HW → 1999.10.15 Land Disposal Restriction Report

Norlite Corporation

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COHOES, N.Y. 12047
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To: Peter Mack
Howard Brezner
FYI + return JG

October 15, 1999

Mr. Parag Amin
State of New York
Department of Environmental Conservation
Division of Solid and Hazardous Materials
50 Wolf Road
Albany, NY 12233-7251

Dear Mr. Amin:

Please find enclosed the Norlite Corporation report on the Land Disposal Restriction determination for the lightweight aggregate clinker. The report is based upon the two samples taken during the trial burn in April 1999. The report on the Bevill Determination will follow tomorrow and a single copy of the full data package for both determinations should arrive sometime this week. I apologize for the delay in forwarding this information to you and I appreciate your patience. If you have any questions regarding the report, please feel free to call me.

Sincerely,

William Morris

William Morris
Environmental Director
NORLITE CORPORATION

cc. Jeff Gregg, Region IV
Stan Milos, Norlite
Doug Roeck, ENSR

Land Disposal Restriction Determination for Norlite Corporation Clinker

Norlite Corporation
628 South Saratoga Street
Cohoes, NY 12047

October 15, 1999

INTRODUCTION

Between April 28 and April 30, 1999, Norlite Corporation (Norlite) performed a RCRA Trial Burn and collected data to update the Human Health Risk Assessment for the facility. During this test, the operation was subjected to stressed conditions to define an operating envelope for the process and collect emission and residual samples for analysis. Two samples of the lightweight aggregate clinker were collected during this period. One sample was collected during the "low temperature" condition (Condition A) and one sample was collected during the "high temperature" condition (Condition B). The samples were collected while the kiln was burning hazardous waste fuel, low heat value solid low grade fuel and hazardous waste wastewater. During the "low temperature" condition, the kiln feed was spiked with chlorinated hydrocarbons. Chlorinated hydrocarbons and various heavy metals were spiked during the "high temperature" condition.

Because certain waste streams that were fed to the kiln were burned for the purposes of destruction, pursuant to 6 NYCRR 374-1.3(a)(2), the clinker must meet the following criteria in order to be used as a unrestricted product:

- The product must not exhibit a characteristic of a hazardous waste; and
- The product must meet the nonwastewater Universal Treatment Standards (UTS) found in 40 CFR 268.48.

Based on the thermal process, the clinker will not exhibit the characteristics of ignitability, corrosivity or reactivity. The material should also not be expected to contain any organic compounds or leachable metals. Norlite performed the sampling and analysis plan that was submitted to NYSDEC on July 14, 1998 to demonstrate that the clinker meets the UTS as described above.

RESULTS OF ANALYSIS

Provided in Appendix A are the data sheets reporting the results of metals and organic compound concentrations for both conditions. As indicated on the data sheets for the organic

compounds, the only analyte detected was Methylene Chloride at a concentration of 160 ug/kg in both samples and chloroform was found below the detection limit. Table 1 shows the results of the metals analysis for each sample and the comparison to the LDR/UTS limits. The clinker was subjected to the TCLP extraction (EPA Method 1311) and the leachate was analyzed for the required metals.

Table 1

METALLIC ANALYTE	Cas No.	LDR/UTS Limits	Clinker Leachate Condition A	Clinker Leachate Condition B
Antimony	7440-36-0	2.1	0.0091	0.0043
Arsenic	7440-38-2	5.0	0.0105	0.006
Barium	7440-39-3	7.6	0.116	0.341
Beryllium	7440-41-7	0.014	0.00057	0.00059
Cadmium	7440-43-9	0.19	ND<0.0004	ND<0.0004
Chromium	7440-47-3	0.86	ND<0.0047	ND<0.0047
Lead	7439-92-1	0.37	ND<0.0026	0.0071
Mercury	7439-97-6	0.025	0.00028	0.00029
Nickel	7440-02-0	5.0	0.0048	0.0054
Selenium	7782-49-2	0.16	ND<0.0021	ND<0.0021
Silver	7440-22-4	0.3	ND<0.0041	ND<0.0041
Thallium	7440-28-0	0.078	0.0932	ND<0.0053
Vanadium	7440-62-2	0.23	ND<0.0057	ND<0.0057
Zinc	7440-66-6	5.3	0.318	0.130

CONCLUSIONS

The analyses of these two samples demonstrates compliance of the lightweight aggregate clinker with the land disposal restrictions for organic compounds as well as metals under both extreme operating conditions with the exception of thallium during the low temperature condition The concentration of thallium in the TCLP extract of the clinker yielded a leachable concentration of 93.2 ug/L and the universal treatment standard for thallium is 78 ug/L. With the exceptions of methylene chloride and chloroform, no organic compounds, including chlorinated dioxins and furans, were observed in the clinker under either condition.

The discovery of thallium in the clinker extract is suspect, however. At a concentration of 93.2 ug/L, a mass analysis of clinker would need to show at least 1.86 mg/kg based on the dilution factor of the TCLP extraction. While metals analysis was not performed during the low temperature condition, results of clinker analysis as reported in the trial burn report for thallium show that the metal is not present at a concentration over 0.2 mg/kg for the high temperature condition. Analysis of the feed streams, likewise, shows the absence of thallium during the high temperature condition.

