Wilcox potential PRGs and hazardous contaminants or constituents

Leaded tank bottoms	RCRA K052 haz subst
Haz subst added to crude oil	Include Pet Exc
Contaminants in petro prod (substances not indigenous or present at levels exceeding normal)	Not included in Pet Exc

COCs
Total Petro Hydrocarbon (TPH)
Benzene
PAHS
selected metals

Wilcox ESI 1997 WS-03 and WS-08 due TPH	Wilcox ESI 2011 soil waste W-7 & 8	Lorraine ESI LWW-3&4 former tank location	Analyte	From HRS document: Wilcox ESI results - March 1999 Table 2-2 Souce Weston ESI 1997 Oily waste	Surface D	Stream Sed	Background S	
			2-Methylnaphthalene	1400			ND	mg/kg
	2400 ug/kg	900 ug/kg	Phenanthrene	520	0.79		0.034	mg/kg
54,000 ug/kg	2600 ug/kg	880 ug/kg	Pyrene	260 J	0.56		0.062	mg/kg
293000 mg/kg			TPH	875000			NA	mg/kg
			Arsenic	8.7			1.5	mg/kg
	6.10 mg/kg	11.1	Copper	100	127		5.3	mg/kg
	15.4 mg/kg	12.2	Lead	47000	55049 J		26.3	mg/kg
		5.8	Nickel					
	22 mg/kg	24.8	Zinc					
			Tank Bottoms					
	1200 ug/kg	610 ug/kg	Benzo(b)fluoranthene					
	1300 ug/kg		Benzo(a)anthacene					
	1200 ug/kg	410 ug/kg	Benzo(a)pyrene					
	2500 ug/kg	550 ug/kg	Chrysene					
	1500 ug/kg	1200 ug/kg	Fluoranthene					
	3000 ug/kg	600 ug/kg	Benzo(a)perylene					

	Soils: Source 1	Souce 2	Source 3	Source 4	Souce 5	Source 6	Souce 7	Souce 8	Souce 9	Souce 10	Seds Sed-14
2-Methylnaphthalene	ug/kg	380,000									
Phenanthrene	ug/kg	200,000									
Pyrene	ug/kg	200,000		3,300 J		1,200		490			4,500
TPH											
Arsenic	mg/kg	1.5 ppm	11						19.8		
Copper	mg/kg	4.9 ppm	8.2	5.6	7.4	7.9	6.1		52.1	78.2	
Lead	mg/kg	513 ppm	164	2,320	254	590	15.4	122	15.7	1,560	145
Nickel	mg/kg	6.70 ppm	13.8	153					23.6	22.6	
Zinc	mg/kg	16.7 ppm									
Tank Bottoms			Yes								
Benzo(b)fluoranthene	ug/kg						1,200				
Benzo(a)anthacene	ug/kg			1,800 J							2,400
Benzo(a)pyrene	ug/kg		1,200								
Chrysene	ug/kg		2,500								4,100
Fluoranthene						1,500					1,600
		Ref #6									
		Ref #10									

Possible PRGs

Analyte	Hudson soil PRGs Com/Ind	Hudson soil PRGs Resident		North Com/Ind Soil	North Com/Ind Sediment	ORC RAO Soil	ORC RAO Subsoil	RSL Res	RSL Soil 1.00E-06 HI=1	RAIS ppm Res	RAIS ppm Soil 1.00E-06 HI=1	Imper Soil E-05	Imper Sedim E-05	
2-Methylnaphthalene			mg/kg			1080	510	na?	na?	na	776			
Phenanthrene			mg/kg			1,080		na?	na?					
Pyrene			mg/kg			8,100		na?	na?		5,820			
TPH			mg/kg											
Arsenic	32	19	mg/kg	31.8		25	305	0.61	34	0.39		20	20	
Copper			mg/kg			351000			3,100					
Lead	1000		mg/kg	1000		600	865		400					
Nickel			mg/kg			5,400		14,000	820					
Zinc			mg/kg			54,000			23,000					
Tank Bottoms			mg/kg											
Benzo(b)fluoranthene			mg/kg			0.69		na?	na?	0.148	na			
Benzo(a)anthacene		0.62	mg/kg		42.2	4.1		na?	na?	0.15	na			
Benzo(a)pyrene	4.2	0.062	mg/kg	4.22	4.22	0.33		na?	na?	0.015		1.55	0.782	eco non C
Chrysene			mg/kg			46		na?	na?	0.148	na			
Fluoranthene			mg/kg			10,800		na?	na?	na	7,760			
Benzene	7	0.12					0.2	1.1	86	1.08	107			
Aroclor-1254		0.22						0.22	1.1	0.22	3.8			

na? = IRIS

9836496

From HRS document

Analyte	Wilcox ESI results - March 1999 Table 2-2 Souce Weston ESI 1997) Oily waste	Surface D	Stream Sed	Background S	
2-Methylnaphthalene	1400			ND	mg/kg
Phenanthrene	520	0.79		0.034	mg/kg
Pyrene	260 J	0.56		0.062	mg/kg
TPH	875000			NA	mg/kg
Arsenic	8.7			1.5	mg/kg
Copper	100	127		5.3	mg/kg
Lead	47000	55049 J		26.3	mg/kg
Nickel					
Zinc					
Tank Bottoms					
Benzo(b)fluoranthene					
Benzo(a)anthacene					
Benzo(a)pyrene					
Chrysene					
Fluoranthene					

	Soils										Sediments
	Source 1	Souce 2	Source 3	Souce 4	Souce 5	Source 6	Souce 7	Souce 8	Souce 9	Souce 10	Sed-14
ug/kg		380,000									
ug/kg		200,000									
ug/kg		200,000		3,300 J		1,200		490			4,500
mg/kg	1.5 ppm	11							19.8		
mg/kg	4.9 ppm	8.2	5.6	7.4	7.9	6.1			52.1	78.2	
mg/kg	513 ppm	164	2,320	254	590	15.4	122		15.7	1,560	145
mg/kg	6.70 ppm	13.8	153						23.6	22.6	
mg/kg	16.7 ppm										
		Yes									
ug/kg						1,200					
ug/kg				1,800 J							2,400
ug/kg		1,200									
ug/kg		2,500									4,100
						1,500					1,600