

**Clean Earth Sampling Protocol
Philadelphia**

PARAMETERS	TOTAL PETROLEUM HYDROCARBONS (TPH) GRO & TPH-DRO - Expanded to C44 (GRAB SAMPLE)	BTEX (GRAB SAMPLE)	TOX (GRAB SAMPLE)	TOTAL VOLATILE ORGANICS (GRAB SAMPLE)	TOTAL SEMI-VOLATILE ORGANICS (GRAB SAMPLE)	TOTAL METALS - 8 RCRA + Cu, Ni, Zn	TCLP METALS - 8 RCRA + Cu, Ni, Zn	IGNITABILITY	CORROSIVITY (pH)	REACTIVITY - SULFIDE AND CYANIDE	PCBs	TOTAL SULFUR	TCLP VOLATILE ORGANICS (GRAB SAMPLE)	TCLP SEMI-VOLATILE ORGANICS	TCLP HERBICIDES	TCLP PESTICIDES	
METHODS (1)		8015M (expanded to C44)	8260B	9020 or 9023	8260B	8270D	6010/7471	1311/6010/7470A	1010A	9040C	SW846 CHAPTER 7.3	8082A	ASTM D129 or equivalent	1311/8260B	1311/8270D	1311/8151A	1311/8081B
FREQUENCY																	
VIRGIN PETROLEUM	Grab Sample Every 250 tons	X															
	Grab sample every 1000 tons		X														
	5 point composite sample every 1000 tons						X	X	X	X	X						
Limit (mg/Kg)		GRO <30,000; DRO <100,000		<1000	<30,000		End Use Criteria	Below RCRA Toxicity Level	Negative	> 2 - <12.5	Sulfide <500; Cyanide <250	<48	No Limit	Below RCRA Toxicity Level	Below RCRA Toxicity Level	Below RCRA Toxicity Level	Below RCRA Toxicity Level
HISTORIC FILL/ WASTE PETROLEUM/ USED (WASTE) OIL	Grab Sample Every 250 tons	X															
	Grab sample every 1000 tons				X								X				
	5 point composite sample every 1000 tons					X	X	X	X	X	X	X		X	X	X	X
Limit (mg/Kg)		GRO <30,000; DRO <100,000		<1000	<30,000		End Use Criteria	Below RCRA Toxicity Level	Negative	> 2 - <12.5	Sulfide <500; Cyanide <250	<48	No Limit	Below RCRA Toxicity Level	Below RCRA Toxicity Level	Below RCRA Toxicity Level	Below RCRA Toxicity Level
MGP (COAL TAR)	Grab Sample Every 250 tons	X															
	Grab sample every 1000 tons			X	X								X				
	5 point composite sample every 1000 tons					X	X	X	X	X	X	X	X	X	X	X	X
Limit (mg/Kg)		GRO <30,000; DRO <100,000		<1000	<30,000		End Use Criteria	Below RCRA Toxicity Level	Negative	> 2 - <12.5	Sulfide <500; Cyanide <250	<48	No Limit	Below RCRA Toxicity Level	Below RCRA Toxicity Level	Below RCRA Toxicity Level	Below RCRA Toxicity Level

(1) The methods provided are standard EPA methods. The method revisions are subject to change and the most current method should always be utilized by the laboratory.

This is to be used as a guideline for sampling. Sampling frequencies and parameter requirements may be modified at the discretion of the CE Approval staff based items such as site history, levels of contamination and/or source of

Virgin petroleum soils, less than 50 tons from a residential source, require only TPH-DRO to C44 (EPA 8015M) and TOX (EPA 9020 or 9023) analysis for acceptance. Residential is defined as a single family home or multiple unit dwelling containing no more than 4 units and cannot be part of a commercial building.