Norlite will monitor compliance with the LDR/UTS requirements for the metals on a monthly basis while processing solid low grade fuel and hazardous waste wastewater as described in the previously submitted test protocol. In addition, Norlite will sample and analyze for the organic compounds on an annual basis to ensure compliance.

APPENDIX A

FORM 1

VOLATILE ORGANICS DATA SHEET

EPA SAMPLE NO.

ENSR - NORLITE
CCC-TCLPUTS-CA

Lab Code: AES	Case No: EN9901	SDG No.:	BD-BVL-CA
Matrix (SOIL/WATER):	SOIL SAS No._____	Lab Sample ID:	CCC-TCLPUTS-CA
Sample wt/vol: 10 (g/ml	g	File ID:	D0579
Level: (low/med)	LOW	Date Received:	05/05/99
% Moisture:	0	Date Analyzed:	05/12/99
Dilution Factor:	1	Instrument ID:	7002D
Concentration Units: UG/KG		Column (pack/csp):	CAP

CAS No.	Compound	Result	Lab Flags
630-20-6	1,1,1,2-Tetrachloroethane	100	U
71-55-6	1,1,1-Trichloroethane	100	U
79-64-5	1,1,2,2-Tetrachloroethane	100	U
79-00-5	1,1,2-Trichloroethane	100	U
75-34-3	1,1-Dichloroethane	100	U
75-35-4	1,1-Dichloroethene	100	U
96-18-4	1,2,3-Trichloropropane	100	U
96-12-8	1,2-Dibromo-3-Chloropropane	100	U
106-93-4	1,2-Dibromoethane	100	U
107-06-2	1,2-Dichloroethane	100	U
78-87-5	1,2-Dichloropropane	100	U
78-93-3	2-Butanone (MEK)	100	U
110-75-8	2-Chloroethyl Vinyl Ether	100	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	100	U
67-64-1	Acetone	100	U
75-05-8	Acetonitrile	1000	U
107-02-8	Acrolein	1000	U
107-13-1	Acrylonitrile	100	U
71-43-2	Benzene	100	U
74-97-5	Bromochloromethane	100	U
75-25-2	Bromoform	100	U
74-83-9	Bromomethane	100	U
75-15-0	Carbon Disulfide	100	U
56-23-5	Carbon Tetrachloride	100	U
124-48-1	Chlorodibromomethane	100	U

CAS No.	Compound	Result	Lab Flags
75-00-3	Chloroethane	100	U
67-66-3	Chloroform	21	BJ
74-87-3	Chloromethane	100	U
108-90-7	Chlorobenzene	100	U
75-71-8	Dichlorodifluoromethane	100	U
10061-01-5	Cis-1,3-Dichloropropene	100	U
74-95-3	Dibromomethane	100	U
97-63-2	Ethyl Methacrylate	100	U
100-41-4	Ethylbenzene	100	U
206-44-0	Ethylene Oxide	100	U
74-88-4	Iodomethane	100	U
126-98-7	Methacrylonitrile	100	U
75-09-2	Methylene Chloride	160	
80-62-6	Methyl Methacrylate	100	U
108-38-3	m&p-Xylene	100	U
95-47-6	o-Xylene	100	U
76-01-7	Pentachloroethane	100	U
127-18-4	Tetrachloroethene	100	U
108-88-3	Toluene	100	U
156-60-5	Trans-1,2-Dichloroethene	100	U
10061-02-6	Trans-1,3-Dichloropropene	100	U
79-01-6	Trichloroethene	100	U
75-69-4	Trichlorofluoromethane	100	U
75-01-4	Vinyl Chloride	100	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CCC-TCLPUTS-CA

Lab Name: AES,INC. Contract:

Lab Code: AES Case No.: EN9901 SAS No.: SDG No.: BD-BVL-CA

Matrix: (soil/water) SOIL Lab Sample ID: CCC-TCLPUTS-CA

Sample wt/vol: 10.0 (g/mL) G Lab File ID: D0579

Level: (low/med) LOW Date Received: 5/ 5/99

% Moisture: not dec. 0. Date Analyzed: 5/12/99

Column: (pack/cap) CAP Dilution Factor: 1.00

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM 1

VOLATILE ORGANICS DATA SHEET

EPA SAMPLE NO.

