TABLE I
SUMMARY OF SOIL QUALITY DATA
WASHINGTON STATE DOE
TREOIL INDUSTRIES PROPERTY
FERNDALE, WASHINGTON

Location Name	Action Level						B-01	B-01	B-01	B-02	B-03	B-03	B-04	B-04	B-05	B-05	B-05	B-05	B-06
Sample Name							B-01-S1	B-01-S2	B-01-S7	B-02-S2	B-03-S1	B-03-S2	B-04-S1	B-04-S2	B-05-S1	FD01	B-05-S2	B-05-S3	B-06-S1
Sample Date							08/08/2023	08/08/2023	08/08/2023	08/07/2023	08/07/2023	08/07/2023	08/09/2023	08/09/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023
Lab Sample ID							23H0691-03			23H0691-01	23H0691-02		23H0705-01		23H0704-02	23H0704-03			23H0704-01
Sample Depth (bgs)	MTCA Method A Unrestricted	MTCA Method B Cancerous	MTCA Method B Non-Cancerous	MTCA Ecological Indicator Soil Concentrations for Protection of Plants	MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota	MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife	580-130495-13 2.5 - 5 (ft)	580-130495-14 7.5 - 10 (ft)	580-130493-2 50 - 51 (ft)	580-130495-2 7.5 - 10 (ft)	580-130495-7 2.5 - 5 (ft)	580-130495-8 7.5 - 10 (ft)	580-130515-1 2.5 - 5 (ft)	580-130515-2 7.5 - 10 (ft)	580-130493-10 1 - 2.5 (ft)	580-130493-17 1 - 2.5 (ft)	580-130493-11 6 - 8 (ft)	580-130493-12 12 - 14 (ft)	580-130493-3 2.5 - 5 (ft)
Volatile Organic Compounds (mg/kg)																			
1,1,1,2-Tetrachloroethane	NA	38	2400	NA	NA	NA	0.021 UJ	-	0.016 UJ	0.02 UJ	0.019 UJ	-	0.019 UJ	-	0.027 UJ	0.023 UJ	0.021 UJ	0.02 UJ	0.021 UJ
1,1,1-Trichloroethane	2	NA	160000	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
1,1,2,2-Tetrachloroethane	NA	5	1600	NA	NA	NA	0.021 UJ	-	0.016 UJ	0.02 UJ	0.019 UJ	-	0.019 UJ	-	0.027 UJ	0.023 UJ	0.021 UJ	0.02 UJ	0.021 UJ
1,1,2-Trichloroethane	NA	18	320	NA	NA	NA	0.021 UJ	-	0.016 UJ	0.02 UJ	0.019 UJ	-	0.019 UJ	-	0.027 UJ	0.023 UJ	0.021 UJ	0.02 UJ	0.021 UJ
1,1-Dichloroethane	NA	180	16000	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
1,1-Dichloroethene	NA	NA	4000	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
1,1-Dichloropropene	NA	NA	NA	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
1,2,3-Trichlorobenzene	NA	NA	64	20	NA	NA	**0.046 J**	-	0.063 UJ	**0.088 J**	**0.078 J**	-	0.076 UJ	-	0.11 UJ	0.092 UJ	0.084 UJ	0.082 UJ	0.086 UJ
1,2,3-Trichloropropane	NA	0.0063	320	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
1,2,4-Trichlorobenzene	NA	34	800	20	NA	NA	0.083 UJ	-	0.063 UJ	**0.051 J**	0.076 UJ	-	0.076 UJ	-	0.11 UJ	0.092 UJ	0.084 UJ	0.082 UJ	0.086 UJ
1,2,4-Trimethylbenzene	NA	NA	800	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
1,2-Dibromo-3-chloropropane (DBCP)	NA	0.23	16	NA	NA	NA	0.062 UJ	-	0.047 UJ	0.059 UJ	0.057 UJ	-	0.057 UJ	-	0.082 UJ	0.069 UJ	0.063 UJ	0.061 UJ	0.064 UJ
1,2-Dibromoethane (Ethylene Dibromide)	0.005	0.5	720	NA	NA	NA	0.021 UJ	-	0.016 UJ	0.02 UJ	0.019 UJ	-	0.019 UJ	-	0.027 UJ	0.023 UJ	0.021 UJ	0.02 UJ	0.021 UJ
1,2-Dichlorobenzene	NA	NA	7200	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
1,2-Dichloroethane	NA	11	480	NA	NA	NA	0.021 UJ	-	0.016 UJ	0.02 UJ	0.019 UJ	-	0.019 UJ	-	0.027 UJ	0.023 UJ	0.021 UJ	0.02 UJ	0.021 UJ
1,2-Dichloropropane	NA	27	3200	700	NA	NA	0.021 UJ	-	0.016 UJ	0.02 UJ	0.019 UJ	-	0.019 UJ	-	0.027 UJ	0.023 UJ	0.021 UJ	0.02 UJ	0.021 UJ
1,3,5-Trimethylbenzene	NA	NA	800	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	0.062 UJ	-	0.047 UJ	0.059 UJ	0.057 UJ	-	0.057 UJ	-	0.082 UJ	0.069 UJ	0.063 UJ	0.061 UJ	0.064 UJ
1,3-Dichloropropane	NA	NA	1600	NA	NA	NA	0.062 UJ	-	0.047 UJ	0.059 UJ	0.057 UJ	-	0.057 UJ	-	0.082 UJ	0.069 UJ	0.063 UJ	0.061 UJ	0.064 UJ
1,4-Dichlorobenzene	NA	190	5600	20	NA	NA	0.062 UJ	-	0.047 UJ	0.059 UJ	0.057 UJ	-	0.057 UJ	-	0.082 UJ	0.069 UJ	0.063 UJ	0.061 UJ	0.064 UJ
2,2-Dichloropropane	NA	NA	NA	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
2-Chlorotoluene	NA	NA	1600	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
2-Phenylbutane (sec-Butylbenzene)	NA	NA	8000	NA	NA	NA	0.041 UJ	-	0.031 UJ	**0.01 J**	**0.0089 J**	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
4-Chlorotoluene	NA	NA	1600	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
Benzene	0.03	18	320	NA	NA	NA	0.021 UJ	-	0.016 UJ	0.02 UJ	0.019 UJ	-	0.019 UJ	-	0.027 UJ	0.023 UJ	0.021 UJ	0.02 UJ	0.021 UJ
Bromobenzene	NA	NA	640	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
Bromodichloromethane	NA	16	1600	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
Bromoform	NA	130	1600	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
Bromomethane (Methyl Bromide)	NA	NA	110	NA	NA	NA	0.1 UJ	-	0.078 UJ	0.099 UJ	0.095 UJ	-	0.095 UJ	-	0.14 UJ	0.12 UJ	0.1 UJ	0.1 UJ	0.11 UJ
Carbon tetrachloride	NA	14	320	NA	NA	NA	0.021 UJ	-	0.016 UJ	0.02 UJ	0.019 UJ	-	0.019 UJ	-	0.027 UJ	0.023 UJ	0.021 UJ	0.02 UJ	0.021 UJ
Chlorobenzene	NA	NA	1600	40	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
Chlorobromomethane	NA	NA	NA	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
Chloroethane	NA	NA	NA	NA	NA	NA	0.083 UJ	-	0.063 UJ	0.079 UJ	0.076 UJ	-	0.076 UJ	-	0.11 UJ	0.092 UJ	0.084 UJ	0.082 UJ	0.086 UJ
Chloroform (Trichloromethane)	NA	32	800	NA	NA	NA	0.021 UJ	-	0.016 UJ	0.02 UJ	0.019 UJ	-	0.019 UJ	-	0.027 UJ	0.023 UJ	0.021 UJ	0.02 UJ	0.021 UJ
Chloromethane (Methyl Chloride)	NA	NA	NA	NA	NA	NA	0.062 UJ	-	0.047 UJ	0.059 UJ	0.057 UJ	-	0.057 UJ	-	0.082 UJ	0.069 UJ	0.063 UJ	0.061 UJ	0.064 UJ
cis-1,2-Dichloroethene	NA	NA	160	NA	NA	NA	0.062 UJ	-	0.047 UJ	0.059 UJ	0.057 UJ	-	0.057 UJ	-	0.082 UJ	0.069 UJ	0.063 UJ	0.061 UJ	0.064 UJ
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	0.021 UJ	-	0.016 UJ	0.02 UJ	0.019 UJ	-	0.019 UJ	-	0.027 UJ	0.023 UJ	0.021 UJ	0.02 UJ	0.021 UJ
Cymene (p-Isopropyltoluene)	NA	NA	NA	NA	NA	NA	0.041 UJ	-	0.031 UJ	**0.012 J**	**0.011 J**	-	0.038 UJ	-	**0.033 J**	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
Dibromochloromethane	NA	12	1600	NA	NA	NA	0.021 UJ	-	0.016 UJ	0.02 UJ	0.019 UJ	-	0.019 UJ	-	0.027 UJ	0.023 UJ	0.021 UJ	0.02 UJ	0.021 UJ
Dibromomethane	NA	NA	800	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
Dichlorodifluoromethane (CFC-12)	NA	NA	16000	NA	NA	NA	0.26 UJ	-	0.2 UJ	0.25 UJ	0.24 UJ	-	0.24 UJ	-	0.34 UJ	0.29 UJ	0.26 UJ	0.25 UJ	0.27 UJ
Ethylbenzene	6	NA	8000	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
Hexachlorobutadiene	NA	13	80	NA	NA	NA	0.1 UJ	-	0.078 UJ	0.099 UJ	0.095 UJ	-	0.095 UJ	-	0.14 UJ	0.12 UJ	0.1 UJ	0.1 UJ	0.11 UJ
Isopropylbenzene (Cumene)	NA	NA	8000	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
m,p-Xylenes	NA	NA	NA	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
Methyl Tert Butyl Ether (MTBE)	0.1	560	NA	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
Methylene chloride (Dichloromethane)	0.02	94	480	NA	NA	NA	0.26 UJ	-	0.2 UJ	0.25 UJ	0.24 UJ	-	0.24 UJ	-	0.34 UJ	0.29 UJ	0.26 UJ	0.25 UJ	0.27 UJ
Naphthalene	5	NA	1600	NA	NA	NA	0.16 UJ	-	0.12 UJ	0.15 UJ	0.14 UJ	-	0.14 UJ	-	0.21 UJ	0.17 UJ	0.16 UJ	0.15 UJ	0.16 UJ
n-Butylbenzene	NA	NA	4000	NA	NA	NA	0.041 UJ	-	0.031 UJ	**0.03 J**	**0.02 J**	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
n-Propylbenzene	NA	NA	8000	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
o-Xylene	NA	NA	16000	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
Styrene	NA	NA	16000	NA	300	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
tert-Butylbenzene	NA	NA	8000	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
Tetrachloroethene	0.05	480	480	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
Toluene	7	NA	6400	NA	200	NA	0.062 UJ	-	0.047 UJ	0.059 UJ	0.057 UJ	-	0.057 UJ	-	**0.15 J**	0.069 UJ	**0.036 J**	0.061 UJ	0.064 UJ
trans-1,2-Dichloroethene	NA	NA	1600	NA	NA	NA	0.062 UJ	-	0.047 UJ	0.059 UJ	0.057 UJ	-	0.057 UJ	-	0.082 UJ	0.069 UJ	0.063 UJ	0.061 UJ	0.064 UJ
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
Trichloroethene	0.03	12	40	NA	NA	NA	0.041 UJ	-	0.031 UJ	0.04 UJ	0.038 UJ	-	0.038 UJ	-	0.055 UJ	0.046 UJ	0.042 UJ	0.041 UJ	0.043 UJ
Trichlorofluoromethane (CFC-11)	NA	NA	24000	NA	NA	NA	0.083 UJ	-	0.063 UJ	0.079 UJ	0.076 UJ	-	0.076 UJ	-	0.11 UJ	0.092 UJ	0.084 UJ	0.082 UJ	0.086 UJ
Vinyl chloride	NA	0.67	240	NA	NA	NA	0.1 UJ	-	0.078 UJ	0.099 UJ	0.095 UJ	-	0.095 UJ	-	0.14 UJ	0.12 UJ	0.1 UJ	0.1 UJ	0.11 UJ

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TREOIL INDUSTRIES PROPERTY
FERNDALE, WASHINGTON

Location Name	Action Level						B-01	B-01	B-01	B-02	B-03	B-03	B-04	B-04	B-05	B-05	B-05	B-05	B-06
Sample Name							B-01-S1	B-01-S2	B-01-S7	B-02-S2	B-03-S1	B-03-S2	B-04-S1	B-04-S2	B-05-S1	FD01	B-05-S2	B-05-S3	B-06-S1
Sample Date							08/08/2023	08/08/2023	08/08/2023	08/07/2023	08/07/2023	08/07/2023	08/09/2023	08/09/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023
Lab Sample ID	MTCA Method A	MTCA Method B	MTCA Method B	MTCA Ecological Indicator Soil Concentrations for Protection of Plants	MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota	MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife	23H0691-03			23H0691-01	23H0691-02		23H0705-01		23H0704-02	23H0704-03			23H0704-01
Sample Depth (bgs)	Unrestricted	Cancerous	Non-Cancerous				580-130495-13 2.5 - 5 (ft)	580-130495-14 7.5 - 10 (ft)	580-130493-2 50 - 51 (ft)	580-130495-2 7.5 - 10 (ft)	580-130495-7 2.5 - 5 (ft)	580-130495-8 7.5 - 10 (ft)	580-130515-1 2.5 - 5 (ft)	580-130515-2 7.5 - 10 (ft)	580-130493-10 1 - 2.5 (ft)	580-130493-17 1 - 2.5 (ft)	580-130493-11 6 - 8 (ft)	580-130493-12 12 - 14 (ft)	580-130493-3 2.5 - 5 (ft)
Semi-Volatile Organic Compounds (mg/kg)																			
1,2,4-Trichlorobenzene	NA	34	800	20	NA	NA	0.058 UJ	-	0.056 UJ	0.056 UJ	0.058 UJ	-	0.057 UJ	-	0.064 UJ	0.059 UJ	0.058 UJ	0.056 UJ	0.059 UJ
1,2-Dichlorobenzene	NA	NA	7200	NA	NA	NA	0.058 UJ	-	0.056 UJ	0.056 UJ	0.058 UJ	-	0.057 UJ	-	0.064 UJ	0.059 UJ	0.058 UJ	0.056 UJ	0.059 UJ
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	0.058 UJ	-	0.056 UJ	0.056 UJ	0.058 UJ	-	0.057 UJ	-	0.064 UJ	0.059 UJ	0.058 UJ	0.056 UJ	0.059 UJ
1,4-Dichlorobenzene	NA	190	5600	20	NA	NA	0.058 UJ	-	0.056 UJ	0.056 UJ	0.058 UJ	-	0.057 UJ	-	0.064 UJ	0.059 UJ	0.058 UJ	0.056 UJ	0.059 UJ
1-Methylnaphthalene	NA	34	5600	NA	NA	NA	0.035 UJ	-	0.033 UJ	0.033 UJ	0.035 UJ	-	0.034 UJ	-	0.038 UJ	0.035 UJ	0.035 UJ	0.034 UJ	0.035 UJ
2,2'-oxybis(1-Chloropropane)	NA	14	3200	NA	NA	NA	0.23 UJ	-	0.22 UJ	0.22 UJ	0.23 UJ	-	0.23 UJ	-	0.25 UJ	0.24 UJ	0.23 UJ	0.23 UJ	0.23 UJ
2,4,5-Trichlorophenol	NA	NA	8000	9	4	NA	0.23 UJ	-	0.22 UJ	0.22 UJ	0.23 UJ	-	0.23 UJ	-	0.25 UJ	0.24 UJ	0.23 UJ	0.23 UJ	0.23 UJ
2,4,6-Trichlorophenol	NA	91	80	10	NA	NA	0.17 UJ	-	0.17 UJ	0.17 UJ	0.17 UJ	-	0.17 UJ	-	0.19 UJ	0.18 UJ	0.18 UJ	0.17 UJ	0.18 UJ
2,4-Dichlorophenol	NA	NA	240	NA	NA	NA	0.23 UJ	-	0.22 UJ	0.22 UJ	0.23 UJ	-	0.23 UJ	-	0.25 UJ	0.24 UJ	0.23 UJ	0.23 UJ	0.23 UJ
2,4-Dimethylphenol	NA	NA	1600	NA	NA	NA	0.23 UJ	-	0.22 UJ	0.22 UJ	0.23 UJ	-	0.23 UJ	-	0.25 UJ	0.24 UJ	0.23 UJ	0.23 UJ	0.23 UJ
2,4-Dinitrophenol	NA	NA	160	NA	20	NA	2.3 UJ	-	2.2 UJ	2.2 UJ	2.3 UJ	-	2.3 UJ	-	2.5 UJ	2.4 UJ	2.3 UJ	2.3 UJ	2.3 UJ
2,4-Dinitrotoluene	NA	3.2	160	NA	NA	NA	0.23 UJ	-	0.22 UJ	0.22 UJ	0.23 UJ	-	0.23 UJ	-	0.25 UJ	0.24 UJ	0.23 UJ	0.23 UJ	0.23 UJ
2,6-Dinitrotoluene	NA	0.67	24	NA	NA	NA	0.17 UJ	-	0.17 UJ	0.17 UJ	0.17 UJ	-	0.17 UJ	-	0.19 UJ	0.18 UJ	0.18 UJ	0.17 UJ	0.18 UJ
2-Chloronaphthalene	NA	NA	6400	NA	NA	NA	0.029 UJ	-	0.028 UJ	0.028 UJ	0.029 UJ	-	0.028 UJ	-	0.032 UJ	0.029 UJ	0.029 UJ	0.028 UJ	0.029 UJ
2-Chlorophenol	NA	NA	400	NA	NA	NA	0.23 UJ	-	0.22 UJ	0.22 UJ	0.23 UJ	-	0.23 UJ	-	0.25 UJ	0.24 UJ	0.23 UJ	0.23 UJ	0.23 UJ
2-Methylnaphthalene	NA	NA	320	NA	NA	NA	0.058 UJ	-	0.056 UJ	0.056 UJ	0.058 UJ	-	0.057 UJ	-	0.064 UJ	0.059 UJ	0.058 UJ	0.056 UJ	0.059 UJ
2-Methylphenol (o-Cresol)	NA	NA	4000	NA	NA	NA	0.17 UJ	-	0.17 UJ	0.17 UJ	0.17 UJ	-	0.17 UJ	-	0.19 UJ	0.18 UJ	0.18 UJ	0.17 UJ	0.18 UJ
2-Nitroaniline	NA	NA	800	NA	NA	NA	0.12 UJ	-	0.11 UJ	0.11 UJ	0.12 UJ	-	0.11 UJ	-	0.13 UJ	0.12 UJ	0.12 UJ	0.11 UJ	0.12 UJ
2-Nitrophenol	NA	NA	NA	NA	NA	NA	0.23 UJ	-	0.22 UJ	0.22 UJ	0.23 UJ	-	0.23 UJ	-	0.25 UJ	0.24 UJ	0.23 UJ	0.23 UJ	0.23 UJ
3&4-Methylphenol	NA	NA	NA	NA	NA	NA	0.23 UJ	-	0.22 UJ	0.22 UJ	0.23 UJ	-	0.23 UJ	-	**0.092 J-**	0.24 UJ	**0.045 J-**	0.23 UJ	0.23 UJ
3,3'-Dichlorobenzidine	NA	2.2	NA	NA	NA	NA	0.46 UJ	-	0.45 UJ	0.45 UJ	0.47 UJ	-	0.46 UJ	-	0.51 UJ	0.47 UJ	0.47 UJ	0.45 UJ	0.47 UJ
3-Nitroaniline	NA	NA	NA	NA	NA	NA	0.35 UJ	-	0.33 UJ	0.33 UJ	0.35 UJ	-	0.34 UJ	-	0.38 UJ	0.35 UJ	0.35 UJ	0.34 UJ	0.35 UJ
4,6-Dinitro-2-methylphenol	NA	NA	6.4	NA	NA	NA	1.2 UJ	-	1.1 UJ	1.1 UJ	1.2 UJ	-	1.1 UJ	-	1.3 UJ	1.2 UJ	1.2 UJ	1.1 UJ	1.2 UJ
4-Bromophenyl phenyl ether (BDE-3)	NA	NA	NA	NA	NA	NA	0.23 UJ	-	0.22 UJ	0.22 UJ	0.23 UJ	-	0.23 UJ	-	0.25 UJ	0.24 UJ	0.23 UJ	0.23 UJ	0.23 UJ
4-Chloro-3-methylphenol	NA	NA	8000	NA	NA	NA	0.17 UJ	-	0.17 UJ	0.17 UJ	0.17 UJ	-	0.17 UJ	-	0.19 UJ	0.18 UJ	0.18 UJ	0.17 UJ	0.18 UJ
4-Chloroaniline	NA	5	320	NA	NA	NA	1.7 UJ	-	1.7 UJ	1.7 UJ	1.7 UJ	-	1.7 UJ	-	1.9 UJ	1.8 UJ	1.8 UJ	1.7 UJ	1.8 UJ
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	NA	0.23 UJ	-	0.22 UJ	0.22 UJ	0.23 UJ	-	0.23 UJ	-	0.25 UJ	0.24 UJ	0.23 UJ	0.23 UJ	0.23 UJ
4-Nitroaniline	NA	50	320	NA	NA	NA	0.17 UJ	-	0.17 UJ	0.17 UJ	0.17 UJ	-	0.17 UJ	-	0.19 UJ	0.18 UJ	0.18 UJ	0.17 UJ	0.18 UJ
4-Nitrophenol	NA	NA	NA	7	NA	NA	2.3 UJ	-	2.2 UJ	2.2 UJ	2.3 UJ	-	2.3 UJ	-	2.5 UJ	2.4 UJ	2.3 UJ	2.3 UJ	2.3 UJ
Acenaphthene	NA	NA	4800	NA	20	NA	0.046 UJ	-	0.045 UJ	0.045 UJ	0.047 UJ	-	0.046 UJ	-	0.051 UJ	0.047 UJ	0.047 UJ	0.045 UJ	0.047 UJ
Acenaphthylene	NA	NA	NA	NA	NA	NA	0.029 UJ	-	0.028 UJ	0.028 UJ	0.029 UJ	-	0.028 UJ	-	0.032 UJ	0.029 UJ	0.029 UJ	0.028 UJ	0.029 UJ
Anthracene	NA	NA	24000	NA	NA	NA	0.069 UJ	-	0.067 UJ	0.067 UJ	0.07 UJ	-	0.068 UJ	-	0.076 UJ	0.071 UJ	0.07 UJ	0.068 UJ	0.07 UJ
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	0.046 UJ	-	0.045 UJ	0.045 UJ	0.047 UJ	-	0.046 UJ	-	0.051 UJ	0.047 UJ	0.047 UJ	0.045 UJ	0.047 UJ
Benzo(a)pyrene	0.1	0.19	24	NA	NA	12	0.069 UJ	-	0.067 UJ	0.067 UJ	0.07 UJ	-	0.068 UJ	-	0.076 UJ	0.071 UJ	0.07 UJ	0.068 UJ	0.07 UJ
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	0.046 UJ	-	0.045 UJ	0.045 UJ	0.047 UJ	-	0.046 UJ	-	0.051 UJ	0.047 UJ	0.047 UJ	0.045 UJ	0.047 UJ
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	0.069 UJ	-	0.067 UJ	0.067 UJ	0.07 UJ	-	0.068 UJ	-	0.076 UJ	0.071 UJ	0.07 UJ	0.068 UJ	0.07 UJ
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	0.069 UJ	-	0.067 UJ	0.067 UJ	0.07 UJ	-	0.068 UJ	-	0.076 UJ	0.071 UJ	0.07 UJ	0.068 UJ	0.07 UJ
Benzoic acid	NA	NA	320000	NA	NA	NA	4.6 UJ	-	4.5 R	4.5 UJ	4.7 UJ	-	4.6 UJ	-	5.1 UJ	4.7 UJ	4.7 UJ	4.5 UJ	4.7 UJ
Benzyl Alcohol	NA	NA	8000	NA	NA	NA	1.2 UJ	-	1.1 UJ	1.1 UJ	1.2 UJ	-	1.1 UJ	-	1.3 UJ	1.2 UJ	1.2 UJ	1.1 UJ	1.2 UJ
bis(2-Chloroethoxy)methane	NA	NA	240	NA	NA	NA	0.23 UJ	-	0.22 UJ	0.22 UJ	0.23 UJ	-	0.23 UJ	-	0.25 UJ	0.24 UJ	0.23 UJ	0.23 UJ	0.23 UJ
bis(2-Chloroethyl)ether	NA	0.91	NA	NA	NA	NA	0.12 UJ	-	0.11 UJ	0.11 UJ	0.12 UJ	-	0.11 UJ	-	0.13 UJ	0.12 UJ	0.12 UJ	0.11 UJ	0.12 UJ
bis(2-Ethylhexyl)phthalate	NA	71	1600	NA	NA	NA	**0.23 J-**	-	**0.22 J-**	0.67 UJ	0.7 UJ	-	**0.25 J-**	-	0.76 UJ	0.71 UJ	0.7 UJ	0.68 UJ	0.7 UJ
Butyl benzylphthalate (BBP)	NA	530	16000	NA	NA	NA	0.23 UJ	-	0.22 UJ	0.22 UJ	0.23 UJ	-	0.23 UJ	-	0.25 UJ	0.24 UJ	0.23 UJ	0.23 UJ	0.23 UJ
Carbazole	NA	NA	NA	NA	NA	NA	0.17 UJ	-	0.17 UJ	0.17 UJ	0.17 UJ	-	0.17 UJ	-	0.19 UJ	0.18 UJ	0.18 UJ	0.17 UJ	0.18 UJ
Chrysene	NA	NA	NA	NA	NA	NA	0.069 UJ	-	0.067 UJ	0.067 UJ	0.07 UJ	-	0.068 UJ	-	0.076 UJ	0.071 UJ	0.07 UJ	0.068 UJ	0.07 UJ
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	0.058 UJ	-	0.056 UJ	0.056 UJ	0.058 UJ	-	0.057 UJ	-	0.064 UJ	0.059 UJ	0.058 UJ	0.056 UJ	0.059 UJ
Dibenzofuran	NA	NA	80	NA	NA	NA	0.17 UJ	-	0.17 UJ	0.17 UJ	0.17 UJ	-	0.17 UJ	-	0.19 UJ	0.18 UJ	0.18 UJ	0.17 UJ	0.18 UJ
Diethyl phthalate	NA	NA	64000	NA	100	NA	0.46 UJ	-	0.45 UJ	0.45 UJ	0.47 UJ	-	0.46 UJ	-	0.51 UJ	0.47 UJ	0.47 UJ	0.45 UJ	0.47 UJ
Dimethyl phthalate	NA	NA	NA	200	NA	NA	0.17 UJ	-	0.17 UJ	0.17 UJ	0.17 UJ	-	0.17 UJ	-	0.19 UJ	0.18 UJ	0.18 UJ	0.17 UJ	0.18 UJ
Di-n-butylphthalate (DBP)	NA	NA	8000	NA	200	NA	0.58 UJ	-	0.56 UJ	0.56 UJ	**0.27 J-**	-	0.57 UJ	-	0.64 UJ	0.59 UJ	0.58 UJ	0.56 UJ	0.59 UJ
Di-n-octyl phthalate (DnOP)	NA	NA	800	NA	NA	NA	0.17 UJ	-	0.17 UJ	0.17 UJ	0.17 UJ	-	0.17 UJ	-	0.19 UJ	0.18 UJ	0.18 UJ	0.17 UJ	0.18 UJ
Fluoranthene	NA	NA	3200	NA	NA	NA	0.046 UJ	-	0.045 UJ	0.045 UJ	0.047 UJ	-	0.046 UJ	-	0.051 UJ	0.047 UJ	0.047 UJ	0.045 UJ	0.047 UJ
Fluorene	NA	NA	3200	30	NA	NA	0.029 UJ	-	0.028 UJ	0.028 UJ	0.029 UJ	-	0.028 UJ	-	0.032 UJ	0.029 UJ	0.029 UJ	0.028 UJ	0.029 UJ
Hexachlorobenzene	NA	0.63	64	NA	NA	17	0.058 UJ	-	0.056 UJ	0.056 UJ	0.058 UJ	-	0.057 UJ	-	0.064 UJ	0.059 UJ	0.058 UJ	0.056 UJ	0.059 UJ
Hexachlorobutadiene	NA	13	80	NA	NA	NA	0.058 UJ	-	0.056 UJ	0.056 UJ	0.058 UJ	-	0.057 UJ	-	0.064 UJ	0.059 UJ	0.058 UJ	0.056 UJ	0.059 UJ
Hexachlorocyclopentadiene	NA	NA	480	NA	10	NA	0.12 UJ	-	0.11 UJ	0.11 UJ	0.12 UJ	-	0.11 UJ	-	0.13 UJ	0.12 UJ	0.12 UJ	0.11 UJ	0.12 UJ
Hexachloroethane	NA	25	56	NA	NA	NA	0.17 UJ	-	0.17 UJ	0.17 UJ	0.17 UJ	-	0.17 UJ	-	0.19 UJ	0.18 UJ	0.18 UJ	0.17 UJ	0.18 UJ
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	0.046 UJ	-	0.045 UJ	0.045 UJ	0.047 UJ	-	0.046 UJ	-	0.051 UJ	0.047 UJ	0.047 UJ	0.045 UJ	0.047 UJ
Isophorone	NA	1100	16000	NA	NA	NA	0.17 UJ	-	0.17 UJ	0.17 UJ	0.17 UJ	-	0.17 UJ	-	0.19 UJ	0.18 UJ	0.18 UJ	0.17 UJ	0.18 UJ
Naphthalene	5	NA	1600	NA	NA	NA	0.029 UJ	-	0.028 UJ	0.028 UJ	0.029 UJ	-	**0.0058 J-**	-	**0.0074 J-**	0.029 UJ	0.029 UJ	0.028 UJ	0.029 UJ
Nitrobenzene	NA	NA	160	40	NA	NA	0.23 UJ	-	0.22 UJ	0.22 UJ	0.23 UJ	-	0.23 UJ	-	0.25 UJ	0.24 UJ	0.23 UJ	0.23 UJ	0.23 UJ
N-Nitrosodi-n-propylamine	NA	0.14	NA	NA	NA	NA	0.23 UJ	-	0.22 UJ	0.22 UJ	0.23 UJ	-	0.23 UJ	-	0.25 UJ	0.24 UJ	0.23 UJ	0.23 UJ	0.23 UJ

