (714) 241-4773

Pages including cover: 3

- **Message:**

Bill's letter regard pet coke test burn

If you have difficulty receiving this transmission, please call Dee at (714) 241-4707

LG&EPOWER

LG&E Power Development Inc.
3200 Park Center Drive, Suite 400
Costa Mesa, California 92626
714-241-4700
714-241-4791 FAX

August 18, 1997

Mr. Bill Hocutt
Waste Determination Coordinator
State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Waste Management, Solid Waste Section
401 Oberlin Road Building, Suite 150
P. O. Box 27687
Raleigh, North Carolina 27611-7687

Subject: Pending Petroleum Coke Test Burn, Unit 1
Request for Confirmation of Ash Beneficial Reuse Testing Protocol
Roanoke Valley Energy Facility

Dear Mr. Hocutt:

As you may be aware, Westmoreland-LG&E Partners is resuming the investigation into co-firing petroleum coke in the coal boilers (Unit 1 and Unit 2) at the Roanoke Valley Energy Facility. In accordance with NCDEHNR previous approvals, a petroleum coke test burn was performed in the Unit 2 boiler in January 1997. This test burn was suspended due to baghouse blinding problems. After studying the bag blinding issue, we believe the presence of vanadium in the petroleum coke caused increased sulfate (SO_3) concentrations in the boiler. The increased amount of SO_3 reacted during the combustion process with the free ammonia (used in the NO_x control system) to form ammonium bisulfates. These ammonium bisulfates condensed on the bag surfaces causing blinding of the fabric material. Washing the bags with water restored the baghouse operation to normal levels.

To confirm that the ammonium bisulfates are the probable cause of the blinding problem, and to continue to investigate the operational characteristics of using petroleum coke, the facility would like to perform a petroleum coke test burn on Unit 1. The bag blinding problems are not expected to occur during the Unit 1 test burn because Unit 1 does not have urea injection for NO_x control, but uses low NO_x burners and overfire air for NO_x control. Although we assume the previous protocol required for Unit 2 may be required for Unit 1, we request your confirmation regarding the beneficial reuse testing protocol to be implemented during the Unit 1 test burn.

Since the facility does not know which petroleum coke fuel percentage will be the most operationally feasible for Unit 1 on a long term basis, testing for operational data collection will be performed for each of the four specified fuel percentages (5%, 10%, 15%, and 20%). Testing of the ash for disposal purposes will also be performed at the four different percentages. Because data generated when burning a 20% petroleum coke fuel mixture is anticipated to give a "worst case pet coke scenario", we request that beneficial reuse testing be performed for the 20% fuel mixture only, and not for the individual fuel percentages of 5%, 10% or 15%. Whichever testing you consider necessary for beneficial reuse will be performed immediately following the TCLP metals testing performed for disposal purposes.

Due to the similarities of the units, we anticipate similar ash test burn results for Unit 1 and for Unit 2. As has been shown in the laboratory data, the mixed ash generated during the previous test was determined not to be hazardous. The slight differences between Unit 1 and Unit 2 include the lack of urea injection for NO_x control and the use of pebble lime instead of hydrated lime in the FGD system. We believe these differences will not adversely effect the characteristics of the test generate ash for either disposal or beneficial reuse. Because of these design differences, performing the test burn on Unit 1 which will assist in confirming the findings related to Unit 2. Upon approval by Sherri Coghill of the NCDEHNR and the Halifax County, the test burn generated ash will be stored (with the intent of final disposal) at the Halifax County landfill in a designated area within the lined monofill, where the four different mixture percentages can be segregated. Ash at these various percentages will be sampled and analyzed per pre-approved testing requirements (prepared by Sherri Coghill) to confirm a non hazardous waste designation prior to final disposal. The Unit 1 ash will also be tested per your prepared protocol to confirm acceptability for beneficial reuse. The samples for ash disposal purposes will be taken approximately 24 hours after the introduction of each fuel percentage, and each fuel percentage will be burned for three to four days to allow for plant process stabilization and sufficient engineering test data collection. Upon your approval, samples for beneficial reuse testing will be taken approximately 24 hours after the introduction of the 20% fuel percentage.

With your written confirmation regarding the ash beneficial reuse testing protocol for Unit 1, we will finalize the Unit 1 test schedule and ash test protocol/plan. As these documents are completed, we will forward them to you and Sherri Coghill. The testing of Unit 1 will be interrupted September 27, 1997 through October 28, 1997 to perform a scheduled maintenance outage performed semiannually at the facility to inspect the various systems and equipment. When completed, the remainder of the test burn will be performed. Upon completion of Unit 1 test burn, all the test and engineering data will be evaluated to determine the viability of permanently using petroleum coke in Unit 1 and to determine the test status of Unit 2. At a later date, we will inform you of the facility's intent to resume or not resume the test burn for Unit 2. We believe this will be in the first quarter of next year.

We appreciate your efforts regarding the pending Unit 1 test burn, which is intended to begin the week of September 8, 1997. Please let us know your determination regarding the beneficial reuse testing protocol at your earliest convenience. If you have any questions, do not hesitate to call me at (714) 241-4773.

Sincerely,

Maggie T. Estrada
Project Manager
Environmental Services

cc: C. Braun
B. Hamilton
Q. Morrison
D. Ray
S. Coghill
esd/rvp.3.6

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State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Waste Management

James B. Hunt, Jr., Governor
Wayne McDevitt, Secretary
William L. Meyer, Director

DEHNR

August 26, 1997

Maggie T. Estrada
Senior Environmental Engineer
LG&E Power Development, Inc.
3200 Park Center Drive, Suite 400
Costa Mesa, California 92626

Re: Disposal of Ash Resulting for Pet Coke/Coal Test Burn
Roanoke Valley Energy Facility
Halifax County, North Carolina

Dear Ms. Estrada:

The Solid Waste Section has completed review your request of August 11, 1997, regarding testing, storage, and disposal of ash generated from the referenced test burn. The proposed sampling and analysis procedures, storage procedures, and proposed disposal for ash generated during the test burn presented in your request are satisfactory to the Section and are hereby approved.

If you have any questions or comments, please contact me at (919) 733-0692, extension 259.

Sincerely,

Sherri L. Coghill

Sherri L. Coghill
Environmental Engineer
Solid Waste Section

cc: Hazen Blodgett, Halifax County
William R. Hocutt
Ben Barnes
Terry Dover

LG&EPOWER

August 11, 1997

LG&E Power Development Inc.
3200 Park Center Drive, Suite 400
Costa Mesa, California 92626
714 241 4700
714-241 4791 FAX

Ms. Sherri Coghill
Environmental Engineer
State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Waste Management
512 N. Salisbury Street
P. O. Box 29535
Raleigh, North Carolina 27604

Subject: **Pending Petroleum Coke Test Burn, Unit 1**
Request for Confirmation of Ash Testing and Storage
Roanoke Valley Energy Facility

Dear Ms. Coghill:

As we discussed on the telephone, Westmoreland-LG&E Partners is resuming the investigation into co-firing petroleum coke in the coal boilers (Unit 1 and Unit 2) at the Roanoke Valley Energy Facility. In accordance with NCDEHNR previous approvals, a petroleum coke test burn was performed in the Unit 2 boiler in January 1997. This test burn was suspended due to baghouse blinding problems. After studying the bag blinding issue, we believe the presence of vanadium in the petroleum coke caused increased sulfates (SO_3) concentrations in the boiler. The increased amount of SO_3 reacted during the combustion process with the free ammonia or urea (used in the NO_x control system) to form ammonium bisulfates. These ammonium bisulfates condensed on the bag surfaces causing blinding of the fabric material. Washing the bags with water restored the baghouse operation to normal levels.

To confirm that the ammonium bisulfates are the possible cause of the blinding problem, and to continue to investigate the operational characteristics of using petroleum coke, the facility would like to perform a petroleum coke test burn on Unit 1. The bag blinding problems are not expected to occur during the Unit 1 test burn because Unit 1 does not have urea injection for NO_x control, but uses low NO_x burners and overfire air for NO_x control. Prior to commencement of the intended Unit 1 test burn, we request your confirmation regarding necessary ash testing for disposal purposes and acceptable ash storage and disposal procedures.

We will also send a letter to Mr. Bill Hocutt requesting confirmation of the Unit 1 petroleum coke test protocol to be implemented for beneficial use determination purposes. We assume the previous protocol required for Unit 2 will be required for Unit 1. This testing, which includes the TCLP organics, will be performed for each of the four specified fuel percentages (5%, 10%, 15%, and 20%) immediately preceding the TCLP metals testing performed for disposal purposes. Testing the four different petroleum coke percentages will assist in determining the most viable coal/petroleum coke blend for use in Unit 1 on a long term basis. In addition, equipment

operation, efficiency, maintenance, fuel costs, and capital improvement costs will also be considered by the facility when determining the most effective petroleum coke percentage.

