

TABLE WAP-1 WASTE ANALYSIS PLAN

STREAM⁽²⁾	PARAMETER	ANALYTICAL METHOD⁽¹⁾⁽³⁾	NORLITE SOP FOR ANALYTICAL METHOD	RATIONAL FOR PARAMETER	SAMPLING AND ANALYSIS FREQUENCY
LLGF, OSUOF, WFA	Specific Gravity	ASTM-1298-85	Norlite SOP#04-012	Waste Verification	each load
LLGF, OSUOF, WFA, CF	Viscosity	ASTM-D2983	n/a	pumpability 3000 SUS @80F	when material appears unpumpable
LLGF, OSUOF, WFA, CF, SUOF	Heat of Combustion BTU	ASTM-D240	Norlite SOP#04-064	Assess Burning Efficiency Requirements	each load ⁽⁶⁾
LLGF, OSUOF, WFA, SUOF, CF	Total Halogens	EPA 5050 & 9253	Norlite SOP#04-014	Halogen Content	each load ⁽⁶⁾ and one blended tank weekly
LLGF, CF	Bottom Sediment	Norlite SOP#4-049	Norlite SOP#04-049	Solids Determination	for blended tanks when necessary
Solid Haz Wastes	Free Liquids	EPA 9095B	n/a	Free Liquids for Solids Storage	as necessary
LLGF	Compatibility	Norlite SOP#4-063	Norlite SOP#04-063	Ensure Materials are compatible	each load
	Oxidzer	Norlite SOP#4-063	Norlite SOP#04-063	Verify compliance with permit limits	each load
	Peroxide	Norlite SOP#4-063	Norlite SOP#04-063	Verify Absence of a Peroxide	each load
LLGF, OSUOF, WFA, CF, SUOF	PCB	D6160	Norlite SOP#04-073 & 04-074	Compliance with permit limits	each load ⁽⁶⁾
LLGF, OSUOF, WFA, SUOF, CF, SCW	Arsenic	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each load ⁽⁶⁾ , one blended tank weekly
	Beryllium	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each load ⁽⁶⁾ , one blended tank weekly
	Cadmium	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each load ⁽⁶⁾ , one blended tank weekly
	Chromium	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each load ⁽⁶⁾ , one blended tank weekly
	Copper	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each load ⁽⁶⁾ , one blended tank weekly
	Lead	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each load ⁽⁶⁾ , one blended tank weekly
	Barium	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each load ⁽⁶⁾ , one blended tank weekly
	Mercury	EPA 7471B	Norlite SOP#04-065 & 066	Verify Metals Below Permit Levels	each load ⁽⁶⁾ , one blended tank weekly
	Nickel	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each load ⁽⁶⁾ , one blended tank weekly
	Antimony	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each load ⁽⁶⁾ , one blended tank weekly
	Selenium	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each load ⁽⁶⁾ , one blended tank weekly
	Silver	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each load ⁽⁶⁾ , one blended tank weekly
	Thallium	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each load ⁽⁶⁾ , one blended tank weekly
	Zinc	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each load ⁽⁶⁾ , one blended tank weekly
LLGF	Pesticides	EPA 8081B/8141B/8151A	Analyzed by off site ELAP certified lab	Verify Absence	one load monthly
	Organic Hazardous Constituents	EPA 8260C/8270D	Analyzed by off site ELAP certified lab	Verify Absence or Presence	initially and whenever the stream changes significantly
	PCDD/PCDF	EPA 8290	Analyzed by off site ELAP certified lab	Verify Absence at EPA 8290 detection limits	one load quarterly