TABLE I
SUMMARY OF SOIL QUALITY DATA
WASHINGTON STATE DOE
TREOIL INDUSTRIES PROPERTY
FERNDALE, WASHINGTON

Location Name	Action Level						B-01	B-01	B-01	B-02	B-03	B-03	B-04	B-04	B-05	B-05	B-05	B-05	B-06
Sample Name							B-01-S1	B-01-S2	B-01-S7	B-02-S2	B-03-S1	B-03-S2	B-04-S1	B-04-S2	B-05-S1	FD01	B-05-S2	B-05-S3	B-06-S1
Sample Date							08/08/2023	08/08/2023	08/08/2023	08/07/2023	08/07/2023	08/07/2023	08/09/2023	08/09/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023
Lab Sample ID	MTCA Method A	MTCA Method B	MTCA Method B	MTCA Ecological Indicator Soil Concentrations for Protection of Plants	MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota	MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife	23H0691-03			23H0691-01	23H0691-02		23H0705-01		23H0704-02	23H0704-03			23H0704-01
Sample Depth (bgs)	Unrestricted	Cancerous	Non-Cancerous				580-130495-13 2.5 - 5 (ft)	580-130495-14 7.5 - 10 (ft)	580-130493-2 50 - 51 (ft)	580-130495-2 7.5 - 10 (ft)	580-130495-7 2.5 - 5 (ft)	580-130495-8 7.5 - 10 (ft)	580-130515-1 2.5 - 5 (ft)	580-130515-2 7.5 - 10 (ft)	580-130493-10 1 - 2.5 (ft)	580-130493-17 1 - 2.5 (ft)	580-130493-11 6 - 8 (ft)	580-130493-12 12 - 14 (ft)	580-130493-3 2.5 - 5 (ft)
N-Nitrosodiphenylamine	NA	200	NA	20	NA	NA	0.069 UJ	-	0.067 UJ	0.067 UJ	0.07 UJ	-	0.068 UJ	-	0.076 UJ	0.071 UJ	0.07 UJ	0.068 UJ	0.07 UJ
Pentachlorophenol	NA	2.5	400	6	3	4.5	0.46 UJ	-	0.45 UJ	0.45 UJ	0.47 UJ	-	0.46 UJ	-	0.51 UJ	0.47 UJ	0.47 UJ	0.45 UJ	0.47 UJ
Phenanthrene	NA	NA	NA	NA	NA	NA	0.069 UJ	-	0.067 UJ	0.067 UJ	0.07 UJ	-	0.068 UJ	-	0.076 UJ	0.071 UJ	0.07 UJ	0.068 UJ	0.07 UJ
Phenol	NA	NA	24000	30	70	NA	0.17 UJ	-	0.17 UJ	0.17 UJ	0.17 UJ	-	0.17 UJ	-	0.19 UJ	0.18 UJ	0.18 UJ	0.17 UJ	0.18 UJ
Pyrene	NA	NA	2400	NA	NA	NA	0.069 UJ	-	0.067 UJ	0.067 UJ	0.07 UJ	-	0.068 UJ	-	0.076 UJ	0.071 UJ	0.07 UJ	0.068 UJ	0.07 UJ
Total Petroleum Hydrocarbons (mg/kg)																			
Gasoline	*30/100	NA	NA	NA	100	5000	4.1 UJ	4.2 UJ	3.1 UJ	4 UJ	3.8 UJ	4.5 UJ	3.8 UJ	4.5 UJ	**1.2 J**	4.6 UJ	4.2 UJ	4.1 UJ	4.3 UJ
Total Petroleum Hydrocarbons (C10-C24), DRO Silica-Gel Cleanup	2000	NA	NA	NA	200	5000	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons (C10-C24)-Diesel #2	2000	NA	NA	NA	200	5000	58 UJ	57 UJ	53 UJ	56 UJ	59 UJ	61 UJ	59 UJ	62 UJ	66 UJ	**120 J-**	**17 J-**	59 UJ	58 UJ
Total Petroleum Hydrocarbons (C24-C36), MRO Silica-Gel Cleanup	2000	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons (C24-C36) Motor Oil	2000	NA	NA	NA	NA	NA	58 UJ	57 UJ	53 UJ	56 UJ	59 UJ	61 UJ	59 UJ	62 UJ	66 UJ	**300 J-**	**25 J-**	59 UJ	58 UJ
VPH (mg/kg)																			
1,2,3-Trichlorobenzene	NA	NA	64	20	NA	NA	1.05 U	-	-	0.922 U	0.927 U	-	0.844 U	-	1.26 U	1.48 U	-	-	0.944 U
1-Methylnaphthalene	NA	34	5600	NA	NA	NA	1.05 U	-	-	0.922 U	0.927 U	-	0.844 U	-	1.26 U	1.48 U	-	-	0.944 U
Benzene	0.03	18	320	NA	NA	NA	1.05 U	-	-	0.922 U	0.927 U	-	0.844 U	-	1.26 U	1.48 U	-	-	0.944 U
Ethylbenzene	6	NA	8000	NA	NA	NA	1.05 U	-	-	0.922 U	0.927 U	-	0.844 U	-	1.26 U	1.48 U	-	-	0.944 U
Hexane	NA	NA	4800	NA	NA	NA	1.05 U	-	-	0.922 U	0.927 U	-	0.844 U	-	1.26 U	1.48 U	-	-	0.944 U
m,p-Xylenes	NA	NA	NA	NA	NA	NA	2.1 U	-	-	1.84 U	1.85 U	-	1.69 U	-	2.53 U	2.96 U	-	-	1.89 U
Methyl Tert Butyl Ether (MTBE)	0.1	560	NA	NA	NA	NA	1.05 U	-	-	0.922 U	0.927 U	-	0.844 U	-	1.26 U	1.48 U	-	-	0.944 U
Naphthalene	5	NA	1600	NA	NA	NA	1.05 U	-	-	0.922 U	0.927 U	-	0.844 U	-	1.26 U	1.48 U	-	-	0.944 U
N-Decane	NA	NA	NA	NA	NA	NA	1.05 U	-	-	0.922 U	0.927 U	-	0.844 U	-	1.26 U	1.48 U	-	-	0.944 U
N-Dodecane	NA	NA	NA	NA	NA	NA	1.05 U	-	-	0.922 U	0.927 U	-	0.844 U	-	1.26 U	1.48 U	-	-	0.944 U
Octane	NA	NA	NA	NA	NA	NA	1.05 U	-	-	0.922 U	0.927 U	-	0.844 U	-	1.26 U	1.48 U	-	-	0.944 U
o-Xylene	NA	NA	16000	NA	NA	NA	1.05 U	-	-	0.922 U	0.927 U	-	0.844 U	-	1.26 U	1.48 U	-	-	0.944 U
Pentane	NA	NA	NA	NA	NA	NA	1.05 U	-	-	0.922 U	0.927 U	-	0.844 U	-	1.26 U	**1.98**	-	-	0.944 U
Toluene	7	NA	6400	NA	200	NA	1.05 U	-	-	0.922 U	0.927 U	-	0.844 U	-	1.26 U	1.48 U	-	-	0.944 U
Volatile Petroleum Hydrocarbons (C5-C6) Aliphatic	NA	NA	NA	NA	NA	NA	10.5 U	-	-	9.22 U	9.27 U	-	8.44 U	-	12.6 U	14.8 U	-	-	9.44 U
Volatile Petroleum Hydrocarbons (C6-C8) Aliphatic	NA	NA	NA	NA	NA	NA	10.5 U	-	-	9.22 U	9.27 U	-	8.44 U	-	12.6 U	14.8 U	-	-	9.44 U
Volatile Petroleum Hydrocarbons (C8-C10) Aliphatic	NA	NA	NA	NA	NA	NA	10.5 U	-	-	9.22 U	9.27 U	-	8.44 U	-	12.6 U	14.8 U	-	-	9.44 U
Volatile Petroleum Hydrocarbons (C10-C12) Aliphatic	NA	NA	NA	NA	NA	NA	10.5 U	-	-	9.22 U	9.27 U	-	8.44 U	-	12.6 U	14.8 U	-	-	9.44 U
Volatile Petroleum Hydrocarbons (C8-C10) Aromatic	NA	NA	NA	NA	NA	NA	10.5 U	-	-	9.22 U	9.27 U	-	8.44 U	-	12.6 U	14.8 U	-	-	9.44 U
Volatile Petroleum Hydrocarbons (C10-C12) Aromatic	NA	NA	NA	NA	NA	NA	10.5 U	-	-	9.22 U	9.27 U	-	8.44 U	-	12.6 U	14.8 U	-	-	9.44 U
Volatile Petroleum Hydrocarbons (C12-C13) Aromatic	NA	NA	NA	NA	NA	NA	10.5 U	-	-	9.22 U	9.27 U	-	8.44 U	-	12.6 U	14.8 U	-	-	9.44 U
EPH (mg/kg)																			
Extractable Petroleum Hydrocarbons (C8-C10) Aliphatic	NA	NA	NA	NA	NA	NA	2.49 UJ	-	-	2.42 UJ	2.37 UJ	-	2.42 UJ	-	2.73 UJ	2.9 UJ	-	-	2.37 UJ
Extractable Petroleum Hydrocarbons (C10-C12) Aliphatic	NA	NA	NA	NA	NA	NA	2.49 UJ	-	-	2.42 UJ	2.37 UJ	-	2.42 UJ	-	2.73 UJ	2.9 UJ	-	-	2.37 UJ
Extractable Petroleum Hydrocarbons (C12-C16) Aliphatic	NA	NA	NA	NA	NA	NA	2.49 UJ	-	-	2.42 UJ	2.37 UJ	-	2.42 UJ	-	2.73 UJ	2.9 UJ	-	-	2.37 UJ
Extractable Petroleum Hydrocarbons (C16-C21) Aliphatic	NA	NA	NA	NA	NA	NA	2.49 UJ	-	-	2.42 UJ	2.37 UJ	-	2.42 UJ	-	**10.7 J-**	**3.89 J-**	-	-	2.37 UJ
Extractable Petroleum Hydrocarbons (C21-C34) Aliphatic	NA	NA	NA	NA	NA	NA	2.49 UJ	-	-	2.42 UJ	2.37 UJ	-	2.42 UJ	-	2.73 UJ	**9.88 J-**	-	-	2.37 UJ
Extractable Petroleum Hydrocarbons (C8-C10) Aromatic	NA	NA	NA	NA	NA	NA	2.49 UJ	-	-	2.42 UJ	2.37 UJ	-	2.42 UJ	-	2.73 UJ	2.9 UJ	-	-	2.37 UJ
Extractable Petroleum Hydrocarbons (C10-C12) Aromatic	NA	NA	NA	NA	NA	NA	2.49 UJ	-	-	2.42 UJ	2.37 UJ	-	2.42 UJ	-	2.73 UJ	2.9 UJ	-	-	2.37 UJ
Extractable Petroleum Hydrocarbons (C12-C16) Aromatic	NA	NA	NA	NA	NA	NA	2.49 UJ	-	-	2.42 UJ	2.37 UJ	-	2.42 UJ	-	2.73 UJ	2.9 UJ	-	-	2.37 UJ
Extractable Petroleum Hydrocarbons (C16-C21) Aromatic	NA	NA	NA	NA	NA	NA	2.49 UJ	-	-	2.42 UJ	2.37 UJ	-	2.42 UJ	-	**3.51 J-**	**3.49 J-**	-	-	2.37 UJ
Extractable Petroleum Hydrocarbons (C21-C34) Aromatic	NA	NA	NA	NA	NA	NA	2.49 UJ	-	-	2.42 UJ	2.37 UJ	-	2.42 UJ	-	**4.94 J-**	**5.14 J-**	-	-	2.37 UJ
Inorganic Compounds (mg/kg)																			
Arsenic	20	0.67	24	NA	NA	NA	**6.4** [F]	-	**2.7** [F]	**7.2** [F]	**5.4** [F]	-	**5.9** [F]	-	**5.2** [F]	**2.7** [F]	**8** [F]	**6.7** [F]	**4.7** [F]
Cadmium	2	NA	80	20	4	14	**0.25 J**	-	**0.18 J**	**0.24 J**	**0.22 J**	-	**0.18 J**	-	**0.13 J**	**0.2 J**	**0.56 J**	**0.33 J**	**0.15 J**
Chromium	NA	NA	NA	42	42	67	**62** [AC]	-	**27**	**46** [AC]	**47** [AC]	-	**53** [AC]	-	**39**	**38**	**60** [AC]	**42**	**44** [AC]
Copper	NA	NA	3200	50	100	217	**46 J**	-	**16 J**	**34 J**	**32 J**	-	**35 J**	-	**13 J**	**22 J**	**44 J**	**35 J**	**27 J**
Lead	250	NA	NA	500	50	118	**5.6**	-	**2**	**4.8**	**4.2**	-	**4**	-	**2.9 J**	**5.2 J**	**5.2**	**3.9**	**3**
Mercury	2	NA	NA	NA	NA	NA	**0.16**	-	**0.031 J+**	**0.058**	**0.065**	-	**0.042**	-	**0.045 J+**	**0.04 J+**	**0.059 J+**	**0.047 J+**	**0.052 J+**
Nickel	NA	NA	1600	200	30	980	**58** [C]	-	**23**	**38** [C]	**41** [C]	-	**46** [C]	-	**30**	**32** [C]	**55** [C]	**41** [C]	**37** [C]
Potassium	NA	NA	NA	NA	NA	NA	**1500 J+**	-	**1000 J+**	**1400 J+**	**1100 J+**	-	**1100 J**	-	**720 J+**	**640 J+**	**1700 J+**	**1500 J+**	**1200 J+**
Sodium	NA	NA	NA	NA	NA	NA	**380 J+**	-	**570**	**520 J+**	**380 J+**	-	**380**	-	**390 J**	**240 J**	**550**	**510**	**330**
Zinc	NA	NA	24000	200	86	360	**75**	-	**33**	**58**	**53**	-	**53**	-	**38**	**53**	**71**	**55**	**51**
PCBs (mg/kg)																			
Aroclor-1016 (PCB-1016)	NA	14	5.6	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1221 (PCB-1221)	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1232 (PCB-1232)	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1242 (PCB-1242)	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1248 (PCB-1248)	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1254 (PCB-1254)	NA	0.5	1.6	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1260 (PCB-1260)	NA	0.5	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE I
SUMMARY OF SOIL QUALITY DATA
WASHINGTON STATE DOE
TREOIL INDUSTRIES PROPERTY
FERNDALE, WASHINGTON

Location Name	Action Level						B-01	B-01	B-01	B-02	B-03	B-03	B-04	B-04	B-05	B-05	B-05	B-05	B-06
Sample Name							B-01-S1	B-01-S2	B-01-S7	B-02-S2	B-03-S1	B-03-S2	B-04-S1	B-04-S2	B-05-S1	FD01	B-05-S2	B-05-S3	B-06-S1
Sample Date				MTCA Ecological Indicator Soil Concentrations for	MTCA Ecological Indicator Soil Concentrations for	MTCA Ecological Indicator Soil Concentrations for	08/08/2023	08/08/2023	08/08/2023	08/07/2023	08/07/2023	08/07/2023	08/09/2023	08/09/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023
Lab Sample ID	MTCA Method A Unrestricted	MTCA Method B Cancerous	MTCA Method B Non-Cancerous	Protection of Plants	Protection of Soil biota	Protection of Wildlife	23H0691-03 580-130495-13	580-130495-14	580-130493-2	23H0691-01 580-130495-2	23H0691-02 580-130495-7	580-130495-8	23H0705-01 580-130515-1	580-130515-2	23H0704-02 580-130493-10	23H0704-03 580-130493-17	580-130493-11	580-130493-12	23H0704-01 580-130493-3
Sample Depth (bgs)							2.5 - 5 (ft)	7.5 - 10 (ft)	50 - 51 (ft)	7.5 - 10 (ft)	2.5 - 5 (ft)	7.5 - 10 (ft)	2.5 - 5 (ft)	7.5 - 10 (ft)	1 - 2.5 (ft)	1 - 2.5 (ft)	6 - 8 (ft)	12 - 14 (ft)	2.5 - 5 (ft)

ABBREVIATIONS AND NOTES:
-: not analyzed or not available
*30 mg/kg if benzene is present, otherwise, 100 mg/kg.
J: value is an estimate
J+: value is an estimate, biased high
J-: value is an estimate, biased low
mg/kg: milligrams per kilogram
MTCA: Model Toxics Control Act
NA: No Action level established
R: The sample results were rejected as unusable; the compound may or may not be present in the sample.
U: not detected, value is the laboratory reporting limit

Bold values indicate a detected concentration.
Blue shading indicates a detected analyte concentration exceeding MTCA Method A Unrestricted Cleanup Level.
Light purple shading indicates a detected analyte concentration exceeding MTCA Method B Cancerous Cleanup Level.
Yellow shading indicates a detected analyte concentration exceeding MTCA Ecological Indicator Soil Concentrations for Protection of Plants.
Green shading indicates a detected analyte concentration exceeding MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota.
Orange shading indicates a detected analyte concentration exceeding MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife.
When multiple action levels are exceeded a bracketed bold superscript corresponding to each screening level is denoted. A: MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota; B: MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife; C: MTCA Ecological Indicator Soil Concentrations for Protection of Plants; E: MTCA Method A Unrestricted; F: MTCA Method B Cancerous; G: MTCA Method B Non-Cancerous.