ENSR - NORLITE
CCC-TCLPUTS-CB

Lab Code: AES	Case No: EN9901	SDG No.:	BD-BVL-CA
Matrix (SOIL/WATER):	SOIL SAS No._____	Lab Sample ID:	CCC-TCLPUTS-CB
Sample wt/vol: 10 (g/ml	g	File ID:	D0583
Level: (low/med)	LOW	Date Received:	05/05/99
% Moisture:	0	Date Analyzed:	05/12/99
Dilution Factor:	1	Instrument ID:	7002D
Concentration Units: UG/KG		Column (pack/csp):	CAP

CAS No.	Compound	Result	Lab Flags
630-20-6	1,1,1,2-Tetrachloroethane	100	U
71-55-6	1,1,1-Trichloroethane	100	U
79-64-5	1,1,2,2-Tetrachloroethane	100	U
79-00-5	1,1,2-Trichloroethane	100	U
75-34-3	1,1-Dichloroethane	100	U
75-35-4	1,1-Dichloroethene	100	U
96-18-4	1,2,3-Trichloropropane	100	U
96-12-8	1,2-Dibromo-3-Chloropropane	100	U
106-93-4	1,2-Dibromoethane	100	U
107-06-2	1,2-Dichloroethane	100	U
78-87-5	1,2-Dichloropropane	100	U
78-93-3	2-Butanone (MEK)	100	U
110-75-8	2-Chloroethyl Vinyl Ether	100	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	100	U
67-64-1	Acetone	100	U
75-05-8	Acetonitrile	1000	U
107-02-8	Acrolein	1000	U
107-13-1	Acrylonitrile	100	U
71-43-2	Benzene	100	U
74-97-5	Bromochloromethane	100	U
75-25-2	Bromoform	100	U
74-83-9	Bromomethane	100	U
75-15-0	Carbon Disulfide	100	U
56-23-5	Carbon Tetrachloride	100	U
124-48-1	Chlorodibromomethane	100	U

CAS No.	Compound	Result	Lab Flags
75-00-3	Chloroethane	100	U
67-66-3	Chloroform	16	BJ
74-87-3	Chloromethane	100	U
108-90-7	Chlorobenzene	100	U
75-71-8	Dichlorodifluoromethane	100	U
10061-01-5	Cis-1,3-Dichloropropene	100	U
74-95-3	Dibromomethane	100	U
97-63-2	Ethyl Methacrylate	100	U
100-41-4	Ethylbenzene	100	U
206-44-0	Ethylene Oxide	100	U
74-88-4	Iodomethane	100	U
126-98-7	Methacrylonitrile	100	U
75-09-2	Methylene Chloride	160	
80-62-6	Methyl Methacrylate	100	U
108-38-3	m&p-Xylene	100	U
95-47-6	o-Xylene	100	U
76-01-7	Pentachloroethane	100	U
127-18-4	Tetrachloroethene	100	U
108-88-3	Toluene	100	U
156-60-5	Trans-1,2-Dichloroethene	100	U
10061-02-6	Trans-1,3-Dichloropropene	100	U
79-01-6	Trichloroethene	100	U
75-69-4	Trichlorofluoromethane	100	U
75-01-4	Vinyl Chloride	100	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CCC-TCLPUTS-CB

Lab Name: AES,INC. Contract:

Lab Code: AES Case No.: EN9901 SAS No.: SDG No.: BD-BVL-CA

Matrix: (soil/water) SOIL Lab Sample ID: CCC-TCLPUTS-CB

Sample wt/vol: 10.0 (g/mL) G Lab File ID: D0583

Level: (low/med) LOW Date Received: 5/ 5/99

% Moisture: not dec. 0. Date Analyzed: 5/12/99

Column: (pack/cap) CAP Dilution Factor: 1.00

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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EPA SAMPLE NO.

ENSR-NORLITE
CCC-TCLPUTS-CA

Lab Code: AES Case No: EN9901 SAS No._____

Matrix (SOIL/WATER): SOIL

Sample wt/vol: 30 (g/ml) g

Level: (low/med) LOW

% Moisture: 0

Dilution Factor: 1

Column (pack/cap): CAP

SDG No.: BD-BVL-CA

Lab Sample ID: CCC-TCLPUTS-CA

File ID: A1240

Date Received: 05/05/99

Date Extracted: 05/11/99

Date Analyzed: 05/28/99

Instrument ID: 7001A

Concentration Units: UG/KG

CAS No.	Compound	Result	Lab Flags
95-94-3	1,2,3,5-Tetrachlorobenzene	660	U
120-82-1	1,2,4-Trichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
122-66-7	1,2-Diphenylhydrazine	330	U
106-46-7	1,4-Dichlorobenzene	330	U
100-25-4	1,4-Dinitrobenzene	ND	
58-90-2	2,3,4,6-Tetrachlorophenol	660	U
95-95-4	2,4,5-Trichlorophenol	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
120-83-2	2,4-Dichlorophenol	330	U
105-67-9	2,4-Dimethyl phenol	330	U
51-28-5	2,4-Dinitrophenol	1700	U
121-14-2	2,4-Dinitrotoluene	330	U
87-65-0	2,6-Dichlorophenol	660	U
606-20-2	2,6-Dinitrotoluene	330	U
53-96-3	2-Acetylaminofluorene	660	U
91-58-7	2-Chloronaphthale	ND	
95-57-8	2-Chlorophenol	330	U
95-48-7	2-Methylphenol	330	U
91-59-8	2-Naphthylamine	660	U
88-74-4	2-Nitroaniline	1700	U
88-75-5	2-Nitrophenol	330	U
56-49-5	3-Methylchloanthrene	660	U
108-39-4	3-Methylphenol	330	U
534-52-1	4,6-Dinitro-2-Methylphenol	1700	U
92-67-1	4-Aminobiphenyl	660	U
101-55-3	4-Bromophenyl Phenyl Ether	330	U
59-50-7	4-Chloro-3-Methylphenol	330	U
106-47-8	4-Chloroaniline	330	U
106-44-5	4-Methylphenol	330	U
100-01-6	4-Nitroaniline	1700	U
100-02-7	4-Nitrophenol	330	U
99-55-8	5-Nitro-o-Toluidine	660	U
208-96-8	Acenaphthylene	330	U
83-32-9	Acenapthene	ND	
98-86-2	Acetophenone	660	U
62-53-3	Aniline	660	U
120-12-7	Anthracene	330	U
140-57-8	Aramite	ND	
56-55-3	Benzo(a)Anthracene	330	U
50-32-8	Benzo(a)pyrene	330	U
205-99-2	Benzo(b)fluoranthene	330	U
191-24-2	Benzo(g,h,i)Perylene	330	U
207-08-9	Benzo(k)Fluoranthene	330	U
111-91-1	Bis(2-Chloroethoxy)Methane	330	U
111-44-4	Bis(2-Chloroethyl)ether	330	U
108-60-1	Bis(2-Chloroisopropyl)ether	330	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	330	U