Due to the similarities of the units, we anticipate similar ash test burn results for Unit 1 that were obtained during the test burn for Unit 2. As has been shown in the laboratory data, the mixed ash generated during the previous test was determined not to be hazardous. It should be noted, the two units do slightly vary. The differences between Unit 1 and Unit 2 include the lack of urea injection for NO_x control and the use of pebble lime instead of hydrated lime in the FGD system. We believe these differences will not adversely effect the characteristics of the test generate ash. One of the main reasons for performing the test burn on Unit 1 is because of these differences, which will assist in confirming the findings related to Unit 2. One design difference that may complicate the test burn is that Unit 1 is approximately three times the size of Unit 2. This size increase will cause a larger quantity of ash to be generated during the test burn, which will make on-site storage impossible. To solve this storage problem, we are requesting that test burn generated ash be stored at the Halifax County landfill in a designated area within the lined monofill, where the four different mixture percentages can be segregated. Ash at these various percentages will be sampled and analyzed for TCLP metals to confirm a non hazardous waste designation. The samples will be taken approximately 24 hours after the introduction of each fuel percentage, and each fuel percentage will be burned for three to four days to allow for plant process stabilization and sufficient engineering test data collection. Although not expected, if any of the TCLP metals test results received from the laboratory indicate toxic characteristics, the specifically identified ash percentage will be removed and disposed of in a landfill that accepts hazardous wastes.

The Halifax County Assistant Manager has been informed verbally and will be notified in writing of the intent to perform a test burn on Unit 1 and will also be requested, upon the approval of the DEHNR, to store the test generated ash in a designated area of the lined monofill. Within the designated area, each ash mixture percentage (5%, 10%, 15% and 20% petroleum coke) will be segregated, and if necessary, physically separated using layers of lime (provided by the facility) to distinguish between the varying percentages. The facility will request three day turn-around of the analytical results from the laboratory, and upon receipt of the TCLP metals test results, the facility will immediately send the copies to the County as well as to the DEHNR. Positive results will confirm final disposal of the test generated ash in the landfill. The bottom ash TCLP test results will also be submitted to the DEHNR for review to confirm that the mixed fuel generated bottom ash can continue to be use for daily cover at the Halifax County landfill.

With your written determination regarding ash disposal testing and storage at the landfill, we will finalize the Unit 1 test schedule and ash test protocol/plan. As these documents are completed, we will forward them to you and Bill Hocutt. The testing of Unit 1 will be interrupted September 27, 1997 through October 28, 1997 to perform a scheduled maintenance outage performed yearly at the facility to inspect the various systems and equipment. When completed, the remainder of the test burn will be performed. Upon completion of Unit 1 test burn, all the test and engineering data will be evaluated to determine the viability of permanently using petroleum coke in Unit 1 and to determine the test status of Unit 2. At a later date, we will inform you of the facility's

intent to resume or not resume the test burn for Unit 2. We believe this will be in the first quarter of next year.

We appreciate your efforts regarding the pending Unit 1 test burn, which is intended to begin the week of September 8, 1997. Please let us know your determination regarding test burn ash disposal testing and landfill storage at your earliest convenience. If you have any questions, do not hesitate to call me at (714) 241-4773.

Sincerely,

Maggie T. Estrada

Maggie T. Estrada
Project Manager
Environmental Services

cc: C. Braun
B. Hamilton
Q. Morrison
D. Ray
B. Hocutt, DEHNR
C. Archer, Halifax County
esd/rvp.2.7

Coghill

County of Halifax

P. O. BOX 38
HALIFAX, N.C. 27839
919-583-1131

August 22, 1997

Maggie Estrada, Project Engineer
LG&E Power Development Inc.
3200 Park Center Dr, Suite 400
Costa Mesa, California 92626

Subject: Permission to Store Test Burn Petroleum Coke

Dear Ms. Estrada:

Halifax County has reviewed your request to use the ash monofill as a temporary storage facility while we await the TCLP metal test results from the petroleum coke test burn. The County has discussed this matter with Sheri Coghill, DEHNR engineer, and we will permit temporary storage of the petroleum coke ash at our monofill provided the following conditions are met:

1. DEHNR provides Halifax County with a letter of the approval of the temporary ash storage.

2. All of the test burn ash is spread on top of a layer of lime and subsequent mixtures are separated by lime.

3. If the TCLP results are negative, all hazardous ash will be removed from the site within 48 hours.

If you have any questions or would like to discuss this matter further, please do not hesitate to call.

Thank you.

Sincerely,

H. Hazen Blodgett
Deputy County Manager

cc: Charles Archer
Sheri Coghill
Don Ray
Richard Garner

LG&EPOWER

LG&E Power Development Inc.
3200 Park Center Drive, Suite 400
Costa Mesa, California 92626
714-241-4700
714-241-4791 FAX

August 12, 1997

Mr. Hazen Blodgett
Assistant County Manager
County of Halifax
P. O. Box 38
Halifax, North Carolina 27839

Subject: Pending Unit 1 Petroleum Coke Test Burn
Request for Ash Storage and Disposal
Roanoke Valley Energy Facility

Dear Mr. Blodgett:

As we discussed on the telephone, Westmoreland-LG&E Partners is resuming the investigation into co-firing petroleum coke in the coal boilers (Unit 1 and Unit 2) at the Roanoke Valley Energy Facility. In accordance with NCDEHNR and Halifax County previous approvals, a petroleum coke test burn was performed in the Unit 2 boiler in January 1997. This test burn was suspended due to baghouse blinding problems. After studying the bag blinding issue, we believe the presence of vanadium in the petroleum coke caused increased sulfates (SO_3) concentrations in the boiler. The increased amount of SO_3 reacted during the combustion process with the free ammonia or urea (used in the NO_x control system) to form ammonium bisulfates. These ammonium bisulfates condensed on the bag surfaces causing blinding of the fabric material. Washing the bags with water restored the baghouse operation to normal levels.

To confirm that the ammonium bisulfates are the possible cause of the blinding problem, and to continue to investigate the operational characteristics of using petroleum coke, the facility would like to perform a petroleum coke test burn on Unit 1. The bag blinding problems are not expected to occur during the Unit 1 test burn because Unit 1 does not have urea injection for NO_x control, but uses low NO_x burners and overfire air for NO_x control. Prior to commencement of the test burn and contingent on the approval from Ms. Sherri Coghill of the DEHNR, we request your confirmation regarding acceptable test ash storage and disposal at the County landfill.

Due to the similarities of the units, we anticipate similar ash test burn results for Unit 1 that were obtained during the test burn for Unit 2. As has been shown in the laboratory data, the mixed ash generated during the previous test was determined not to be hazardous. One design difference that may complicate the test burn is that Unit 1 is approximately three times the size of Unit 2. This size increase will cause a larger quantity of ash to be generated during the test burn, which will make on-site storage impossible. To solve this storage problem, we are requesting (upon the approval of the DEHNR) that test burn generated ash be stored at the Halifax County landfill in a designated area within the lined monofill, where the four different mixture percentages can be

segregated, and if necessary, physically separated with lime (provided by the facility) to distinguish between the varying percentages. Ash samples at these various percentages will be sampled and analyzed for TCLP metals to determine waste designation.

Upon receipt of the TCLP metals test results, the facility will immediately send the copies to the County as well as the DEHNR. Positive results will designate a non hazardous waste and confirm final disposal of the test generated ash in the landfill. The bottom ash TCLP test results will also be submitted to the DEHNR for review to confirm that the mixed fuel generated bottom ash can continue to be use for daily cover at the Halifax County landfill. Although not expected, if any of the TCLP metals test results received from the laboratory indicate toxic characteristics, the specific ash percentage(s) will be removed and disposed of in a landfill that accepts hazardous wastes.

With approvals from the County and the DEHNR for ash testing, storage and disposal, we will finalize the Unit 1 test schedule and ash test protocol/plan. The testing of Unit 1 will be interrupted September 27, 1997 through October 28, 1997 to perform a scheduled maintenance outage performed yearly at the facility to inspect the various systems and equipment. When completed, the remainder of the test burn will be performed. Upon completion of Unit 1 test burn, all the test and engineering data will be evaluated to determine the viability of permanently using petroleum coke in Unit 1 and to determine the test status of Unit 2. At a later date, we will inform you of the facility's intent to resume or not resume the test burn for Unit 2. We believe this will be in the first quarter of next year.

We appreciate your efforts regarding the pending Unit 1 test burn, which is intended to begin the week of September 8, 1997. Please let us know your determination regarding test burn ash landfill storage and disposal at your earliest convenience. If you have any questions, do not hesitate to call me at (714) 241-4773.