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Location Name	Action Level						B-06	B-06	B-07	B-07	B-07	B-08	B-08	B-09	B-09	B-10	B-10	B-11	B-11
Sample Name							B-06-S2	B-06-S4	B-07-S1	B-07-S2	FD-02	B-08-S1	B-08-S2	B-09-S1	B-09-S2	B-10-S1	B-10-S2	B-11-S1	B-11-S2
Sample Date							08/08/2023	08/08/2023	08/09/2023	08/09/2023	08/09/2023	08/10/2023	08/10/2023	08/09/2023	08/09/2023	08/09/2023	08/09/2023	08/10/2023	08/10/2023
Lab Sample ID									23H0706-02					23H0705-02					
									23H0706-02RE1			23H0706-01		23H0705-02RE1		23H0706-05		23H0706-03	
Sample Depth (bgs)	MTCA Method A Unrestricted	MTCA Method B Cancerous	MTCA Method B Non-Cancerous	MTCA Ecological Indicator Soil Concentrations for Protection of Plants	MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota	MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife	580-130493-4 7.5 - 10 (ft)	580-130493-6 17 - 19 (ft)	580-130524-8 1 - 2.5 (ft)	580-130524-9 7.5 - 10 (ft)	580-130515-21 7.5 - 10 (ft)	580-130524-1 3 - 5 (ft)	580-130524-2 8 - 10 (ft)	580-130515-13 2.5 - 5 (ft)	580-130515-14 7.5 - 10 (ft)	580-130524-24 2 - 3 (ft)	580-130524-25 8 - 10 (ft)	580-130524-15 1 - 2 (ft)	580-130524-16 8 - 10 (ft)
Volatile Organic Compounds (mg/kg)																			
1,1,1,2-Tetrachloroethane	NA	38	2400	NA	NA	NA	-	0.02 UJ	0.3 UJ	0.02 UJ	0.019 UJ	0.02 UJ	-	0.021 UJ	-	0.019 UJ	0.023 UJ	0.019 UJ	-
1,1,1-Trichloroethane	2	NA	160000	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
1,1,2,2-Tetrachloroethane	NA	5	1600	NA	NA	NA	-	0.02 UJ	0.3 UJ	0.02 UJ	0.019 UJ	0.02 UJ	-	0.021 UJ	-	0.019 UJ	0.023 UJ	0.019 UJ	-
1,1,2-Trichloroethane	NA	18	320	NA	NA	NA	-	0.02 UJ	0.3 UJ	0.02 UJ	0.019 UJ	0.02 UJ	-	0.021 UJ	-	0.019 UJ	0.023 UJ	0.019 UJ	-
1,1-Dichloroethane	NA	180	16000	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
1,1-Dichloroethene	NA	NA	4000	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
1,1-Dichloropropene	NA	NA	NA	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
1,2,3-Trichlorobenzene	NA	NA	64	20	NA	NA	-	0.081 UJ	1.2 UJ	0.081 UJ	0.077 UJ	0.081 UJ	-	0.085 UJ	-	0.077 UJ	0.091 UJ	0.078 UJ	-
1,2,3-Trichloropropane	NA	0.0063	320	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
1,2,4-Trichlorobenzene	NA	34	800	20	NA	NA	-	0.081 UJ	1.2 UJ	0.081 UJ	0.077 UJ	0.081 UJ	-	0.085 UJ	-	0.077 UJ	0.091 UJ	0.078 UJ	-
1,2,4-Trimethylbenzene	NA	NA	800	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
1,2-Dibromo-3-chloropropane (DBCP)	NA	0.23	16	NA	NA	NA	-	0.061 UJ	0.91 UJ	0.061 UJ	0.057 UJ	0.061 UJ	-	0.064 UJ	-	0.058 UJ	0.068 UJ	0.058 UJ	-
1,2-Dibromoethane (Ethylene Dibromide)	0.005	0.5	720	NA	NA	NA	-	0.02 UJ	0.3 UJ	0.02 UJ	0.019 UJ	0.02 UJ	-	0.021 UJ	-	0.019 UJ	0.023 UJ	0.019 UJ	-
1,2-Dichlorobenzene	NA	NA	7200	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
1,2-Dichloroethane	NA	11	480	NA	NA	NA	-	0.02 UJ	0.3 UJ	0.02 UJ	0.019 UJ	0.02 UJ	-	0.021 UJ	-	0.019 UJ	0.023 UJ	0.019 UJ	-
1,2-Dichloropropane	NA	27	3200	700	NA	NA	-	0.02 UJ	0.3 UJ	0.02 UJ	0.019 UJ	0.02 UJ	-	0.021 UJ	-	0.019 UJ	0.023 UJ	0.019 UJ	-
1,3,5-Trimethylbenzene	NA	NA	800	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	-	0.061 UJ	0.91 UJ	0.061 UJ	0.057 UJ	0.061 UJ	-	0.064 UJ	-	0.058 UJ	0.068 UJ	0.058 UJ	-
1,3-Dichloropropane	NA	NA	1600	NA	NA	NA	-	0.061 UJ	0.91 UJ	0.061 UJ	0.057 UJ	0.061 UJ	-	0.064 UJ	-	0.058 UJ	0.068 UJ	0.058 UJ	-
1,4-Dichlorobenzene	NA	190	5600	20	NA	NA	-	0.061 UJ	0.91 UJ	0.061 UJ	0.057 UJ	0.061 UJ	-	0.064 UJ	-	0.058 UJ	0.068 UJ	0.058 UJ	-
2,2-Dichloropropane	NA	NA	NA	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
2-Chlorotoluene	NA	NA	1600	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
2-Phenylbutane (sec-Butylbenzene)	NA	NA	8000	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
4-Chlorotoluene	NA	NA	1600	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
Benzene	0.03	18	320	NA	NA	NA	-	0.02 UJ	**0.094 J** [E]	0.02 UJ	0.019 UJ	0.02 UJ	-	0.021 UJ	-	**0.0061 J**	**0.005 J**	0.019 UJ	-
Bromobenzene	NA	NA	640	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
Bromodichloromethane	NA	16	1600	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
Bromoform	NA	130	1600	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
Bromomethane (Methyl Bromide)	NA	NA	110	NA	NA	NA	-	0.1 UJ	1.5 UJ	0.1 UJ	0.096 UJ	0.1 UJ	-	0.11 UJ	-	0.096 UJ	0.11 UJ	0.097 UJ	-
Carbon tetrachloride	NA	14	320	NA	NA	NA	-	0.02 UJ	0.3 UJ	0.02 UJ	0.019 UJ	0.02 UJ	-	0.021 UJ	-	0.019 UJ	0.023 UJ	0.019 UJ	-
Chlorobenzene	NA	NA	1600	40	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
Chlorobromomethane	NA	NA	NA	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
Chloroethane	NA	NA	NA	NA	NA	NA	-	0.081 UJ	1.2 UJ	0.081 UJ	0.077 UJ	0.081 UJ	-	0.085 UJ	-	0.077 UJ	0.091 UJ	0.078 UJ	-
Chloroform (Trichloromethane)	NA	32	800	NA	NA	NA	-	0.02 UJ	0.3 UJ	0.02 UJ	0.019 UJ	0.02 UJ	-	0.021 UJ	-	0.019 UJ	0.023 UJ	0.019 UJ	-
Chloromethane (Methyl Chloride)	NA	NA	NA	NA	NA	NA	-	0.061 UJ	0.91 UJ	0.061 UJ	0.057 UJ	0.061 UJ	-	0.064 UJ	-	0.058 UJ	0.068 UJ	0.058 UJ	-
cis-1,2-Dichloroethene	NA	NA	160	NA	NA	NA	-	0.061 UJ	0.91 UJ	0.061 UJ	0.057 UJ	0.061 UJ	-	0.064 UJ	-	0.058 UJ	0.068 UJ	0.058 UJ	-
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	-	0.02 UJ	0.3 UJ	0.02 UJ	0.019 UJ	0.02 UJ	-	0.021 UJ	-	0.019 UJ	0.023 UJ	0.019 UJ	-
Cymene (p-Isopropyltoluene)	NA	NA	NA	NA	NA	NA	-	0.04 UJ	**1.4 J**	**0.037 J**	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	**0.017 J**	-
Dibromochloromethane	NA	12	1600	NA	NA	NA	-	0.02 UJ	0.3 UJ	0.02 UJ	0.019 UJ	0.02 UJ	-	0.021 UJ	-	0.019 UJ	0.023 UJ	0.019 UJ	-
Dibromomethane	NA	NA	800	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
Dichlorodifluoromethane (CFC-12)	NA	NA	16000	NA	NA	NA	-	0.25 UJ	3.8 UJ	0.25 UJ	0.24 UJ	0.25 UJ	-	0.27 UJ	-	0.24 UJ	0.28 UJ	0.24 UJ	-
Ethylbenzene	6	NA	8000	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
Hexachlorobutadiene	NA	13	80	NA	NA	NA	-	0.1 UJ	1.5 UJ	0.1 UJ	0.096 UJ	0.1 UJ	-	0.11 UJ	-	0.096 UJ	0.11 UJ	0.097 UJ	-
Isopropylbenzene (Cumene)	NA	NA	8000	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
m,p-Xylenes	NA	NA	NA	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
Methyl Tert Butyl Ether (MTBE)	0.1	560	NA	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
Methylene chloride (Dichloromethane)	0.02	94	480	NA	NA	NA	-	0.25 UJ	3.8 UJ	0.25 UJ	0.24 UJ	0.25 UJ	-	0.27 UJ	-	0.24 UJ	0.28 UJ	0.24 UJ	-
Naphthalene	5	NA	1600	NA	NA	NA	-	0.15 UJ	2.3 UJ	0.15 UJ	0.14 UJ	0.15 UJ	-	0.16 UJ	-	0.14 UJ	0.17 UJ	0.15 UJ	-
n-Butylbenzene	NA	NA	4000	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
n-Propylbenzene	NA	NA	8000	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
o-Xylene	NA	NA	16000	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
Styrene	NA	NA	16000	NA	300	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
tert-Butylbenzene	NA	NA	8000	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
Tetrachloroethene	0.05	480	480	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
Toluene	7	NA	6400	NA	200	NA	-	0.061 UJ	0.91 UJ	0.061 UJ	0.057 UJ	0.061 UJ	-	0.064 UJ	-	0.058 UJ	0.068 UJ	0.058 UJ	-
trans-1,2-Dichloroethene	NA	NA	1600	NA	NA	NA	-	0.061 UJ	0.91 UJ	0.061 UJ	0.057 UJ	0.061 UJ	-	0.064 UJ	-	0.058 UJ	0.068 UJ	0.058 UJ	-
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
Trichloroethene	0.03	12	40	NA	NA	NA	-	0.04 UJ	0.61 UJ	0.04 UJ	0.038 UJ	0.041 UJ	-	0.043 UJ	-	0.039 UJ	0.045 UJ	0.039 UJ	-
Trichlorofluoromethane (CFC-11)	NA	NA	24000	NA	NA	NA	-	0.081 UJ	1.2 UJ	0.081 UJ	0.077 UJ	0.081 UJ	-	0.085 UJ	-	0.077 UJ	0.091 UJ	0.078 UJ	-
Vinyl chloride	NA	0.67	240	NA	NA	NA	-	0.1 UJ	1.5 UJ	0.1 UJ	0.096 UJ	0.1 UJ	-	0.11 UJ	-	0.096 UJ	0.11 UJ	0.097 UJ	-

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TREOIL INDUSTRIES PROPERTY
FERNDALE, WASHINGTON

Location Name	Action Level						B-06	B-06	B-07	B-07	B-07	B-08	B-08	B-09	B-09	B-10	B-10	B-11	B-11
Sample Name							B-06-S2	B-06-S4	B-07-S1	B-07-S2	FD-02	B-08-S1	B-08-S2	B-09-S1	B-09-S2	B-10-S1	B-10-S2	B-11-S1	B-11-S2
Sample Date							08/08/2023	08/08/2023	08/09/2023 23H0706-02	08/09/2023	08/09/2023	08/10/2023	08/10/2023	08/09/2023 23H0705-02	08/09/2023	08/09/2023	08/09/2023	08/10/2023	08/10/2023
Lab Sample ID							580-130493-4	580-130493-6	23H0706-02RE1 580-130524-8	580-130524-9	580-130515-21	23H0706-01 580-130524-1	580-130524-2	23H0705-02RE1 580-130515-13	580-130515-14	23H0706-05 580-130524-24	580-130524-25	23H0706-03 580-130524-15	580-130524-16
Sample Depth (bgs)	MTCA Method A Unrestricted	MTCA Method B Cancerous	MTCA Method B Non-Cancerous	MTCA Ecological Indicator Soil Concentrations for Protection of Plants	MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota	MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife	7.5 - 10 (ft)	17 - 19 (ft)	1 - 2.5 (ft)	7.5 - 10 (ft)	7.5 - 10 (ft)	3 - 5 (ft)	8 - 10 (ft)	2.5 - 5 (ft)	7.5 - 10 (ft)	2 - 3 (ft)	8 - 10 (ft)	1 - 2 (ft)	8 - 10 (ft)
Semi-Volatile Organic Compounds (mg/kg)																			
1,2,4-Trichlorobenzene	NA	34	800	20	NA	NA	-	0.059 UJ	1 U	0.058 U	0.055 U	0.06 U	-	0.057 UJ	-	0.055 UJ	0.062 UJ	0.055 U	-
1,2-Dichlorobenzene	NA	NA	7200	NA	NA	NA	-	0.059 UJ	1 U	0.058 U	0.055 U	0.06 U	-	0.057 UJ	-	0.055 UJ	0.062 UJ	0.055 U	-
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	-	0.059 UJ	1 U	0.058 U	0.055 U	0.06 U	-	0.057 UJ	-	0.055 UJ	0.062 UJ	0.055 U	-
1,4-Dichlorobenzene	NA	190	5600	20	NA	NA	-	0.059 UJ	1 U	0.058 U	0.055 U	0.06 U	-	0.057 UJ	-	0.055 UJ	0.062 UJ	0.055 U	-
1-Methylnaphthalene	NA	34	5600	NA	NA	NA	-	0.036 UJ	0.61 U	0.035 U	0.033 U	0.036 U	-	0.034 UJ	-	0.033 UJ	0.037 UJ	0.033 U	-
2,2'-oxybis(1-Chloropropane)	NA	14	3200	NA	NA	NA	-	0.24 UJ	4 U	0.23 U	0.22 U	0.24 U	-	0.23 UJ	-	0.22 UJ	0.25 UJ	0.22 U	-
2,4,5-Trichlorophenol	NA	NA	8000	9	4	NA	-	0.24 UJ	4 U	0.23 U	0.22 U	0.24 U	-	0.23 UJ	-	0.22 UJ	0.25 UJ	0.22 U	-
2,4,6-Trichlorophenol	NA	91	80	10	NA	NA	-	0.18 UJ	3 U	0.17 U	0.16 U	0.18 U	-	0.17 UJ	-	0.16 UJ	0.19 UJ	0.17 U	-
2,4-Dichlorophenol	NA	NA	240	NA	NA	NA	-	0.24 UJ	4 U	0.23 U	0.22 U	0.24 U	-	0.23 UJ	-	0.22 UJ	0.25 UJ	0.22 U	-
2,4-Dimethylphenol	NA	NA	1600	NA	NA	NA	-	0.24 UJ	4 U	0.23 U	0.22 U	0.24 U	-	0.23 UJ	-	0.22 UJ	0.25 UJ	0.22 U	-
2,4-Dinitrophenol	NA	NA	160	NA	20	NA	-	2.4 UJ	40 U	2.3 U	2.2 U	2.4 U	-	2.3 UJ	-	2.2 UJ	2.5 UJ	2.2 U	-
2,4-Dinitrotoluene	NA	3.2	160	NA	NA	NA	-	0.24 UJ	4 U	0.23 U	0.22 U	0.24 U	-	0.23 UJ	-	0.22 UJ	0.25 UJ	0.22 U	-
2,6-Dinitrotoluene	NA	0.67	24	NA	NA	NA	-	0.18 UJ	3 U	0.17 U	0.16 U	0.18 U	-	0.17 UJ	-	0.16 UJ	0.19 UJ	0.17 U	-
2-Chloronaphthalene	NA	NA	6400	NA	NA	NA	-	0.03 UJ	0.5 U	0.029 U	0.027 U	0.03 U	-	0.029 UJ	-	0.027 UJ	0.031 UJ	0.028 U	-
2-Chlorophenol	NA	NA	400	NA	NA	NA	-	0.24 UJ	4 U	0.23 U	0.22 U	0.24 U	-	0.23 UJ	-	0.22 UJ	0.25 UJ	0.22 U	-
2-Methylnaphthalene	NA	NA	320	NA	NA	NA	-	0.059 UJ	1 U	0.058 U	0.055 U	0.06 U	-	0.057 UJ	-	0.055 UJ	0.062 UJ	0.055 U	-
2-Methylphenol (o-Cresol)	NA	NA	4000	NA	NA	NA	-	0.18 UJ	3 U	0.17 U	0.16 U	0.18 U	-	0.17 UJ	-	0.16 UJ	0.19 UJ	0.17 U	-
2-Nitroaniline	NA	NA	800	NA	NA	NA	-	0.12 UJ	2 U	0.12 U	0.11 U	0.12 U	-	0.11 UJ	-	0.11 UJ	0.12 UJ	0.11 U	-
2-Nitrophenol	NA	NA	NA	NA	NA	NA	-	0.24 UJ	4 U	0.23 U	0.22 U	0.24 U	-	0.23 UJ	-	0.22 UJ	0.25 UJ	0.22 U	-
3&4-Methylphenol	NA	NA	NA	NA	NA	NA	-	0.24 UJ	**1**	0.23 U	0.22 U	0.24 U	-	0.23 UJ	-	0.22 UJ	0.25 UJ	0.22 U	-
3,3'-Dichlorobenzidine	NA	2.2	NA	NA	NA	NA	-	0.48 UJ	8.1 U	0.46 U	0.44 U	0.48 U	-	0.46 UJ	-	0.44 UJ	0.49 UJ	0.44 U	-
3-Nitroaniline	NA	NA	NA	NA	NA	NA	-	0.36 UJ	6.1 U	0.35 U	0.33 U	0.36 U	-	0.34 UJ	-	0.33 UJ	0.37 UJ	0.33 U	-
4,6-Dinitro-2-methylphenol	NA	NA	6.4	NA	NA	NA	-	1.2 UJ	20 U	1.2 U	1.1 U	1.2 U	-	1.1 UJ	-	1.1 UJ	1.2 UJ	1.1 U	-
4-Bromophenyl phenyl ether (BDE-3)	NA	NA	NA	NA	NA	NA	-	0.24 UJ	4 U	0.23 U	0.22 U	0.24 U	-	0.23 UJ	-	0.22 UJ	0.25 UJ	0.22 U	-
4-Chloro-3-methylphenol	NA	NA	8000	NA	NA	NA	-	0.18 UJ	3 U	0.17 U	0.16 U	0.18 U	-	0.17 UJ	-	0.16 UJ	0.19 UJ	0.17 U	-
4-Chloroaniline	NA	5	320	NA	NA	NA	-	1.8 UJ	30 U	1.7 U	1.6 U	1.8 U	-	1.7 UJ	-	1.6 UJ	1.9 UJ	1.7 U	-
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	NA	-	0.24 UJ	4 U	0.23 U	0.22 U	0.24 U	-	0.23 UJ	-	0.22 UJ	0.25 UJ	0.22 U	-
4-Nitroaniline	NA	50	320	NA	NA	NA	-	0.18 UJ	3 U	0.17 U	0.16 U	0.18 U	-	0.17 UJ	-	0.16 UJ	0.19 UJ	0.17 U	-
4-Nitrophenol	NA	NA	NA	7	NA	NA	-	2.4 UJ	40 U	2.3 U	2.2 U	2.4 U	-	2.3 UJ	-	2.2 UJ	2.5 UJ	2.2 U	-
Acenaphthene	NA	NA	4800	NA	20	NA	-	0.048 UJ	0.81 U	0.046 U	0.044 U	0.048 U	-	0.046 UJ	-	0.044 UJ	0.049 UJ	0.044 U	-
Acenaphthylene	NA	NA	NA	NA	NA	NA	-	0.03 UJ	0.5 U	0.029 U	0.027 U	0.03 U	-	0.029 UJ	-	0.027 UJ	0.031 UJ	0.028 U	-
Anthracene	NA	NA	24000	NA	NA	NA	-	0.071 UJ	1.2 U	0.07 U	0.066 U	0.072 U	-	0.069 UJ	-	0.066 UJ	0.074 UJ	0.066 U	-
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	-	0.048 UJ	0.81 U	0.046 U	0.044 U	0.048 U	-	0.046 UJ	-	0.044 UJ	0.049 UJ	0.044 U	-
Benzo(a)pyrene	0.1	0.19	24	NA	NA	12	-	0.071 UJ	1.2 U	0.07 U	0.066 U	0.072 U	-	0.069 UJ	-	0.066 UJ	0.074 UJ	0.066 U	-
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	-	0.048 UJ	0.81 U	0.046 U	0.044 U	0.048 U	-	0.046 UJ	-	0.044 UJ	0.049 UJ	0.044 U	-
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	-	0.071 UJ	1.2 U	0.07 U	0.066 U	0.072 U	-	0.069 UJ	-	0.066 UJ	0.074 UJ	0.066 U	-
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	-	0.071 UJ	1.2 U	0.07 U	0.066 U	0.072 U	-	0.069 UJ	-	0.066 UJ	0.074 UJ	0.066 U	-
Benzoic acid	NA	NA	320000	NA	NA	NA	-	4.8 UJ	81 U	4.6 U	4.4 U	4.8 U	-	4.6 UJ	-	4.4 UJ	4.9 UJ	4.4 U	-
Benzyl Alcohol	NA	NA	8000	NA	NA	NA	-	1.2 UJ	20 U	1.2 U	1.1 U	1.2 U	-	1.1 UJ	-	1.1 UJ	1.2 UJ	1.1 U	-
bis(2-Chloroethoxy)methane	NA	NA	240	NA	NA	NA	-	0.24 UJ	4 U	0.23 U	0.22 U	0.24 U	-	0.23 UJ	-	0.22 UJ	0.25 UJ	0.22 U	-
bis(2-Chloroethyl)ether	NA	0.91	NA	NA	NA	NA	-	0.12 UJ	2 U	0.12 U	0.11 U	0.12 U	-	0.11 UJ	-	0.11 UJ	0.12 UJ	0.11 U	-
bis(2-Ethylhexyl)phthalate	NA	71	1600	NA	NA	NA	-	0.71 UJ	12 U	0.7 U	0.66 U	0.72 U	-	0.69 UJ	-	**0.22 J-**	0.74 UJ	0.66 U	-
Butyl benzylphthalate (BBP)	NA	530	16000	NA	NA	NA	-	0.24 UJ	4 U	0.23 U	0.22 U	0.24 U	-	0.23 UJ	-	0.22 UJ	0.25 UJ	0.22 U	-
Carbazole	NA	NA	NA	NA	NA	NA	-	0.18 UJ	3 U	0.17 U	0.16 U	0.18 U	-	0.17 UJ	-	0.16 UJ	0.19 UJ	0.17 U	-
Chrysene	NA	NA	NA	NA	NA	NA	-	0.071 UJ	1.2 U	0.07 U	0.066 U	0.072 U	-	0.069 UJ	-	0.066 UJ	0.074 UJ	0.066 U	-
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	-	0.059 UJ	1 U	0.058 U	0.055 U	0.06 U	-	0.057 UJ	-	0.055 UJ	0.062 UJ	0.055 U	-
Dibenzofuran	NA	NA	80	NA	NA	NA	-	0.18 UJ	3 U	0.17 U	0.16 U	0.18 U	-	0.17 UJ	-	0.16 UJ	0.19 UJ	0.17 U	-
Diethyl phthalate	NA	NA	64000	NA	100	NA	-	0.48 UJ	8.1 U	0.46 U	0.44 U	0.48 U	-	0.46 UJ	-	0.44 UJ	0.49 UJ	0.44 U	-
Dimethyl phthalate	NA	NA	NA	200	NA	NA	-	0.18 UJ	3 U	0.17 U	0.16 U	0.18 U	-	0.17 UJ	-	0.16 UJ	0.19 UJ	0.17 U	-
Di-n-butylphthalate (DBP)	NA	NA	8000	NA	200	NA	-	0.59 UJ	10 U	0.58 U	0.55 U	0.6 U	-	0.57 UJ	-	0.55 UJ	0.62 UJ	**0.061 J**	-
Di-n-octyl phthalate (DnOP)	NA	NA	800	NA	NA	NA	-	0.18 UJ	3 U	0.17 U	0.16 U	0.18 U	-	0.17 UJ	-	0.16 UJ	0.19 UJ	0.17 U	-
Fluoranthene	NA	NA	3200	NA	NA	NA	-	0.048 UJ	0.81 U	0.046 U	0.044 U	0.048 U	-	0.046 UJ	-	0.044 UJ	0.049 UJ	0.044 U	-
Fluorene	NA	NA	3200	30	NA	NA	-	0.03 UJ	0.5 U	0.029 U	0.027 U	0.03 U	-	0.029 UJ	-	0.027 UJ	0.031 UJ	0.028 U	-
Hexachlorobenzene	NA	0.63	64	NA	NA	17	-	0.059 UJ	1 U	0.058 U	0.055 U	0.06 U	-	0.057 UJ	-	0.055 UJ	0.062 UJ	0.055 U	-
Hexachlorobutadiene	NA	13	80	NA	NA	NA	-	0.059 UJ	1 U	0.058 U	0.055 U	0.06 U	-	0.057 UJ	-	0.055 UJ	0.062 UJ	0.055 U	-
Hexachlorocyclopentadiene	NA	NA	480	NA	10	NA	-	0.12 UJ	2 U	0.12 U	0.11 U	0.12 U	-	0.11 UJ	-	0.11 UJ	0.12 UJ	0.11 U	-
Hexachloroethane	NA	25	56	NA	NA	NA	-	0.18 UJ	3 U	0.17 U	0.16 U	0.18 U	-	0.17 UJ	-	0.16 UJ	0.19 UJ	0.17 U	-
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	-	0.048 UJ	0.81 U	0.046 U	0.044 U	0.048 U	-	0.046 UJ	-	0.044 UJ	0.049 UJ	0.044 U	-
Isophorone	NA	1100	16000	NA	NA	NA	-	0.18 UJ	3 U	0.17 U	0.16 U	0.18 U	-	0.17 UJ	-	0.16 UJ	0.19 UJ	0.17 U	-
Naphthalene	5	NA	1600	NA	NA	NA	-	0.03 UJ	0.5 U	0.029 U	0.027 U	0.03 U	-	0.029 UJ	-	0.027 UJ	0.031 UJ	0.028 U	-
Nitrobenzene	NA	NA	160	40	NA	NA	-	0.24 UJ	4 U	0.23 U	0.22 U	0.24 U	-	0.23 UJ	-	0.22 UJ	0.25 UJ	0.22 U	-
N-Nitrosodi-n-propylamine	NA	0.14	NA	NA	NA	NA	-	0.24 UJ	4 U	0.23 U	0.22 U	0.24 U	-	0.23 UJ	-	0.22 UJ	0.25 UJ	0.22 U	-