TABLE WAP-1 WASTE ANALYSIS PLAN

STREAM ⁽²⁾	PARAMETER	ANALYTICAL METHOD ⁽¹⁾⁽³⁾	NORLITE SOP FOR ANALYTICAL METHOD	RATIONAL FOR PARAMETER	SAMPLING AND ANALYSIS FREQUENCY
Raw Shale	Arsenic	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each blast
	Beryllium	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each blast
	Cadmium	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each blast
	Chromium	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each blast
	Copper	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each blast
	Lead	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each blast
	Barium	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each blast
	Mercury	EPA 7471B	Norlite SOP#04-065 & 066	Verify Metals Below Permit Levels	each blast
	Nickel	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each blast
	Antimony	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each blast
	Selenium	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each blast
	Silver	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each blast
	Thallium	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each blast
	Zinc	EPA 3052/6010C	Norlite SOP#04-058 & 070	Verify Metals Below Permit Levels	each blast
	Total Halogen	EPA 5050/9056	Norlite SOP#04-032	Verify Total Halogens Below Permit Levels	each blast
Clinker	Metals ⁽⁵⁾	EPA 1311 6010C/7471B	Norlite SOP#04-027	Verify that Clinker meets LDR	monthly, when applicable ⁽⁴⁾
	Volatile Organics ⁽⁵⁾	EPA 5035A/8015B/ 8260C	Analyzed by off site ELAP certified lab	Verify that Clinker meets LDR	annually, when applicable ⁽⁴⁾
	Semivolatile Organics ⁽⁵⁾	EPA 3540C/8270D/8081A 8290/8082A	Analyzed by off site ELAP certified lab	Verify that Clinker meets LDR	annually, when applicable ⁽⁴⁾
Multiclone Dust,	Metals ⁽⁵⁾	EPA 1311/6010C/7471B		Ensure Eligibility for Bevill Exclusion	monthly
Baghouse Dust, FilterCake	Volatile Organics ⁽⁵⁾	EPA 5035A/8015B/8260C	Analyzed by off site ELAP certified lab	Ensure Eligibility for Bevill Exclusion	annually
	Semivolatile Organics ⁽⁵⁾	EPA 3540C/8270D/8081A 8290/8082A	Analyzed by off site ELAP certified lab	Ensure Eligibility for Bevill Exclusion	annually

(1) EPA in this table = EPA SW-846 Method

(2) LLGF = Liquid Low Grade Fuel; OSUOF = off-specification used oil fuel; SUOF = specification used oil fuel; WFA = Waste Fuel A; CF = Comparable Fuels; SCW = Secondary Cont

(3) The most updated official version of each method is used. Norlite Laboratory detection limits found in document 49B.

(4) Applicable when the process is burning for disposal per 6 NYCRR Part 374.3

(5) Please see WAP Appendix 2 for list of analytes

(6) 1 in 10 loads of Comparable Fuels are analyzed for metals and total halogens

**TABLE WAP-4
LABORATORY SOPs**

SOP#	Title	Rev #
04-004	Sample Collection of LGF Loads Received	1
04-007	Sample Collection of LGF From Storage Tanks	1
04-012	Determination of Density and Specific Gravity	6
04-014	Determination of Total Halogens in LGF by Titration	11
04-015	MDS 2000 Microwave Digestion for ICP Analysis	13
04-027	Toxicity Characteristic Leaching Procedure	10
04-032	Preparation of Shale for Chlorine Analysis by Ion Chromatography	4
04-043	Determination of Ash Content in Fuel	5
04-047	MARS Microwave Digestion for ICP Analysis (Method 3050B)	7
04-048	Automatic Flash Point Analysis	6
04-049	Determination of Bottom Sediment and Water	4
04-053	Sample Receipt and Handling	3
04-058	Mars Microwave 3052 Digestion for ICP Analysis	3
04-063	Compatibility	1
04-064	Determination of Heat of Combustion of LGF	1
04-065	Mercury Digestion of Liquid and Solid Waste by Method 7471B	1
04-066	Mercury Analysis of Liquid and Solid Waste by Method 7471B	1
	(reserve for 6160 SOP)	
04-068	Analysis to Determine Content of PCBs by Method 8082A	1
04-069	Extraction of Solid Waste to Determine Levels of PCBs by Method 8082A	1
04-070	Determination of Metals Content in Solid and Liquid Waste by Method 6010C	1