

Table 1
Federal 1-10-84 Pit Closure
Soil Sample Summary
National Fuel Corporation

SAMPLE SUMMARY	
Location Description	Federal 2-10-84 Pit
Sample Type	Soil - Grab
Sample Date	04/12/2012

LABORATORY DATA SUMMARY																
Sample ID	NFC-SS1	NFC-SS2	NFC-SS3	NFC-SS4	NFC-SS5	NFC-SS6	NFC-SS7	NFC-SS8	NFC-SS9	NFC-BG1	NFC-BG2	NFC-BG3	NFC-BG4	NFC-BG5	ALLOWABLE LIMITS	UNITS
Depth	±60"	±60"	±60"	±60"	±120"	±120"	±120"	±120"	±120"	38-42"	104-108"	102-106"	18-22"	0-2"		
Analytical Parameters																
TPH-GRO	95.5	137	ND	107	76.9	25.3	68.2	63.7	45.3	NT	NT	NT	NT	NT	NA	mg/kg
TPH-DRO	250	110	ND	70.1	115	403	29.1	27.4	45.4	NT	NT	NT	NT	NT	NA	mg/kg
Total TPH	345.5	247	ND	177.1	191.9	428.3	97.3	91.1	90.7	NT	NT	NT	NT	NT	500	mg/kg
BTEX																
Benzene	0.0322	0.0266	ND	ND	ND	ND	0.0659	ND	ND	NT	NT	NT	NT	NT	0.17	mg/kg
Toluene	0.184	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	NT	NT	85	mg/kg
Ethylbenzene	0.128	0.405	ND	0.231	0.109	ND	0.177	0.0881	ND	NT	NT	NT	NT	NT	100	mg/kg
Total Xylene	1.73	4.0	ND	2.77	1.06	0.167	0.726	0.839	0.253	NT	NT	NT	NT	NT	175	mg/kg
PAHs																
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	NT	NT	1,000	mg/kg
Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	NT	NT	1,000	mg/kg
Benzo(a)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	NT	NT	0.22	mg/kg
Benzo(a)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	NT	NT	0.022	mg/kg
Benzo(b)fluoranthene	ND	0.0122	ND	0.0072	ND	ND	0.0088	ND	ND	NT	NT	NT	NT	NT	0.22	mg/kg
Benzo(k)fluoranthene	ND	0.0	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	NT	NT	2.2	mg/kg
Chrysene	0.0138	0.0153	ND	0.007	0.0105	0.0084	0.0086	ND	0.0070	NT	NT	NT	NT	NT	22	mg/kg
Dibenzo(a,h)anthracene	ND	0.0065	ND	ND	ND	ND	0.0048	ND	ND	NT	NT	NT	NT	NT	0.022	mg/kg
Fluoranthene	0.0064	0.0105	ND	ND	0.0072	ND	0.0055	ND	ND	NT	NT	NT	NT	NT	1,000	mg/kg
Fluorene	0.0447	0.0211	ND	0.0188	ND	0.0388	ND	ND	ND	NT	NT	NT	NT	NT	1,000	mg/kg
Indeno(1,2,3-cd)pyrene	ND	0.0109	ND	0.0054	ND	ND	0.0067	ND	ND	NT	NT	NT	NT	NT	0.22	mg/kg
Naphthalene	0.189	0.841	ND	0.683	0.336	0.108	0.0562	0.0951	0.154	NT	NT	NT	NT	NT	23	mg/kg
Pyrene	0.0073	0.0	ND	0.005	0.0083	0.0056	0.0081	ND	0.0050	NT	NT	NT	NT	NT	1,000	mg/kg
Metals																
Arsenic	7.8	7.6	6.5	8.5	7.9	7.4	7.5	8.2	6.6	8.5	8.9	10.2	6.4	NT	0.39	mg/kg
Barium	68.3	62.3	54	55.4	67.4	70.5	82.3	67.4	66.3	NT	92.1	NT	NT	NT	15,000	mg/kg
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	ND	NT	NT	NT	70	mg/kg
Chromium	7	7.8	6.9	7.5	8.6	7.5	8.5	8.1	7.7	NT	7.6	NT	NT	NT	NA	mg/kg
Copper	12.5	11.5	10.7	11.8	12.7	11.2	12.3	12.1	11.9	NT	14.0	NT	NT	NT	3,100	mg/kg
Lead	13.5	12.2	9.8	11.3	12.9	12.1	13.2	13.5	12.4	NT	14.0	NT	NT	NT	400	mg/kg
Mercury	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	ND	NT	NT	NT	23	mg/kg
Nickel	14.2	14.9	120	15.2	16.1	12.8	15.1	14.5	14.9	NT	14.7	NT	NT	NT	1,600	mg/kg
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	ND	NT	NT	NT	390	mg/kg
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	ND	NT	NT	NT	390	mg/kg
Zinc	55.0	49.7	ND	50	50.9	59.9	47.7	47.3	44.9	NT	51.9	NT	NT	NT	23,000	mg/kg
General Chemistry																
Chromium, Hexavalent	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	ND	NT	NT	NT	23	mg/kg
Chromium, Trivalent	7	7.8	6.9	7.5	8.6	7.5	8.5	7.5	6.9	NT	7.6	NT	NT	NT	120,000	mg/kg
Redox Potential Vs H2	468	464	509	481	479	478	480	478	455	NT	514	NT	NT	NT	NA	mv
Percent Solids	93.9	92.1	87.8	94.2	93	97.6	96.4	91.7	90.5	NT	88.5	NT	NT	97.6	NA	%
Sodium Adsorption Ratio	70.7	6.08	5.88	20.7	40.3	37.6	5.48	6.62	49.6	NT	1.72	NT	NT	42.9	< 12	ratio
Specific Conductivity	59,200	11,700	10,600	35,100	38,900	42,400	7,360	13,200	38,200	NT	2,730	NT	NT	20,500	2 x Background	µmhos/cm
pH	7.94	8.24	7.99	8.05	8.02	7.84	8.30	8.21	7.94	NT	7.90	NT	NT	8.31	6-9	su

Indicates a value which is above the allowable limit but within background limits
Indicates a value which is above the allowable limit and not within background limits

mg/kg = milligrams per kilogram
ND = results was not detected or was below the detection limit
NT = not tested
µmhos/cm = micromhos per centimeter
su = standard units
NA - not applicable