TABLE I
SUMMARY OF SOIL QUALITY DATA
WASHINGTON STATE DOE
TREOIL INDUSTRIES PROPERTY
FERNDALE, WASHINGTON

Location Name	Action Level						B-06	B-06	B-07	B-07	B-07	B-08	B-08	B-09	B-09	B-10	B-10	B-11	B-11
Sample Name							B-06-S2	B-06-S4	B-07-S1	B-07-S2	FD-02	B-08-S1	B-08-S2	B-09-S1	B-09-S2	B-10-S1	B-10-S2	B-11-S1	B-11-S2
Sample Date							08/08/2023	08/08/2023	08/09/2023	08/09/2023	08/09/2023	08/10/2023	08/10/2023	08/09/2023	08/09/2023	08/09/2023	08/09/2023	08/10/2023	08/10/2023
Lab Sample ID									23H0706-02			23H0706-01		23H0705-02					
									23H0706-02RE1					23H0705-02RE1		23H0706-05		23H0706-03	
Sample Depth (bgs)	MTCA Method A Unrestricted	MTCA Method B Cancerous	MTCA Method B Non-Cancerous	MTCA Ecological Indicator Soil Concentrations for Protection of Plants	MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota	MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife	580-130493-4 7.5 - 10 (ft)	580-130493-6 17 - 19 (ft)	580-130524-8 1 - 2.5 (ft)	580-130524-9 7.5 - 10 (ft)	580-130515-21 7.5 - 10 (ft)	580-130524-1 3 - 5 (ft)	580-130524-2 8 - 10 (ft)	580-130515-13 2.5 - 5 (ft)	580-130515-14 7.5 - 10 (ft)	580-130524-24 2 - 3 (ft)	580-130524-25 8 - 10 (ft)	580-130524-15 1 - 2 (ft)	580-130524-16 8 - 10 (ft)
N-Nitrosodiphenylamine	NA	200	NA	20	NA	NA	-	0.071 UJ	1.2 U	0.07 U	0.066 U	0.072 U	-	0.069 UJ	-	0.066 UJ	0.074 UJ	0.066 U	-
Pentachlorophenol	NA	2.5	400	6	3	4.5	-	0.48 UJ	**5.8** [BCF]	0.46 U	0.44 U	0.48 U	-	0.46 UJ	-	0.44 UJ	0.49 UJ	0.44 U	-
Phenanthrene	NA	NA	NA	NA	NA	NA	-	0.071 UJ	1.2 U	0.07 U	0.066 U	0.072 U	-	0.069 UJ	-	0.066 UJ	0.074 UJ	0.066 U	-
Phenol	NA	NA	24000	30	70	NA	-	0.18 UJ	3 U	0.17 U	0.16 U	0.18 U	-	0.17 UJ	-	0.16 UJ	0.19 UJ	0.17 U	-
Pyrene	NA	NA	2400	NA	NA	NA	-	0.071 UJ	1.2 U	0.07 U	0.066 U	0.072 U	-	0.069 UJ	-	0.066 UJ	0.074 UJ	0.066 U	-
Total Petroleum Hydrocarbons (mg/kg)																			
Gasoline	*30/100	NA	NA	NA	100	5000	4.4 UJ	4 UJ	**29 J**	**2.5 J**	3.8 UJ	4.1 UJ	3.7 UJ	4.3 UJ	4.2 UJ	**0.59 J**	4.5 UJ	**0.57 J**	4.1 UJ
Total Petroleum Hydrocarbons (C10-C24), DRO Silica-Gel Cleanup	2000	NA	NA	NA	200	5000	-	-	**4700 J** [ABE]	-	-	-	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons (C10-C24)-Diesel #2	2000	NA	NA	NA	200	5000	59 UJ	59 UJ	**4400 J-** [ABE]	**37 J-**	57 UJ	57 UJ	55 UJ	53 UJ	58 UJ	55 UJ	59 UJ	**18 J-**	60 UJ
Total Petroleum Hydrocarbons (C24-C36), MRO Silica-Gel Cleanup	2000	NA	NA	NA	NA	NA	-	-	**5100 J** [E]	-	-	-	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons (C24-C36) Motor Oil	2000	NA	NA	NA	NA	NA	59 UJ	59 UJ	**4700 J-** [E]	**41 J-**	57 UJ	57 UJ	55 UJ	53 UJ	58 UJ	55 UJ	59 UJ	**20 J-**	60 UJ
VPH (mg/kg)																			
1,2,3-Trichlorobenzene	NA	NA	64	20	NA	NA	-	-	1.91 U	-	-	1.06 U	-	0.813 U	-	0.981 U	-	0.936 U	-
1-Methylnaphthalene	NA	34	5600	NA	NA	NA	-	-	1.91 U	-	-	1.06 U	-	0.813 U	-	0.981 U	-	0.936 U	-
Benzene	0.03	18	320	NA	NA	NA	-	-	1.91 U	-	-	1.06 U	-	0.813 U	-	0.981 U	-	0.936 U	-
Ethylbenzene	6	NA	8000	NA	NA	NA	-	-	1.91 U	-	-	1.06 U	-	0.813 U	-	0.981 U	-	0.936 U	-
Hexane	NA	NA	4800	NA	NA	NA	-	-	1.91 U	-	-	1.06 U	-	0.813 U	-	0.981 U	-	0.936 U	-
m,p-Xylenes	NA	NA	NA	NA	NA	NA	-	-	3.82 U	-	-	2.12 U	-	1.63 U	-	1.96 U	-	1.87 U	-
Methyl Tert Butyl Ether (MTBE)	0.1	560	NA	NA	NA	NA	-	-	1.91 U	-	-	1.06 U	-	0.813 U	-	0.981 U	-	0.936 U	-
Naphthalene	5	NA	1600	NA	NA	NA	-	-	1.91 U	-	-	1.06 U	-	0.813 U	-	0.981 U	-	0.936 U	-
N-Decane	NA	NA	NA	NA	NA	NA	-	-	1.91 U	-	-	1.06 U	-	0.813 U	-	0.981 U	-	0.936 U	-
N-Dodecane	NA	NA	NA	NA	NA	NA	-	-	1.91 U	-	-	1.06 U	-	0.813 U	-	0.981 U	-	0.936 U	-
Octane	NA	NA	NA	NA	NA	NA	-	-	1.91 U	-	-	1.06 U	-	0.813 U	-	0.981 U	-	0.936 U	-
o-Xylene	NA	NA	16000	NA	NA	NA	-	-	1.91 U	-	-	1.06 U	-	0.813 U	-	0.981 U	-	0.936 U	-
Pentane	NA	NA	NA	NA	NA	NA	-	-	1.91 U	-	-	1.06 U	-	0.813 U	-	0.981 U	-	0.936 U	-
Toluene	7	NA	6400	NA	200	NA	-	-	1.91 U	-	-	1.06 U	-	0.813 U	-	0.981 U	-	0.936 U	-
Volatile Petroleum Hydrocarbons (C5-C6) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	19.1 U	-	-	10.6 U	-	8.13 U	-	9.81 U	-	9.36 U	-
Volatile Petroleum Hydrocarbons (C6-C8) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	19.1 U	-	-	10.6 U	-	8.13 U	-	9.81 U	-	9.36 U	-
Volatile Petroleum Hydrocarbons (C8-C10) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	19.1 U	-	-	10.6 U	-	8.13 U	-	9.81 U	-	9.36 U	-
Volatile Petroleum Hydrocarbons (C10-C12) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	19.1 U	-	-	10.6 U	-	8.13 U	-	9.81 U	-	9.36 U	-
Volatile Petroleum Hydrocarbons (C8-C10) Aromatic	NA	NA	NA	NA	NA	NA	-	-	19.1 U	-	-	10.6 U	-	8.13 U	-	9.81 U	-	9.36 U	-
Volatile Petroleum Hydrocarbons (C10-C12) Aromatic	NA	NA	NA	NA	NA	NA	-	-	19.1 U	-	-	10.6 U	-	8.13 U	-	9.81 U	-	9.36 U	-
Volatile Petroleum Hydrocarbons (C12-C13) Aromatic	NA	NA	NA	NA	NA	NA	-	-	19.1 U	-	-	10.6 U	-	8.13 U	-	9.81 U	-	9.36 U	-
EPH (mg/kg)																			
Extractable Petroleum Hydrocarbons (C8-C10) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	2.32 UJ	-	-	2.42 UJ	-	2.38 UJ	-	2.25 UJ	-	2.37 UJ	-
Extractable Petroleum Hydrocarbons (C10-C12) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	2.32 UJ	-	-	2.42 UJ	-	2.38 UJ	-	2.25 UJ	-	2.37 UJ	-
Extractable Petroleum Hydrocarbons (C12-C16) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	**13.9 J-**	-	-	2.42 UJ	-	2.38 UJ	-	2.25 UJ	-	2.37 UJ	-
Extractable Petroleum Hydrocarbons (C16-C21) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	**229 J-**	-	-	2.42 UJ	-	2.38 UJ	-	2.25 UJ	-	2.37 UJ	-
Extractable Petroleum Hydrocarbons (C21-C34) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	**649 J-**	-	-	**2.47 J-**	-	2.38 UJ	-	**3.78 J-**	-	**7.11 J-**	-
Extractable Petroleum Hydrocarbons (C8-C10) Aromatic	NA	NA	NA	NA	NA	NA	-	-	**3.08 J-**	-	-	2.42 UJ	-	2.38 UJ	-	2.25 UJ	-	2.37 UJ	-
Extractable Petroleum Hydrocarbons (C10-C12) Aromatic	NA	NA	NA	NA	NA	NA	-	-	**2.46 J-**	-	-	2.42 UJ	-	2.38 UJ	-	2.25 UJ	-	2.37 UJ	-
Extractable Petroleum Hydrocarbons (C12-C16) Aromatic	NA	NA	NA	NA	NA	NA	-	-	**5.44 J-**	-	-	2.42 UJ	-	2.38 UJ	-	2.25 UJ	-	2.37 UJ	-
Extractable Petroleum Hydrocarbons (C16-C21) Aromatic	NA	NA	NA	NA	NA	NA	-	-	**126 J-**	-	-	2.42 UJ	-	2.38 UJ	-	2.25 UJ	-	2.37 UJ	-
Extractable Petroleum Hydrocarbons (C21-C34) Aromatic	NA	NA	NA	NA	NA	NA	-	-	**294 J-**	-	-	2.42 UJ	-	2.38 UJ	-	**3.37 J-**	-	**8.65 J-**	-
Inorganic Compounds (mg/kg)																			
Arsenic	20	0.67	24	NA	NA	NA	-	**3.5** [F]	**2.4** [F]	**4** [F]	**5.7** [F]	**4.2** [F]	-	**4.9** [F]	-	**3.4** [F]	**9.6** [F]	**3.3** [F]	-
Cadmium	2	NA	80	20	4	14	-	**0.36 J**	**0.39 J**	**0.18 J**	**0.31 J**	**0.16 J**	-	**0.17 J**	-	**0.072 J**	**0.31 J**	**0.15 J**	-
Chromium	NA	NA	NA	42	42	67	-	**39**	**34**	**35**	**50** [AC]	**41**	-	**35**	-	**30**	**58** [AC]	**30**	-
Copper	NA	NA	3200	50	100	217	-	**31 J**	**20 J**	**28 J**	**37 J**	**33 J**	-	**28 J**	-	**14 J**	**45 J**	**16 J**	-
Lead	250	NA	NA	500	50	118	-	**4**	**5.3**	**4**	**4.7**	**5**	-	**3.6**	-	**2.8**	**5.6**	**2.3**	-
Mercury	2	NA	NA	NA	NA	NA	-	**0.05 J+**	**0.037**	**0.059**	**0.051**	**0.073**	-	**0.051**	-	**0.048**	**0.083**	**0.039**	-
Nickel	NA	NA	1600	200	30	980	-	**40** [C]	**20**	**35** [C]	**46** [C]	**40** [C]	-	**36** [C]	-	**29**	**53** [C]	**29**	-
Potassium	NA	NA	NA	NA	NA	NA	-	**1800 J+**	**340 J**	**930 J**	**1400 J**	**990 J**	-	**1000 J**	-	**600 J**	**1600 J**	**490 J**	-
Sodium	NA	NA	NA	NA	NA	NA	-	**590**	**290**	**360 J**	**500 J**	**310**	-	**390**	-	**240**	**410**	**290**	-
Zinc	NA	NA	24000	200	86	360	-	**56**	**50**	**47**	**64**	**52**	-	**50**	-	**26**	**70**	**26**	-
PCBs (mg/kg)																			
Aroclor-1016 (PCB-1016)	NA	14	5.6	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1221 (PCB-1221)	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1232 (PCB-1232)	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1242 (PCB-1242)	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1248 (PCB-1248)	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1254 (PCB-1254)	NA	0.5	1.6	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1260 (PCB-1260)	NA	0.5	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE I
SUMMARY OF SOIL QUALITY DATA
WASHINGTON STATE DOE
TREOIL INDUSTRIES PROPERTY
FERNDALE, WASHINGTON

Location Name	Action Level						B-06	B-06	B-07	B-07	B-07	B-08	B-08	B-09	B-09	B-10	B-10	B-11	B-11
Sample Name							B-06-S2	B-06-S4	B-07-S1	B-07-S2	FD-02	B-08-S1	B-08-S2	B-09-S1	B-09-S2	B-10-S1	B-10-S2	B-11-S1	B-11-S2
Sample Date				MTCA Ecological Indicator Soil Concentrations for	MTCA Ecological Indicator Soil Concentrations for	MTCA Ecological Indicator Soil Concentrations for	08/08/2023	08/08/2023	08/09/2023 23H0706-02	08/09/2023	08/09/2023	08/10/2023	08/10/2023	08/09/2023 23H0705-02	08/09/2023	08/09/2023	08/09/2023	08/10/2023	08/10/2023
Lab Sample ID	MTCA Method A	MTCA Method B	MTCA Method B	Protection of	Protection of Soil	Protection of	580-130493-4	580-130493-6	23H0706-02RE1 580-130524-8	580-130524-9	580-130515-21	23H0706-01 580-130524-1	580-130524-2	23H0705-02RE1 580-130515-13	580-130515-14	23H0706-05 580-130524-24	580-130524-25	23H0706-03 580-130524-15	580-130524-16
Sample Depth (bgs)	Unrestricted	Cancerous	Non-Cancerous	Plants	biota	Wildlife	7.5 - 10 (ft)	17 - 19 (ft)	1 - 2.5 (ft)	7.5 - 10 (ft)	7.5 - 10 (ft)	3 - 5 (ft)	8 - 10 (ft)	2.5 - 5 (ft)	7.5 - 10 (ft)	2 - 3 (ft)	8 - 10 (ft)	1 - 2 (ft)	8 - 10 (ft)

ABBREVIATIONS AND NOTES:
-: not analyzed or not available
*30 mg/kg if benzene is present, otherwise, 100 mg/kg.
J: value is an estimate
J+: value is an estimate, biased high
J-: value is an estimate, biased low
mg/kg: milligrams per kilogram
MTCA: Model Toxics Control Act
NA: No Action level established
R: The sample results were rejected as unusable; the compound may or may not be present in the sample.
U: not detected, value is the laboratory reporting limit

Bold values indicate a detected concentration.
Blue shading indicates a detected analyte concentration exceeding MTCA Method A Unrestricted Cleanup Level.
Light purple shading indicates a detected analyte concentration exceeding MTCA Method B Cancerous Cleanup Level.
Yellow shading indicates a detected analyte concentration exceeding MTCA Ecological Indicator Soil Concentrations for Protection of Plants.
Green shading indicates a detected analyte concentration exceeding MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota.
Orange shading indicates a detected analyte concentration exceeding MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife.
When multiple action levels are exceeded a bracketed bold superscript corresponding to each screening level is denoted. A: MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota; B: MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife; C: MTCA Ecological Indicator Soil Concentrations for Protection of Plants; E: MTCA Method A Unrestricted; F: MTCA Method B Cancerous; G: MTCA Method B Non-Cancerous.