Sincerely,

Maggie T. Estrada
Project Manager
Environmental Services

cc: C. Braun
B. Hamilton
Q. Morrison
D. Ray
S. Coghill, DEHNR
esd/rvp.2.7

LG&EPOWER℠

LG&E Power Development Inc.
3200 Park Center Drive, Suite 400
Costa Mesa, California 92626
714-241-4700
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August 11, 1997

Ms. Sherri Coghill
Environmental Engineer
State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Waste Management
P. O. Box 27687
Raleigh, North Carolina 27611-7687

Subject: Pending Petroleum Coke Test Burn, Unit 1
Request for Confirmation of Ash Testing and Storage
Roanoke Valley Energy Facility

Dear Ms. Coghill:

As we discussed on the telephone, Westmoreland-LG&E Partners is resuming the investigation into co-firing petroleum coke in the coal boilers (Unit 1 and Unit 2) at the Roanoke Valley Energy Facility. In accordance with NCDEHNR previous approvals, a petroleum coke test burn was performed in the Unit 2 boiler in January 1997. This test burn was suspended due to baghouse blinding problems. After studying the bag blinding issue, we believe the presence of vanadium in the petroleum coke caused increased sulfates (SO_3) concentrations in the boiler. The increased amount of SO_3 reacted during the combustion process with the free ammonia or urea (used in the NO_x control system) to form ammonium bisulfates. These ammonium bisulfates condensed on the bag surfaces causing blinding of the fabric material. Washing the bags with water restored the baghouse operation to normal levels.

To confirm that the ammonium bisulfates are the possible cause of the blinding problem, and to continue to investigate the operational characteristics of using petroleum coke, the facility would like to perform a petroleum coke test burn on Unit 1. The bag blinding problems are not expected to occur during the Unit 1 test burn because Unit 1 does not have urea injection for NO_x control, but uses low NO_x burners and overfire air for NO_x control. Prior to commencement of the intended Unit 1 test burn, we request your confirmation regarding necessary ash testing for disposal purposes and acceptable ash storage and disposal procedures.

We will also send a letter to Mr. Bill Hocutt requesting confirmation of the Unit 1 petroleum coke test protocol to be implemented for beneficial use determination purposes. We assume the previous protocol required for Unit 2 will be required for Unit 1. This testing, which includes the TCLP organics, will be performed for each of the four specified fuel percentages (5%, 10%, 15%, and 20%) immediately preceding the TCLP metals testing performed for disposal purposes. Testing the four different petroleum coke percentages will assist in determining the most viable coal/petroleum coke blend for use in Unit 1 on a long term basis. In addition, equipment

operation, efficiency, maintenance, fuel costs, and capital improvement costs will also be considered by the facility when determining the most effective petroleum coke percentage.

Due to the similarities of the units, we anticipate similar ash test burn results for Unit 1 that were obtained during the test burn for Unit 2. As has been shown in the laboratory data, the mixed ash generated during the previous test was determined not to be hazardous. It should be noted, the two units do slightly vary. The differences between Unit 1 and Unit 2 include the lack of urea injection for NO_x control and the use of pebble lime instead of hydrated lime in the FGD system. We believe these differences will not adversely effect the characteristics of the test generate ash. One of the main reasons for performing the test burn on Unit 1 is because of these differences, which will assist in confirming the findings related to Unit 2. One design difference that may complicate the test burn is that Unit 1 is approximately three times the size of Unit 2. This size increase will cause a larger quantity of ash to be generated during the test burn, which will make on-site storage impossible. To solve this storage problem, we are requesting that test burn generated ash be stored at the Halifax County landfill in a designated area within the lined monofill, where the four different mixture percentages can be segregated. Ash at these various percentages will be sampled and analyzed for TCLP metals to confirm a non hazardous waste designation. The samples will be taken approximately 24 hours after the introduction of each fuel percentage, and each fuel percentage will be burned for three to four days to allow for plant process stabilization and sufficient engineering test data collection. Although not expected, if any of the TCLP metals test results received from the laboratory indicate toxic characteristics, the specifically identified ash percentage will be removed and disposed of in a landfill that accepts hazardous wastes.

The Halifax County Assistant Manager has been informed verbally and will be notified in writing of the intent to perform a test burn on Unit 1 and will also be requested, upon the approval of the DEHNR, to store the test generated ash in a designated area of the lined monofill. Within the designated area, each ash mixture percentage (5%, 10%, 15% and 20% petroleum coke) will be segregated, and if necessary, physically separated using layers of lime (provided by the facility) to distinguish between the varying percentages. The facility will request three day turn-around of the analytical results from the laboratory, and upon receipt of the TCLP metals test results, the facility will immediately send the copies to the County as well as to the DEHNR. Positive results will confirm final disposal of the test generated ash in the landfill. The bottom ash TCLP test results will also be submitted to the DEHNR for review to confirm that the mixed fuel generated bottom ash can continue to be use for daily cover at the Halifax County landfill.

With your written determination regarding ash disposal testing and storage at the landfill, we will finalize the Unit 1 test schedule and ash test protocol/plan. As these documents are completed, we will forward them to you and Bill Hocutt. The testing of Unit 1 will be interrupted September 27, 1997 through October 28, 1997 to perform a scheduled maintenance outage performed yearly at the facility to inspect the various systems and equipment. When completed,

the remainder of the test burn will be performed. Upon completion of Unit 1 test burn, all the test and engineering data will be evaluated to determine the viability of permanently using petroleum coke in Unit 1 and to determine the test status of Unit 2. At a later date, we will inform you of the facility's intent to resume or not resume the test burn for Unit 2. We believe this will be in the first quarter of next year.

We appreciate your efforts regarding the pending Unit 1 test burn, which is intended to begin the week of September 8, 1997. Please let us know your determination regarding test burn ash disposal testing and landfill storage at your earliest convenience. If you have any questions, do not hesitate to call me at (714) 241-4773.

Sincerely,

Maggie T. Estrada
Project Manager
Environmental Services

cc: C. Braun
B. Hamilton
Q. Morrison
D. Ray
B. Hocutt, DEHNR
C. Archer, Halifax County
esd/rvp.2.7

LG&E POWER DEVELOPMENT INC
3200 PARK CENTER DRIVE
COSTA MESA, CA 92626
Tel: 714-241-4700
Fax: 714-241-4794

Date 1-24-97

No. of Pages 1
(Including cover sheet)

FACSIMILE COVER SHEET

TO: Sherri Coghill FAX NO. (919) 733-4810

COMPANY: NCDEM - Solid Waste Section

FROM: Maggie Estrada TELE. NO. (714) 241-4773

REFERENCE: Pet Coke

SUBJECT: Bottom Ash Testing

Per Phone conversation 1/27 - LG&E to do TCLP organic analysis on 20% pet coke/coal ash.

MESSAGE:

Due to various reasons, mostly testing costs, we have decided not to analyze the mixed bottom ash for beneficial reuse. We believe the "non-hazardous" results shown in the test results for disposal purposes are sufficient for determination of landfill daily cover. Would you please confirm this. We appreciate your efforts - Maggie

If you have difficulty receiving this transmission, please call Beverly Orloff at 714-241-4781.

LG&EPOWER℠

January 22, 1997

LG&E Power Development Inc.
3200 Park Center Drive, Suite 400
Costa Mesa, California 92626
714-241-4700
714-241-4791 FAX

Ms. Sherri Coghill
Environmental Engineer
State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Waste Management
512 N. Salisbury Street
P.O. Box 29535
Raleigh, North Carolina 27604

Subject: Second Submittal of Mixed Ash Testing Results
Petroleum Coke Test Burn
Roanoke Valley Energy Facility

Dear Ms. Coghill:

As required per your November 19, 1996 letter regarding disposal of the mixed ash generated from the petroleum coke test burn at the Roanoke Valley Energy Facility, we are submitting the second set of petroleum coke and coal mixed ash TCLP test results. Although it is difficult to obtain samples exactly at the 15% and 20% fuel blends, samples of the mixed ash were taken at a time during the test burn process to best represent these desired fuel blend percentages. It is estimated that the average percentages obtained were approximately 14% and 17%, these percentages are noted on the test data. The mixed ash generated from 15% (estimated 14%) and 20% (estimated 17%) fuel mixtures were tested for TCLP metals, and due to the results of the mixed ash generated from 5% fuel mixture, the test for organics (volatiles and semi volatiles) was not required for the 20% samples. Both fly ash and bottom ash were tested as required. The laboratory test data is attached for your review and record. As was seen with the 5% and 10% mixed ash, the TCLP test results of the petroleum coke and coal ash at blends of 15% and 20% are below the toxic characteristic regulatory levels, demonstrating non-toxic characteristics, thus, the mixed ash can be designated non-hazardous. Due to this designation, the mixed ash generated during this section of the test burn is acceptable for disposal.

The pH values for the fly ash and bottom ash at the 15% and 20% fuel mixtures are noted in the laboratory data sheets. As was confirmed in our last correspondence, ash is a solid and is not aqueous and therefore the pH ranges as noted in 40 CFR 261.22 do not apply. Based on this conclusion, the mixed ash generated from this section of the test burn is also acceptable for disposal.

In consideration of the above mentioned results and determinations, the mixed ash generated at both fuel blends can be disposed of in the Halifax County Landfill. We will submit these test results to the Halifax County as was stated in previous correspondences.

The third section of the petroleum coke test burn will commence on January 27, 1997 during which the air emission testing will be performed concurrently with testing the 15% and 20% mixed ash for beneficial reuse purposes. When the mixed ash test results for beneficial reuse become available, they will be submitted to you, Mr. Bill Hocutt and the County. The data obtained from the beneficial reuse testing, along with the data obtained from the disposal testing, can be reviewed for mixed ash consideration as daily cover at the Halifax County landfill.