CAS No.	Compound	Result	Lab Flags
85-68-7	Butyl Benzyl Phthalate	330	U
510-15-6	Chlorobenzilate	660	U
218-01-9	Chrysene	330	U
192-65-4	Dibenzo(a,e)Pyrene	ND	
53-70-3	Dibenzo(a,h)anthrancene	330	U
84-66-2	Diethyl Phthalate	330	U
131-11-3	Dimethyl Phthalate	330	U
60-11-7	Dimethylaminoazobenzene	660	U
84-74-2	Di-n-butyl phthalate	330	U
117-84-0	Di-n-octyl phthalate	330	U
122-39-7	Diphenylamine	660	U
298-04-4	Disulfoton	660	U
206-44-0	Fluoranthene	330	U
86-73-7	Fluorene	330	U
118-74-1	Hexachlorobenzene	330	U
87-68-3	Hexachlorobutadiene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
67-72-1	Hexachloroethane	330	U
1888-71-7	Hexachloropropene	660	U
193-39-5	Indeno(1,2,3-cd)Pyrene	330	U
120-58-1	Isosafrole	660	U
143-50-0	Kepone	ND	
91-80-5	Methapyrilene	ND	
66-27-3	Methyl Methanesulfonate	660	U
298-00-0	Methyl Parathion	660	U
91-20-3	Naphthalene	330	U
98-95-3	Nitrobenzene	330	U
55-18-5	N-Nitrosodiethylamine	660	U
62-75-9	N-Nitrosodimethylamine	660	U
924-16-3	N-Nitrosodi-n-butylamine	660	U
621-64-7	N-Nitrosodi-n-propylamine	330	U
86-30-6	N-Nitrosodiphenylamine	330	U
10595-95-6	N-Nitrosomethylethlamine	660	U
59-89-2	N-Nitrosomorpholine	660	U
100-75-4	N-Nitrosopiperdine	660	U
930-55-2	N-Nitrosopyrrolidine	660	U
82-68-8	Pentachlorobenzene	660	U
82-68-8	Pentachloronitrobenzene	660	U
87-86-5	Pentachlorophenol	1700	U
62-44-2	Phenacetin	660	U
85-01-8	Phenanthrene	330	U
108-95-2	Phenol	330	U
298-02-2	Phorate	660	U
85-44-9	Phthalic Anhydride	ND	
129-00-0	Pyrene	330	U
110-86-1	Pyridine	330	U
94-59-7	Safrole	660	U
126-72-7	Tris(2,3-Dibromopropyl)Phosphate	ND	

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CCC-TCLPUTS-CA

Lab Name: AES,INC. Contract:

Lab Code: AES Case No.: EN9901 SAS No.: SDG No.: BD-BVL-CA

Matrix: (soil/water) SOIL Lab Sample ID: CCC-TCLPUTS-CA

Sample wt/vol: 30.0 (g/mL) G Lab File ID: A1240

Level: (low/med) LOW Date Received: 5/ 5/99

% Moisture: not dec. 0. dec._____ Date Extracted: 5/11/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 5/28/99

GPC Cleanup: (Y/N) N pH: 8.3 Dilution Factor: 1.00

Number TICs found: 4 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	ALDOL CONDENSATE	4.29	1000.	BJ A
2.	- -	UNKNOWN	25.57	2000.	BJ
3.	- -	UNKNOWN	27.60	1000.	J
4.	- -	UNKNOWN	27.76	1000.	J
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SEMI-VOLATILE ORGANICS DATA SHEET

EPA SAMPLE NO.