TABLE I
SUMMARY OF SOIL QUALITY DATA
WASHINGTON STATE DOE
TREOIL INDUSTRIES PROPERTY
FERNDALE, WASHINGTON

Location Name	Action Level						B-12	B-12	BG-01	BG-01	PP-01	S-01	S-02	S-03	S-04	S-04	S-05	S-06	S-07
Sample Name							B-12-S1	B-12-S2	BG-01-S1	BG-01-S2	PP-01	S-01-20230808	S-02-20230808	S-03-20230807	S-04-20230808	S-04-20230821	S-05-20230807	S-06-20230807	S-07-20230807
Sample Date							08/10/2023	08/10/2023	08/09/2023	08/09/2023	08/09/2023	08/08/2023	08/08/2023	08/07/2023	08/08/2023	08/21/2023	08/07/2023	08/07/2023	08/07/2023
Lab Sample ID							23H0706-04												
Sample Depth (bgs)	MTCA Method A Unrestricted	MTCA Method B Cancerous	MTCA Method B Non-Cancerous	MTCA Ecological Indicator Soil Concentrations for Protection of Plants	MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota	MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife	580-130524-20 2 - 4 (ft)	580-130524-21 8 - 10 (ft)	580-130515-8 2.5 - 5 (ft)	580-130515-9 7.5 - 10 (ft)	580-130515-20 -	580-130485-16 0 - 0.5 (ft)	580-130485-14 0 - 0.5 (ft)	580-130485-4 0 - 0.5 (ft)	580-130485-13 0 - 0.5 (ft)	580-130816-2 0 - 0.5 (ft)	580-130485-3 0 - 0.5 (ft)	580-130485-2 0 - 0.5 (ft)	580-130485-1 0 - 0.5 (ft)
Volatile Organic Compounds (mg/kg)																			
1,1,1,2-Tetrachloroethane	NA	38	2400	NA	NA	NA	0.02 UJ	-	0.02 UJ	-	0.19 UJ	0.024 U	0.019 U	0.025 U	-	0.023 U	0.016 U	-	0.022 U
1,1,1-Trichloroethane	2	NA	160000	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
1,1,2,2-Tetrachloroethane	NA	5	1600	NA	NA	NA	0.02 UJ	-	0.02 UJ	-	0.19 UJ	0.024 U	0.019 U	0.025 U	-	0.023 U	0.016 U	-	0.022 U
1,1,2-Trichloroethane	NA	18	320	NA	NA	NA	0.02 UJ	-	0.02 UJ	-	0.19 UJ	0.024 U	0.019 U	0.025 U	-	0.023 U	0.016 U	-	0.022 U
1,1-Dichloroethane	NA	180	16000	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
1,1-Dichloroethene	NA	NA	4000	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
1,1-Dichloropropene	NA	NA	NA	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
1,2,3-Trichlorobenzene	NA	NA	64	20	NA	NA	0.08 UJ	-	0.078 UJ	-	0.74 UJ	0.097 U	0.076 U	0.1 U	-	0.091 U	0.062 U	-	0.086 U
1,2,3-Trichloropropane	NA	0.0063	320	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
1,2,4-Trichlorobenzene	NA	34	800	20	NA	NA	0.08 UJ	-	0.078 UJ	-	0.74 UJ	0.097 U	0.076 U	0.1 U	-	0.091 U	0.062 U	-	0.086 U
1,2,4-Trimethylbenzene	NA	NA	800	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	**0.21 J+**	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
1,2-Dibromo-3-chloropropane (DBCP)	NA	0.23	16	NA	NA	NA	0.06 UJ	-	0.059 UJ	-	0.56 UJ	0.072 U	0.057 U	0.075 U	-	0.068 U	0.047 U	-	0.065 U
1,2-Dibromoethane (Ethylene Dibromide)	0.005	0.5	720	NA	NA	NA	0.02 UJ	-	0.02 UJ	-	0.19 UJ	0.024 U	0.019 U	0.025 U	-	0.023 U	0.016 U	-	0.022 U
1,2-Dichlorobenzene	NA	NA	7200	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
1,2-Dichloroethane	NA	11	480	NA	NA	NA	0.02 UJ	-	0.02 UJ	-	0.19 UJ	0.024 U	0.019 U	0.025 U	-	0.023 U	0.016 U	-	0.022 U
1,2-Dichloropropane	NA	27	3200	700	NA	NA	0.02 UJ	-	0.02 UJ	-	0.19 UJ	0.024 U	0.019 U	0.025 U	-	0.023 U	0.016 U	-	0.022 U
1,3,5-Trimethylbenzene	NA	NA	800	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	**0.12 J+**	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	0.06 UJ	-	0.059 UJ	-	0.56 UJ	0.072 U	0.057 U	0.075 U	-	0.068 U	0.047 U	-	0.065 U
1,3-Dichloropropane	NA	NA	1600	NA	NA	NA	0.06 UJ	-	0.059 UJ	-	0.56 UJ	0.072 U	0.057 U	0.075 U	-	0.068 U	0.047 U	-	0.065 U
1,4-Dichlorobenzene	NA	190	5600	20	NA	NA	0.06 UJ	-	0.059 UJ	-	0.56 UJ	0.072 U	0.057 U	0.075 U	-	0.068 U	0.047 U	-	0.065 U
2,2-Dichloropropane	NA	NA	NA	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
2-Chlorotoluene	NA	NA	1600	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
2-Phenylbutane (sec-Butylbenzene)	NA	NA	8000	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
4-Chlorotoluene	NA	NA	1600	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
Benzene	0.03	18	320	NA	NA	NA	0.02 UJ	-	0.02 UJ	-	**0.099 J** [E]	0.024 U	0.019 U	0.025 U	-	0.023 U	0.016 U	-	0.022 U
Bromobenzene	NA	NA	640	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
Bromodichloromethane	NA	16	1600	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
Bromoform	NA	130	1600	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
Bromomethane (Methyl Bromide)	NA	NA	110	NA	NA	NA	0.1 UJ	-	0.098 UJ	-	0.93 UJ	0.12 U	0.094 U	0.13 U	-	0.11 U	0.078 U	-	0.11 U
Carbon tetrachloride	NA	14	320	NA	NA	NA	0.02 UJ	-	0.02 UJ	-	0.19 UJ	0.024 U	0.019 U	0.025 U	-	0.023 U	0.016 U	-	0.022 U
Chlorobenzene	NA	NA	1600	40	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
Chlorobromomethane	NA	NA	NA	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
Chloroethane	NA	NA	NA	NA	NA	NA	0.08 UJ	-	0.078 UJ	-	0.74 UJ	0.097 U	0.076 U	0.1 U	-	0.091 U	0.062 U	-	0.086 U
Chloroform (Trichloromethane)	NA	32	800	NA	NA	NA	0.02 UJ	-	0.02 UJ	-	0.19 UJ	0.024 U	0.019 U	0.025 U	-	0.023 U	0.016 U	-	0.022 U
Chloromethane (Methyl Chloride)	NA	NA	NA	NA	NA	NA	0.06 UJ	-	0.059 UJ	-	0.56 UJ	0.072 U	0.057 U	0.075 U	-	0.068 U	0.047 U	-	0.065 U
cis-1,2-Dichloroethene	NA	NA	160	NA	NA	NA	0.06 UJ	-	0.059 UJ	-	0.56 UJ	0.072 U	0.057 U	0.075 U	-	0.068 U	0.047 U	-	0.065 U
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	0.02 UJ	-	0.02 UJ	-	0.19 UJ	0.024 U	0.019 U	0.025 U	-	0.023 U	0.016 U	-	0.022 U
Cymene (p-Isopropyltoluene)	NA	NA	NA	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	**0.025 J+**	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
Dibromochloromethane	NA	12	1600	NA	NA	NA	0.02 UJ	-	0.02 UJ	-	0.19 UJ	0.024 U	0.019 U	0.025 U	-	0.023 U	0.016 U	-	0.022 U
Dibromomethane	NA	NA	800	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
Dichlorodifluoromethane (CFC-12)	NA	NA	16000	NA	NA	NA	0.25 UJ	-	0.24 UJ	-	2.3 UJ	0.3 U	0.24 U	0.31 U	-	0.28 U	0.19 U	-	0.27 U
Ethylbenzene	6	NA	8000	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	**0.033 J+**	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
Hexachlorobutadiene	NA	13	80	NA	NA	NA	0.1 UJ	-	0.098 UJ	-	0.93 UJ	0.12 U	0.094 U	0.13 U	-	0.11 U	0.078 U	-	0.11 U
Isopropylbenzene (Cumene)	NA	NA	8000	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	**0.027 J+**	0.038 U	0.05 U	-	0.046 U	0.031 U	-	**0.0097 J**
m,p-Xylenes	NA	NA	NA	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	**0.12 J**	**0.11 J+**	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
Methyl Tert Butyl Ether (MTBE)	0.1	560	NA	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
Methylene chloride (Dichloromethane)	0.02	94	480	NA	NA	NA	0.25 UJ	-	0.24 UJ	-	**0.24 J** [E]	0.3 U	0.24 U	0.31 U	-	0.28 U	0.19 U	-	0.27 U
Naphthalene	5	NA	1600	NA	NA	NA	0.15 UJ	-	0.15 UJ	-	1.4 UJ	**2.2 J+**	0.14 U	0.19 U	-	0.17 U	0.12 U	-	0.16 U
n-Butylbenzene	NA	NA	4000	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
n-Propylbenzene	NA	NA	8000	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
o-Xylene	NA	NA	16000	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	**0.13 J+**	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
Styrene	NA	NA	16000	NA	300	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	**0.016 J**
tert-Butylbenzene	NA	NA	8000	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
Tetrachloroethene	0.05	480	480	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
Toluene	7	NA	6400	NA	200	NA	0.06 UJ	-	0.059 UJ	-	0.56 UJ	**0.044 J**	0.057 U	0.075 U	-	0.068 U	0.047 U	-	0.065 U
trans-1,2-Dichloroethene	NA	NA	1600	NA	NA	NA	0.06 UJ	-	0.059 UJ	-	0.56 UJ	0.072 U	0.057 U	0.075 U	-	0.068 U	0.047 U	-	0.065 U
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
Trichloroethene	0.03	12	40	NA	NA	NA	0.04 UJ	-	0.039 UJ	-	0.37 UJ	0.048 U	0.038 U	0.05 U	-	0.046 U	0.031 U	-	0.043 U
Trichlorofluoromethane (CFC-11)	NA	NA	24000	NA	NA	NA	0.08 UJ	-	0.078 UJ	-	0.74 UJ	0.097 U	0.076 U	0.1 U	-	0.091 U	0.062 U	-	0.086 U
Vinyl chloride	NA	0.67	240	NA	NA	NA	0.1 UJ	-	0.098 UJ	-	0.93 UJ	0.12 U	0.094 U	0.13 U	-	0.11 U	0.078 U	-	0.11 U

TABLE I
SUMMARY OF SOIL QUALITY DATA
WASHINGTON STATE DOE
TREOIL INDUSTRIES PROPERTY
FERNDALE, WASHINGTON

Location Name	Action Level						B-12	B-12	BG-01	BG-01	PP-01	S-01	S-02	S-03	S-04	S-04	S-05	S-06	S-07
Sample Name							B-12-S1	B-12-S2	BG-01-S1	BG-01-S2	PP-01	S-01-20230808	S-02-20230808	S-03-20230807	S-04-20230808	S-04-20230821	S-05-20230807	S-06-20230807	S-07-20230807
Sample Date							08/10/2023	08/10/2023	08/09/2023	08/09/2023	08/09/2023	08/08/2023	08/08/2023	08/07/2023	08/08/2023	08/21/2023	08/07/2023	08/07/2023	08/07/2023
Lab Sample ID							23H0706-04												
Sample Depth (bgs)	MTCA Method A Unrestricted	MTCA Method B Cancerous	MTCA Method B Non-Cancerous	MTCA Ecological Indicator Soil Concentrations for Protection of Plants	MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota	MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife	580-130524-20 2 - 4 (ft)	580-130524-21 8 - 10 (ft)	580-130515-8 2.5 - 5 (ft)	580-130515-9 7.5 - 10 (ft)	580-130515-20 -	580-130485-16 0 - 0.5 (ft)	580-130485-14 0 - 0.5 (ft)	580-130485-4 0 - 0.5 (ft)	580-130485-13 0 - 0.5 (ft)	580-130816-2 0 - 0.5 (ft)	580-130485-3 0 - 0.5 (ft)	580-130485-2 0 - 0.5 (ft)	580-130485-1 0 - 0.5 (ft)
Semi-Volatile Organic Compounds (mg/kg)																			
1,2,4-Trichlorobenzene	NA	34	800	20	NA	NA	0.053 U	-	0.058 UJ	-	26 UJ	0.055 U	0.051 U	0.056 U	0.053 U	-	0.049 U	0.05 U	0.049 U
1,2-Dichlorobenzene	NA	NA	7200	NA	NA	NA	0.053 U	-	0.058 UJ	-	26 UJ	0.055 U	0.051 U	0.056 U	0.053 U	-	0.049 U	0.05 U	0.049 U
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	0.053 U	-	0.058 UJ	-	26 UJ	0.055 U	0.051 U	0.056 U	0.053 U	-	0.049 U	0.05 U	0.049 U
1,4-Dichlorobenzene	NA	190	5600	20	NA	NA	0.053 U	-	0.058 UJ	-	26 UJ	0.055 U	0.051 U	0.056 U	0.053 U	-	0.049 U	0.05 U	0.049 U
1-Methylnaphthalene	NA	34	5600	NA	NA	NA	0.032 U	-	0.035 UJ	-	15 UJ	**0.017 J**	0.031 U	**0.047**	0.032 U	-	**0.031**	0.03 U	**0.011 J**
2,2'-oxybis(1-Chloropropane)	NA	14	3200	NA	NA	NA	0.21 U	-	0.23 UJ	-	100 UJ	0.22 U	0.2 U	0.22 U	0.21 U	-	0.2 U	0.2 U	0.19 U
2,4,5-Trichlorophenol	NA	NA	8000	9	4	NA	0.21 U	-	0.23 UJ	-	100 UJ	0.22 U	0.2 U	0.22 U	0.21 U	-	0.2 U	0.2 U	0.19 UJ
2,4,6-Trichlorophenol	NA	91	80	10	NA	NA	0.16 U	-	0.17 UJ	-	77 UJ	0.16 U	0.15 U	0.17 U	0.16 U	-	0.15 U	0.15 U	0.15 UJ
2,4-Dichlorophenol	NA	NA	240	NA	NA	NA	0.21 U	-	0.23 UJ	-	100 UJ	0.22 U	0.2 U	0.22 U	0.21 U	-	0.2 U	0.2 U	0.19 U
2,4-Dimethylphenol	NA	NA	1600	NA	NA	NA	0.21 U	-	0.23 UJ	-	100 UJ	0.22 U	0.2 U	**1.6**	0.21 U	-	0.2 U	0.2 U	0.19 U
2,4-Dinitrophenol	NA	NA	160	NA	20	NA	2.1 U	-	2.3 UJ	-	1000 UJ	2.2 U	2 U	2.2 U	2.1 U	-	2 U	2 U	1.9 UJ
2,4-Dinitrotoluene	NA	3.2	160	NA	NA	NA	0.21 U	-	0.23 UJ	-	100 UJ	0.22 U	0.2 U	0.22 U	0.21 U	-	0.2 U	0.2 U	0.19 U
2,6-Dinitrotoluene	NA	0.67	24	NA	NA	NA	0.16 U	-	0.17 UJ	-	77 R	0.16 U	0.15 U	0.17 U	0.16 U	-	0.15 U	0.15 U	0.15 U
2-Chloronaphthalene	NA	NA	6400	NA	NA	NA	0.026 U	-	0.029 UJ	-	13 UJ	0.027 U	0.026 U	0.028 U	0.027 U	-	0.025 U	0.025 U	0.024 U
2-Chlorophenol	NA	NA	400	NA	NA	NA	0.21 U	-	0.23 UJ	-	100 UJ	0.22 U	0.2 U	0.22 U	0.21 U	-	0.2 U	0.2 U	0.19 U
2-Methylnaphthalene	NA	NA	320	NA	NA	NA	0.053 U	-	0.058 UJ	-	26 UJ	**0.017 J**	0.051 U	**0.039 J**	0.053 U	-	**0.04 J**	0.05 U	**0.024 J**
2-Methylphenol (o-Cresol)	NA	NA	4000	NA	NA	NA	0.16 U	-	0.17 UJ	-	77 UJ	**0.042 J**	0.15 U	**0.7**	0.16 U	-	0.15 U	0.15 U	0.15 U
2-Nitroaniline	NA	NA	800	NA	NA	NA	0.11 U	-	0.12 UJ	-	51 R	0.11 U	0.1 U	0.11 U	0.11 U	-	0.099 U	0.1 U	0.097 U
2-Nitrophenol	NA	NA	NA	NA	NA	NA	0.21 U	-	0.23 UJ	-	100 UJ	0.22 U	0.2 U	0.22 U	0.21 U	-	0.2 U	0.2 U	0.19 U
3&4-Methylphenol	NA	NA	NA	NA	NA	NA	0.21 U	-	0.23 UJ	-	100 UJ	**0.078 J**	0.2 U	**2.1**	0.21 U	-	0.2 U	0.2 U	0.19 U
3,3'-Dichlorobenzidine	NA	2.2	NA	NA	NA	NA	0.42 U	-	0.46 UJ	-	200 UJ	22 U	0.41 U	0.44 R	0.43 U	-	0.39 U	0.4 U	0.39 U
3-Nitroaniline	NA	NA	NA	NA	NA	NA	0.32 U	-	0.35 UJ	-	150 UJ	0.33 U	0.31 U	0.33 R	0.32 U	-	0.3 U	0.3 U	0.29 U
4,6-Dinitro-2-methylphenol	NA	NA	6.4	NA	NA	NA	1.1 U	-	1.2 UJ	-	510 UJ	1.1 U	1 U	1.1 U	1.1 U	-	0.99 U	1 U	0.97 UJ
4-Bromophenyl phenyl ether (BDE-3)	NA	NA	NA	NA	NA	NA	0.21 U	-	0.23 UJ	-	100 UJ	0.22 U	0.2 U	0.22 U	0.21 U	-	0.2 U	0.2 U	0.19 U
4-Chloro-3-methylphenol	NA	NA	8000	NA	NA	NA	0.16 U	-	0.17 UJ	-	77 UJ	0.16 U	0.15 U	0.17 U	0.16 U	-	0.15 U	0.15 U	0.15 U
4-Chloroaniline	NA	5	320	NA	NA	NA	1.6 U	-	1.7 UJ	-	770 UJ	1.6 U	1.5 U	1.7 R	1.6 U	-	1.5 U	1.5 U	1.5 U
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	NA	0.21 U	-	0.23 UJ	-	100 UJ	0.22 U	0.2 U	0.22 U	0.21 U	-	0.2 U	0.2 U	0.19 U
4-Nitroaniline	NA	50	320	NA	NA	NA	0.16 U	-	0.17 UJ	-	77 UJ	0.16 U	0.15 U	0.17 R	0.16 U	-	0.15 U	0.15 U	0.15 U
4-Nitrophenol	NA	NA	NA	7	NA	NA	2.1 U	-	2.3 UJ	-	1000 UJ	2.2 U	2 U	2.2 U	2.1 U	-	2 U	2 U	1.9 UJ
Acenaphthene	NA	NA	4800	NA	20	NA	0.042 U	-	0.046 UJ	-	20 UJ	**0.07**	**0.018 J**	**0.19 J**	0.043 U	-	0.039 U	0.04 U	**0.051**
Acenaphthylene	NA	NA	NA	NA	NA	NA	0.026 U	-	0.029 UJ	-	13 UJ	0.027 U	0.026 U	**0.023 J**	0.027 U	-	0.025 U	0.025 U	0.024 U
Anthracene	NA	NA	24000	NA	NA	NA	0.063 U	-	0.069 UJ	-	31 UJ	**0.19**	**0.06 J**	**3.3 J**	0.064 U	-	0.059 U	0.06 U	**0.16**
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	0.042 U	-	0.046 UJ	-	20 UJ	**1.3 J**	**0.69**	**13**	**0.014 J**	-	**0.11**	0.04 U	**0.98**
Benzo(a)pyrene	0.1	0.19	24	NA	NA	12	0.063 U	-	0.069 UJ	-	31 UJ	**0.8** [EF]	**0.34** [EF]	**9.4** [EF]	0.064 U	-	**0.093**	0.06 U	**0.67** [EF]
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	0.042 U	-	0.046 UJ	-	20 UJ	**1.4**	**0.82**	**13**	0.043 U	-	**0.2**	**0.033 J**	**0.97**
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	0.063 U	-	0.069 UJ	-	31 UJ	**0.14**	**0.081**	**3.5 J**	0.064 U	-	0.059 U	0.06 U	**0.37**
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	0.063 U	-	0.069 UJ	-	31 UJ	0.066 U	0.061 U	**6.5 J**	0.064 U	-	0.059 U	0.06 U	**0.39**
Benzoic acid	NA	NA	320000	NA	NA	NA	4.2 U	-	4.6 UJ	-	2000 UJ	**1.4 J**	4.1 U	**1.5 J**	4.3 U	-	3.9 U	4 U	**1.3 J**
Benzyl Alcohol	NA	NA	8000	NA	NA	NA	1.1 U	-	1.2 UJ	-	510 UJ	1.1 U	1 U	**0.2 J**	1.1 U	-	0.99 U	1 U	0.97 U
bis(2-Chloroethoxy)methane	NA	NA	240	NA	NA	NA	0.21 U	-	0.23 UJ	-	100 UJ	0.22 U	0.2 U	0.22 U	0.21 U	-	0.2 U	0.2 U	0.19 U
bis(2-Chloroethyl)ether	NA	0.91	NA	NA	NA	NA	0.11 U	-	0.12 UJ	-	51 UJ	0.11 U	0.1 U	0.11 U	0.11 U	-	0.099 U	0.1 U	0.097 U
bis(2-Ethylhexyl)phthalate	NA	71	1600	NA	NA	NA	0.63 U	-	**0.23 J-**	-	**90 J-** [F]	**13 J**	**0.97**	**3 J**	0.64 U	-	0.59 U	0.6 U	**0.27 J**
Butyl benzylphthalate (BBP)	NA	530	16000	NA	NA	NA	0.21 U	-	0.23 UJ	-	100 UJ	**4.1 J**	0.2 U	0.22 U	0.21 U	-	0.2 U	0.2 U	0.19 U
Carbazole	NA	NA	NA	NA	NA	NA	0.16 U	-	0.17 UJ	-	77 UJ	**0.31**	**0.097 J**	**1.5**	0.16 U	-	0.15 U	0.15 U	**0.11 J**
Chrysene	NA	NA	NA	NA	NA	NA	0.063 U	-	0.069 UJ	-	31 UJ	**1.7 J**	**0.78**	**14**	**0.017 J**	-	**0.16**	0.06 U	**1.1**
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	0.053 U	-	0.058 UJ	-	26 UJ	0.055 U	0.051 U	**1.5 J**	0.053 U	-	0.049 U	0.05 U	**0.11**
Dibenzofuran	NA	NA	80	NA	NA	NA	0.16 U	-	0.17 UJ	-	77 UJ	**0.033 J**	**0.0075 J**	**0.16 J**	0.16 U	-	0.15 U	0.15 U	**0.021 J**
Diethyl phthalate	NA	NA	64000	NA	100	NA	0.42 U	-	0.46 UJ	-	200 UJ	0.44 U	0.41 U	0.44 U	0.43 U	-	0.39 U	0.4 U	0.39 U
Dimethyl phthalate	NA	NA	NA	200	NA	NA	0.16 U	-	0.17 UJ	-	77 UJ	0.16 U	0.15 U	0.17 U	0.16 U	-	0.15 U	0.15 U	0.15 U
Di-n-butylphthalate (DBP)	NA	NA	8000	NA	200	NA	0.53 U	-	0.58 UJ	-	260 UJ	0.55 U	0.51 U	0.56 U	0.53 U	-	0.49 U	0.5 U	0.49 U
Di-n-octyl phthalate (DnOP)	NA	NA	800	NA	NA	NA	0.16 U	-	0.17 UJ	-	77 UJ	0.16 U	0.15 U	0.17 U	0.16 U	-	0.15 U	0.15 U	0.15 U
Fluoranthene	NA	NA	3200	NA	NA	NA	0.042 U	-	0.046 UJ	-	20 UJ	**2.9**	**1.2**	**22**	**0.023 J**	-	**0.22**	**0.019 J**	**1.4**
Fluorene	NA	NA	3200	30	NA	NA	0.026 U	-	0.029 UJ	-	13 UJ	**0.065**	**0.012 J**	**0.24 J**	0.027 U	-	0.025 U	0.025 U	**0.044**
Hexachlorobenzene	NA	0.63	64	NA	NA	17	0.053 U	-	0.058 UJ	-	26 UJ	0.055 U	0.051 U	0.056 U	0.053 U	-	0.049 U	0.05 U	0.049 U
Hexachlorobutadiene	NA	13	80	NA	NA	NA	0.053 U	-	0.058 UJ	-	26 UJ	0.055 U	0.051 U	0.056 U	0.053 U	-	0.049 U	0.05 U	0.049 U
Hexachlorocyclopentadiene	NA	NA	480	NA	10	NA	0.11 U	-	0.12 UJ	-	51 R	0.11 U	0.1 U	0.11 UJ	0.11 U	-	0.099 U	0.1 U	0.097 U
Hexachloroethane	NA	25	56	NA	NA	NA	0.16 U	-	0.17 UJ	-	77 UJ	0.16 U	0.15 U	0.17 U	0.16 U	-	0.15 U	0.15 U	0.15 U
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	0.042 U	-	0.046 UJ	-	20 UJ	**0.19**	**0.098**	**4.3 J**	0.043 U	-	**0.058**	0.04 U	**0.38**
Isophorone	NA	1100	16000	NA	NA	NA	0.16 U	-	0.17 UJ	-	77 UJ	0.16 U	0.15 U	0.17 U	0.16 U	-	0.15 U	0.15 U	0.15 U
Naphthalene	5	NA	1600	NA	NA	NA	0.026 U	-	0.029 UJ	-	13 UJ	**0.029**	**0.0058 J**	**0.06**	0.027 U	-	**0.15 J+**	**0.057 J+**	**0.2**
Nitrobenzene	NA	NA	160	40	NA	NA	0.21 U	-	0.23 UJ	-	100 UJ	0.22 U	0.2 U	0.22 U	0.21 U	-	0.2 U	0.2 U	0.19 U
N-Nitrosodi-n-propylamine	NA	0.14	NA	NA	NA	NA	0.21 U	-	0.23 UJ	-	100 UJ	0.22 U	0.2 U	0.22 U	0.21 U	-	0.2 U	0.2 U	0.19 U

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Location Name	Action Level						B-12	B-12	BG-01	BG-01	PP-01	S-01	S-02	S-03	S-04	S-04	S-05	S-06	S-07
Sample Name							B-12-S1	B-12-S2	BG-01-S1	BG-01-S2	PP-01	S-01-20230808	S-02-20230808	S-03-20230807	S-04-20230808	S-04-20230821	S-05-20230807	S-06-20230807	S-07-20230807
Sample Date							08/10/2023	08/10/2023	08/09/2023	08/09/2023	08/09/2023	08/08/2023	08/08/2023	08/07/2023	08/08/2023	08/21/2023	08/07/2023	08/07/2023	08/07/2023
Lab Sample ID							23H0706-04												
Sample Depth (bgs)	MTCA Method A Unrestricted	MTCA Method B Cancerous	MTCA Method B Non-Cancerous	MTCA Ecological Indicator Soil Concentrations for Protection of Plants	MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota	MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife	580-130524-20 2 - 4 (ft)	580-130524-21 8 - 10 (ft)	580-130515-8 2.5 - 5 (ft)	580-130515-9 7.5 - 10 (ft)	580-130515-20 -	580-130485-16 0 - 0.5 (ft)	580-130485-14 0 - 0.5 (ft)	580-130485-4 0 - 0.5 (ft)	580-130485-13 0 - 0.5 (ft)	580-130816-2 0 - 0.5 (ft)	580-130485-3 0 - 0.5 (ft)	580-130485-2 0 - 0.5 (ft)	580-130485-1 0 - 0.5 (ft)
N-Nitrosodiphenylamine	NA	200	NA	20	NA	NA	0.063 U	-	0.069 UJ	-	31 UJ	0.066 U	0.061 U	0.067 U	0.064 U	-	0.059 U	0.06 U	0.058 U
Pentachlorophenol	NA	2.5	400	6	3	4.5	0.42 U	-	0.46 UJ	-	200 UJ	0.44 U	0.41 U	0.44 U	0.43 U	-	0.39 U	0.4 U	0.39 UJ
Phenanthrene	NA	NA	NA	NA	NA	NA	0.063 U	-	0.069 UJ	-	31 UJ	**1.1**	**0.36**	**14**	**0.014 J**	-	**0.15**	0.06 U	**0.83**
Phenol	NA	NA	24000	30	70	NA	0.16 U	-	0.17 UJ	-	77 UJ	0.16 U	0.15 U	**0.26**	0.16 U	-	0.15 U	0.15 U	0.15 U
Pyrene	NA	NA	2400	NA	NA	NA	0.063 U	-	0.069 UJ	-	31 UJ	**2.3**	**1.1**	**20**	**0.017 J**	-	**0.22**	**0.018 J**	**1.4**
Total Petroleum Hydrocarbons (mg/kg)																			
Gasoline	*30/100	NA	NA	NA	100	5000	4 UJ	4.5 UJ	3.9 UJ	3.8 UJ	**92 J** [E]	**16**	3.8 U	5 U	-	4.6 U	3.1 U	-	4.3 U
Total Petroleum Hydrocarbons (C10-C24), DRO Silica-Gel Cleanup	2000	NA	NA	NA	200	5000	-	-	-	-	**200000 J** [ABE]	**2400 J** [ABE]	-	**400 J** [A]	-	-	-	-	-
Total Petroleum Hydrocarbons (C10-C24)-Diesel #2	2000	NA	NA	NA	200	5000	52 UJ	63 UJ	55 UJ	53 UJ	**200000 J-** [ABE]	**3600 J+** [ABE]	**350 J** [A]	**680 J** [A]	**29 J**	-	**23 J**	**14 J**	**260 J** [A]
Total Petroleum Hydrocarbons (C24-C36), MRO Silica-Gel Cleanup	2000	NA	NA	NA	NA	NA	-	-	-	-	**230000 J** [E]	**2800 J** [E]	-	**800 J**	-	-	-	-	-
Total Petroleum Hydrocarbons (C24-C36) Motor Oil	2000	NA	NA	NA	NA	NA	52 UJ	63 UJ	55 UJ	53 UJ	**230000 J-** [E]	**7600 J+** [E]	**810 J**	**2000 J**	**180 J**	-	**120 J**	**61 J**	**930 J**
VPH (mg/kg)																			
1,2,3-Trichlorobenzene	NA	NA	64	20	NA	NA	0.937 U	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	NA	34	5600	NA	NA	NA	0.937 U	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	0.03	18	320	NA	NA	NA	0.937 U	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	6	NA	8000	NA	NA	NA	0.937 U	-	-	-	-	-	-	-	-	-	-	-	-
Hexane	NA	NA	4800	NA	NA	NA	0.937 U	-	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes	NA	NA	NA	NA	NA	NA	1.87 U	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Tert Butyl Ether (MTBE)	0.1	560	NA	NA	NA	NA	0.937 U	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	5	NA	1600	NA	NA	NA	0.937 U	-	-	-	-	-	-	-	-	-	-	-	-
N-Decane	NA	NA	NA	NA	NA	NA	0.937 U	-	-	-	-	-	-	-	-	-	-	-	-
N-Dodecane	NA	NA	NA	NA	NA	NA	0.937 U	-	-	-	-	-	-	-	-	-	-	-	-
Octane	NA	NA	NA	NA	NA	NA	0.937 U	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	NA	NA	16000	NA	NA	NA	0.937 U	-	-	-	-	-	-	-	-	-	-	-	-
Pentane	NA	NA	NA	NA	NA	NA	0.937 U	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	7	NA	6400	NA	200	NA	0.937 U	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C5-C6) Aliphatic	NA	NA	NA	NA	NA	NA	9.37 U	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C6-C8) Aliphatic	NA	NA	NA	NA	NA	NA	9.37 U	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C8-C10) Aliphatic	NA	NA	NA	NA	NA	NA	9.37 U	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C10-C12) Aliphatic	NA	NA	NA	NA	NA	NA	9.37 U	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C8-C10) Aromatic	NA	NA	NA	NA	NA	NA	9.37 U	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C10-C12) Aromatic	NA	NA	NA	NA	NA	NA	9.37 U	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C12-C13) Aromatic	NA	NA	NA	NA	NA	NA	9.37 U	-	-	-	-	-	-	-	-	-	-	-	-
EPH (mg/kg)																			
Extractable Petroleum Hydrocarbons (C8-C10) Aliphatic	NA	NA	NA	NA	NA	NA	2.34 UJ	-	-	-	-	-	-	-	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C10-C12) Aliphatic	NA	NA	NA	NA	NA	NA	2.34 UJ	-	-	-	-	-	-	-	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C12-C16) Aliphatic	NA	NA	NA	NA	NA	NA	2.34 UJ	-	-	-	-	-	-	-	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C16-C21) Aliphatic	NA	NA	NA	NA	NA	NA	2.34 UJ	-	-	-	-	-	-	-	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C21-C34) Aliphatic	NA	NA	NA	NA	NA	NA	**3.67 J-**	-	-	-	-	-	-	-	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C8-C10) Aromatic	NA	NA	NA	NA	NA	NA	2.34 UJ	-	-	-	-	-	-	-	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C10-C12) Aromatic	NA	NA	NA	NA	NA	NA	2.34 UJ	-	-	-	-	-	-	-	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C12-C16) Aromatic	NA	NA	NA	NA	NA	NA	2.34 UJ	-	-	-	-	-	-	-	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C16-C21) Aromatic	NA	NA	NA	NA	NA	NA	2.34 UJ	-	-	-	-	-	-	-	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C21-C34) Aromatic	NA	NA	NA	NA	NA	NA	**4.28 J-**	-	-	-	-	-	-	-	-	-	-	-	-
Inorganic Compounds (mg/kg)																			
Arsenic	20	0.67	24	NA	NA	NA	**2.9** [F]	-	**5** [F]	-	-	**4.5** [F]	**4.7 J-** [F]	**4.6** [F]	**2.6** [F]	-	**2.5** [F]	**2.6** [F]	**46** [EFG]
Cadmium	2	NA	80	20	4	14	**0.045 J**	-	**0.14 J**	-	-	**0.17 J**	**0.12 J**	**0.31 J**	**0.14 J**	-	**0.21 J**	**0.21 J**	**1.5**
Chromium	NA	NA	NA	42	42	67	**27**	-	**49** [AC]	-	-	**29 J**	**34 J-**	**31 J**	**24 J**	-	**17 J**	**35 J**	**79 J** [ABC]
Copper	NA	NA	3200	50	100	217	**11 J**	-	**28 J**	-	-	**12 J**	**11 J-**	**21 J**	**9.1 J**	-	**20 J**	**30 J**	**440 J** [ABC]
Lead	250	NA	NA	500	50	118	**2.4**	-	**3.4**	-	-	**7.1 J**	**5.8 J-**	**18 J**	**4.6 J**	-	**6.4 J**	**5.2 J**	**53 J** [C]
Mercury	2	NA	NA	NA	NA	NA	**0.039**	-	**0.046**	-	-	**0.055**	**0.033**	**0.082**	**0.065**	-	**0.033**	**0.044**	**0.035**
Nickel	NA	NA	1600	200	30	980	**22**	-	**40** [C]	-	-	**23**	**27 J-**	**25**	**15**	-	**37** [C]	**44** [C]	**41** [C]
Potassium	NA	NA	NA	NA	NA	NA	**340 J**	-	**1000 J**	-	-	**570**	**570**	**800**	**430**	-	**560**	**580**	**1800**
Sodium	NA	NA	NA	NA	NA	NA	**210**	-	**410**	-	-	**230**	**170**	**210**	**130**	-	**190**	**220**	**520**
Zinc	NA	NA	24000	200	86	360	**17**	-	**48**	-	-	**62 J**	**45 J-**	**66 J**	**47 J**	-	**46 J**	**48 J**	**330 J** [AC]
PCBs (mg/kg)																			
Aroclor-1016 (PCB-1016)	NA	14	5.6	NA	NA	NA	-	-	-	-	0.67 UJ	-	-	-	-	-	-	-	-
Aroclor-1221 (PCB-1221)	NA	NA	NA	NA	NA	NA	-	-	-	-	0.67 UJ	-	-	-	-	-	-	-	-
Aroclor-1232 (PCB-1232)	NA	NA	NA	NA	NA	NA	-	-	-	-	0.67 UJ	-	-	-	-	-	-	-	-
Aroclor-1242 (PCB-1242)	NA	NA	NA	NA	NA	NA	-	-	-	-	0.67 UJ	-	-	-	-	-	-	-	-
Aroclor-1248 (PCB-1248)	NA	NA	NA	NA	NA	NA	-	-	-	-	0.67 UJ	-	-	-	-	-	-	-	-
Aroclor-1254 (PCB-1254)	NA	0.5	1.6	NA	NA	NA	-	-	-	-	0.67 UJ	-	-	-	-	-	-	-	-
Aroclor-1260 (PCB-1260)	NA	0.5	NA	NA	NA	NA	-	-	-	-	0.67 UJ	-	-	-	-	-	-	-	-

TABLE I
SUMMARY OF SOIL QUALITY DATA
WASHINGTON STATE DOE
TREOIL INDUSTRIES PROPERTY
FERNDALE, WASHINGTON

Location Name	Action Level						B-12	B-12	BG-01	BG-01	PP-01	S-01	S-02	S-03	S-04	S-04	S-05	S-06	S-07
Sample Name							B-12-S1	B-12-S2	BG-01-S1	BG-01-S2	PP-01	S-01-20230808	S-02-20230808	S-03-20230807	S-04-20230808	S-04-20230821	S-05-20230807	S-06-20230807	S-07-20230807
Sample Date				MTCA Ecological Indicator Soil Concentrations for	MTCA Ecological Indicator Soil Concentrations for	MTCA Ecological Indicator Soil Concentrations for	08/10/2023	08/10/2023	08/09/2023	08/09/2023	08/09/2023	08/08/2023	08/08/2023	08/07/2023	08/08/2023	08/21/2023	08/07/2023	08/07/2023	08/07/2023
Lab Sample ID	MTCA Method A	MTCA Method B	MTCA Method B	Protection of	Protection of Soil	Protection of	23H0706-04												
Sample Depth (bgs)	Unrestricted	Cancerous	Non-Cancerous	Plants	biota	Wildlife	580-130524-20	580-130524-21	580-130515-8	580-130515-9	580-130515-20	580-130485-16	580-130485-14	580-130485-4	580-130485-13	580-130816-2	580-130485-3	580-130485-2	580-130485-1
							2 - 4 (ft)	8 - 10 (ft)	2.5 - 5 (ft)	7.5 - 10 (ft)	-	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)

ABBREVIATIONS AND NOTES:
-: not analyzed or not available
*30 mg/kg if benzene is present, otherwise, 100 mg/kg.
J: value is an estimate
J+: value is an estimate, biased high
J-: value is an estimate, biased low
mg/kg: milligrams per kilogram
MTCA: Model Toxics Control Act
NA: No Action level established
R: The sample results were rejected as unusable; the compound may or may not be present in the sample.
U: not detected, value is the laboratory reporting limit

Bold values indicate a detected concentration.
Blue shading indicates a detected analyte concentration exceeding MTCA Method A Unrestricted Cleanup Level.
Light purple shading indicates a detected analyte concentration exceeding MTCA Method B Cancerous Cleanup Level.
Yellow shading indicates a detected analyte concentration exceeding MTCA Ecological Indicator Soil Concentrations for Protection of Plants.
Green shading indicates a detected analyte concentration exceeding MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota.
Orange shading indicates a detected analyte concentration exceeding MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife.
When multiple action levels are exceeded a bracketed bold superscript corresponding to each screening level is denoted. A: MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota; B: MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife; C: MTCA Ecological Indicator Soil Concentrations for Protection of Plants; E: MTCA Method A Unrestricted; F: MTCA Method B Cancerous; G: MTCA Method B Non-Cancerous.

TABLE I
SUMMARY OF SOIL QUALITY DATA
WASHINGTON STATE DOE
TREOIL INDUSTRIES PROPERTY
FERNDALE, WASHINGTON

Location Name	Action Level						S-08	S-08	S-10	S-10	S-13	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20
Sample Name							S-08-20230808	S-08-20230821	S-10-20230808	S-10-20230821	S-13-20230808	S-13-20230821	S-14-20230808	S-15-20230808	S-16-20230808	S-17-20230808	S-18-20230808	S-19-20230808	S-20-20230808
Sample Date				MTCA Ecological Indicator Soil Concentrations for Protection of Plants	MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota	MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife	08/08/2023	08/21/2023	08/08/2023	08/21/2023	08/08/2023	08/21/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023
Lab Sample ID	MTCA Method A Unrestricted	MTCA Method B Cancerous	MTCA Method B Non-Cancerous				580-130485-21	580-130816-1	580-130485-5	580-130816-3	580-130485-19	580-130816-5	580-130485-12	580-130485-11	580-130485-8	580-130485-9	580-130485-7	580-130485-15	580-130485-17
Sample Depth (bgs)							0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)
Volatile Organic Compounds (mg/kg)																			
1,1,1,2-Tetrachloroethane	NA	38	2400	NA	NA	NA	0.019 U	0.017 U	-	0.019 U	-	0.03 U	0.017 U	0.017 U	0.017 U	0.017 U	0.03 U	0.049 U	0.039 U
1,1,1-Trichloroethane	2	NA	160000	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
1,1,2,2-Tetrachloroethane	NA	5	1600	NA	NA	NA	0.019 U	0.017 U	-	0.019 U	-	0.03 U	0.017 U	0.017 U	0.017 U	0.017 U	0.03 U	0.049 U	0.039 U
1,1,2-Trichloroethane	NA	18	320	NA	NA	NA	0.019 U	0.017 U	-	0.019 U	-	0.03 U	0.017 U	0.017 U	0.017 U	0.017 U	0.03 U	0.049 U	0.039 U
1,1-Dichloroethane	NA	180	16000	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
1,1-Dichloroethene	NA	NA	4000	NA	NA	NA	0.037 U	0.035 U	-	**0.024 J**	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
1,1-Dichloropropene	NA	NA	NA	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
1,2,3-Trichlorobenzene	NA	NA	64	20	NA	NA	0.075 U	0.07 U	-	0.077 U	-	0.12 U	0.069 U	0.067 U	0.069 U	0.069 U	0.12 U	0.2 U	0.15 U
1,2,3-Trichloropropane	NA	0.0063	320	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
1,2,4-Trichlorobenzene	NA	34	800	20	NA	NA	0.075 U	0.07 U	-	0.077 U	-	0.12 U	0.069 U	0.067 U	0.069 U	0.069 U	0.12 U	0.2 U	0.15 U
1,2,4-Trimethylbenzene	NA	NA	800	NA	NA	NA	0.037 U	**0.028 J**	-	0.038 U	-	0.059 U	0.035 U	**0.062 J+**	0.035 U	0.034 U	**0.093 J+**	0.098 U	0.077 U
1,2-Dibromo-3-chloropropane (DBCP)	NA	0.23	16	NA	NA	NA	0.056 U	0.052 U	-	0.058 U	-	0.089 U	0.052 U	0.051 U	0.052 U	0.052 U	0.091 U	0.15 U	0.12 U
1,2-Dibromoethane (Ethylene Dibromide)	0.005	0.5	720	NA	NA	NA	0.019 U	0.017 U	-	0.019 U	-	0.03 U	0.017 U	0.017 U	0.017 U	0.017 U	0.03 U	0.049 U	0.039 U
1,2-Dichlorobenzene	NA	NA	7200	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
1,2-Dichloroethane	NA	11	480	NA	NA	NA	0.019 U	0.017 U	-	0.019 U	-	0.03 U	0.017 U	0.017 U	0.017 U	0.017 U	0.03 U	0.049 U	0.039 U
1,2-Dichloropropane	NA	27	3200	700	NA	NA	0.019 U	0.017 U	-	0.019 U	-	0.03 U	0.017 U	0.017 U	0.017 U	0.017 U	0.03 U	0.049 U	0.039 U
1,3,5-Trimethylbenzene	NA	NA	800	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	0.056 U	0.052 U	-	0.058 U	-	0.089 U	0.052 U	0.051 U	0.052 U	0.052 U	0.091 U	0.15 U	0.12 U
1,3-Dichloropropane	NA	NA	1600	NA	NA	NA	0.056 U	0.052 U	-	0.058 U	-	0.089 U	0.052 U	0.051 U	0.052 U	0.052 U	0.091 U	0.15 U	0.12 U
1,4-Dichlorobenzene	NA	190	5600	20	NA	NA	0.056 U	0.052 U	-	0.058 U	-	0.089 U	0.052 U	0.051 U	0.052 U	0.052 U	0.091 U	0.15 U	0.12 U
2,2-Dichloropropane	NA	NA	NA	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
2-Chlorotoluene	NA	NA	1600	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
2-Phenylbutane (sec-Butylbenzene)	NA	NA	8000	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
4-Chlorotoluene	NA	NA	1600	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
Benzene	0.03	18	320	NA	NA	NA	0.019 U	0.017 U	-	0.019 U	-	0.03 U	0.017 U	**0.0041 J**	0.017 U	0.017 U	0.03 U	0.049 U	0.039 U
Bromobenzene	NA	NA	640	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
Bromodichloromethane	NA	16	1600	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
Bromoform	NA	130	1600	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
Bromomethane (Methyl Bromide)	NA	NA	110	NA	NA	NA	0.093 U	0.087 U	-	0.096 U	-	0.15 U	0.087 U	0.084 U	0.086 U	0.086 U	0.15 U	0.25 U	0.19 U
Carbon tetrachloride	NA	14	320	NA	NA	NA	0.019 U	0.017 U	-	0.019 U	-	0.03 U	0.017 U	0.017 U	0.017 U	0.017 U	0.03 U	0.049 U	0.039 U
Chlorobenzene	NA	NA	1600	40	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
Chlorobromomethane	NA	NA	NA	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
Chloroethane	NA	NA	NA	NA	NA	NA	0.075 U	0.07 U	-	0.077 U	-	0.12 U	0.069 U	0.067 U	0.069 U	0.069 U	0.12 U	0.2 U	0.15 U
Chloroform (Trichloromethane)	NA	32	800	NA	NA	NA	0.019 U	0.017 U	-	0.019 U	-	0.03 U	0.017 U	0.017 U	0.017 U	0.017 U	0.03 U	0.049 U	0.039 U
Chloromethane (Methyl Chloride)	NA	NA	NA	NA	NA	NA	0.056 U	0.052 U	-	0.058 U	-	0.089 U	0.052 U	0.051 U	0.052 U	0.052 U	0.091 U	0.15 U	0.12 U
cis-1,2-Dichloroethene	NA	NA	160	NA	NA	NA	0.056 U	0.052 U	-	0.058 U	-	0.089 U	0.052 U	0.051 U	0.052 U	0.052 U	0.091 U	0.15 U	0.12 U
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	0.019 U	0.017 U	-	0.019 U	-	0.03 U	0.017 U	0.017 U	0.017 U	0.017 U	0.03 U	0.049 U	0.039 U
Cymene (p-Isopropyltoluene)	NA	NA	NA	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	**0.24**	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
Dibromochloromethane	NA	12	1600	NA	NA	NA	0.019 U	0.017 U	-	0.019 U	-	0.03 U	0.017 U	0.017 U	0.017 U	0.017 U	0.03 U	0.049 U	0.039 U
Dibromomethane	NA	NA	800	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
Dichlorodifluoromethane (CFC-12)	NA	NA	16000	NA	NA	NA	0.23 U	0.22 U	-	0.24 U	-	0.37 U	0.22 U	0.21 U	0.22 U	0.22 U	0.38 U	0.62 U	0.48 U
Ethylbenzene	6	NA	8000	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	**0.059**	0.035 U	0.034 U	**0.03 J**	0.098 U	0.077 U
Hexachlorobutadiene	NA	13	80	NA	NA	NA	0.093 U	0.087 U	-	0.096 U	-	0.15 U	0.087 U	0.084 U	0.086 U	0.086 U	0.15 U	0.25 U	0.19 U
Isopropylbenzene (Cumene)	NA	NA	8000	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	**0.013 J**	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
m,p-Xylenes	NA	NA	NA	NA	NA	NA	0.037 U	**0.058**	-	0.038 U	-	0.059 U	0.035 U	**0.076 J+**	0.035 U	0.034 U	**0.1**	0.098 U	0.077 U
Methyl Tert Butyl Ether (MTBE)	0.1	560	NA	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
Methylene chloride (Dichloromethane)	0.02	94	480	NA	NA	NA	0.23 U	0.22 U	-	0.24 U	-	0.37 U	0.22 U	0.21 U	0.22 U	0.22 U	0.38 U	0.62 U	0.48 U
Naphthalene	5	NA	1600	NA	NA	NA	0.14 U	0.13 U	-	0.14 U	-	0.22 U	0.13 U	0.13 U	0.13 U	0.13 U	0.23 U	0.37 U	**1**
n-Butylbenzene	NA	NA	4000	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
n-Propylbenzene	NA	NA	8000	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
o-Xylene	NA	NA	16000	NA	NA	NA	0.037 U	**0.011 J**	-	0.038 U	-	0.059 U	0.035 U	**0.035**	0.035 U	0.034 U	**0.036 J**	0.098 U	0.077 U
Styrene	NA	NA	16000	NA	300	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
tert-Butylbenzene	NA	NA	8000	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
Tetrachloroethene	0.05	480	480	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
Toluene	7	NA	6400	NA	200	NA	0.056 U	0.052 U	-	0.058 U	-	0.089 U	0.052 U	**0.055**	0.052 U	**0.016 J**	**0.029 J**	0.15 U	0.12 U
trans-1,2-Dichloroethene	NA	NA	1600	NA	NA	NA	0.056 U	0.052 U	-	0.058 U	-	0.089 U	0.052 U	0.051 U	0.052 U	0.052 U	0.091 U	0.15 U	0.12 U
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
Trichloroethene	0.03	12	40	NA	NA	NA	0.037 U	0.035 U	-	0.038 U	-	0.059 U	0.035 U	0.034 U	0.035 U	0.034 U	0.061 U	0.098 U	0.077 U
Trichlorofluoromethane (CFC-11)	NA	NA	24000	NA	NA	NA	0.075 U	0.07 U	-	**0.13**	-	0.12 U	0.069 U	0.067 U	0.069 U	0.069 U	0.12 U	0.2 U	0.15 U
Vinyl chloride	NA	0.67	240	NA	NA	NA	0.093 U	0.087 U	-	0.096 U	-	0.15 U	0.087 U	0.084 U	0.086 U	0.086 U	0.15 U	0.25 U	0.19 U

TABLE I
SUMMARY OF SOIL QUALITY DATA
WASHINGTON STATE DOE
TREOIL INDUSTRIES PROPERTY
FERNDALE, WASHINGTON

Location Name	Action Level						S-08	S-08	S-10	S-10	S-13	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20
Sample Name							S-08-20230808	S-08-20230821	S-10-20230808	S-10-20230821	S-13-20230808	S-13-20230821	S-14-20230808	S-15-20230808	S-16-20230808	S-17-20230808	S-18-20230808	S-19-20230808	S-20-20230808
Sample Date							08/08/2023	08/21/2023	08/08/2023	08/21/2023	08/08/2023	08/21/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023
Lab Sample ID	MTCA Method A	MTCA Method B	MTCA Method B	MTCA Ecological Indicator Soil Concentrations for Protection of Plants	MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota	MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife	580-130485-21	580-130816-1	580-130485-5	580-130816-3	580-130485-19	580-130816-5	580-130485-12	580-130485-11	580-130485-8	580-130485-9	580-130485-7	580-130485-15	580-130485-17
Sample Depth (bgs)	Unrestricted	Cancerous	Non-Cancerous				0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)
Semi-Volatile Organic Compounds (mg/kg)																			
1,2,4-Trichlorobenzene	NA	34	800	20	NA	NA	0.051 U	-	0.052 U	-	0.059 U	-	0.049 U	1.3 U	0.051 U	0.05 U	0.049 U	0.071 U	0.066 R
1,2-Dichlorobenzene	NA	NA	7200	NA	NA	NA	0.051 U	-	0.052 U	-	0.059 U	-	0.049 U	1.3 U	0.051 U	0.05 U	0.049 U	0.071 U	0.066 R
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	0.051 U	-	0.052 U	-	0.059 U	-	0.049 U	1.3 U	0.051 U	0.05 U	0.049 U	0.071 U	0.066 R
1,4-Dichlorobenzene	NA	190	5600	20	NA	NA	0.051 U	-	0.052 U	-	0.059 U	-	0.049 U	1.3 U	0.051 U	0.05 U	0.049 U	0.071 U	0.066 R
1-Methylnaphthalene	NA	34	5600	NA	NA	NA	0.03 U	-	0.031 U	-	0.035 U	-	0.029 U	0.81 U	0.03 U	0.03 U	0.03 U	0.043 U	0.04 R
2,2'-oxybis(1-Chloropropane)	NA	14	3200	NA	NA	NA	0.2 U	-	0.21 U	-	0.24 U	-	0.2 U	5.4 U	0.2 U	0.2 U	0.2 U	0.28 U	0.27 R
2,4,5-Trichlorophenol	NA	NA	8000	9	4	NA	0.2 U	-	0.21 U	-	0.24 U	-	0.2 U	5.4 U	0.2 U	0.2 U	0.2 U	0.28 U	0.27 R
2,4,6-Trichlorophenol	NA	91	80	10	NA	NA	0.15 U	-	0.16 U	-	0.18 U	-	0.15 U	4 U	0.15 U	0.15 U	0.15 U	0.21 U	0.2 R
2,4-Dichlorophenol	NA	NA	240	NA	NA	NA	0.2 U	-	0.21 U	-	0.24 U	-	0.2 U	5.4 U	0.2 U	0.2 U	0.2 U	0.28 U	0.27 R
2,4-Dimethylphenol	NA	NA	1600	NA	NA	NA	0.2 U	-	0.21 U	-	0.24 U	-	0.2 U	5.4 U	0.2 U	0.2 U	0.2 U	0.28 U	0.27 R
2,4-Dinitrophenol	NA	NA	160	NA	20	NA	2 U	-	2.1 U	-	2.4 U	-	2 U	54 U	2 U	2 U	2 U	2.8 U	2.7 R
2,4-Dinitrotoluene	NA	3.2	160	NA	NA	NA	0.2 U	-	0.21 U	-	0.24 U	-	0.2 U	5.4 U	0.2 U	0.2 U	0.2 U	0.28 U	0.27 R
2,6-Dinitrotoluene	NA	0.67	24	NA	NA	NA	0.15 U	-	0.16 U	-	0.18 U	-	0.15 U	4 U	0.15 U	0.15 U	0.15 U	0.21 U	0.2 R
2-Chloronaphthalene	NA	NA	6400	NA	NA	NA	0.025 U	-	0.026 U	-	0.029 U	-	0.024 U	0.67 U	0.025 U	0.025 U	0.025 U	0.035 U	0.033 R
2-Chlorophenol	NA	NA	400	NA	NA	NA	0.2 U	-	0.21 U	-	0.24 U	-	0.2 U	5.4 U	0.2 U	0.2 U	0.2 U	0.28 U	0.27 R
2-Methylnaphthalene	NA	NA	320	NA	NA	NA	0.051 U	-	0.052 U	-	0.059 U	-	0.049 U	1.3 U	0.051 U	0.05 U	0.049 U	0.071 U	0.066 R
2-Methylphenol (o-Cresol)	NA	NA	4000	NA	NA	NA	0.15 U	-	0.16 U	-	0.18 U	-	0.15 U	**3.7 J**	0.15 U	0.15 U	0.15 U	0.21 U	0.2 UJ
2-Nitroaniline	NA	NA	800	NA	NA	NA	0.1 U	-	0.1 U	-	0.12 U	-	0.098 U	2.7 U	0.1 U	0.1 U	0.099 U	0.14 U	0.13 R
2-Nitrophenol	NA	NA	NA	NA	NA	NA	0.2 U	-	0.21 U	-	0.24 U	-	0.2 U	5.4 U	0.2 U	0.2 U	0.2 U	0.28 U	0.27 R
3&4-Methylphenol	NA	NA	NA	NA	NA	NA	**0.023 J**	-	0.21 U	-	0.24 U	-	0.2 U	**2.8 J**	0.2 U	**0.027 J**	0.2 U	0.28 U	0.27 R
3,3'-Dichlorobenzidine	NA	2.2	NA	NA	NA	NA	0.4 U	-	0.41 U	-	0.47 U	-	0.39 U	11 U	0.4 U	0.4 U	0.39 U	0.57 U	0.53 R
3-Nitroaniline	NA	NA	NA	NA	NA	NA	0.3 U	-	0.31 U	-	0.35 U	-	**1.1**	8.1 U	0.3 U	0.3 U	0.3 U	**0.82**	0.4 R
4,6-Dinitro-2-methylphenol	NA	NA	6.4	NA	NA	NA	1 U	-	1 U	-	1.2 U	-	0.98 U	27 U	1 U	1 U	0.99 U	1.4 U	1.3 R
4-Bromophenyl phenyl ether (BDE-3)	NA	NA	NA	NA	NA	NA	0.2 U	-	0.21 U	-	0.24 U	-	0.2 U	5.4 U	0.2 U	0.2 U	0.2 U	0.28 U	0.27 R
4-Chloro-3-methylphenol	NA	NA	8000	NA	NA	NA	0.15 U	-	0.16 U	-	0.18 U	-	0.15 U	4 U	0.15 U	0.15 U	0.15 U	0.21 U	0.2 UJ
4-Chloroaniline	NA	5	320	NA	NA	NA	1.5 U	-	1.6 U	-	1.8 U	-	1.5 U	40 U	1.5 U	1.5 U	1.5 U	2.1 U	2 R
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	NA	0.2 U	-	0.21 U	-	0.24 U	-	0.2 U	5.4 U	0.2 U	0.2 U	0.2 U	0.28 U	0.27 R
4-Nitroaniline	NA	50	320	NA	NA	NA	0.15 U	-	0.16 U	-	0.18 U	-	0.15 U	4 U	0.15 U	0.15 U	0.15 U	0.21 U	0.2 R
4-Nitrophenol	NA	NA	NA	7	NA	NA	2 U	-	2.1 U	-	2.4 U	-	2 U	54 U	2 U	2 U	2 U	2.8 U	2.7 R
Acenaphthene	NA	NA	4800	NA	20	NA	0.04 U	-	0.041 U	-	0.047 U	-	0.039 U	1.1 U	0.04 U	0.04 U	0.039 U	0.057 U	0.053 R
Acenaphthylene	NA	NA	NA	NA	NA	NA	0.025 U	-	0.026 U	-	0.029 U	-	**0.016 J**	0.67 U	0.025 U	0.025 U	0.025 U	0.035 U	0.033 R
Anthracene	NA	NA	24000	NA	NA	NA	0.061 U	-	0.062 U	-	0.071 U	-	0.059 U	1.6 U	0.061 U	0.06 U	0.059 U	0.085 U	0.08 R
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	0.04 U	-	**0.042**	-	**0.021 J**	-	0.039 U	1.1 U	0.04 U	0.04 U	0.039 U	**0.04 J**	0.053 R
Benzo(a)pyrene	0.1	0.19	24	NA	NA	12	0.061 U	-	0.062 U	-	0.071 U	-	0.059 U	1.6 U	0.061 U	0.06 U	0.059 U	**0.054 J**	0.08 R
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	0.04 U	-	**0.05**	-	0.047 U	-	0.039 U	1.1 U	0.04 U	0.04 U	**0.022 J**	**0.074**	0.053 R
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	0.061 U	-	0.062 U	-	0.071 U	-	0.059 U	1.6 U	0.061 U	0.06 U	0.059 U	0.085 U	0.08 R
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	0.061 U	-	0.062 U	-	0.071 U	-	0.059 U	1.6 U	0.061 U	0.06 U	0.059 U	0.085 U	0.08 R
Benzoic acid	NA	NA	320000	NA	NA	NA	4 U	-	4.1 U	-	**1.6 J**	-	**2.1 J**	110 U	4 U	4 U	3.9 U	5.7 U	5.3 R
Benzyl Alcohol	NA	NA	8000	NA	NA	NA	1 U	-	1 U	-	1.2 U	-	**0.28 J**	27 U	1 U	1 U	0.99 U	1.4 U	1.3 R
bis(2-Chloroethoxy)methane	NA	NA	240	NA	NA	NA	0.2 U	-	0.21 U	-	0.24 U	-	0.2 U	5.4 U	0.2 U	0.2 U	0.2 U	0.28 U	0.27 R
bis(2-Chloroethyl)ether	NA	0.91	NA	NA	NA	NA	0.1 U	-	0.1 U	-	0.12 U	-	0.098 U	2.7 U	0.1 U	0.1 U	0.099 U	0.14 U	0.13 R
bis(2-Ethylhexyl)phthalate	NA	71	1600	NA	NA	NA	**0.25 J**	-	0.62 U	-	0.71 U	-	0.59 U	16 U	**0.21 J**	**0.13 J**	**0.12 J**	0.85 U	0.8 U
Butyl benzylphthalate (BBP)	NA	530	16000	NA	NA	NA	0.2 U	-	0.21 U	-	0.24 U	-	0.2 U	5.4 U	0.2 U	0.2 U	0.2 U	0.28 U	0.27 R
Carbazole	NA	NA	NA	NA	NA	NA	0.15 U	-	**0.014 J**	-	0.18 U	-	0.15 U	4 U	0.15 U	0.15 U	0.15 U	0.21 U	0.2 R
Chrysene	NA	NA	NA	NA	NA	NA	0.061 U	-	**0.045 J**	-	**0.028 J**	-	0.059 U	1.6 U	0.061 U	**0.015 J**	**0.016 J**	**0.054 J**	0.08 R
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	0.051 U	-	0.052 U	-	0.059 U	-	0.049 U	1.3 U	0.051 U	0.05 U	0.049 U	0.071 U	0.066 R
Dibenzofuran	NA	NA	80	NA	NA	NA	0.15 U	-	**0.0077 J**	-	0.18 U	-	0.15 U	4 U	0.15 U	0.15 U	0.15 U	0.21 U	0.2 R
Diethyl phthalate	NA	NA	64000	NA	100	NA	0.4 U	-	0.41 U	-	0.47 U	-	0.39 U	11 U	0.4 U	0.4 U	0.39 U	0.57 U	0.53 R
Dimethyl phthalate	NA	NA	NA	200	NA	NA	0.15 U	-	**0.0095 J**	-	0.18 U	-	**0.086 J**	4 U	0.15 U	0.15 U	0.15 U	0.21 U	0.2 R
Di-n-butylphthalate (DBP)	NA	NA	8000	NA	200	NA	0.51 U	-	0.52 U	-	0.59 U	-	0.49 U	13 U	0.51 U	0.5 U	0.49 U	0.71 U	0.66 R
Di-n-octyl phthalate (DnOP)	NA	NA	800	NA	NA	NA	0.15 U	-	0.16 U	-	0.18 U	-	0.15 U	4 U	0.15 U	0.15 U	0.15 U	0.21 U	0.2 R
Fluoranthene	NA	NA	3200	NA	NA	NA	0.04 U	-	**0.098**	-	**0.032 J**	-	**0.02 J**	1.1 U	0.04 U	**0.013 J**	**0.02 J**	**0.067**	0.053 R
Fluorene	NA	NA	3200	30	NA	NA	0.025 U	-	0.026 U	-	0.029 U	-	0.024 U	0.67 U	0.025 U	0.025 U	0.025 U	0.035 U	0.033 R
Hexachlorobenzene	NA	0.63	64	NA	NA	17	0.051 U	-	0.052 U	-	0.059 U	-	0.049 U	1.3 U	0.051 U	0.05 U	0.049 U	0.071 U	0.066 R
Hexachlorobutadiene	NA	13	80	NA	NA	NA	0.051 U	-	0.052 U	-	0.059 U	-	0.049 U	1.3 U	0.051 U	0.05 U	0.049 U	0.071 U	0.066 R
Hexachlorocyclopentadiene	NA	NA	480	NA	10	NA	0.1 U	-	0.1 U	-	0.12 U	-	0.098 U	2.7 U	0.1 U	0.1 U	0.099 U	0.14 U	0.13 R
Hexachloroethane	NA	25	56	NA	NA	NA	0.15 U	-	0.16 U	-	0.18 U	-	0.15 U	4 U	0.15 U	0.15 U	0.15 U	0.21 U	0.2 R
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	0.04 U	-	**0.012 J**	-	0.047 U	-	0.039 U	1.1 U	0.04 U	0.04 U	0.039 U	0.057 U	0.053 R
Isophorone	NA	1100	16000	NA	NA	NA	0.15 U	-	0.16 U	-	0.18 U	-	0.15 U	4 U	0.15 U	0.15 U	0.15 U	0.21 U	0.2 U
Naphthalene	5	NA	1600	NA	NA	NA	0.025 U	-	**0.0084 J**	-	0.039 U	-	0.024 U	0.67 U	0.025 U	0.025 U	0.025 U	0.035 U	**0.05 J**
Nitrobenzene	NA	NA	160	40	NA	NA	0.2 U	-	0.21 U	-	0.24 U	-	0.2 U	5.4 U	0.2 U	0.2 U	0.2 U	0.28 U	0.27 U
N-Nitrosodi-n-propylamine	NA	0.14	NA	NA	NA	NA	0.2 U	-	0.21 U	-	0.24 U	-	0.2 U	5.4 U	0.2 U	0.2 U	0.2 U	0.28 U	0.27 R

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FERNDALE, WASHINGTON

Location Name	Action Level						S-08	S-08	S-10	S-10	S-13	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20
Sample Name							S-08-20230808	S-08-20230821	S-10-20230808	S-10-20230821	S-13-20230808	S-13-20230821	S-14-20230808	S-15-20230808	S-16-20230808	S-17-20230808	S-18-20230808	S-19-20230808	S-20-20230808
Sample Date				MTCA Ecological Indicator Soil Concentrations for Protection of Plants	MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota	MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife	08/08/2023	08/21/2023	08/08/2023	08/21/2023	08/08/2023	08/21/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023
Lab Sample ID	MTCA Method A	MTCA Method B	MTCA Method B				580-130485-21	580-130816-1	580-130485-5	580-130816-3	580-130485-19	580-130816-5	580-130485-12	580-130485-11	580-130485-8	580-130485-9	580-130485-7	580-130485-15	580-130485-17
Sample Depth (bgs)	Unrestricted	Cancerous	Non-Cancerous				0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)
N-Nitrosodiphenylamine	NA	200	NA	20	NA	NA	0.061 U	-	0.062 U	-	0.071 U	-	0.059 U	1.6 U	0.061 U	0.06 U	0.059 U	0.085 U	0.08 R
Pentachlorophenol	NA	2.5	400	6	3	4.5	0.4 U	-	0.41 U	-	0.47 U	-	0.39 U	11 U	0.4 U	0.4 U	0.39 U	0.57 U	0.53 R
Phenanthrene	NA	NA	NA	NA	NA	NA	0.061 U	-	**0.089**	-	**0.021 J**	-	**0.0073 J**	1.6 U	0.061 U	**0.0087 J**	**0.0084 J**	**0.031 J**	0.08 R
Phenol	NA	NA	24000	30	70	NA	0.15 U	-	0.16 U	-	0.18 U	-	**0.057 J**	**0.72 J**	**0.15**	0.15 U	0.15 U	0.21 U	0.2 UJ
Pyrene	NA	NA	2400	NA	NA	NA	0.061 U	-	**0.086**	-	**0.024 J**	-	**0.018 J**	1.6 U	0.061 U	0.06 U	**0.014 J**	**0.054 J**	0.08 R
Total Petroleum Hydrocarbons (mg/kg)																			
Gasoline	*30/100	NA	NA	NA	100	5000	3.7 U	**1.3 J**	-	3.8 U	-	5.9 U	3.5 U	**15**	3.5 U	3.4 U	6.1 U	9.8 U	8.7 U
Total Petroleum Hydrocarbons (C10-C24), DRO Silica-Gel Cleanup	2000	NA	NA	NA	200	5000	-	-	-	-	-	-	-	**41000 J** [ABE]	-	-	-	-	**1300 J** [A]
Total Petroleum Hydrocarbons (C10-C24)-Diesel #2	2000	NA	NA	NA	200	5000	**130 J**	-	**59 J**	-	**130 J**	-	**460 J** [A]	**45000 J** [ABE]	**520 J** [A]	**71 J**	**38 J**	**49 J**	**2600 J** [ABE]
Total Petroleum Hydrocarbons (C24-C36), MRO Silica-Gel Cleanup	2000	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	**8000 J** [E]	-	-	-	-	**2000 J**
Total Petroleum Hydrocarbons (C24-C36) Motor Oil	2000	NA	NA	NA	NA	NA	**400 J**	-	**340 J**	-	**700 J**	-	**1100 J**	**17000 J** [E]	**1000 J**	**320 J**	**200 J**	**360 J**	**5600 J** [E]
VPH (mg/kg)																			
1,2,3-Trichlorobenzene	NA	NA	64	20	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	NA	34	5600	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	0.03	18	320	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	6	NA	8000	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexane	NA	NA	4800	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Tert Butyl Ether (MTBE)	0.1	560	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	5	NA	1600	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Decane	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Dodecane	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Octane	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	NA	NA	16000	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentane	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	7	NA	6400	NA	200	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C5-C6) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C6-C8) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C8-C10) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C10-C12) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C8-C10) Aromatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C10-C12) Aromatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C12-C13) Aromatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
EPH (mg/kg)																			
Extractable Petroleum Hydrocarbons (C8-C10) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C10-C12) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C12-C16) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C16-C21) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C21-C34) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C8-C10) Aromatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C10-C12) Aromatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C12-C16) Aromatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C16-C21) Aromatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C21-C34) Aromatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganic Compounds (mg/kg)																			
Arsenic	20	0.67	24	NA	NA	NA	**2.6** [F]	-	**3.8 J-** [F]	-	**4.1** [F]	-	**1.6 J** [F]	**3.3** [F]	**5.4** [F]	**2.3** [F]	**6.5** [F]	**3** [F]	**11** [F]
Cadmium	2	NA	80	20	4	14	**0.21 J**	-	**0.3 J-**	-	**0.1 J**	-	**0.13 J**	**0.33 J**	**0.64 J**	**0.17 J**	**1.1**	**0.12 J**	**0.83 J**
Chromium	NA	NA	NA	42	42	67	**46 J** [AC]	-	**38 J**	-	**30 J**	-	**18 J**	**40 J**	**42 J**	**22 J**	**54 J** [AC]	**32 J**	**36 J**
Copper	NA	NA	3200	50	100	217	**24 J**	-	**41 J-**	-	**15 J**	-	**13 J**	**74 J** [A]	**210 J** [AC]	**31 J**	**58 J** [A]	**18 J**	**54 J** [A]
Lead	250	NA	NA	500	50	118	**3.8 J**	-	**280 J** [BCE]	-	**7.6 J**	-	**11 J**	**280 J** [BCE]	**19 J**	**22 J**	**31 J**	**9.2 J**	**50 J**
Mercury	2	NA	NA	NA	NA	NA	**0.022**	-	**0.055**	-	**0.098**	-	**0.026**	**0.029**	**0.051**	**0.033**	**0.042**	**0.09**	**0.1**
Nickel	NA	NA	1600	200	30	980	**39** [C]	-	**30 J-**	-	**21**	-	**22**	**37** [C]	**44** [C]	**23**	**60** [C]	**24**	**31** [C]
Potassium	NA	NA	NA	NA	NA	NA	**850**	-	**620 J+**	-	**770**	-	**440**	**950**	**1700**	**660**	**1500**	**410**	**730**
Sodium	NA	NA	NA	NA	NA	NA	**320**	-	**180**	-	**160**	-	**140**	**270**	**320**	**240**	**520**	**170**	**190**
Zinc	NA	NA	24000	200	86	360	**46 J**	-	**100 J** [C]	-	**63 J**	-	**37 J**	**110 J** [C]	**200 J** [C]	**65 J**	**160 J** [C]	**55 J**	**320 J** [AC]
PCBs (mg/kg)																			
Aroclor-1016 (PCB-1016)	NA	14	5.6	NA	NA	NA	-	-	-	-	-	-	-	-	-	0.041 U	-	-	-
Aroclor-1221 (PCB-1221)	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	0.041 U	-	-	-
Aroclor-1232 (PCB-1232)	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	0.041 U	-	-	-
Aroclor-1242 (PCB-1242)	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	0.041 U	-	-	-
Aroclor-1248 (PCB-1248)	NA	NA	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	0.041 U	-	-	-
Aroclor-1254 (PCB-1254)	NA	0.5	1.6	NA	NA	NA	-	-	-	-	-	-	-	-	-	0.041 U	-	-	-
Aroclor-1260 (PCB-1260)	NA	0.5	NA	NA	NA	NA	-	-	-	-	-	-	-	-	-	0.041 U	-	-	-

TABLE I
SUMMARY OF SOIL QUALITY DATA
WASHINGTON STATE DOE
TREOIL INDUSTRIES PROPERTY
FERNDALE, WASHINGTON

Location Name	Action Level						S-08	S-08	S-10	S-10	S-13	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20
Sample Name							S-08-20230808	S-08-20230821	S-10-20230808	S-10-20230821	S-13-20230808	S-13-20230821	S-14-20230808	S-15-20230808	S-16-20230808	S-17-20230808	S-18-20230808	S-19-20230808	S-20-20230808
Sample Date				MTCA Ecological Indicator Soil Concentrations for	MTCA Ecological Indicator Soil Concentrations for	MTCA Ecological Indicator Soil Concentrations for	08/08/2023	08/21/2023	08/08/2023	08/21/2023	08/08/2023	08/21/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023	08/08/2023
Lab Sample ID	MTCA Method A	MTCA Method B	MTCA Method B	Protection of	Protection of Soil	Protection of	580-130485-21	580-130816-1	580-130485-5	580-130816-3	580-130485-19	580-130816-5	580-130485-12	580-130485-11	580-130485-8	580-130485-9	580-130485-7	580-130485-15	580-130485-17
Sample Depth (bgs)	Unrestricted	Cancerous	Non-Cancerous	Plants	biota	Wildlife	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)

ABBREVIATIONS AND NOTES:
-: not analyzed or not available
*30 mg/kg if benzene is present, otherwise, 100 mg/kg.
J: value is an estimate
J+: value is an estimate, biased high
J-: value is an estimate, biased low
mg/kg: milligrams per kilogram
MTCA: Model Toxics Control Act
NA: No Action level established
R: The sample results were rejected as unusable; the compound may or may not be present in the sample.
U: not detected, value is the laboratory reporting limit

Bold values indicate a detected concentration.
Blue shading indicates a detected analyte concentration exceeding MTCA Method A Unrestricted Cleanup Level.
Light purple shading indicates a detected analyte concentration exceeding MTCA Method B Cancerous Cleanup Level.
Yellow shading indicates a detected analyte concentration exceeding MTCA Ecological Indicator Soil Concentrations for Protection of Plants.
Green shading indicates a detected analyte concentration exceeding MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota.
Orange shading indicates a detected analyte concentration exceeding MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife.
When multiple action levels are exceeded a bracketed bold superscript corresponding to each screening level is denoted. A: MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota; B: MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife; C: MTCA Ecological Indicator Soil Concentrations for Protection of Plants; E: MTCA Method A Unrestricted; F: MTCA Method B Cancerous; G: MTCA Method B Non-Cancerous.

TABLE I
SUMMARY OF SOIL QUALITY DATA
WASHINGTON STATE DOE
TREOIL INDUSTRIES PROPERTY
FERNDALE, WASHINGTON

Location Name	Action Level						S-21	S-22	S-23	S-24	S-24
Sample Name							S-21-20230808	S-22-20230808	S-23-20230808	S-24-20230808	S-24-20230821
Sample Date				MTCA Ecological Indicator Soil Concentrations for Protection of Plants	MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota	MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife	08/08/2023	08/08/2023	08/08/2023	08/08/2023	08/21/2023
Lab Sample ID	MTCA Method A	MTCA Method B	MTCA Method B				580-130485-18	580-130485-20	580-130485-10	580-130485-6	580-130816-4
Sample Depth (bgs)	Unrestricted	Cancerous	Non-Cancerous				0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)
Volatile Organic Compounds (mg/kg)											
1,1,1,2-Tetrachloroethane	NA	38	2400	NA	NA	NA	0.031 U	0.04 U	0.062 U	-	0.016 U
1,1,1-Trichloroethane	2	NA	160000	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
1,1,2,2-Tetrachloroethane	NA	5	1600	NA	NA	NA	0.031 U	0.04 U	0.062 U	-	0.016 U
1,1,2-Trichloroethane	NA	18	320	NA	NA	NA	0.031 U	0.04 U	0.062 U	-	0.016 U
1,1-Dichloroethane	NA	180	16000	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
1,1-Dichloroethene	NA	NA	4000	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
1,1-Dichloropropene	NA	NA	NA	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
1,2,3-Trichlorobenzene	NA	NA	64	20	NA	NA	0.12 U	0.16 U	0.25 U	-	0.064 U
1,2,3-Trichloropropane	NA	0.0063	320	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
1,2,4-Trichlorobenzene	NA	34	800	20	NA	NA	0.12 U	0.16 U	0.25 U	-	0.064 U
1,2,4-Trimethylbenzene	NA	NA	800	NA	NA	NA	**0.096 J+**	0.079 U	0.12 U	-	0.032 U
1,2-Dibromo-3-chloropropane (DBCP)	NA	0.23	16	NA	NA	NA	0.092 U	0.12 U	0.19 U	-	0.048 U
1,2-Dibromoethane (Ethylene Dibromide)	0.005	0.5	720	NA	NA	NA	0.031 U	0.04 U	0.062 U	-	0.016 U
1,2-Dichlorobenzene	NA	NA	7200	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
1,2-Dichloroethane	NA	11	480	NA	NA	NA	0.031 U	0.04 U	0.062 U	-	0.016 U
1,2-Dichloropropane	NA	27	3200	700	NA	NA	0.031 U	0.04 U	0.062 U	-	0.016 U
1,3,5-Trimethylbenzene	NA	NA	800	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	0.092 U	0.12 U	0.19 U	-	0.048 U
1,3-Dichloropropane	NA	NA	1600	NA	NA	NA	0.092 U	0.12 U	0.19 U	-	0.048 U
1,4-Dichlorobenzene	NA	190	5600	20	NA	NA	0.092 U	0.12 U	0.19 U	-	0.048 U
2,2-Dichloropropane	NA	NA	NA	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
2-Chlorotoluene	NA	NA	1600	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
2-Phenylbutane (sec-Butylbenzene)	NA	NA	8000	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
4-Chlorotoluene	NA	NA	1600	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
Benzene	0.03	18	320	NA	NA	NA	0.031 U	0.04 U	0.062 U	-	0.016 U
Bromobenzene	NA	NA	640	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
Bromodichloromethane	NA	16	1600	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
Bromoform	NA	130	1600	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
Bromomethane (Methyl Bromide)	NA	NA	110	NA	NA	NA	0.15 U	0.2 U	0.31 U	-	0.08 U
Carbon tetrachloride	NA	14	320	NA	NA	NA	0.031 U	0.04 U	0.062 U	-	0.016 U
Chlorobenzene	NA	NA	1600	40	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
Chlorobromomethane	NA	NA	NA	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
Chloroethane	NA	NA	NA	NA	NA	NA	0.12 U	0.16 U	0.25 U	-	0.064 U
Chloroform (Trichloromethane)	NA	32	800	NA	NA	NA	0.031 U	0.04 U	0.062 U	-	0.016 U
Chloromethane (Methyl Chloride)	NA	NA	NA	NA	NA	NA	0.092 U	0.12 U	0.19 U	-	0.048 U
cis-1,2-Dichloroethene	NA	NA	160	NA	NA	NA	0.092 U	0.12 U	0.19 U	-	0.048 U
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	0.031 U	0.04 U	0.062 U	-	0.016 U
Cymene (p-Isopropyltoluene)	NA	NA	NA	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
Dibromochloromethane	NA	12	1600	NA	NA	NA	0.031 U	0.04 U	0.062 U	-	0.016 U
Dibromomethane	NA	NA	800	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
Dichlorodifluoromethane (CFC-12)	NA	NA	16000	NA	NA	NA	0.38 U	0.49 U	0.77 U	-	0.2 U
Ethylbenzene	6	NA	8000	NA	NA	NA	**0.028 J**	0.079 U	0.12 U	-	0.032 U
Hexachlorobutadiene	NA	13	80	NA	NA	NA	0.15 U	0.2 U	0.31 U	-	0.08 U
Isopropylbenzene (Cumene)	NA	NA	8000	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
m,p-Xylenes	NA	NA	NA	NA	NA	NA	**0.099**	0.079 U	0.12 U	-	0.032 U
Methyl Tert Butyl Ether (MTBE)	0.1	560	NA	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
Methylene chloride (Dichloromethane)	0.02	94	480	NA	NA	NA	0.38 U	0.49 U	0.77 U	-	0.2 U
Naphthalene	5	NA	1600	NA	NA	NA	**0.099 J**	0.3 U	0.46 U	-	0.12 U
n-Butylbenzene	NA	NA	4000	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
n-Propylbenzene	NA	NA	8000	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
o-Xylene	NA	NA	16000	NA	NA	NA	**0.035 J**	0.079 U	0.12 U	-	0.032 U
Styrene	NA	NA	16000	NA	300	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
tert-Butylbenzene	NA	NA	8000	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
Tetrachloroethene	0.05	480	480	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
Toluene	7	NA	6400	NA	200	NA	**0.027 J**	0.12 U	0.19 U	-	0.048 U
trans-1,2-Dichloroethene	NA	NA	1600	NA	NA	NA	0.092 U	0.12 U	0.19 U	-	0.048 U
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
Trichloroethene	0.03	12	40	NA	NA	NA	0.061 U	0.079 U	0.12 U	-	0.032 U
Trichlorofluoromethane (CFC-11)	NA	NA	24000	NA	NA	NA	0.12 U	0.16 U	0.25 U	-	0.064 U
Vinyl chloride	NA	0.67	240	NA	NA	NA	0.15 U	0.2 U	0.31 U	-	0.08 U

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FERNDALE, WASHINGTON

Location Name	Action Level						S-21	S-22	S-23	S-24	S-24
Sample Name							S-21-20230808	S-22-20230808	S-23-20230808	S-24-20230808	S-24-20230821
Sample Date				MTCA Ecological Indicator Soil Concentrations for Protection of Plants	MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota	MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife	08/08/2023	08/08/2023	08/08/2023	08/08/2023	08/21/2023
Lab Sample ID	MTCA Method A Unrestricted	MTCA Method B Cancerous	MTCA Method B Non-Cancerous				580-130485-18	580-130485-20	580-130485-10	580-130485-6	580-130816-4
Sample Depth (bgs)							0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)
Semi-Volatile Organic Compounds (mg/kg)											
1,2,4-Trichlorobenzene	NA	34	800	20	NA	NA	0.059 U	0.69 U	0.098 U	0.05 U	-
1,2-Dichlorobenzene	NA	NA	7200	NA	NA	NA	0.059 U	0.69 U	0.098 U	0.05 U	-
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	0.059 U	0.69 U	0.098 U	0.05 U	-
1,4-Dichlorobenzene	NA	190	5600	20	NA	NA	0.059 U	0.69 U	0.098 U	0.05 U	-
1-Methylnaphthalene	NA	34	5600	NA	NA	NA	0.036 U	0.41 U	**0.036 J**	0.03 U	-
2,2'-oxybis(1-Chloropropane)	NA	14	3200	NA	NA	NA	0.24 U	2.7 U	0.39 U	0.2 U	-
2,4,5-Trichlorophenol	NA	NA	8000	9	4	NA	0.24 U	2.7 U	0.39 U	0.2 U	-
2,4,6-Trichlorophenol	NA	91	80	10	NA	NA	0.18 U	2.1 U	0.29 U	0.15 U	-
2,4-Dichlorophenol	NA	NA	240	NA	NA	NA	0.24 U	2.7 U	0.39 U	0.2 U	-
2,4-Dimethylphenol	NA	NA	1600	NA	NA	NA	0.24 U	2.7 U	0.39 U	0.2 U	-
2,4-Dinitrophenol	NA	NA	160	NA	20	NA	2.4 U	27 U	3.9 U	2 U	-
2,4-Dinitrotoluene	NA	3.2	160	NA	NA	NA	0.24 U	2.7 U	0.39 U	0.2 U	-
2,6-Dinitrotoluene	NA	0.67	24	NA	NA	NA	0.18 U	2.1 U	0.29 U	0.15 U	-
2-Chloronaphthalene	NA	NA	6400	NA	NA	NA	0.03 U	0.34 U	0.049 U	0.025 U	-
2-Chlorophenol	NA	NA	400	NA	NA	NA	0.24 U	2.7 U	0.39 U	0.2 U	-
2-Methylnaphthalene	NA	NA	320	NA	NA	NA	0.059 U	0.69 U	**0.073 J**	0.05 U	-
2-Methylphenol (o-Cresol)	NA	NA	4000	NA	NA	NA	0.18 U	2.1 U	0.29 U	0.15 U	-
2-Nitroaniline	NA	NA	800	NA	NA	NA	0.12 U	1.4 U	0.2 U	0.099 U	-
2-Nitrophenol	NA	NA	NA	NA	NA	NA	0.24 U	2.7 U	0.39 U	0.2 U	-
3&4-Methylphenol	NA	NA	NA	NA	NA	NA	0.24 U	2.7 U	**0.063 J**	0.2 U	-
3,3'-Dichlorobenzidine	NA	2.2	NA	NA	NA	NA	0.47 U	5.5 U	0.79 U	0.4 U	-
3-Nitroaniline	NA	NA	NA	NA	NA	NA	0.36 U	4.1 U	0.59 U	0.3 U	-
4,6-Dinitro-2-methylphenol	NA	NA	6.4	NA	NA	NA	1.2 U	14 U	2 U	0.99 U	-
4-Bromophenyl phenyl ether (BDE-3)	NA	NA	NA	NA	NA	NA	0.24 U	2.7 U	0.39 U	0.2 U	-
4-Chloro-3-methylphenol	NA	NA	8000	NA	NA	NA	0.18 U	2.1 U	0.29 U	0.15 U	-
4-Chloroaniline	NA	5	320	NA	NA	NA	1.8 U	21 U	2.9 U	1.5 U	-
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	NA	0.24 U	2.7 U	0.39 U	0.2 U	-
4-Nitroaniline	NA	50	320	NA	NA	NA	0.18 U	2.1 U	0.29 U	0.15 U	-
4-Nitrophenol	NA	NA	NA	7	NA	NA	2.4 U	27 U	3.9 U	2 U	-
Acenaphthene	NA	NA	4800	NA	20	NA	0.047 U	0.55 U	**0.043 J**	0.04 U	-
Acenaphthylene	NA	NA	NA	NA	NA	NA	0.03 U	0.34 U	0.049 U	0.025 U	-
Anthracene	NA	NA	24000	NA	NA	NA	0.071 U	0.82 U	**0.06 J**	0.06 U	-
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	**0.021 J**	0.55 U	**0.32**	0.04 U	-
Benzo(a)pyrene	0.1	0.19	24	NA	NA	12	0.071 U	0.82 U	**0.25** [EF]	**0.024 J**	-
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	0.047 U	0.55 U	**0.41**	**0.022 J**	-
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	0.071 U	0.82 U	**0.081 J**	0.06 U	-
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	0.071 U	0.82 U	0.12 U	0.06 U	-
Benzoic acid	NA	NA	320000	NA	NA	NA	4.7 U	55 U	7.9 U	4 U	-
Benzyl Alcohol	NA	NA	8000	NA	NA	NA	1.2 U	14 U	**0.11 J**	0.99 U	-
bis(2-Chloroethoxy)methane	NA	NA	240	NA	NA	NA	0.24 U	2.7 U	0.39 U	0.2 U	-
bis(2-Chloroethyl)ether	NA	0.91	NA	NA	NA	NA	0.12 U	1.4 U	0.2 U	0.099 U	-
bis(2-Ethylhexyl)phthalate	NA	71	1600	NA	NA	NA	0.71 U	8.2 U	**11**	0.6 U	-
Butyl benzylphthalate (BBP)	NA	530	16000	NA	NA	NA	0.24 U	2.7 U	0.39 U	0.2 U	-
Carbazole	NA	NA	NA	NA	NA	NA	0.18 U	2.1 U	**0.043 J**	0.15 U	-
Chrysene	NA	NA	NA	NA	NA	NA	**0.027 J**	0.82 U	**0.35**	**0.018 J**	-
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	0.059 U	0.69 U	0.098 U	0.05 U	-
Dibenzofuran	NA	NA	80	NA	NA	NA	0.18 U	2.1 U	**0.047 J**	0.15 U	-
Diethyl phthalate	NA	NA	64000	NA	100	NA	0.47 U	5.5 U	0.79 U	0.4 U	-
Dimethyl phthalate	NA	NA	NA	200	NA	NA	0.18 U	2.1 U	0.29 U	0.15 U	-
Di-n-butylphthalate (DBP)	NA	NA	8000	NA	200	NA	0.59 U	6.9 U	0.98 U	0.5 U	-
Di-n-octyl phthalate (DnOP)	NA	NA	800	NA	NA	NA	0.18 U	2.1 U	0.29 U	0.15 U	-
Fluoranthene	NA	NA	3200	NA	NA	NA	**0.03 J**	0.55 U	**0.67**	**0.019 J**	-
Fluorene	NA	NA	3200	30	NA	NA	0.03 U	0.34 U	**0.033 J**	0.025 U	-
Hexachlorobenzene	NA	0.63	64	NA	NA	17	0.059 U	0.69 U	0.098 U	0.05 U	-
Hexachlorobutadiene	NA	13	80	NA	NA	NA	0.059 U	0.69 U	0.098 U	0.05 U	-
Hexachlorocyclopentadiene	NA	NA	480	NA	10	NA	0.12 U	1.4 U	0.2 U	0.099 U	-
Hexachloroethane	NA	25	56	NA	NA	NA	0.18 U	2.1 U	0.29 U	0.15 U	-
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	0.047 U	0.55 U	**0.082**	0.04 U	-
Isophorone	NA	1100	16000	NA	NA	NA	0.18 U	2.1 U	0.29 U	0.15 U	-
Naphthalene	5	NA	1600	NA	NA	NA	**0.09 J+**	**0.083 J**	**0.049**	0.025 U	-
Nitrobenzene	NA	NA	160	40	NA	NA	0.24 U	2.7 U	0.39 U	0.2 U	-
N-Nitrosodi-n-propylamine	NA	0.14	NA	NA	NA	NA	0.24 U	2.7 U	0.39 U	0.2 U	-

TABLE I
SUMMARY OF SOIL QUALITY DATA
WASHINGTON STATE DOE
TREOIL INDUSTRIES PROPERTY
FERNDALE, WASHINGTON

Location Name	Action Level						S-21	S-22	S-23	S-24	S-24
Sample Name							S-21-20230808	S-22-20230808	S-23-20230808	S-24-20230808	S-24-20230821
Sample Date				MTCA Ecological Indicator Soil Concentrations for Protection of Plants	MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota	MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife	08/08/2023	08/08/2023	08/08/2023	08/08/2023	08/21/2023
Lab Sample ID							580-130485-18	580-130485-20	580-130485-10	580-130485-6	580-130816-4
Sample Depth (bgs)	MTCA Method A Unrestricted	MTCA Method B Cancerous	MTCA Method B Non-Cancerous				0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)
N-Nitrosodiphenylamine	NA	200	NA	20	NA	NA	0.071 U	0.82 U	0.12 U	0.06 U	-
Pentachlorophenol	NA	2.5	400	6	3	4.5	0.47 U	5.5 U	0.79 U	0.4 U	-
Phenanthrene	NA	NA	NA	NA	NA	NA	0.071 U	0.82 U	**0.42**	**0.0067 J**	-
Phenol	NA	NA	24000	30	70	NA	0.18 U	2.1 U	0.29 U	0.15 U	-
Pyrene	NA	NA	2400	NA	NA	NA	**0.028 J**	0.82 U	**0.74**	**0.018 J**	-
Total Petroleum Hydrocarbons (mg/kg)											
Gasoline	*30/100	NA	NA	NA	100	5000	6.1 U	**7.9 J+**	12 U	-	3.2 U
Total Petroleum Hydrocarbons (C10-C24), DRO Silica-Gel Cleanup	2000	NA	NA	NA	200	5000	-	**800 J** [A]	-	-	-
Total Petroleum Hydrocarbons (C10-C24)-Diesel #2	2000	NA	NA	NA	200	5000	**70 J**	**1600 J** [A]	**630 J** [A]	**35 J**	-
Total Petroleum Hydrocarbons (C24-C36), MRO Silica-Gel Cleanup	2000	NA	NA	NA	NA	NA	-	**1600 J**	-	-	-
Total Petroleum Hydrocarbons (C24-C36) Motor Oil	2000	NA	NA	NA	NA	NA	**320 J**	**4900 J** [E]	**1600 J**	**190 J**	-
VPH (mg/kg)											
1,2,3-Trichlorobenzene	NA	NA	64	20	NA	NA	-	-	-	-	-
1-Methylnaphthalene	NA	34	5600	NA	NA	NA	-	-	-	-	-
Benzene	0.03	18	320	NA	NA	NA	-	-	-	-	-
Ethylbenzene	6	NA	8000	NA	NA	NA	-	-	-	-	-
Hexane	NA	NA	4800	NA	NA	NA	-	-	-	-	-
m,p-Xylenes	NA	NA	NA	NA	NA	NA	-	-	-	-	-
Methyl Tert Butyl Ether (MTBE)	0.1	560	NA	NA	NA	NA	-	-	-	-	-
Naphthalene	5	NA	1600	NA	NA	NA	-	-	-	-	-
N-Decane	NA	NA	NA	NA	NA	NA	-	-	-	-	-
N-Dodecane	NA	NA	NA	NA	NA	NA	-	-	-	-	-
Octane	NA	NA	NA	NA	NA	NA	-	-	-	-	-
o-Xylene	NA	NA	16000	NA	NA	NA	-	-	-	-	-
Pentane	NA	NA	NA	NA	NA	NA	-	-	-	-	-
Toluene	7	NA	6400	NA	200	NA	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C5-C6) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C6-C8) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C8-C10) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C10-C12) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C8-C10) Aromatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C10-C12) Aromatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-
Volatile Petroleum Hydrocarbons (C12-C13) Aromatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-
EPH (mg/kg)											
Extractable Petroleum Hydrocarbons (C8-C10) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C10-C12) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C12-C16) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C16-C21) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C21-C34) Aliphatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C8-C10) Aromatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C10-C12) Aromatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C12-C16) Aromatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C16-C21) Aromatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-
Extractable Petroleum Hydrocarbons (C21-C34) Aromatic	NA	NA	NA	NA	NA	NA	-	-	-	-	-
Inorganic Compounds (mg/kg)											
Arsenic	20	0.67	24	NA	NA	NA	**4.6** [F]	**6.1** [F]	**3.8 J** [F]	**2.6** [F]	-
Cadmium	2	NA	80	20	4	14	**0.18 J**	**0.68 J**	**0.58 J**	**0.2 J**	-
Chromium	NA	NA	NA	42	42	67	**39 J**	**39 J**	**43 J** [AC]	**34 J**	-
Copper	NA	NA	3200	50	100	217	**15 J**	**30 J**	**54 J** [A]	**20 J**	-
Lead	250	NA	NA	500	50	118	**7.9 J**	**66 J** [C]	**37 J**	**5.7 J**	-
Mercury	2	NA	NA	NA	NA	NA	**0.1**	**0.074**	**0.049**	**0.023 J**	-
Nickel	NA	NA	1600	200	30	980	**27**	**34** [C]	**33** [C]	**39** [C]	-
Potassium	NA	NA	NA	NA	NA	NA	**760**	**680**	**850**	**670**	-
Sodium	NA	NA	NA	NA	NA	NA	**140**	**180**	**1800**	**220**	-
Zinc	NA	NA	24000	200	86	360	**66 J**	**330 J** [AC]	**110 J** [C]	**42 J**	-
PCBs (mg/kg)											
Aroclor-1016 (PCB-1016)	NA	14	5.6	NA	NA	NA	-	-	0.39 U	-	-
Aroclor-1221 (PCB-1221)	NA	NA	NA	NA	NA	NA	-	-	0.39 U	-	-
Aroclor-1232 (PCB-1232)	NA	NA	NA	NA	NA	NA	-	-	0.39 U	-	-
Aroclor-1242 (PCB-1242)	NA	NA	NA	NA	NA	NA	-	-	0.39 U	-	-
Aroclor-1248 (PCB-1248)	NA	NA	NA	NA	NA	NA	-	-	0.39 U	-	-
Aroclor-1254 (PCB-1254)	NA	0.5	1.6	NA	NA	NA	-	-	0.39 U	-	-
Aroclor-1260 (PCB-1260)	NA	0.5	NA	NA	NA	NA	-	-	0.39 U	-	-

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WASHINGTON STATE DOE
TREOIL INDUSTRIES PROPERTY
FERNDALE, WASHINGTON

Location Name	Action Level						S-21	S-22	S-23	S-24	S-24
Sample Name							S-21-20230808	S-22-20230808	S-23-20230808	S-24-20230808	S-24-20230821
Sample Date				MTCA Ecological Indicator Soil Concentrations for	MTCA Ecological Indicator Soil Concentrations for	MTCA Ecological Indicator Soil Concentrations for	08/08/2023	08/08/2023	08/08/2023	08/08/2023	08/21/2023
Lab Sample ID	MTCA Method A	MTCA Method B	MTCA Method B	Protection of	Protection of Soil	Protection of	580-130485-18	580-130485-20	580-130485-10	580-130485-6	580-130816-4
Sample Depth (bgs)	Unrestricted	Cancerous	Non-Cancerous	Plants	biota	Wildlife	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)	0 - 0.5 (ft)

ABBREVIATIONS AND NOTES:
-: not analyzed or not available
*30 mg/kg if benzene is present, otherwise, 100 mg/kg.
J: value is an estimate
J+: value is an estimate, biased high
J-: value is an estimate, biased low
mg/kg: milligrams per kilogram
MTCA: Model Toxics Control Act
NA: No Action level established
R: The sample results were rejected as unusable; the compound may or may not be present in the sample.
U: not detected, value is the laboratory reporting limit

Bold values indicate a detected concentration.
Blue shading indicates a detected analyte concentration exceeding MTCA Method A Unrestricted Cleanup Level.
Light purple shading indicates a detected analyte concentration exceeding MTCA Method B Cancerous Cleanup Level.
Yellow shading indicates a detected analyte concentration exceeding MTCA Ecological Indicator Soil Concentrations for Protection of Plants.
Green shading indicates a detected analyte concentration exceeding MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota.
Orange shading indicates a detected analyte concentration exceeding MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife.
When multiple action levels are exceeded a bracketed bold superscript corresponding to each screening level is denoted. A: MTCA Ecological Indicator Soil Concentrations for Protection of Soil biota; B: MTCA Ecological Indicator Soil Concentrations for Protection of Wildlife; C: MTCA Ecological Indicator Soil Concentrations for Protection of Plants; E: MTCA Method A Unrestricted; F: MTCA Method B Cancerous; G: MTCA Method B Non-Cancerous.