Disposal of the ash will begin just after this information is faxed to you and Halifax County. Should you have any questions, do not hesitate to call me at (714) 241-4773 or Mr. Bill McGee, Plant Engineer, at the plant at (919) 536-3200.

Sincerely,

Maggie T. Estrada

Maggie T. Estrada
Project Manager
Environmental Services

Enclosure

cc: B. Hamilton
Q. Morrison
D. Ray
C. Archer, Halifax County
B. Hocutt, Beneficial Reuse
esd/file/rvp.3.6

bcc: C. Braun
J. Bove
J. Ferrick
B. McGee
J. Mersereau

CLIENT: Westmoreland - LG&E Partners

SAMPLE ID: Fly Ash 98%/2% Air Heater

SAMPLE NO: 97-0606

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit(mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		1.03	FPE-01/20/97 @ 2100
Barium	D005	6010A	0.005	100.0		1.03	FPE-01/20/97 @ 2100
Cadmium	D006	6010A	0.0005	1.0		0.0012	FPE-01/20/97 @ 2100
Chromium	D007	6010A	0.005	5.0		0.046	FPE-01/20/97 @ 2100
Lead	D008	6010A	0.005	5.0		0.007	FPE-01/20/97 @ 2100
Mercury	D009	7470	0.0002	0.2		<0.0002	SKH-01/21/97 @ 0830
Selenium	D010	6010A	0.005	1.0		0.436	FPE-01/20/97 @ 2100
Silver	D011	6010A	0.001	5.0		<0.001	FPE-01/20/97 @ 2100

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (757) 873-4703 phone (757) 873-1498 fax		
ATTN:	Bill McClee				
ADDRESS:	P.O. Box 351, Railroad Street				
CITY:	Weldon, NC 27890				
PHONE:	(919) 536-3200 ext 234	SAMPLE RECEIPT DATE:	1/18/97	TIME:	1050
FAX:		RECEIVED BY:	LDG		
		GRAB COLLECTION DATE:	1/17/97	GRAB TIME:	1800
SPECIAL NOTES: **Ash Testing for Disposal (NC)** 20% Blend (17% estimated)		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time		
		COLLECTED BY:	Chris Larue/Barry Parks - LG&E Partners		
		PICKED UP BY:	Clifton W. Johnson - LG&E Partners		
		NUMBER OF CONTAINERS:	3	Condition	(X)GOOD ( )OTHER
		EXPLAIN			

SAMPLE ID: Fly Ash 98%/2% Air Heater

SAMPLE NO: 97-0606

Pres.	Parameter	Method Number	Method Detection Limit (mg/kg)	Practical Quantitation Limit(mg/kg)	Result (mg/kg)	Analyst/Date/Time
	Carbon	ASTM D3178	N/A		17.70%	HRT-01/21/97
	Sulfur	ASTM D4239	N/A		6.40%	HRT-01/21/97
	Nickel	6010A	0.24		25.6	FPE-01/21/97 @ 1412
	Vanadium	6010A	0.24		187	FPE-01/21/97 @ 1412
	pH	9045	N/A		12.4 @ 20°C	SKH-01/21/97 @ 0745

NOTES:

RESPECTFULLY SUBMITTED BY:

Elaine Clarlow

Carol Isenhour
Vice President
for

DATE: January 21, 1997

CLIENT:	Westmoreland - J.G&E Partners
ATTN:	Bill McGee
ADDRESS:	P.O. Box 351. Railroad Street
CITY:	Weldon, NC 27890
PHONE:	(919) 536-3200 ext 234
FAX:	

SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (757) 873-4703 phone (757) 873-1498 fax
SAMPLE RECEIPT DATE:	1/18/97 — TIME: 1050
RECEIVED BY:	LDG
GRAB COLLECTION DATE:	1/17/97 — GRAB TIME: 1800
COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time
COLLECTED BY:	Chris Larue/Barry Parks - J.G&E Partners
PICKED UP BY:	Clifton W. Johnson - J.G&E Partners
NUMBER OF CONTAINERS:	2 — Condition: (X)GOOD ( )OTHER
EXPLAIN	

SPECIAL NOTES:

Ash Testing for Disposal (NC)

20% Blend
(17% estimated)

SAMPLE ID: Bottom Ash

SAMPLE NO: 97-0607

Pres.	Parameter	Method Number	Method Detection Limit (mg/kg)	Practical Quantitation Limit(mg/kg)	Result (mg/kg)	Analyst/Date/Time
	Carbon	ASTM D3178	N/A		41.14%	HRT-01/21/97
	Sulfur	ASTM D4239	N/A		0.65%	HRT-01/21/97
	Nickel	6010A	0.24		11.9	FPE-01/21/97 @ 1417
	Vanadium	6010A	0.24		55.6	FPE-01/21/97 @ 1417
	pH	9045	N/A		9.3 @ 20°C	SKH-01/21/97 @ 0745

NOTES:

RESPECTFULLY SUBMITTED BY:

Elaine Claborne

Carol Isenhour
Vice President

DATE: January 21, 1997

CLIENT: Westmoreland - LG&E Partners

SAMPLE ID: Bottom Ash

SAMPLE NO: 97-0607

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		0.021	FPE-01/20/97 @ 2120
Barium	D005	6010A	0.005	100.0		1.84	FPE-01/20/97 @ 2120
Cadmium	D006	6010A	0.0005	1.0		<0.0005	FPE-01/20/97 @ 2120
Chromium	D007	6010A	0.005	5.0		0.006	FPE-01/20/97 @ 2120
Lead	D008	6010A	0.005	5.0		<0.005	FPE-01/20/97 @ 2120
Mercury	D009	7470	0.0002	0.2		<0.0002	SKH-01/21/97 @ 0830
Selenium	D010	6010A	0.005	1.0		0.005	FPE-01/20/97 @ 2120
Silver	D011	6010A	0.001	5.0		<0.001	FPE-01/20/97 @ 2120

CLIENT:	Westmoreland - LG&E Partners
ATTN:	Bill McGee
ADDRESS:	P.O. Box 351, Railroad Street
CITY:	Weldon, NC 27890
PHONE:	(919) 536-3200 ext 234
FAX:	

SUBMITTED BY:

James R. Reed & Associates
11864 Canon Blvd., Suite 103
Newport News, VA 23606
(757) 873-4703 phone
(757) 873-1498 fax

SAMPLE RECEIPT DATE:	1/18/97	TIME:	1050
RECEIVED BY:	LDG		
GRAB COLLECTION DATE:	1/15/97	GRAB TIME:	0830

COMPOSITE COLLECTION:	Start Date	Start Time	End Date	End Time

COLLECTED BY:	Chris Larue/Barry Parks - LG&E Partners		
PICKED UP BY:	Clifton W. Johnson - LG&E Partners		
NUMBER OF CONTAINERS:	3	Condition	(X)GOOD ( )OTHER
EXPLAIN			

SPECIAL NOTES:

Ash Testing for Disposal (NC)

Coal Only

SAMPLE ID: Fly Ash 98%/2% Air Heater

SAMPLE NO: 97-0619

Pres.	Parameter	Method Number	Method Detection Limit (mg/kg)	Practical Quantitation Limit(mg/kg)	Result (mg/kg)	Analyst/Date/Time
	Carbon	ASTM D3178	N/A		15.55%	HRT-01/21/97
	Sulfur	ASTM D4239	N/A		5.85%	HRT-01/21/97
	Nickel	6010A	0.24		9.00	FPE-01/21/97 @ 1446
	Vanadium	6010A	0.24		23.5	FPE-01/21/97 @ 1446
	pH	9045	N/A		12.5 @ 20°C	SKH-01/21/97 @ 0745

NOTES:

RESPECTFULLY SUBMITTED BY:

Elaine Chaloin

Carol Isenhour
Vice President

DATE: January 21, 1997

CLIENT: Westmoreland - LG&E Partners

SAMPLE ID: Fly Ash 98%/2% Air Heater

SAMPLE NO: 97-0619

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		1.86	FPE-01/20/97 @ 2130
Barium	D005	6010A	0.005	100.0		0.702	FPE-01/20/97 @ 2130
Cadmium	D006	6010A	0.0005	1.0		0.0028	FPE-01/20/97 @ 2130
Chromium	D007	6010A	0.005	5.0		0.060	FPE-01/20/97 @ 2130
Lead	D008	6010A	0.005	5.0		0.009	FPE-01/20/97 @ 2130
Mercury	D009	7470	0.0002	0.2		<0.0002	SKH-01/21/97 @ 0830
Selenium	D010	6010A	0.005	1.0		0.469	FPE-01/20/97 @ 2130
Silver	D011	6010A	0.001	5.0		<0.001	FPE-01/20/97 @ 2130

CLIENT:	Westmoreland - LG&E Partners
ATTN:	Bill McGee
ADDRESS:	P.O. Box 351, Railroad Street
CITY:	Weldon, NC 27890
PHONE:	(919) 536-3200 ext 234
FAX:	

SUBMITTED BY: James R. Reed & Associates
11864 Canon Blvd., Suite 103
Newport News, VA 23606
(757) 873-4703 phone
(757) 873-1498 fax