ENSR-NORLITE
CCC-TCLPUTS-CB

Lab Code: AES	Case No:	EN9901	
Matrix (SOIL/WATER):	SOIL	SAS No._____	
Sample wt/vol: 30 (g/ml)	g		
Level: (low/med)	LOW		
% Moisture:	0		
Dilution Factor:	1		
Column (pack/cap):	CAP		

SDG No.:	BD-BVL-CA
Lab Sample ID:	CCC-TCLPUTS-CB
File ID:	A1241
Date Received:	05/05/99
Date Extracted:	05/11/99
Date Analyzed:	05/28/99
Instrument ID:	7001A

Concentration Units: UG/KG

CAS No.	Compound	Result	Lab Flags
95-94-3	1,2,3,5-Tetrachlorobenzene	660	U
120-82-1	1,2,4-Trichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
122-66-7	1,2-Diphenylhydrazine	ND	
106-46-7	1,4-Dichlorobenzene	330	U
100-25-4	1,4-Dinitrobenzene	ND	
58-90-2	2,3,4,6-Tetrachlorophenol	660	U
95-95-4	2,4,5-Trichlorophenol	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
120-83-2	2,4-Dichlorophenol	330	U
105-67-9	2,4-Dimethyl phenol	330	U
51-28-5	2,4-Dinitrophenol	1700	U
121-14-2	2,4-Dinitrotoluene	330	U
87-65-0	2,6-Dichlorophenol	660	U
606-20-2	2,6-Dinitrotoluene	330	U
53-96-3	2-Acetylaminofluorene	660	U
91-58-7	2-Chloronaphthale	ND	
95-57-8	2-Chlorophenol	330	U
95-48-7	2-Methylphenol	330	U
91-59-8	2-Naphthylamine	660	U
88-74-4	2-Nitroaniline	1700	U
88-75-5	2-Nitrophenol	330	U
56-49-5	3-Methylchloanthrene	660	U
108-39-4	3-Methylphenol	ND	
534-52-1	4,6-Dinitro-2-Methylphenol	1700	U
92-67-1	4-Aminobiphenyl	660	U
101-55-3	4-Bromophenyl Phenyl Ether	330	U
59-50-7	4-Chloro-3-Methylphenol	330	U
106-47-8	4-Chloroaniline	330	U
106-44-5	4-Methylphenol	330	U
100-01-6	4-Nitroaniline	1700	U
100-02-7	4-Nitrophenol	330	U
99-55-8	5-Nitro-o-Toluidine	660	U
208-96-8	Acenaphthylene	330	U
83-32-9	Acenapthene	ND	
98-86-2	Acetophenone	660	U
62-53-3	Aniline	660	U
120-12-7	Anthracene	330	U
140-57-8	Aramite	ND	
56-55-3	Benzo(a)Anthracene	330	U
50-32-8	Benzo(a)pyrene	330	U
205-99-2	Benzo(b)fluoranthene	330	U
191-24-2	Benzo(g,h,i)Perylene	330	U
207-08-9	Benzo(k)Fluoranthene	330	U
111-91-1	Bis(2-Chloroethoxy)Methane	330	U
111-44-4	Bis(2-Chloroethyl)ether	330	U
108-60-1	Bis(2-Chloroisopropyl)ether	ND	
117-81-7	Bis(2-Ethylhexyl)Phthalate	330	U

CAS No.	Compound	Result	Lab Flags
85-68-7	Butyl Benzyl Phthalate	330	U
510-15-6	Chlorobenzilate	660	U
218-01-9	Chrysene	330	U
192-65-4	Dibenzo(a,e)Pyrene	ND	
53-70-3	Dibenzo(a,h)anthrancene	330	U
84-66-2	Diethyl Phthalate	330	U
131-11-3	Dimethyl Phthalate	330	U
60-11-7	Dimethylaminoazobenzene	660	U
84-74-2	Di-n-butyl phthalate	330	U
117-84-0	Di-n-octyl phthalate	330	U
122-39-7	Diphenylamine	660	U
298-04-4	Disulfoton	660	U
206-44-0	Fluoranthene	330	U
86-73-7	Fluorene	330	U
118-74-1	Hexachlorobenzene	330	U
87-68-3	Hexachlorobutadiene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
67-72-1	Hexachloroethane	330	U
1888-71-7	Hexachloropropene	660	U
193-39-5	Indeno(1,2,3-cd)Pyrene	330	U
120-58-1	Isosafrole	660	U
143-50-0	Kepone	ND	
91-80-5	Methapyrilene	ND	
66-27-3	Methyl Methanesulfonate	660	U
298-00-0	Methyl Parathion	660	U
91-20-3	Naphthalene	330	U
98-95-3	Nitrobenzene	330	U
55-18-5	N-Nitrosodiethylamine	660	U
62-75-9	N-Nitrosodimethylamine	660	U
924-16-3	N-Nitrosodi-n-butylamine	660	U
621-64-7	N-Nitrosodi-n-propylamine	330	U
86-30-6	N-Nitrosodiphenylamine	330	U
10595-95-6	N-Nitrosomethylethlamine	660	U
59-89-2	N-Nitrosomorpholine	660	U
100-75-4	N-Nitrosopiperdine	660	U
930-55-2	N-Nitrosopyrrolidine	660	U
82-68-8	Pentachlorobenzene	660	U
82-68-8	Pentachloronitrobenzene	660	U
87-86-5	Pentachlorophenol	1700	U
62-44-2	Phenacetin	660	U
85-01-8	Phenanthrene	330	U
108-95-2	Phenol	330	U
298-02-2	Phorate	660	U
85-44-9	Phthalic Anhydride	ND	
129-00-0	Pyrene	330	U
110-86-1	Pyridine	330	U
94-59-7	Safrole	660	U
126-72-7	Tris(2,3-Dibromopropyl)Phosphate	ND	

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CCC-TCLPUTS-CB

Lab Name: AES,INC. Contract:

Lab Code: AES Case No.: EN9901 SAS No.: SDG No.: BD-BVL-CA

Matrix: (soil/water) SOIL Lab Sample ID: CCC-TCLPUTS-CB

Sample wt/vol: 30.0 (g/mL) G Lab File ID: A1241

Level: (low/med) LOW Date Received: 5/ 5/99

% Moisture: not dec. 0. dec._____ Date Extracted: 5/11/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 5/28/99

GPC Cleanup: (Y/N) N pH: 8.4 Dilution Factor: 1.00

Number TICs found: 5 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	ALDOL CONDENSATE	4.36	20000.	BJ A
2.	- -	ALDOL CONDENSATE	4.40	100.	BJ A
3.	- -	UNKNOWN	25.55	600.	BJ
4.	- -	UNKNOWN	27.75	400.	J
5.	- -	UNKNOWN	31.72	400.	J
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1D

PESTICIDE/PCB ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CCC-TCLPUTS-CA

Lab Name: AES,INC. Contract:

Lab Code: AES Case No.: EN9901 SAS No.: SDG No.: BD-BVL-CA

Matrix: (soil/water) SOLID Lab Sample ID: CCC-TCLPUTS-CA

Sample wt/vol: 15.0 (g/mL) G Lab File ID: 990505 N01

Level: (low/med) LOW Date Received: 5/ 5/99

% Moisture: not dec. 0. dec._____ Date Extracted: 5/12/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 5/23/99

GPC Cleanup: (Y/N) N pH: 8.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	Alpha-BHC	1.7	U
319-85-7	Beta-BHC	1.7	U
58-89-9	Gamma-BHC	1.7	U
76-44-8	Heptachlor	1.7	U
309-00-2	Aldrin	1.7	U
1024-57-3	Heptachlor Epoxide	1.7	U
959-98-8	Endosulfan I	1.7	U
60-57-1	Dieldrin	3.3	U
72-55-9	4,4'-DDE	3.3	U
72-20-8	Endrin	3.3	U
33213-65-9	Endosulfan II	3.3	U
72-54-8	4,4'-DDD	3.3	U
1031-07-8	Endosulfan Sulfate	3.3	U
50-29-3	4,4'-DDT	3.3	U
72-43-5	Methoxychlor	17.	U
5103-71-9	Alpha Chlordane	1.7	U
5103-74-2	Gamma Chlordane	1.7	U
8001-35-2	Toxaphene	170.	U
12674-11-2	Aroclor-1016	33.	U
11104-28-2	Aroclor-1221	67.	U
11141-16-5	Aroclor-1232	33.	U
53469-21-9	Aroclor-1242	33.	U
12672-29-6	Aroclor-1248	33.	U
11097-69-1	Aroclor-1254	33.	U
11096-82-5	Aroclor-1260	33.	U
200-00-0	Endrin Aldehyde	3.3	U
2303-16-4	Diallate	330.	U
23950-58-5	Pronamide	33.	U
465-73-6	Isodrin	33.	U
298-00-0	Methyl Parathion	3.3	U
82-68-8	PCNB	3.3	U

1D

PESTICIDE/PCB ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CCC-TCLPUTS-CB

Lab Name: AES,INC. Contract:

Lab Code: AES Case No.: EN9901 SAS No.: SDG No.: BD-BVL-CA

Matrix: (soil/water) SOLID Lab Sample ID: CCC-TCLPUTS-CB

Sample wt/vol: 15.0 (g/mL) G Lab File ID: 990505 N02

Level: (low/med) LOW Date Received: 5/ 5/99

% Moisture: not dec. 0. dec._____ Date Extracted: 5/12/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 5/24/99

GPC Cleanup: (Y/N) N pH: 8.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	Alpha-BHC	1.7	U
319-85-7	Beta-BHC	1.7	U
58-89-9	Gamma-BHC	1.7	U
76-44-8	Heptachlor	1.7	U
309-00-2	Aldrin	1.7	U
1024-57-3	Heptachlor Epoxide	1.7	U
959-98-8	Endosulfan I	1.7	U
60-57-1	Dieldrin	3.3	U
72-55-9	4,4'-DDE	3.3	U
72-20-8	Endrin	3.3	U
33213-65-9	Endosulfan II	3.3	U
72-54-8	4,4'-DDD	3.3	U
1031-07-8	Endosulfan Sulfate	3.3	U
50-29-3	4,4'-DDT	3.3	U
72-43-5	Methoxychlor	17.	U
5103-71-9	Alpha Chlordane	1.7	U
5103-74-2	Gamma Chlordane	1.7	U
8001-35-2	Toxaphene	170.	U
12674-11-2	Aroclor-1016	33.	U
11104-28-2	Aroclor-1221	67.	U
11141-16-5	Aroclor-1232	33.	U
53469-21-9	Aroclor-1242	33.	U
12672-29-6	Aroclor-1248	33.	U
11097-69-1	Aroclor-1254	33.	U
11096-82-5	Aroclor-1260	33.	U
200-00-0	Endrin Aldehyde	3.3	U
2303-16-4	Diallate	330.	U
23950-58-5	Pronamide	33.	U
465-73-6	Isodrin	33.	U
298-00-0	Methyl Parathion	3.3	U
82-68-8	PCNB	3.3	U