SAMPLE RECEIPT DATE: 1/18/97 TIME: 1050

RECEIVED BY: LDG

GRAB COLLECTION DATE: 1/15/97 GRAB TIME: 0830

COMPOSITE COLLECTION:	Start Date	Start Time	End Date	End Time

COLLECTED BY: Chris Larue/Barry Parks - LG&E Partners

PICKED UP BY: Clifton W. Johnson - LG&E Partners

NUMBER OF CONTAINERS: 2 Condition (X)GOOD ( )OTHER

EXPLAIN:

SPECIAL NOTES:

Ash Testing for Disposal (NC)

Coal Only

SAMPLE ID: Bottom Ash

SAMPLE NO: 97-0620

Pres.	Parameter	Method Number	Method Detection Limit (mg/kg)	Practical Quantitation Limit(mg/kg)	Result (mg/kg)	Analyst/Date/Time
	Carbon	ASTM D3178	N/A		4.70%	HRT-01/21/97
	Sulfur	ASTM D4239	N/A		0.08%	HRT-01/21/97
	Nickel	6010A	0.24		1.53	FPE-01/21/97 @ 1434
	Vanadium	6010A	0.24		1.98	FPE-01/21/97 @ 1434
	pH	9045	N/A		9.5 @ 20°C	SKH-01/21/97 @ 0745

NOTES:

RESPECTFULLY SUBMITTED BY:

Elaine Clarke for

Carol Isenhour
Vice President

DATE: January 21, 1997

CLIENT: Westmoreland - LG&E Partners

SAMPLE ID: Bottom Ash

SAMPLE NO: 97-0620

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit(mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		0.007	FPE-01/20/97 @ 2140
Barium	D005	6010A	0.005	100.0		1.17	FPE-01/20/97 @ 2140
Cadmium	D006	6010A	0.0005	1.0		<0.0005	FPE-01/20/97 @ 2140
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-01/20/97 @ 2140
Lead	D008	6010A	0.005	5.0		0.006	FPE-01/20/97 @ 2140
Mercury	D009	7470	0.0002	0.2		<0.0002	SKH-01/21/97 @ 0830
Selenium	D010	6010A	0.005	1.0		0.005	FPE-01/20/97 @ 2140
Silver	D011	6010A	0.001	5.0		<0.001	FPE-01/20/97 @ 2140

CLIENT:	Westmoreland - LG&E Partners
ATTN:	Bill McGee
ADDRESS:	P.O. Box 351, Railroad Street
CITY:	Weldon, NC 27890
PHONE:	(919) 536-3200 ext 234
FAX:	

SUBMITTED BY: James R. Reed & Associates
11864 Canon Blvd., Suite 103
Newport News, VA 23606
(757) 873-4703 phone
(757) 873-1498 fax

SAMPLE RECEIPT DATE:	1/18/97	TIME:	1050
RECEIVED BY:	LDG		
GRAB COLLECTION DATE:	1/16/97	GRAB TIME:	1600

COMPOSITE COLLECTION:	Start Date	Start Time	End Date	End Time

COLLECTED BY:	Chris Laruc/Barry Parks - LG&E Partners		
PICKED UP BY:	Clifton W. Johnson - LG&E Partners		
NUMBER OF CONTAINERS:	3	Condition	(X)GOOD ( )OTHER
EXPLAIN:			

SPECIAL NOTES:

Ash Testing for Disposal (NC)

15% Blend
(14% estimated)

SAMPLE ID: Fly Ash 98%/2% Air Heater

SAMPLE NO: 97-0621

Pres.	Parameter	Method Number	Method Detection Limit (mg/kg)	Practical Quantitation Limit(mg/kg)	Result (mg/kg)	Analyst/Date/Time
	Carbon	ASTM D3178	N/A		17.26%	HRT-01/21/97
	Sulfur	ASTM D4239	N/A		6.44%	HRT-01/21/97
	Nickel	6010A	0.24		24.5	FPE-01/21/97 @ 1439
	Vanadium	6010A	0.24		170	FPE-01/21/97 @ 1439
	pH	9045	N/A		12.6 @ 20°C	SKH-01/21/97 @ 0745

NOTES:

RESPECTFULLY SUBMITTED BY:

Elaine Claiborne

Carol Isenhour
Vice President

DATE: January 21, 1997

CLIENT: Westmoreland - LG&E Partners

SAMPLE ID: Fly Ash 98%/2% Air Heater

SAMPLE NO: 97-0621

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit(mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		1.10	FPE-01/20/97 @ 2150
Barium	D005	6010A	0.005	100.0		0.779	FPE-01/20/97 @ 2150
Cadmium	D006	6010A	0.0005	1.0		0.0017	FPE-01/20/97 @ 2150
Chromium	D007	6010A	0.005	5.0		0.048	FPE-01/20/97 @ 2150
Lead	D008	6010A	0.005	5.0		0.007	FPE-01/20/97 @ 2150
Mercury	D009	7470	0.0002	0.2		<0.0002	SKH-01/21/97 @ 0830
Selenium	D010	6010A	0.005	1.0		0.473	FPE-01/20/97 @ 2150
Silver	D011	6010A	0.001	5.0		<0.001	FPE-01/20/97 @ 2150

CLIENT:	Westmoreland - LG&E Partners
ATTN:	Bill McGee
ADDRESS:	P.O. Box 351, Railroad Street
CITY:	Weldon, NC 27890
PHONE:	(919) 536-3200 ext 234
FAX:	

SUBMITTED BY: James R. Reed & Associates
11864 Canon Blvd., Suite 103
Newport News, VA 23606
(757) 873-4703 phone
(757) 873-1498 fax

SAMPLE RECEIPT DATE:	1/18/97	TIME:	1050
RECEIVED BY:	LDG		
GRAB COLLECTION DATE:	1/16/97	GRAB TIME:	1600

COMPOSITE COLLECTION:	Start Date	Start Time	End Date	End Time

COLLECTED BY:	Chris Larue/Barry Parks - LG&E Partners		
PICKED UP BY:	Clifton W. Johnson - LG&E Partners		
NUMBER OF CONTAINERS:	2	Condition	(X)GOOD ( )OTHER
EXPLAIN			

SPECIAL NOTES:

Ash Testing for Disposal (NC)

15% Blend
(14% estimated)

SAMPLE ID: Bottom Ash

SAMPLE NO: 97-0622

Pres.	Parameter	Method Number	Method Detection Limit (mg/kg)	Practical Quantitation Limit(mg/kg)	Result (mg/kg)	Analyst/Date/Time
	Carbon	ASTM D3178	N/A		30.92%	HRT-01/21/97
	Sulfur	ASTM D4239	N/A		0.30%	HRT-01/21/97
	Nickel	6010A	0.24		3.87	FPE-01/21/97 @ 1445
	Vanadium	6010A	0.24		6.83	FPE-01/21/97 @ 1445
	pH	9045	N/A		9.4 @ 20°C	SKH-01/21/97 @ 0745

NOTES:

RESPECTFULLY SUBMITTED BY:

Elaine Clarkson for
Carol Isenhour
Vice President

DATE: January 21, 1997

CLIENT: Westmoreland - LG&E Partners

SAMPLE ID: Bottom Ash

SAMPLE NO: 97-0622

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit(mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		0.015	FPE-01/20/97 @ 2200
Barium	D005	6010A	0.005	100.0		1.97	FPE-01/20/97 @ 2200
Cadmium	D006	6010A	0.0005	1.0		0.0015	FPE-01/20/97 @ 2200
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-01/20/97 @ 2200
Lead	D008	6010A	0.005	5.0		0.024	FPE-01/20/97 @ 2200
Mercury	D009	7470	0.0002	0.2		<0.0002	SKH-01/21/97 @ 0830
Selenium	D010	6010A	0.005	1.0		<0.005	FPE-01/20/97 @ 2200
Silver	D011	6010A	0.001	5.0		<0.001	FPE-01/20/97 @ 2200

ROANOKE VALLEY ENERGY FACILITY
Westmoreland - LG&E Partners

January 14, 1997

Ms. Sherri Coghill
Environmental Engineer
State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Waste Management
512 N. Salisbury Street
P.O. Box 29535
Raleigh, North Carolina 27604

Subject: Submittal of Mixed Ash Testing Results
Petroleum Coke Test Burn
Roanoke Valley Energy Facility

Dear Ms. Coghill:

As required per your November 19, 1996 letter regarding disposal of the mixed ash generated from the petroleum coke test burn at the Roanoke Valley Energy Facility, we are submitting the petroleum coke and coal mixed ash TCLP test results. The mixed ash generated from 5% fuel mixture was tested for TCLP metals and organics (volatiles and semi volatiles) and the mixed ash generated from 10% fuel mixture was tested for the TCLP metals only. Both fly ash and bottom ash were tested as required. The laboratory test data is attached for your review and record. Since the TCLP test results of the petroleum coke and coal ash at blends of 5% and 10% are below the toxic characteristic regulatory levels, demonstrating non-toxic characteristics, the mixed ash can be designated non-hazardous. Due to this designation, the mixed ash generated is acceptable for disposal.

The pH values for the fly ash and bottom ash at the 5% and 10% fuel mixtures are noted in the laboratory data sheets. Because ash is a solid and is not aqueous, the pH ranges as noted in 40 CFR 261.22 do not apply. Therefore, the ash is acceptable for disposal. This confirms your determination regarding satisfactory pH ranges as discussed during our phone conversations.

Based on the above mentioned results and determinations, the mixed ash generated at both 5% and 10% fuel blends can be disposed of in the Halifax County Landfill. We will submit these test results to the Halifax County as was stated in previous correspondences.

P.O. Box 351, Weldon, NC 27890, Tel: (919) 536-3200 Fax: (919) 536-4448

The petroleum test burn will continue this week and when the 15% and 20% mixed ash test results become available, they will be submitted to you and the County. As agreed upon in previous correspondences, the 20% mixed ash, both fly ash and bottom ash, need not be tested for organics. This is due to the low levels or non-detectable levels observed in the 5% ash blends.

Disposal of the ash will begin just after this information is faxed to you and Halifax County. Should you have any questions, do not hesitate to call me or Mr. Bill McGee, Plant Engineer, at the plant at (919) 536-3200.

Sincerely,

Maggie T. Estrada
Senior Environmental Engineer

Enclosure

cc: B. Hamilton
Q. Morrison
D. Ray
C. Archer, Halifax County
B. Hocutt, Beneficial Reuse
esd/file/rvp.3.6

bcc: C. Braun
J. Bove
J. Ferrick
B. McGee
J. Mersereau

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (757) 873-4703 phone (757) 873-1498 fax
ATTN:	Bill McGee		
ADDRESS:	P.O. Box 351, Railroad Street		
CITY:	Weldon, NC 27890		
PHONE:	(919) 536-3200 ext 234	SAMPLE RECEIPT DATE:	01/07/97 TIME: 1756
FAX:		RECEIVED BY:	TGP
		GRAB COLLECTION DATE:	01/07/97 GRAB TIME: 1255
SPECIAL NOTES:		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time
Ash Testing for Disposal (NC)		COLLECTED BY:	LG&E Partners
5% Blend		PICKED UP BY:	C. Johnson - LG&E Partners
		NUMBER OF CONTAINERS:	2 Condition (X)GOOD ( )OTHER
		EXPLAIN	

SAMPLE ID: Bottom Ash

SAMPLE NO: 97-0247

Pres.	Parameter	Method Number	Method Detection Limit (mg/kg)	Practical Quantitation Limit(mg/kg)	Result (mg/kg)	Analyst/Date/Time
	Carbon	ASTM D3178	N/A		30.96%	HRT-01/10/97
	Sulfur	ASTM D4239	N/A		0.34%	HRT-01/10/97
	Nickel	6010A	0.24		17.8	FPE-01/10/97 @ 1457
	Vanadium	6010A	0.24		118	FPE-01/10/97 @ 1457
	pH	9045	N/A		8.9 @ 22°C	SKH-01/10/97 @ 0800

NOTES:

RESPECTFULLY SUBMITTED BY:

Elaine Claiborne

Carol Isenhour
Vice President

DATE: January 10, 1997

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (804) 873-4703 phone (804) 873-1498 fax		
ATTN:	Bill MCGee				
ADDRESS:	P.O. Box 351, Railroad Street				
CITY:	Weldon, NC 27890				
PHONE:	(919) 536-3200 ext 234	SAMPLE RECEIPT DATE:	01/07/97	TIME:	1756
FAX:		RECEIVED BY:	TGP		
		GRAB COLLECTION DATE:	01/07/97	GRAB TIME:	1255
SPECIAL NOTES:		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time		
5% Blend		COLLECTED BY:	LG&E Partners		
		PICKED UP BY:	C. Johnson - LG&E Partners		
		NUMBER OF CONTAINERS:	2	Condition	(x)GOOD ( )OTHER
		EXPLAIN			

SAMPLE ID: Bottom Ash

SAMPLE NO: 97-0247

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		0.013	FPE-01/10/97 @ 1131
Barium	D005	6010A	0.005	100.0		1.86	FPE-01/10/97 @ 1131
Benzene	D018	8240	0.005	0.5		<0.005	CDN-01/10/97 @ 1145
Cadmium	D006	6010A	0.0005	1.0		<0.0005	FPE-01/10/97 @ 1131
Carbon Tetrachloride	D019	8240	0.005	0.5		<0.005	CDN-01/10/97 @ 1145
Chlorobenzene	D021	8240	0.005	100.0		<0.005	CDN-01/10/97 @ 1145
Chloroform	D022	8240	0.005	6.0		<0.005	CDN-01/10/97 @ 1145
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-01/10/97 @ 1131
o-Cresol	D023	8270	0.050	200.0		<0.050	CLH-01/10/97 @ 1147
m-Cresol	D024	8270	0.050	200.0		<0.050	CLH-01/10/97 @ 1147
p-Cresol	D025	8270	0.050	200.0		<0.050	CLH-01/10/97 @ 1147

NOTES:

RESPECTFULLY SUBMITTED BY:

Elaine Claiborne

for Carol Isenhour
Vice President

DATE: January 10, 1997

CLIENT: Westmoreland - LG&E Partners

SAMPLE ID: Bottom Ash 5% Blend

SAMPLE NO: 97-0247

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE (continued)							
Cresol	D026	8270	0.050	200.0		<0.050	CLH-01/10/97 @ 1147
1,4-dichlorobenzene	D027	8240	0.005	7.5		<0.005	CDN-01/10/97 @ 1145
1,2-dichloromethane	D028	8240	0.005	0.5		<0.005	CDN-01/10/97 @ 1145
1,1-dichloroethylene	D029	8240	0.005	0.7		<0.005	CDN-01/10/97 @ 1145
2,4-dinitrotoluene	D030	8270	0.005	0.13		<0.005	CLH-01/10/97 @ 1147
Hexachlorobenzene	D032	8270	0.005	0.13		<0.005	CLH-01/10/97 @ 1147
Hexachloro-1,3-butadiene	D033	8270	0.005	0.5		<0.005	CLH-01/10/97 @ 1147
Hexachloroethane	D034	8270	0.005	3.0		<0.005	CLH-01/10/97 @ 1147
Lead	D008	6010A	0.005	5.0		0.015	FPE-01/10/97 @ 1131
Mercury	D009	7470	0.0002	0.2		0.0002	SKH-01/10/97 @ 1230
Methyl ethyl ketone	D035	8240	0.100	200.0		<0.100	CDN-01/10/97 @ 1145
Nitrobenzene	D036	8270	0.005	2.0		<0.005	CLH-01/10/97 @ 1147
Pentachlorophenol	D037	8270	0.010	100.0		<0.010	CLH-01/10/97 @ 1147
Pyridine	D038	8270	0.500	5.0		<0.500	CLH-01/10/97 @ 1147
Selenium	D010	6010A	0.005	1.0		<0.005	FPE-01/10/97 @ 1131
Silver	D011	6010A	0.001	5.0		<0.001	FPE-01/10/97 @ 1131
Tetrachloroethylene	D039	8240	0.005	0.7		<0.005	CDN-01/10/97 @ 1145
Trichloroethylene	D040	8240	0.005	0.5		<0.005	CDN-01/10/97 @ 1145
2,4,5-trichlorophenol	D041	8270	0.050	400.0		<0.050	CLH-01/10/97 @ 1147
2,4,6-trichlorophenol	D042	8270	0.050	2.0		<0.050	CLH-01/10/97 @ 1147
Vinyl Chloride	D043	8240	0.010	0.2		<0.010	CDN-01/10/97 @ 1145

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (757) 873-4703 phone (757) 873-1498 fax		
ATTN:	Bill McGee				
ADDRESS:	P.O. Box 351, Railroad Street				
CITY:	Weldon, NC 27890				
PHONE:	(919) 536-3200 ext 234	SAMPLE RECEIPT DATE:	01/07/97	TIME:	1756
FAX:					
		RECEIVED BY:	TGP		
		GRAB COLLECTION DATE:	01/07/97	GRAB TIME:	1300 and 1305
SPECIAL NOTES: Ash Testing for Disposal (NC) 5% Blend		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time		
		COLLECTED BY:	LG&E Partners		
		PICKED UP BY:	C. Johnson - LG&E Partners		
		NUMBER OF CONTAINERS:	3	Condition	(X)GOOD ( )OTHER
		EXPLAIN			
SAMPLE ID: Fly Ash					
SAMPLE NO: 97-0248					

Pres.	Parameter	Method Number	Method Detection Limit (mg/kg)	Practical Quantitation Limit(mg/kg)	Result (mg/kg)	Analyst/Date/Time
	Carbon	ASTM D3178	N/A		19.44%	HRT-01/10/97
	Sulfur	ASTM D4239	N/A		0.29%	HRT-01/10/97
	Nickel	6010A	0.24		17.8	FPE-01/10/97 @ 1503
	Vanadium	6010A	0.24		118	FPE-01/10/97 @ 1503
	pH	9045	N/A		12.9 @ 22°C	SKH-01/10/97 @ 0800

NOTES: Fly Ash sample was mixed per client's instructions:
98% Fly Ash and 2% Air Heater

RESPECTFULLY SUBMITTED BY:

Elaine Claiborne

Carol Isenhour
Vice President

DATE: January 10, 1997

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (804) 873-4703 phone (804) 873-1498 fax		
ATTN:	Bill MCGee				
ADDRESS:	P.O. Box 351, Railroad Street				
CITY:	Weldon, NC 27890				
PHONE:	(919) 536-3200 ext 234	SAMPLE RECEIPT DATE:	01/07/97	TIME:	1756
FAX:					
		RECEIVED BY:	TGP		
		GRAB COLLECTION DATE:	01/07/97	GRAB TIME:	1300 and 1305
SPECIAL NOTES:		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time		
5 % Blend		COLLECTED BY:	LG&E Partners		
		PICKED UP BY:	C. Johnson - LG&E Partners		
		NUMBER OF CONTAINERS:	2	Condition	(x)GOOD ( )OTHER
		EXPLAIN			

SAMPLE ID: Fly Ash 98%/2% Air Heater

SAMPLE NO: 97-0248

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		0.122	FPE-01/10/97 @ 1141
Barium	D005	6010A	0.005	100.0		2.65	FPE-01/10/97 @ 1141
Benzene	D018	8240	0.005	0.5		<0.005	CDN-01/10/97 @ 1239
Cadmium	D006	6010A	0.0005	1.0		<0.0005	FPE-01/10/97 @ 1141
Carbon Tetrachloride	D019	8240	0.005	0.5		<0.005	CDN-01/10/97 @ 1239
Chlorobenzene	D021	8240	0.005	100.0		<0.005	CDN-01/10/97 @ 1239
Chloroform	D022	8240	0.005	6.0		<0.005	CDN-01/10/97 @ 1239
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-01/10/97 @ 1141
o-Cresol	D023	8270	0.050	200.0		<0.050	CLH-01/10/97 @ 1248
m-Cresol	D024	8270	0.050	200.0		<0.050	CLH-01/10/97 @ 1248
p-Cresol	D025	8270	0.050	200.0		<0.050	CLH-01/10/97 @ 1248

NOTES:

RESPECTFULLY SUBMITTED BY:

Elaine Chaloux

Carol Isenhour
Vice President

DATE: January 10, 1997

CLIENT: Westmoreland - LG&E Partners

SAMPLE ID: Fly Ash 98%/2% Air Heater 5% Blend

SAMPLE NO: 97-0248

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit (mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE (continued)							
Cresol	D026	8270	0.050	200.0		<0.050	CLH-01/10/97 @ 1248
1,4-dichlorobenzene	D027	8240	0.005	7.5		<0.005	CDN-01/10/97 @ 1239
1,2-dichloroethane	D028	8240	0.005	0.5		<0.005	CDN-01/10/97 @ 1239
1,1-dichloroethylene	D029	8240	0.005	0.7		<0.005	CDN-01/10/97 @ 1239
2,4-dinitrotoluene	D030	8270	0.005	0.13		<0.005	CLH-01/10/97 @ 1248
Hexachlorobenzene	D032	8270	0.005	0.13		<0.005	CLH-01/10/97 @ 1248
Hexachloro-1,3-butadiene	D033	8270	0.005	0.5		<0.005	CLH-01/10/97 @ 1248
Hexachloroethane	D034	8270	0.005	3.0		<0.005	CLH-01/10/97 @ 1248
Lead	D008	6010A	0.005	5.0		<0.005	FPE-01/10/97 @ 1141
Mercury	D009	7470	0.0002	0.2		<0.0002	SKH-01/10/97 @ 1230
Methyl ethyl ketone	D035	8240	0.100	200.0		<0.100	CDN-01/10/97 @ 1239
Nitrobenzene	D036	8270	0.005	2.0		<0.005	CLH-01/10/97 @ 1248
Pentachlorophenol	D037	8270	0.010	100.0		<0.010	CLH-01/10/97 @ 1248
Pyridine	D038	8270	0.500	5.0		<0.500	CLH-01/10/97 @ 1248
Selenium	D010	6010A	0.005	1.0		0.242	FPE-01/10/97 @ 1141
Silver	D011	6010A	0.001	5.0		<0.001	FPE-01/10/97 @ 1141
Tetrachloroethylene	D039	8240	0.005	0.7		<0.005	CDN-01/10/97 @ 1239
Trichloroethylene	D040	8240	0.005	0.5		<0.005	CDN-01/10/97 @ 1239
2,4,5-trichlorophenol	D041	8270	0.050	400.0		<0.050	CLH-01/10/97 @ 1248
2,4,6-trichlorophenol	D042	8270	0.050	2.0		<0.050	CLH-01/10/97 @ 1248
Vinyl Chloride	D043	8240	0.010	0.2		<0.010	CDN-01/10/97 @ 1239

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (757) 873-4703 phone (757) 873-1498 fax		
ATTN:	Bill McGee				
ADDRESS:	P.O. Box 351, Railroad Street				
CITY:	Weldon, NC 27890				
PHONE:	(919) 536-3200 ext 234	SAMPLE RECEIPT DATE:	01/08/97	TIME:	1715
FAX:					
		RECEIVED BY:	TGP		
		GRAB COLLECTION DATE:	01/08/97	GRAB TIME:	1335
SPECIAL NOTES: Ash Testing for Disposal (NC) 10% Blend		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time		
		COLLECTED BY:	B. Wilson - LG&E Partners		
		PICKED UP BY:	C. Johnson - LG&E Partners		
		NUMBER OF CONTAINERS:	2	Condition	(X)GOOD ( )OTHER
		EXPLAIN			
SAMPLE ID: Bottom Ash					
SAMPLE NO: 97-0268					

Pres.	Parameter	Method Number	Method Detection Limit (mg/kg)	Practical Quantitation Limit(mg/kg)	Result (mg/kg)	Analyst/Date/Time
	Carbon	ASTM D3178	N/A		25.52%	HRT-01/10/97
	Sulfur	ASTM D4239	N/A		0.29%	HRT-01/10/97
	Nickel	6010A	0.24		12.4	FPE-01/10/97 @ 1511
	Vanadium	6010A	0.24		44.4	FPE-01/10/97 @ 1511
	pH	9045	N/A		8.8 @ 22°C	SKH-01/10/97 @ 0800

NOTES:

RESPECTFULLY SUBMITTED BY:

Elaine Clarkson

for Carol Isenhour
Vice President

DATE: January 10, 1997

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (804) 873-4703 phone (804) 873-1498 fax		
ATTN:	Bill McGee				
ADDRESS:	P.O. Box 351, Railroad Street				
CITY:	Weldon, NC 27890				
PHONE:	(919) 536-3200 ext 234	SAMPLE RECEIPT DATE:	01/08/97	TIME:	1715
FAX:		RECEIVED BY:	TGP		
		GRAB COLLECTION DATE:	01/08/97	GRAB TIME:	1335
SPECIAL NOTES:		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time		
10 % Blend		COLLECTED BY:	B. Wilson - LG&E Partners		
		PICKED UP BY:	C. Johnson - LG&E Partners		
		NUMBER OF CONTAINERS:	2	Condition	(x)GOOD ( )OTHER
		EXPLAIN:			

SAMPLE ID: Bottom Ash

SAMPLE NO: 97-0268

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit(mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		0.014	FPE-01/10/97 @ 1434
Barium	D005	6010A	0.005	100.0		1.83	FPE-01/10/97 @ 1434
Cadmium	D006	6010A	0.0005	1.0		<0.0005	FPE-01/10/97 @ 1434
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-01/10/97 @ 1434
Lead	D008	6010A	0.005	5.0		<0.005	FPE-01/10/97 @ 1434
Mercury	D009	7470	0.0002	0.2		0.0003	SKH-01/10/97 @ 1230
Selenium	D010	6010A	0.005	1.0		<0.005	FPE-01/10/97 @ 1434
Silver	D011	6010A	0.001	5.0		<0.001	FPE-01/10/97 @ 1434

NOTES:

RESPECTFULLY SUBMITTED BY:

Elaine Claiborne

Carol Isenhour
Vice President

DATE: January 10, 1997

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (757) 873-4703 phone (757) 873-1498 fax		
ATTN:	Bill McGee				
ADDRESS:	P.O. Box 351, Railroad Street				
CITY:	Weldon, NC 27890				
PHONE:	(919) 536-3200 ext 234	SAMPLE RECEIPT DATE:	01/08/97	TIME:	1715
FAX:					
		RECEIVED BY:	TGP		
		GRAB COLLECTION DATE:	01/08/97	GRAB TIME:	1330
SPECIAL NOTES: Ash Testing for Disposal (NC) 10% blend		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time		
		COLLECTED BY:	B. Wilson - LG&E Partners		
		PICKED UP BY:	C. Johnson - LG&E Partners		
		NUMBER OF CONTAINERS:	3	Condition	(X)GOOD ( )OTHER
		EXPLAIN:			

SAMPLE ID: Fly Ash 98%/2% Air Heater

SAMPLE NO: 97-0269

Pres.	Parameter	Method Number	Method Detection Limit (mg/kg)	Practical Quantitation Limit(mg/kg)	Result (mg/kg)	Analyst/Date/Time
	Carbon	ASTM D3178	N/A		18.94%	HRT-01/10/97
	Sulfur	ASTM D4239	N/A		0.27%	HRT-01/10/97
	Nickel	6010A	0.24		30.1	FPE-01/10/97 @ 1517
	Vanadium	6010A	0.24		231	FPE-01/10/97 @ 1517
	pH	9045	N/A		12.7 @ 22°C	SKH-01/10/97 @ 0800

NOTES: Fly Ash sample was mixed per client's instructions:
98% Fly Ash and 2% Air Heater

RESPECTFULLY SUBMITTED BY:

Elaine Charlton

Carol Isenhour
Vice President

DATE: January 10, 1997

CLIENT:	Westmoreland - LG&E Partners	SUBMITTED BY:	James R. Reed & Associates 11864 Canon Blvd., Suite 103 Newport News, VA 23606 (804) 873-4703 phone (804) 873-1498 fax		
ATTN:	Bill McGee				
ADDRESS:	P.O. Box 351, Railroad Street				
CITY:	Weldon, NC 27890				
PHONE:	(919) 536-3200 ext 234	SAMPLE RECEIPT DATE:	01/08/97	TIME:	1715
FAX:					
		RECEIVED BY:	TGP		
		GRAB COLLECTION DATE:	01/08/97	GRAB TIME:	1330
SPECIAL NOTES: 10%		COMPOSITE COLLECTION:	Start Date / Start Time / End Date / End Time		
		COLLECTED BY:	B. Wilson - LG&E Partners		
		PICKED UP BY:	C. Johnson - LG&E Partners		
		NUMBER OF CONTAINERS:	3	Condition	(x)GOOD ( )OTHER
		EXPLAIN			

SAMPLE ID: Fly Ash 98%/2% Air Heater

SAMPLE NO: 97-0269

Parameter	EPA HW No.	Method Number	Method Detection Limit (mg/L)	Regulatory Level (mg/L)	Practical Quantitation Limit(mg/L)	Result (mg/L)	Analyst/Date/Time
TOXICITY CHARACTERISTIC LEACHING PROCEDURE							
Arsenic	D004	6010A	0.002	5.0		0.134	FPE-01/10/97 @ 1446
Barium	D005	6010A	0.005	100.0		1.13	FPE-01/10/97 @ 1446
Cadmium	D006	6010A	0.0005	1.0		<0.0005	FPE-01/10/97 @ 1446
Chromium	D007	6010A	0.005	5.0		<0.005	FPE-01/10/97 @ 1446
Lead	D008	6010A	0.005	5.0		<0.005	FPE-01/10/97 @ 1446
Mercury	D009	7470	0.0002	0.2		<0.0002	SKH-01/10/97 @ 1230
Selenium	D010	6010A	0.005	1.0		0.199	FPE-01/10/97 @ 1446
Silver	D011	6010A	0.001	5.0		<0.001	FPE-01/10/97 @ 1446

NOTES: Fly Ash sample was mixed per client's instructions:
98% Fly Ash and 2% Air Heater

RESPECTFULLY SUBMITTED BY:

Elaine Claiborne

Carol Isenhour
Vice President

DATE: January 10, 1997

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director

DEHNR

January 6, 1997

Mr. Hazen Blodgett
Assistant County Manager
County of Halifax
P. O. Box 38
Halifax, NC 27839

RE: Preliminary Evaluation, Halifax County Ash Monofill, Halifax County, Permit Number 42-04

Dear Mr. Blodgett:

The purpose of this letter is to inform the owner/operator of the referenced facility of their responsibilities under the recently adopted industrial waste rules.

Rule .0503(d)(iii) of the solid waste management rules codified at 15A NCAC 13B requires that operators of new industrial waste landfills (ILFs), lateral expansions of existing ILFs, and ILFs operating on or after January 1,1998, shall submit to the Division a design that satisfies one of the following criteria:

(A) a design that will ensure that the ground water standards established under 15A NCAC 2L will not be exceeded in the uppermost aquifer at the compliance boundary established by the Division in accordance with 15A NCAC 2L. The design shall be based upon modelling methods acceptable to the Division, which shall include at a minimum the following factors:

(I) the hydrogeologic characteristics of the facility and surrounding lands;
(II) the climatic factors of the area; and
(III) the volume and physical and chemical characteristics of the leachate, **or**

(B) a design with a leachate collection system, a closure cap system, and a composite liner system consisting of two components: the upper component shall consist of a minimum 30-mil flexible membrane (FML), and the lower components shall consist of at least a two-foot layer of compacted soil with a hydraulic conductivity of no more than $1x10^{-7}$ cm/sec. FML, components consisting of high density polyethylene (HDPE) shall be at least 60-mil thick.

An existing landfill is defined as a landfill that is receiving waste on October 1, 1995, the effective date of this rule and is not a new landfill. A lateral expansion of an existing landfill is defined as the placement of waste outside the actual waste "footprint" established prior to January 1,1998. A new landfill is defined as a landfill that has not received waste prior to

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October 1, 1995, the effective date of the rules.

Under this rule, an existing landfill may continue to operate until January 1, 1998. However; if the existing landfill proposes to operate on or after that date, it must demonstrate that its current design or a proposed design change to the existing landfill will ensure compliance with the ground water standards as required in criteria (A) of Rule .0503(d)(iii). If a lateral expansion of the existing landfill or a new landfill is proposed, a permit application that meets all the requirements of Rules .0503, .0504, and .0505 must be submitted for review and approval.

In order to meet the requirements of Rule .0503(2)(d)(ii) and to provide adequate landfill capacity while evaluating the landfill design for compliance with those requirements, the Section requires the submittal of a landfill design plan including the following:

A construction and operational plan which limits development of the landfill to the lateral expansion of the waste "footprint"established as of January 1, 1998. The plan shall be developed in one-year phases and operated in such a manner that the landfill may be closed at any time.

The capacity of the landfill design plan shall not exceed five (5) years.

A water quality monitoring plan including additional wells located, sampled, and analyzed in a way that demonstrates compliance with 2L. Please contact Bobby Lutfy of the Section concerning monitoring and sampling parameters.

A closure plan including a final cap system designed to ensure compliance with 2L as demonstrated by modelling methods acceptable to the Section.

The submittal of this information and acknowledgement of receipt by the Section prior to January 1, 1998, will constitute compliance with Rule .0503(2)(d)(ii). However; this does **not** constitute final determination by the Section that the design ensures that the ground water standards established under 15A NCAC 2L will not be exceeded in the uppermost aquifer at the compliance boundary. It should be noted that a lateral expansion beyond the 1998 footprint or a new landfill must meet all the permit requirements of Rules .0503-.0505, including a demonstration that the proposed design meets the requirements of Rule .0503(2)(d)(ii).

This letter serves as notification to the owner/operator that the information previously described as necessary to complete the final determination of compliance with Rule .0503(2)(d)(ii) shall be submitted to the Section thirty (30) days prior to January 1, 1998.

If there are any questions concerning this letter, please contact Susan Leistiko at (919) 733-0692 extension 262.

Sincerely,

James C Coffey

James C. Coffey, Supervisor
Permitting Branch
Solid Waste Section

cc: John Bove
Susan Leistiko
Bobby Lutfy
Terry Dover
Ben Barnes

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State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director

January 3, 1997

Maggie T. Estrada
Senior Environmental Engineer
LG&E Power Development, Inc.
3200 Park Center Drive, Suite 400
Costa Mesa, California 92626

Re: Disposal of Ash Resulting for Pet Coke/Coal Test Burn
Roanoke Valley Energy Facility
Halifax County, North Carolina

Dear Ms. Estrada:

As discussed in previous correspondence, the Solid Waste Section will allow disposal of ash resulting from the petroleum coke/coal test burn at the Halifax County Ash Monofill provided that the ash generated is non-hazardous. Recharacterization of the ash will be required once the process for co-firing petroleum coke and coal on a continuous basis has been refined. Also, the Section has revised rules regarding design of industrial waste landfills. Halifax County may be required to make design changes (especially liner and leachate collection system design) at the landfill based on groundwater modeling results. Modeling would have to be done for the mixed pet coke/coal ash if Roanoke Valley decides to co-fire this mix on a continuous basis.

The proposed sampling and analysis procedures and storage procedures for ash generated during the test burn presented in your letter of December 20, 1996, are satisfactory to the Section. The Solid Waste Section will use data from both disposal sampling and beneficial reuse sampling to determine the feasibility of utilizing the ash as an alternative daily cover.

If you have questions or need additional information, please contact me at (919) 733-0692, extension 259.

Sincerely,

Sherri L. Coghill

Sherri L. Coghill
Environmental Engineer
Solid Waste Section

cc: Hazen Blodgett, Halifax County
William R. Hocutt
Ben Barnes
Terry Dover

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