1D

ALCOHOL ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CCC-TCLPUTS-CA

Lab Name: AES,INC. Contract:

Lab Code: AES Case No.: EN9901 SAS No.: SDG No.: BD-BVL-CA

Matrix: (soil/water) SOLID Lab Sample ID: CCC-TCLPUTS-CA

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 990505N-01

Level: (low/med) LOW Date Received: 5/5/99

% Moisture: not dec. 0. dec._____ Date Extracted: 5/12/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 5/24/99

GPC Cleanup: (Y/N) N pH: 8.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/g) UG/G	Q
67-56-1	Methanol	50.	U
64-17-5	Ethanol	50.	U
71-23-8	1-Propanol	50.	U
107-18-6	Allyl Alcohol	50.	U
75-65-0	t-Butyl Alcohol	50.	U
107-07-3	2-Chloroethanol	50.	U
78-83-1	Isobutyl Alcohol	50.	U
123-91-1	1,4-Dioxane	50.	U
141-78-6	Ethyl Acetate	50.	U
71-36-3	1-Butanol	50.	U

1D

ALCOHOL ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CCC-TCLPUTS-CB

Lab Name: AES,INC. Contract:

Lab Code: AES Case No.: EN9901 SAS No.: SDG No.: BD-BVL-CA

Matrix: (soil/water) SOLID Lab Sample ID: CCC-TCLPUTS-CB

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 990505N-02

Level: (low/med) LOW Date Received: 5/5/99

% Moisture: not dec. 0. dec._____ Date Extracted: 5/12/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 5/24/99

GPC Cleanup: (Y/N) N pH: 8.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/g) UG/G	Q
67-56-1	Methanol	50.	U
64-17-5	Ethanol	50.	U
71-23-8	1-Propanol	50.	U
107-18-6	Allyl Alcohol	50.	U
75-65-0	t-Butyl Alcohol	50.	U
107-07-3	2-Chloroethanol	50.	U
78-83-1	Isobutyl Alcohol	50.	U
123-91-1	1,4-Dioxane	50.	U
141-78-6	Ethyl Acetate	50.	U
71-36-3	1-Butanol	50.	U

1D

2-CHLOROANILINE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CCC-TCLPUTS-CA

Lab Name: AES,INC. Contract:

Lab Code: AES Case No.: EN9901 SAS No.: SDG No.: BD-BVL-CA

Matrix: (soil/water) SOLID Lab Sample ID: CCC-TCLPUTS-CA

Sample wt/vol: 15.0 (g/mL) G Lab File ID: 990505N-01

Level: (low/med) LOW Date Received: 5/5/99

% Moisture: not dec. 0. dec._____ Date Extracted: 5/12/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 5/24/99

GPC Cleanup: (Y/N) N pH: 8.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/g) UG/G	Q
95-51-2	2-Chloroaniline	1.0	U

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2-CHLOROANILINE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CCC-TCLPUTS-CB

Lab Name: AES,INC. Contract:

Lab Code: AES Case No.: EN9901 SAS No.: SDG No.: BD-BVL-CA

Matrix: (soil/water) SOLID Lab Sample ID: CCC-TCLPUTS-CB

Sample wt/vol: 15.0 (g/mL) G Lab File ID: 990505N-02

Level: (low/med) LOW Date Received: 5/5/99

% Moisture: not dec. 0. dec._____ Date Extracted: 5/12/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 5/24/99

GPC Cleanup: (Y/N) N pH: 8.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/g) UG/G	Q
95-51-2	2-Chloroaniline	1.0	U

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

CCCTCLPUTSCA

Lab Name: ADIRONDACK_ENVIRONMENTAL_ Contract: _____

Lab Code: AES___ Case No.: EN9901 SAS No.: _____ SDG No.: BD-BVL

Matrix (soil/water): WATER Lab Sample ID: CCCTCLPUTSCA

Level (low/med): LOW__ Date Received: 05/05/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_		_		NR
7440-36-0	Antimony_	9.1	B		P_
7440-38-2	Arsenic__	10.5	_		P_
7440-39-3	Barium___	116	B		P_
7440-41-7	Beryllium	0.57	B		P_
7440-43-9	Cadmium__	0.40	U		P_
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_	4.7	U		P_
7440-48-4	Cobalt___		_		NR
7440-50-8	Copper___	15.7	B		P_
7439-89-6	Iron_____		_		NR
7439-92-1	Lead_____	2.6	U	*__	P_
7439-95-4	Magnesium		_		NR
7439-96-5	Manganese		_		NR
7439-97-6	Mercury__	0.28	_	N___	AV
7440-02-0	Nickel___	4.8	B		P_
7440-09-7	Potassium		_		NR
7782-49-2	Selenium_	2.1	U	N___	P_
7440-22-4	Silver___	4.1	U	N___	P_
7440-23-5	Sodium___		_		NR
7440-28-0	Thallium_	93.2	_		P_
7440-62-2	Vanadium_	5.7	U		P_
7440-66-6	Zinc_____	318	_		P_
	Boron____		_		NR
			_		

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

CCCTCLPUTSCB

Lab Name: ADIRONDACK_ENVIRONMENTAL_ Contract: _____

Lab Code: AES___ Case No.: EN9901 SAS No.: _____ SDG No.: BD-BVL

Matrix (soil/water): WATER Lab Sample ID: CCCTCLPUTSCB

Level (low/med): LOW__ Date Received: 05/05/99

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_		_		NR
7440-36-0	Antimony_	4.3	B		P_
7440-38-2	Arsenic__	6.0	B		P_
7440-39-3	Barium___	341	_		P_
7440-41-7	Beryllium	0.59	B		P_
7440-43-9	Cadmium__	0.40	U		P_
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_	4.7	U		P_
7440-48-4	Cobalt___		_		NR
7440-50-8	Copper___	36.0	_		P_
7439-89-6	Iron_____		_		NR
7439-92-1	Lead_____	7.1	_	*	P_
7439-95-4	Magnesium		_		NR
7439-96-5	Manganese		_		NR
7439-97-6	Mercury__	0.29	_	N	AV
7440-02-0	Nickel___	5.4	B		P_
7440-09-7	Potassium		_		NR
7782-49-2	Selenium_	2.1	U	N	P_
7440-22-4	Silver___	4.1	U	N	P_
7440-23-5	Sodium___		_		NR
7440-28-0	Thallium_	5.3	U		P_
7440-62-2	Vanadium_	5.7	U		P_
7440-66-6	Zinc_____	130	_		P_
_____	Boron____		_		NR
_____	_____		_		__

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

_____

_____

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_____

PCDD & PCDF

EPA METHOD 8290

Sample ID:	CCC-DF-CA	**Date Received:**	5/5/99	**QC Lot:**	LC0525C
Lab ID:	6746-0001-SA	**Date Extracted:**	5/25/99	**Units:**	pg/g
Matrix:	Clinker	**Sample Amount:**	10.00 g		
% Solids:	100				

Compound	Conc.	D.L.	Ratio	S/N Ratio	Qualifier
2,3,7,8-TCDD	ND	0.078			
Total TCDD	ND	0.078			
1,2,3,7,8-PeCDD	ND	0.17			
Total PeCDD	ND	0.38			
1,2,3,4,7,8-HxCDD	ND	0.21			
1,2,3,6,7,8-HxCDD	ND	0.18			
1,2,3,7,8,9-HxCDD	ND	0.18			
Total HxCDD	ND	0.21			
2,3,7,8-TCDF	ND	0.11			
Total TCDF	ND	0.11			
1,2,3,7,8-PeCDF	ND	0.18			
2,3,4,7,8-PeCDF	ND	0.15			
Total PeCDF	ND	0.18			
1,2,3,4,7,8-HxCDF	ND	0.080			
1,2,3,6,7,8-HxCDF	ND	0.076			
2,3,4,6,7,8-HxCDF	ND	0.076			
1,2,3,7,8,9-HxCDF	ND	0.096			
Total HxCDF	ND	0.096			

Analyst: MS

Reviewer:

ALTA

PCDD & PCDF

EPA METHOD 8290

Sample ID:	CCC-DF-CB	**Date Received:**	5/5/99	**QC Lot:**	LC0525C
Lab ID:	6746-0002-SA	**Date Extracted:**	5/25/99	**Units:**	pg/g
Matrix:	Clinker	**Sample Amount:**	10.02 g		
% Solids:	100				

Compound	Conc.	D.L.	Ratio	S/N Ratio	Qualifier
2,3,7,8-TCDD	ND	0.12			
Total TCDD	ND	0.12			
1,2,3,7,8-PeCDD	ND	0.15			
Total PeCDD	ND	0.15			
1,2,3,4,7,8-HxCDD	ND	0.14			
1,2,3,6,7,8-HxCDD	ND	0.12			
1,2,3,7,8,9-HxCDD	ND	0.12			
Total HxCDD	ND	0.14			
2,3,7,8-TCDF	ND	0.083			
Total TCDF	ND	0.083			
1,2,3,7,8-PeCDF	ND	0.16			
2,3,4,7,8-PeCDF	ND	0.13			
Total PeCDF	ND	0.16			
1,2,3,4,7,8-HxCDF	ND	0.062			
1,2,3,6,7,8-HxCDF	ND	0.060			
2,3,4,6,7,8-HxCDF	ND	0.059			
1,2,3,7,8,9-HxCDF	ND	0.079			
Total HxCDF	ND	0.079			

Analyst: MS

Reviewer: