

DISCLAIMER: Sampling Plan will be updated/ revised in coordination with Department of Health.

SAMPLE TYPE	METHOD	LOCATIONS	FREQUENCY/DURATION	START DATE(S)	REPORTING
1 SOIL VAPOR SAMPLING					
Soil Vapor Concentrations	Photo-ionization Detector (PID)	Tanks 2-18, 20 - Include background reading at each tank	Daily, 7 days per week for 3 weeks until 9 Jun 21	- 10-12 May 21: Initial PID readings at Tanks 13-16 - 13 May 21: Include Tanks 13-18, 20 - 20 May 21: Include Tanks 2-12	- Excel spreadsheet - April monthly results
Soil Vapor Concentrations	Photo-ionization Detector (PID)	Tanks 11-18, 20 - Include background reading at each tank	Twice per week for 3 weeks (Monday, Thursday) ¹ 7 Jul 21: Additional 3 weeks ² 19 Jul 21: Additional 3 weeks	14 Jun 21 to 2 Jul 21 ¹ 6 Jul 21 to 23 Jul 21 ² 2 Aug 21 to 20 Aug 21	Excel spreadsheet
2 SUMMA CANISTER SAMPLING					
Summa Canister Samples	Method TO-15	Zone 7 sump, SV13S, SV16S, SV17S, SV18S, SV20S, SV20M	- One time - Additional targeted sampling if increased trends in PID readings are observed	- 10 May 21: tunnel air near the collection sump - 11 May 21: SV13S - 13 May 21: SV16S, SV17S, SV18S, SV20S - 14 May 21: SV20M	- Laboratory report with chromatograms - Expedited laboratory turnaround time (TAT) of 7 days
Summa Canister Samples	TO-15 & TO-3 w/ C5-C12	SV17S, SV18S, SV20M	One time	5 Jun 21	- Laboratory report with chromatograms
		SVMP with highest PID readings (e.g., SV15S, SV17S, SV18S, SV20M) and most outer bound probe under the same tanks (SV15D, SV17D, SV18D, SV20D)	Once per month for 6 months	14 Jun 21 to 30 Nov 21	- Expedited laboratory TAT (starts next business day after samples are received)
3 RHMW HEADSPACE MONITORING					
Headspace Monitoring	PID	RHMW01, RHMW01R, RHMW02, RHMW03, RHMW05 - 2 inches in well casing - Breathing zone	Daily, 7 days per week for 3 weeks until 9 Jun 21	- 12 May 21: Initial test at RHMW01R during GW sampling event - 13 May 21: Initial tests at RHMW01R, 02, 03 during GW sampling event - 15 May 21: Begin daily monitoring	Excel spreadsheet
Headspace Monitoring	PID	RHMW01R, RHMW02, RHMW03 - 2 inches in well casing - Breathing zone 23 Jun 21: Include RHMW01, RHMW05	Once per week for one month ¹ 7 Jul 21: Additional 3 weeks ² 19 Jul 21: Additional 3 weeks	14 Jun 21 to 9 Jul 21 ¹ 12 Jul 21 to 30 Jul 21 ² 2 Aug 21 to 20 Aug 21	Excel spreadsheet
4 FUEL PRODUCT GAUGING					
Fuel Product Gauging	Oil/water interface probe	RHMW01R, RHMW02, RHMW03 15 May 21: Include RHMW01 and RHMW05	Daily, 7 days per week for 3 weeks until 9 Jun 21	- 12 May 21: Initial test at RHMW01R during GW sampling event - 13 May 21: Initial tests at RHMW01R, 02, 03 during GW sampling event - 15 May 21: Begin daily monitoring	Excel spreadsheet
Fuel Product Gauging	Bailer	RHMW01R, RHMW02, RHMW03	Daily, 7 days per week	2 Jun 21: begin bailer at 01R, 02, 03 3 Jun 21 to 9 Jun 21: 01R, 02, 03, 05	Excel spreadsheet, photos
		23 Jun 21: Include RHMW01 (w/o bailer), RHMW05	Once per week for one month ¹ 7 Jul 21: Additional 3 weeks ² 19 Jul 21: Additional 3 weeks	14 Jun 21 to 9 Jul 21: 01R, 02, 03 ¹ 12 Jul 21 to 30 Jul 21 ² 2 Aug 21 to 20 Aug 21	
5 GROUNDWATER SAMPLING					
Groundwater Sampling	TPH-g/d/o, BTEX, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene - Sample w/ bladder pump	RHMW01R, RHMW02, RHMW03	Every Monday, Wednesday, and Friday for 3 weeks until 11 Jun 21	- 12-13 May 21: 1st sample collection - 19-20 May 21: 2nd sample collection - 24 May : Initiate three times a week sampling	- Laboratory report with chromatograms - Expedited laboratory TAT
Groundwater Sampling	TPH-g/d/o, BTEX, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene - Sample w/ bailer, no purging prior to sampling; one weekly event with duplicate samples from bladder pump	RHMW01R, RHMW02, RHMW03	Monday, Wednesday, Friday until 11 Jun 21	2 Jun 21 to 11 Jul 21: begin bailer samples	- Laboratory report with chromatograms - Expedited laboratory TAT - DOH request to sample from uppermost portion of the water column without prior purging to ensure maximum possibility of identifying initial contaminant migration
			Once per week for one month ¹ 7 Jul 21: Additional 3 weeks ² 19 Jul 21: Additional 3 weeks	14 Jun 21 to 9 Jul 21 ¹ 12 Jul 21 to 30 Jul 21 ² 2 Aug 21 to 20 Aug 21	
6 DRINKING WATER SAMPLING					
Drinking Water Sampling	TPH-g/d/o, BTEX, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene	RHMW2254-01 - pre-chlorination from spigot	Once per week for one month ¹ 7 Jul 21: Additional 3 weeks ² 19 Jul 21: Additional 3 weeks	14 Jun 21 to 9 Jul 21 ¹ 12 Jul 21 to 30 Jul 21 ² 2 Aug 21 to 20 Aug 21	- Laboratory report with chromatograms - Expedited Laboratory TAT

AVERAGE SOIL VAPOR CONCENTRATION READINGS

DATE	SV02 S	SV02 M	SV02 D	SV03 S	SV03 M	SV03 D	SV04 S	SV04 M	SV04 D	SV05 S	SV05 M	SV05 D	SV06 S	SV06 M	SV07 S	SV07 M	SV07 D	SV08 S	SV08 M	SV08 D	SV09 S	SV09 M	SV09 D	SV10 S	SV10 M/D	SV11 S	SV11 M/D	SV12 S	SV12 M	SV12 D	SV13 S	SV13 M	SV13 D	SV14 S	SV14 M	SV14 D	SV15 S	SV15 M	SV15 D	SV16 S	SV16 M	SV16 D	SV17 S	SV17 M	SV17 D	SV18 S	SV18 D	SV20 S	SV20 M	SV20 D
4/22/2021	241	234	248	180	175	446	149	157	186	187	416	1170	3993	243	293	235	477	263	238	227	222	223	367	269	242	259	257	304	368	346	770	693	550	404	361	475	175	NC2	170	207	185	191	289	320	363	1009	1184	223	173	184

DISCLAIMER: Preliminary Data: Undergoing Validation - Subject to Change.

Notes:

* Air compressor used to clear obstruction prior to collecting sample

** "M/D" monitoring points were constructed to screen both middle & deep depth intervals along the respective underground storage tank.

NC - Not collected

NC1 - Not collected due to tank maintenance

NC2 - Not collected due to obstruction in vapor line

Red Hill Bulk Fuel Storage Facility
 Notice of Interest 20210507-0852 JP-5 spill that occurred on 6 May 2021
 2.a. Soil Vapor Concentrations at Tanks 2-18 and 20

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BACKGROUND TUNNEL AIR READINGS (PPBV)																		
DATE	Tank 2	Tank 3	Tank 4	Tank 5	Tank 6	Tank 7	Tank 8	Tank 9	Tank 10	Tank 11	Tank 12	Tank 13	Tank 14	Tank 15	Tank 16	Tank 17	Tank 18	Tank 20
5/10/2021	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	6,900	4,300	8,200	10,300	41,000	70,000	71,000
5/11/2021	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	5,455	5,037	5,068	6,308	NC	NC	NC
5/12/2021	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	11,000	8,369	130	610	NC	NC	NC
5/13/2021	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	36,550	30,120	2,617	1,239	39,740	38,730	11,900
5/14/2021	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	32,630	12,640	4,288	4,266	38,500	17,000	17,230
5/15/2021	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	11,310	3,975	3,015	3,160	31,300	23,310	51,300
5/16/2021	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	10,180	3,628	3,930	4,295	39,960	21,270	33,510
5/17/2021	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	32,190	2,571	2,694	1,172	29,000	15,000	7,500
5/18/2021	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	13,500	1,930	496	2,487	10,360	9,023	7,568
5/19/2021	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	6,620	1,237	631	634	5,300	9,000	6,000
5/20/2021	1,301	1,270	1,219	1,150	1,089	1,101	1,297	1,079	1,008	1,067	1,255	2,438	1,261	613	348	10,700	7,800	7,700
5/21/2021	1,323	1,168	1,051	1,154	1,606	1,578	1,364	2,303	1,352	1,404	1,317	1,968	1,053	650	598	NC1	15,200	6,200
5/22/2021	3,317	3,228	3,251	3,464	3,316	3,422	3,520	3,592	3,872	3,787	3,799	5,004	4,601	3,907	4,050	13,100	17,100	16,000
5/23/2021	1,097	1,069	1,004	1,020	1,040	1,049	1,021	932	1,003	921	1,009	3,610	469	465	348	11,600	10,800	8,100
5/24/2021	1,135	1,015	1,048	1,082	1,028	1,187	1,563	1,758	1,888	2,459	2,733	2,872	2,943	2,134	1,986	8,065	8,054	6,841
5/25/2021	970	1,054	957	945	845	1,099	946	926	1,541	1,875	2,022	2,894	2,458	2,085	530	13,000	16,000	>20,000
5/26/2021	1,817	2,036	3,608	6,460	7,201	6,820	4,902	8,302	NC	6,814	5,951	22,840	11,400	1,911	494	8,000	25,300	10,600
5/27/2021	3,605	2,652	3,725	7,278	7,426	4,895	4,637	4,281	5,403	4,575	5,784	8,932	400	187	229	6,000 ²	11,200 ²	7,900 ²
5/28/2021	2,975	2,803	3,070	3,241	3,184	4,520	8,374	6,249	4,396	4,544	4,558	2,902	3,333	2,391	2,609	15,890	23,340	14,230
5/29/2021	3,229	3,348	3,484	3,503	3,228	3,124	3,488	3,545	3,879	3,878	4,303	9,914	3,225	3,394	3,721	9,000	10,200	10,100
5/30/2021	980	1,257	1,418	1,873	2,025	2,168	2,139	2,314	2,385	2,295	2,014	NC1	1,723	1,502	1,586	9,018	9,613	1,301
5/31/2021	898	640	1,524	1,716	1,238	1,836	954	736	626	560	645	9,503	253	0	0	5,679	5,321	2,885
6/1/2021	730	691	752	767	751	805	786	NC	NC	715	912	NC1	708	307	454	NC1	6,300	5,000
6/2/2021	846	667	653	918	1,805	1,306	1,379	1,406	1,391	1,522	1,510	NC1	877	1,018	920	10,470	10,690	11,210
6/3/2021	2,240	2,232	2,234	2,445	2,511	2,321	2,713	2,714	2,781	3,056	3,356	2,746	3,502	2,378	2,279	15,000	21,500	12,500
6/4/2021	1,131	1,105	1,120	1,024	1,813	1,479	2,683	4,737	3,876	3,216	3,600	7,549	3,907	2,360	2,257	13,500	15,900	14,500
6/5/2021	337	394	313	276	343	346	381	304	333	303	602	5,633	256	0	0	4,867	5,370	4,535
6/6/2021	618	641	693	694	750	822	756	689	779	712	875	4,412	676	391	487	5,400	4,500	4,759
6/7/2021	763	1,046	1,327	1,736	1,805	1,847	1,940	1,752	1,974	2,034	2,610	3,703	3,031	2,092	2,740	8,700	5,000	5,000
6/8/2021	645	721	1,070	1,239	1,715	1,298	1,545	1,576	1,514	1,760	2,030	2,586	1,329	1,577	1,641	13,330	9,593	15,420
6/9/2021	844	850	1,017	805	967	973	939	845	966	900	1,042	4,147	906	422	450	7,981	8,282	6,985
6/14/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	554	440	915	740	240	304	3,890	3,994	2,505
6/18/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	2,122	2,373	12,000	3,534	1,624	1,920	19,000	26,500	17,200
6/21/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	2,363	2,611	43,170	2,424	1,151	1,076	14,820	10,300	11,680
6/24/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	1,023	781	8,634	1,157	115	118	4,173	5,980	5,954
6/28/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	1,749	2,023	8,180	3,448	1,496	1,497	9,900 ²	11,500 ²	10,300 ²
7/1/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	511	540	11,410	1,560	456	514	237,400 ³	42,110	3,373
7/6/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	917	933	4,084	1,611	0	0	4,492	3,270	3,268
7/8/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	666	474	2,130	1,352	23	34	2,988	6,500	4,212
7/12/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	20,500	33,080	347,000	71,240	648	725	5,842	3,718	7,853
7/15/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	389	440	826	903	128	25	3,520	3,568	2,020
7/19/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	314	327	939	927	43	402	3,175	5,834	4,280
7/22/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	640	413	2,815	540	0	230	3,454	3,286	3,112
8/2/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	1,451	1,456	1,823	1,187	1,149	1,231	17,310	4,083	16,220
8/5/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	34	0	1,830	132	0	4	1,854	2,309	2,121
8/9/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	291	355	3,410	355	580	355	1,288	2,756	2,303
8/12/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	0	0	0	0	0	0	637	1,275	1,873
8/16/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	409	329	504	466	408	410	1,417	1,856	1,415
8/19/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	147	199	1,395	1,332	95	122	1,050	2,785	7,313
8/23/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	694	683	1,651	315	160	218	3,885	2,436	1,603
8/26/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	0	0	0	706	47	45	1,518	2,123	4,210
8/30/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	1,242	1,065	1,232	679	1,280	1,401	10,920	3,687	8,234
9/2/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	422	435	461	499	504	500	996	1,361	1,988
9/7/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	198	100	242	96	80	443	8,913	6,560	11,090
9/9/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	148	124	150	201	93	69	3,185	3,820	2,621
9/13/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	186	222	221	230	172	242	6,878	6,415	8,658
9/16/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	1,901	225	325	676	303	352	6,562	6,710	4,414
9/20/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	94	42	89	163	17	25	4,348	3,739	5,896
9/23/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	193	343	269	206	135	186	2,381	3,199	3,134
9/27/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	87	104	186	160	115	152	3,057	3,356	2,448
9/30/2021	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	NC5	452	436	719	445	595	612	5,018	4,811	3,327

Notes:
 1 - "M/D" monitoring points were constructed to screen both middle & deep depth intervals along the respective underground storage tank.
 2 - Soil vapor concentration measured using a ppmv PID.
 3 - Epoxy coatings being applied in the area near Tank 17. Epoxy coating contain volatile organic compounds which can be detected by the monitoring equipment used to collect SVM samples.
 * Air compressor used to clear obstruction prior to collecting sample
 ** - Estimated value - Calibration check observed an approximately 40% low bias reading.
 *** - Estimated value - Inadvertent early termination of PID reading.
 NC - Not collected
 NC1 - Not collected due to tank maintenance
 NC2 - Not collected due to obstruction in vapor line
 NC3 - Not collected - monitoring vault potentially compromised by release. Replacing tubing and cleaning valves. Sampling to begin 14 May
 NC4 - Not collected due to a broken valve/fitting. A replacement valve is being pursued.
 NC5 - Not collected - not required by the DOH Transition Plan.
 Soil vapor concentration readings are reported in parts per billion by volume (ppbv).

Red Hill Bulk Fuel Storage Facility

Notice of Interest 20210507-0852 JP-5 spill that occurred on 6 May 2021

2.c. Monitoring Wells: RHMW01, RHMW01R, RHMW02, RHMW03, and RHMW05 - Headspace and Fuel Product Gauging

DISCLAIMER: Preliminary Data: Undergoing Validation - Subject to Change.

DATE	RHMW01						RHMW01R						RHMW02						RHMW03						RHMW05					
	TIME	AMBIENT (ppmv)	HEADSPACE (ppmv)	DTW (ft btoc)	PRODUCT? (Yes/No)	THICKNESS (ft)	TIME	AMBIENT (ppmv)	HEADSPACE (ppmv)	DTW (ft btoc)	PRODUCT? (Yes/No)	THICKNESS (ft)	TIME	AMBIENT (ppmv)	HEADSPACE (ppmv)	DTW (ft btoc)	PRODUCT? (Yes/No)	THICKNESS (ft)	TIME	AMBIENT (ppmv)	HEADSPACE (ppmv)	DTW (ft btoc)	PRODUCT? (Yes/No)	THICKNESS (ft)	TIME	AMBIENT (ppmv)	HEADSPACE (ppmv)	DTW (ft btoc)	PRODUCT? (Yes/No)	THICKNESS (ft)
8/5/2021	0710	0.11 (see note)	0.038 (see note)	NC3	NC3	NC3	0955	0.0	0.0	84.03	No	NA	1100	0.0	0.3	86.93	No	NA	1203	0.0	0.6	103.16	No	NA	NC2	NC2	NC2	NC2	NC2	NC2
8/9/2021	0735	0.315	0.318	NC3	NC3	NC3	0727	0.315	0.115	83.95	No	NA	0740	0.256	1.276 (see note)	86.48	No	NA	0806	0.198	0.054	103.90	No	NA	0714	0.278	0	83.58	No	NA
8/12/2021	NC2	NC2	NC2	NC2	NC2	NC2	0933	0.0	0.0	84.07	No	NA	1035	0.0	0.8	86.96	No	NA	1142	0.0	0.1	103.17	No	NA	NC2	NC2	NC2	NC2	NC2	NC2
8/16/2021	1139	0.418	0.386	NC3	NC3	NC3	1142	0.419	0.423	84.11	No	NA	1222	0.321	0.214 (see note)	86.98	No	NA	1210	0.338	0	103.22	No	NA	1127	0.407	0	83.77	No	NA
8/19/2021	NC2	NC2	NC2	NC2	NC2	NC2	0950	0.1	0.2	84.02	No	NA	1120	0.2	0.3	86.95	No	NA	1220	0.1	0.1	103.18	No	NA	NC2	NC2	NC2	NC2	NC2	NC2
8/23/2021	1515	0.795	0.746	NC3	NC3	NC3	1520	0.800	0	83.90	No	NA	1540	0.773	22.640	86.83	No	NA	1612	0.834	0.113	103.04	No	NA	1450	0.799	0	83.51	No	NA
8/26/2021	NC2	NC2	NC2	NC2	NC2	NC2	0950	0.0	0.0	84.01	No	NA	1117	0.0	0.2	86.88	No	NA	1225	0.0	2.0	103.11	No	NA	NC2	NC2	NC2	NC2	NC2	NC2
8/30/2021	1051	1.032	0.93	NC3	NC3	NC3	1054	1.027	0.500	83.99	No	NA	1104	1.062	0.362 (see note)	86.91	No	NA	1112	1.156	0.215	103.11	No	NA	1044	0.976	0	83.56	No	NA
9/1/2021	NC2	NC2	NC2	NC2	NC2	NC2	0930	0.0	1.4	84.09	No	NA	1042	0.0	0.2	86.97	No	NA	1145	0.0	0.2	103.17	No	NA	NC2	NC2	NC2	NC2	NC2	NC2
9/7/2021	1210	0.135	0.107	NC3	NC3	NC3	1201	0.131	0	84.00	No	NA	1222	0.061	0.137 (see note)	86.93	No	NA	1238	0.02	0.245	103.24	No	NA	1150	0.106	0	83.64	No	NA
9/8/2021	NC2	NC2	NC2	NC2	NC2	NC2	0935	0.0	0.1	84.09	No	NA	1125	0.0	0.4	86.97	No	NA	1305	0.0	0.0	103.10	No	NA	NC2	NC2	NC2	NC2	NC2	NC2
9/13/2021	1058	0.195	0.181	NC3	NC3	NC3	1055	0.187	0	83.91	No	NA	1116	0.137	1.03 (see note)	86.84	No	NA	1129	0.108	0.157	103.07	No	NA	1040	0.152	0	83.52	No	NA
9/15/2021	NC2	NC2	NC2	NC2	NC2	NC2	1005	0.1	0.1	84.03	No	NA	1300	0.1	1.2	86.89	No	NA	1357	0.1	0.1	103.16	No	NA	NC2	NC2	NC2	NC2	NC2	NC2
9/20/2021	NC	NC	NC	NC3	NC3	NC3	0857	0.412	0	83.99	No	NA	0908	0.061	1.241	86.95	No	NA	1002	0.030	0.049	103.3	No	NA	0850	0.135	0	83.63	No	NA
9/22/2021	NC2	NC2	NC2	NC2	NC2	NC2	0952	0.1	0.1	83.98	No	NA	1125	0.1	0.4	86.88	No	NA	1240	0.0	0.0	103.12	No	NA	NC2	NC2	NC2	NC2	NC2	NC2
9/23/2021	0938	0.267	0.207	NC3	NC3	NC3	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
9/27/2021	0802	0.120	0.125	NC3	NC3	NC3	0801	0.120	0	84.07	No	NA	0810	0.068	0.868 (see note)	87.01	No	NA	0820	0.057	0.157	103.17	No	NA	0747	0.105	0	83.64	No	NA
9/29/2021	NC2	NC2	NC2	NC2	NC2	NC2	0952	0.0	0.0	84.11	No	NA	1100	0.0	0.3	86.94	No	NA	1140	0.0	0.0	103.14	No	NA	NC2	NC2	NC2	NC2	NC2	NC2

DTW = Depth-to-water

ft = feet

ft btoc = feet below top of casing

NA = Not applicable

NM = No measurement taken, due to equipment installed in well.

ppmv = parts-per-million, volume

NC - Not collected

NC1 - Not collected due to headspace and fuel product gauging occurring only where groundwater sampling was being conducted.

NC2 - Not collected - monitoring well not being sampled for groundwater in the DOH Transition Plan.

NC3 - Fuel product gauging not conducted at RHMW01 per email correspondence from DOH on 7/27/2021

Notes:

5/25/2021: Initial headspace reading at RHMW02 was unusually high. No signs of fuel product (sheen or odor) were observed during fuel product gauging. Returned to verify headspace reading and it was significantly lower, as shown in the second set of results.

5/27/2021: Initial headspace reading at RHMW02 was ~14.43 ppmv, but dropped to 0.156 ppmv. No fuel product measured.

6/6/2021: Immediate headspace reading was 3.316 ppmv, but dropped quickly to value recorded.

7/12/2021 Strong background chemical odor related to contractor work at Tank 13.

7/26/2021: Initial headspace reading was ~11.33 ppmv, but dropped quickly to 0.483 ppmv. No fuel product measured.

8/5/2021: Headspace and breathing zone PID readings taken at RHMW01 due to inadvertently being excluded on 8/2/2021.

8/9/2021: Initial headspace reading was ~22.35 ppm, but dropped quickly to value recorded.

8/16/2021: Initial headspace reading was 7.621 ppm, but dropped quickly to value recorded.

8/30/2021: Initial headspace reading was 5.032 ppm, but dropped to value recorded.

9/7/2021: Initial headspace reading at RHMW01R was 0.910 ppm, but dropped to value recorded. Initial headspace reading at RHMW02 was 4.521 ppm, but dropped to value recorded.

9/13/2021: Initial headspace reading at RHMW01R was ~14.1 ppm, but dropped to value recorded.

9/27/2021: Initial headspace reading at RHMW01R was 0.600 ppm, but dropped to value recorded. Initial headspace reading at RHMW02 was 5.806 ppm, with strong sulfur odor, but dropped to value recorded.

Red Hill Bulk Fuel Storage Facility

Notice of Interest 20210507-0852 JP-5 spill that occurred on 6 May 2021

2.c. Monitoring Wells: RHMW01R, RHMW02, RHMW03 - Groundwater Sampling

DISCLAIMER: Preliminary Data: Undergoing Validation - Subject to Change.

2021 NOI Emergency Groundwater Sampling Event			SDG #						96179	96188	96179	96179	96188	96179	
			Sample ID						ERH1363	ERH1365	ERH1367	ERH1362	ERH1364	ERH1366	
			Collected						5/12/2021	5/13/2021	5/13/2021	5/12/2021	5/13/2021	5/13/2021	
			Sampling Method ^{3,4}						Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	
Final results provided (validation completed)			Sample Type						Primary	Primary	Primary	Trip Blank	Trip Blank	Trip Blank	
			Location						RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02	RHMW03	
Analyte	Screening Criteria	SSRBL	RHMW01 2018-2021 Historical Ranges (min/max)		RHMW02 2018-2021 Historical Ranges (min/max)		RHMW03 2018-2021 Historical Ranges (min/max)		Units	Result Q	Result Q	Result Q	Results Q	Result Q	Result Q
Benzene	5	750	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
Ethylbenzene	30	–	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	ug/L	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U
Toluene	40	–	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
Xylenes (Total)	20	–	<0.30	<0.30	<0.30	0.4	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
TPH-g	300	–	<18.0	<18.0	<18.0	95.0	<18.0	<18.0	ug/L	<18.0 U	100.0	<18.0 U	<18.0 U	<18.0 U	<18.0 U
TPH-d	400	4500	<300.0	350.0	1500.0	2900.0	150.0	380.0	ug/L	180.0 J	1600.0 J	200.0 J	–	–	–
TPH-d w/ Silica Gel Cleanup ¹	400	–	<300.0	67.0	260.0	690.0	<25.0	<300.0	ug/L	<300.0 U	360.0 J	<300.0 U	–	–	–
TPH-o	500	–	<40.0	<300.0	<300.0	330.0	<300.0	310.0	ug/L	<300.0 U	240.0 J	220.0 J	–	–	–
TPH-o w/ Silica Gel Cleanup ¹	500	–	<40.0	<300.0	<40.0	<300.0	<40.0	<300.0	ug/L	<300.0 U	<300.0 U	<300.0 U	–	–	–
1-Methylnaphthalene	10	–	<0.025	<0.10	8.7	52.0	<0.025	<0.10	ug/L	<0.10 U	33	<0.10 U	–	–	–
2-Methylnaphthalene	10	–	<0.025	<0.10	7.2	51.0	<0.025	<0.10	ug/L	<0.10 U	24	<0.10 U	–	–	–
Naphthalene	17	–	<0.10	0.19	32.0	98.0	<0.025	<0.10	ug/L	<0.10 U	59	<0.10 U	–	–	–

Notes:

¹ - Silica Gel Cleanup is an EPA approved methodology (SW-846 Method 3630C) that separates fuel related compounds from non-fuel related or naturally-occurring compounds from the sample. When these non-fuel related compounds are reported in the sample results, the reported value is skewed high.

² - After the application of Silica Gel Cleanup, TPH-o levels are below the screening criteria. TPH-o detects heavy oils and greases. JP-5 is not a heavy oil or grease.

³ - Low-flow method – sample with bladder pump, after purging and from approximately mid-screen.

⁴ - Bailer method – sample without purging and from the top of the water column.

J - estimated value

U - nondetect value

ID - identification

TPH-g - total petroleum hydrocarbons gasoline

TPH-d - total petroleum hydrocarbons diesel (JP-5)

TPH-o - total petroleum hydrocarbons oil/grease

"-" - not applicable

Red Hill Bulk Fuel Storage Facility

Notice of Interest 20210507-0852 JP-5 spill that occurred on 6 May 2021

2.c. Monitoring Wells: RHMW01R, RHMW02, RHMW03 - Groundwater Sampling

DISCLAIMER: Preliminary Data: Undergoing Validation - Subject to Change.

2021 NOI Emergency Groundwater Sampling Event			SDG #						96269	96282	96282	96269	96282	96282	
			Sample ID						ERH1370	ERH1372	ERH1374	ERH1369	ERH1371	ERH1373	
			Collected						5/19/2021	5/20/2021	5/20/2021	5/19/2021	5/20/2021	5/20/2021	
			Sampling Method ^{3, 4}						Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	
Final results provided (validation completed)			Sample Type						Primary	Primary	Primary	Trip Blank	Trip Blank	Trip Blank	
			Location						RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02	RHMW03	
Analyte	Screening Criteria	SSRBL	RHMW01 2018-2021 Historical Ranges (min/max)		RHMW02 2018-2021 Historical Ranges (min/max)		RHMW03 2018-2021 Historical Ranges (min/max)		Units	Result Q	Result Q	Result Q	Results Q	Result Q	Result Q
Benzene	5	750	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
Ethylbenzene	30	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	ug/L	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U
Toluene	40	-	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
Xylenes (Total)	20	-	<0.30	<0.30	<0.30	0.4	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
TPH-g	300	-	<18.0	<18.0	<18.0	95.0	<18.0	<18.0	ug/L	<18.0 U	37.0	<18.0 U	<18.0 U	<18.0 U	<18.0 U
TPH-d	400	4500	<300.0	350.0	1500.0	2900.0	150.0	380.0	ug/L	210.0 J	1700.0	170.0 J	-	-	-
TPH-d w/ Silica Gel Cleanup ¹	400	-	<300.0	67.0	260.0	690.0	<25.0	<300.0	ug/L	<300.0 U	340.0	<300.0 U	-	-	-
TPH-o	500	-	<40.0	<300.0	<300.0	330.0	<300.0	310.0	ug/L	<300.0 U	250.0 J	210.0 J	-	-	-
TPH-o w/ Silica Gel Cleanup ¹	500	-	<40.0	<300.0	<40.0	<300.0	<40.0	<300.0	ug/L	<300.0 U	<300.0 U	<300.0 U	-	-	-
1-Methylnaphthalene	10	-	<0.025	<0.10	8.7	52.0	<0.025	<0.10	ug/L	<0.10 U	21	<0.10 U	-	-	-
2-Methylnaphthalene	10	-	<0.025	<0.10	7.2	51.0	<0.025	<0.10	ug/L	<0.10 U	9.5	<0.10 U	-	-	-
Naphthalene	17	-	<0.10	0.19	32.0	98.0	<0.025	<0.10	ug/L	<0.10 U	52	<0.10 U	-	-	-

Notes:

¹ - Silica Gel Cleanup is an EPA approved methodology (SW-846 Method 3630C) that separates fuel related compounds from non-fuel related or naturally-occurring compounds from the sample. When these non-fuel related compounds are reported in the sample results, the reported value is skewed high.

² - After the application of Silica Gel Cleanup, TPH-o levels are below the screening criteria. TPH-o detects heavy oils and greases. JP-5 is not a heavy oil or grease.

³ - Low-flow method – sample with bladder pump, after purging and from approximately mid-screen.

⁴ - Bailer method – sample without purging and from the top of the water column.

J - estimated value

U - nondetect value

ID - identification

TPH-g - total petroleum hydrocarbons gasoline

TPH-d - total petroleum hydrocarbons diesel (JP-5)

TPH-o - total petroleum hydrocarbons oil/grease

"-" - not applicable

Red Hill Bulk Fuel Storage Facility
 Notice of Interest 20210507-0852 JP-5 spill that occurred on 6 May 2021
 2.c. Monitoring Wells: RHMW01R, RHMW02, RHMW03 - Groundwater Sampling
DISCLAIMER: Preliminary Data: Undergoing Validation - Subject to Change.

2021 NOI Emergency Groundwater Sampling Event		SDG #		96320	96320	96343	96320	96320	96343	96363	96363	96363	96363	96363	96363	96410	96410	96410	96410	96410	96410				
		Sample ID		ERH1376	ERH1378	ERH1380	ERH1375	ERH1377	ERH1379	ERH1382	ERH1384	ERH1386	ERH1381	ERH1383	ERH1385	ERH1388	ERH1390	ERH1392	ERH1387	ERH1389	ERH1391				
		Collected		5/24/2021	5/24/2021	5/25/2021	5/24/2021	5/24/2021	5/25/2021	5/26/2021	5/26/2021	5/26/2021	5/26/2021	5/26/2021	5/26/2021	5/28/2021	5/28/2021	5/28/2021	5/28/2021	5/28/2021	5/28/2021				
		Sampling Method ^{3,4}		Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow				
Final results provided (validation completed)		Sample Type		Primary	Primary	Primary	Trip Blank	Trip Blank	Trip Blank	Primary	Primary	Primary	Trip Blank	Trip Blank	Trip Blank	Primary	Primary	Primary	Trip Blank	Trip Blank	Trip Blank				
		Location		RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02	RHMW03				
Analyte	Screening Criteria	SSRBL	RHMW01 2018-2021 Historical Ranges (min/max)	RHMW02 2018-2021 Historical Ranges (min/max)	RHMW03 2018-2021 Historical Ranges (min/max)	Units	Result Q	Result Q	Result Q	Results Q	Result Q	Result Q	Result Q	Result Q	Results Q	Result Q	Result Q	Result Q	Results Q	Result Q	Result Q	Results Q	Result Q	Result Q	
Benzene	5	750	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	
Ethylbenzene	30	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	ug/L	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	
Toluene	40	-	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	
Xylenes (Total)	20	-	<0.30	<0.30	<0.30	0.4	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	
TPH-g	300	-	<18.0	<18.0	<18.0	95.0	<18.0	<18.0	ug/L	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 UJ	<18.0 UJ	<18.0 UJ	<18.0 UJ	<18.0 UJ	<18.0 UJ	<18.0 U	80.0	<18.0 U	<18.0 U	<18.0 U
TPH-d	400	4500	<300.0	350.0	1500.0	2900.0	150.0	380.0	ug/L	310.0 J	1500.0	160.0 J	-	-	-	210.0 J	1600	<300.0 U	-	-	-	180.0 J	1400.0 J	180.0 J	-
TPH-d w/ Silica Gel Cleanup ¹	400	-	<300.0	67.0	260.0	690.0	<25.0	<300.0	ug/L	<300.0 U	360.0	<300.0 U	-	-	-	<300.0 U	380.0	-	-	-	<300.0 UJ	210.0 J	<300.0 UJ	-	
TPH-o	500	-	<40.0	<300.0	<300.0	330.0	<300.0	310.0	ug/L	<300.0 U	170.0 J	<300.0 U	-	-	-	<300.0 U	<300.0 U	<300.0 U	-	-	-	<300.0 UJ	190.0 J	180.0 J	-
TPH-o w/ Silica Gel Cleanup ¹	500	-	<40.0	<300.0	<40.0	<300.0	<40.0	<300.0	ug/L	<300.0 U	<300.0 U	<300.0 U	-	-	-	<300.0 U	<300.0 U	-	-	-	<300.0 UJ	<300.0 UJ	<300.0 UJ	-	
1-Methylnaphthalene	10	-	<0.025	<0.10	8.7	52.0	<0.025	<0.10	ug/L	<0.10 U	22.0	<0.10 U	-	-	-	<0.10 U	19	<0.10 U	-	-	-	<0.10 U	17	<0.10 U	-
2-Methylnaphthalene	10	-	<0.025	<0.10	7.2	51.0	<0.025	<0.10	ug/L	<0.10 U	11.0 J	<0.10 U	-	-	-	<0.10 U	11	<0.10 U	-	-	-	<0.10 U	7.0	<0.10 U	-
Naphthalene	17	-	<0.10	0.19	32.0	98.0	<0.025	<0.10	ug/L	<0.10 U	47.0	<0.10 U	-	-	-	<0.10 U	39	<0.10 U	-	-	-	<0.10 U	35	<0.10 U	-

Notes:
¹ - Silica Gel Cleanup is an EPA approved methodology (SW-846 Method 3630C) that separates fuel related compounds from non-fuel related or naturally-occurring compounds from the sample. When these non-fuel related compounds are reported in the sample results, the reported value is skewed high.
² - After the application of Silica Gel Cleanup, TPH-o levels are below the screening criteria. TPH-o detects heavy oils and greases. JP-5 is not a heavy oil or grease.
³ - Low-flow method - sample with bladder pump, after purging and from approximately mid-screen.
⁴ - Bailer method - sample without purging and from the top of the water column.

J - estimated value
 U - nondetect value
 ID - identification
 TPH-g - total petroleum hydrocarbons gasoline
 TPH-d - total petroleum hydrocarbons diesel (JP-5)
 TPH-o - total petroleum hydrocarbons oil/grease
 "-" - not applicable

Red Hill Bulk Fuel Storage Facility
 Notice of Interest 20210507-0852 JP-5 spill that occurred on 6 May 2021
 2.c. Monitoring Wells: RHMW01R, RHMW02, RHMW03 - Groundwater Sampling
DISCLAIMER: Preliminary Data: Undergoing Validation - Subject to Change.

2021 NOI Emergency Groundwater Sampling Event		SDG #		96410	96410	96410	96410	96410	96410	96410	96438	96438	96438	96438	96438	96438	96463	96463	96463	96463	96463	96463			
		Sample ID		ERH1394	ERH1396	ERH1398	ERH1393	ERH1395	ERH1397	ERH1400	ERH1402	ERH1404	ERH1399	ERH1401	ERH1403	ERH1406	ERH1408	ERH1410	ERH1405	ERH1407	ERH1409				
		Collected		5/31/2021	5/31/2021	5/31/2021	5/31/2021	5/31/2021	5/31/2021	5/31/2021	5/31/2021	6/2/2021	6/2/2021	6/2/2021	6/2/2021	6/2/2021	6/4/2021	6/4/2021	6/4/2021	6/4/2021	6/4/2021	6/4/2021			
		Sampling Method ^{3,4}		Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer			
Final results provided (validation pending)		Sample Type		Primary	Primary	Primary	Trip Blank	Trip Blank	Trip Blank	Primary	Primary	Primary	Trip Blank	Trip Blank	Trip Blank	Primary	Primary	Primary	Trip Blank	Trip Blank	Trip Blank				
Final results provided (validation completed)		Location		RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02	RHMW03				
Analyte	Screening Criteria	SSRBL	RHMW01 2018-2021 Historical Ranges (min/max)	RHMW02 2018-2021 Historical Ranges (min/max)	RHMW03 2018-2021 Historical Ranges (min/max)	Units	Result Q	Result Q	Result Q	Results Q	Result Q	Result Q	Result Q	Result Q	Result Q	Results Q	Result Q	Result Q	Result Q	Results Q	Result Q	Result Q	Results Q	Result Q	Result Q
Benzene	5	750	<0.30	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
Ethylbenzene	30	-	<0.50	<0.50	<0.50	ug/L	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U
Toluene	40	-	<0.30	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
Xylenes (Total)	20	-	<0.30	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
TPH-g	300	-	<18.0	<18.0	95.0	ug/L	<18.0 U	81.0	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U	38.0	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U	27.0	<18.0 U	<18.0 U	<18.0 U	<18.0 U
TPH-d	400	4500	<300.0	350.0	1500.0	ug/L	200.0 J	1300.0	180.0 J	-	-	-	270.0 J	2000.0	260.0 J	-	-	-	270.0 J	1500.0	330.0	-	-	-	-
TPH-d w/ Silica Gel Cleanup ¹	400	-	<300.0	67.0	260.0	ug/L	<300.0 U	330.0	<300.0 U	-	-	-	<300.0 U	290 J	<300.0 U	-	-	-	<300.0 U	390.0	<300.0 U	-	-	-	-
TPH-o	500	-	<40.0	<300.0	330.0	ug/L	<300.0 U	180.0 J	180.0 J	-	-	-	160 J	300 J	330	-	-	-	200.0 J	370.0	580.0 ²	-	-	-	-
TPH-o w/ Silica Gel Cleanup ¹	500	-	<40.0	<300.0	<40.0	ug/L	<300.0 U	<300.0 U	<300.0 U	-	-	-	<300.0 U	<300.0 U	<300.0 U	-	-	-	<300.0 U	<300.0 U	<300.0 U	-	-	-	-
1-Methylnaphthalene	10	-	<0.025	<0.10	8.7	ug/L	<0.10 U	14	<0.10 U	-	-	-	<0.10 U	20	<0.10 U	-	-	-	<0.10 U	12	<0.10 UJ	-	-	-	-
2-Methylnaphthalene	10	-	<0.025	<0.10	7.2	ug/L	<0.10 U	7.0	<0.10 U	-	-	-	<0.10 U	12	<0.10 U	-	-	-	<0.10 U	2.8	<0.10 UJ	-	-	-	-
Naphthalene	17	-	<0.10	0.19	32.0	ug/L	<0.10 U	29	<0.10 U	-	-	-	<0.10 U	42	<0.10 U	-	-	-	<0.10 U	26	<0.10 UJ	-	-	-	-

Notes:
¹ - Silica Gel Cleanup is an EPA approved methodology (SW-846 Method 3630C) that separates fuel related compounds from non-fuel related or naturally-occurring compounds from the sample. When these non-fuel related compounds are reported in the sample results, the reported value is skewed high.
² - After the application of Silica Gel Cleanup, TPH-o levels are below the screening criteria. TPH-o detects heavy oils and greases. JP-5 is not a heavy oil or grease.
³ - Low-flow method - sample with bladder pump, after purging and from approximately mid-screen.
⁴ - Bailer method - sample without purging and from the top of the water column.
 J - estimated value
 U - nondetect value
 ID - identification
 TPH-g - total petroleum hydrocarbons gasoline
 TPH-d - total petroleum hydrocarbons diesel (JP-5)
 TPH-o - total petroleum hydrocarbons oil/grease
 "-" - not applicable

Red Hill Bulk Fuel Storage Facility
 Notice of Interest 20210507-0852 JP-5 spill that occurred on 6 May 2021
 2.c. Monitoring Wells: RHMW01R, RHMW02, RHMW03 - Groundwater Sampling
DISCLAIMER: Preliminary Data: Undergoing Validation - Subject to Change.

2021 NOI Emergency Groundwater Sampling Event		SDG #		96472	96472	96472	96472	96472	96472	96472	96524	96524	96524	96524	96524	96524	96548	96548	96548	96548	96548	96548		
		Sample ID		ERH1412	ERH1414	ERH1416	ERH1411	ERH1413	ERH1415	ERH1418	ERH1420	ERH1422	ER1417	ERH1419	ERH1421	ERH1424	ERH1428	ERH1426	ERH1423	ERH1427	ERH1425			
		Collected		6/7/2021	6/7/2021	6/7/2021	6/7/2021	6/7/2021	6/7/2021	6/7/2021	6/7/2021	6/9/2021	6/9/2021	6/9/2021	6/9/2021	6/9/2021	6/9/2021	6/11/2021	6/11/2021	6/11/2021	6/11/2021	6/11/2021	6/11/2021	6/11/2021
		Sampling Method ^{3,4}		Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer
Final results provided (validation pending)		Sample Type		Primary	Primary	Primary	Trip Blank	Trip Blank	Trip Blank	Primary	Primary	Primary	Trip Blank	Trip Blank	Trip Blank	Primary	Primary	Primary	Trip Blank	Trip Blank	Trip Blank			
Final results provided (validation completed)		Location		RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02	RHMW03			
Analyte	Screening Criteria	SSRBL	RHMW01 2018-2021 Historical Ranges (min/max)	RHMW02 2018-2021 Historical Ranges (min/max)	RHMW03 2018-2021 Historical Ranges (min/max)	Units	Result Q	Result Q	Result Q	Results Q	Result Q	Result Q	Result Q	Result Q	Result Q	Results Q	Result Q	Result Q	Result Q	Results Q	Result Q	Result Q		
Benzene	5	750	<0.30	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 UJ	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U		
Ethylbenzene	30	-	<0.50	<0.50	<0.50	ug/L	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 UJ	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U		
Toluene	40	-	<0.30	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 UJ	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U		
Xylenes (Total)	20	-	<0.30	<0.30	0.4	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 UJ	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U		
TPH-g	300	-	<18.0	<18.0	95.0	ug/L	<18.0 U	33.0	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U	60.0	<18.0 U	<18.0 UJ	<18.0 U	<18.0 U	<18.0 U	47.0	<18.0 U	<18.0 U		
TPH-d	400	4500	<300.0	350.0	1500.0	ug/L	220.0 J	1900.0	430.0	-	-	-	230.0 J	1900.0	370.0	-	-	-	210.0 J	2100.0	260.0 J	-		
TPH-d w/ Silica Gel Cleanup ¹	400	-	<300.0	67.0	260.0	ug/L	<300.0 U	400.0	<300.0 U	-	-	-	<300.0 U	<300.0 U	<300.0 U	-	-	-	<300.0 U	250.0 J	<300.0 U	-		
TPH-o	500	-	<40.0	<300.0	330.0	ug/L	320.0	320.0	840.0 ²	-	-	-	190.0 J	240.0 J	550.0 ²	-	-	-	<300.0 U	410.0	370.0	-		
TPH-o w/ Silica Gel Cleanup ¹	500	-	<40.0	<300.0	350.0	ug/L	<300.0 U	<300.0 U	350.0	-	-	-	<300.0 U	<300.0 U	200.0 J	-	-	-	<300.0 U	<300.0 U	<300.0 U	-		
1-Methylnaphthalene	10	-	<0.025	<0.10	8.7	ug/L	<0.10 U	19	<0.10 UJ	-	-	-	<0.10 UJ	12 J	<0.10 UJ	-	-	-	<0.10 U	14	<0.10 U	-		
2-Methylnaphthalene	10	-	<0.025	<0.10	7.2	ug/L	<0.10 U	14	<0.10 UJ	-	-	-	<0.10 UJ	7.2 J	<0.10 UJ	-	-	-	<0.10 U	6.0	<0.10 U	-		
Naphthalene	17	-	<0.10	0.19	32.0	ug/L	<0.10 U	43	<0.10 UJ	-	-	-	<0.10 UJ	24 J	<0.10 UJ	-	-	-	<0.10 U	26	<0.10 U	-		

Notes:
¹ - Silica Gel Cleanup is an EPA approved methodology (SW-846 Method 3630C) that separates fuel related compounds from non-fuel related or naturally-occurring compounds from the sample. When these non-fuel related compounds are reported in the sample results, the reported value is skewed high.
² - After the application of Silica Gel Cleanup, TPH-o levels are below the screening criteria. TPH-o detects heavy oils and greases. JP-5 is not a heavy oil or grease.
³ - Low-flow method – sample with bladder pump, after purging and from approximately mid-screen.
⁴ - Bailer method – sample without purging and from the top of the water column.
 J - estimated value
 U - nondetect value
 ID - identification
 TPH-g - total petroleum hydrocarbons gasoline
 TPH-d - total petroleum hydrocarbons diesel (JP-5)
 TPH-o - total petroleum hydrocarbons oil/grease
 "-" - not applicable

Red Hill Bulk Fuel Storage Facility

Notice of Interest 20210507-0852 JP-5 spill that occurred on 6 May 2021

2.c. Monitoring Wells: RHMW01R, RHMW02, RHMW03 - Groundwater Sampling

DISCLAIMER: Preliminary Data: Undergoing Validation - Subject to Change.

2021 NOI Emergency Groundwater Sampling Event			SDG #						96623	96623	96623	96623	96623	96623	
			Sample ID						ERH1440	ERH1442	ERH1444	ERH1439	ERH1441	ERH1443	
			Collected						6/17/2021	6/17/2021	6/17/2021	6/17/2021	6/17/2021	6/17/2021	
			Sampling Method ^{3, 4}						Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	
Final results provided (validation completed)			Sample Type						Primary	Primary	Primary	Trip Blank	Trip Blank	Trip Blank	
			Location						RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02	RHMW03	
Analyte	Screening Criteria	SSRBL	RHMW01 2018-2021 Historical Ranges (min/max)		RHMW02 2018-2021 Historical Ranges (min/max)		RHMW03 2018-2021 Historical Ranges (min/max)		Units	Result Q	Result Q	Result Q	Results Q	Result Q	Result Q
Benzene	5	750	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
Ethylbenzene	30	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	ug/L	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U
Toluene	40	-	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
Xylenes (Total)	20	-	<0.30	<0.30	<0.30	0.4	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
TPH-g	300	-	<18.0	<18.0	<18.0	95.0	<18.0	<18.0	ug/L	<18.0 U	23.0	<18.0 U	<18.0 U	<18.0 U	<18.0 U
TPH-d	400	4500	<300.0	350.0	1500.0	2900.0	150.0	380.0	ug/L	240.0 J	2000.0	220.0 J	-	-	-
TPH-d w/ Silica Gel Cleanup ¹	400	-	<300.0	67.0	260.0	690.0	<25.0	<300.0	ug/L	<300.0 U	740.0	<300.0 U	-	-	-
TPH-o	500	-	<40.0	<300.0	<300.0	330.0	<300.0	310.0	ug/L	170.0 J	350.0	330.0	-	-	-
TPH-o w/ Silica Gel Cleanup ¹	500	-	<40.0	<300.0	<40.0	<300.0	<40.0	<300.0	ug/L	150.0 J	160.0 J	200.0 J	-	-	-
1-Methylnaphthalene	10	-	<0.025	<0.10	8.7	52.0	<0.025	<0.10	ug/L	0.43	19	<0.10 U	-	-	-
2-Methylnaphthalene	10	-	<0.025	<0.10	7.2	51.0	<0.025	<0.10	ug/L	<0.10 U	8.3	<0.10 U	-	-	-
Naphthalene	17	-	<0.10	0.19	32.0	98.0	<0.025	<0.10	ug/L	<0.10 U	33	<0.10 U	-	-	-

Notes:

¹ - Silica Gel Cleanup is an EPA approved methodology (SW-846 Method 3630C) that separates fuel related compounds from non-fuel related or naturally-occurring compounds from the sample. When these non-fuel related compounds are reported in the sample results, the reported value is skewed high.

² - After the application of Silica Gel Cleanup, TPH-o levels are below the screening criteria. TPH-o detects heavy oils and greases. JP-5 is not a heavy oil or grease.

³ - Low-flow method – sample with bladder pump, after purging and from approximately mid-screen.

⁴ - Bailer method – sample without purging and from the top of the water column.

J - estimated value

U - nondetect value

ID - identification

TPH-g - total petroleum hydrocarbons gasoline

TPH-d - total petroleum hydrocarbons diesel (JP-5)

TPH-o - total petroleum hydrocarbons oil/grease

"-" - not applicable

Red Hill Bulk Fuel Storage Facility

Notice of Interest 20210507-0852 JP-5 spill that occurred on 6 May 2021

2.c. Monitoring Wells: RHMW01R, RHMW02, RHMW03 - Groundwater Sampling

DISCLAIMER: Preliminary Data: Undergoing Validation - Subject to Change.

2021 NOI Emergency Groundwater Sampling Event			SDG #						96682	96682	96682	96682	96682	96682	
			Sample ID						ERH1448	ERH1450	ERH1452	ERH1447	ERH1449	ERH1451	
			Collected						6/24/2021	6/24/2021	6/24/2021	6/24/2021	6/24/2021	6/24/2021	
			Sampling Method ^{3, 4}						Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	
Final results provided (validation pending)			Sample Type						Primary	Primary	Primary	Trip Blank	Trip Blank	Trip Blank	
Final results provided (validation completed)			Location						RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02	RHMW03	
Analyte	Screening Criteria	SSRBL	RHMW01 2018-2021 Historical Ranges (min/max)		RHMW02 2018-2021 Historical Ranges (min/max)		RHMW03 2018-2021 Historical Ranges (min/max)		Units	Result	Q	Result	Q	Result	Q
Benzene	5	750	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	ug/L	<0.30	U	<0.30	U	<0.30	U
Ethylbenzene	30	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	ug/L	<0.50	U	<0.50	U	<0.50	U
Toluene	40	-	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	ug/L	<0.30	U	<0.30	U	<0.30	U
Xylenes (Total)	20	-	<0.30	<0.30	<0.30	0.37	<0.30	<0.30	ug/L	<0.30	U	<0.30	U	<0.30	U
TPH-g	300	-	<18.0	<18.0	<18.0	95	<18.0	<18.0	ug/L	<18.0	U	39	<18.0	U	<18.0
TPH-d	400	4500	<300.0	350	1500	2900	150	380	ug/L	160	J	1400	150	J	-
TPH-d w/ Silica Gel Cleanup ¹	400	-	<300.0	67	260	690	<25.0	<300.0	ug/L	150	J	470	<300.0	U	-
TPH-o	500	-	<40.0	<300.0	<300.0	330	<300.0	310	ug/L	<300.0	U	<300.0	U	170	J
TPH-o w/ Silica Gel Cleanup ¹	500	-	<40.0	<300.0	<40.0	<300.0	<40.0	<300.0	ug/L	<300.0	U	<300.0	U	<300.0	U
1-Methylnaphthalene	10	-	<0.025	<0.10	8.7	52	<0.025	<0.10	ug/L	<0.10	U	24	<0.10	U	-
2-Methylnaphthalene	10	-	<0.025	<0.10	7.2	51	<0.025	<0.10	ug/L	<0.10	U	17	<0.10	U	-
Naphthalene	17	-	<0.10	0.19	32	98	<0.025	<0.10	ug/L	<0.10	U	54	<0.10	U	-

Notes:

¹ - Silica Gel Cleanup is an EPA approved methodology (SW-846 Method 3630C) that separates fuel related compounds from non-fuel related or naturally-occurring compounds from the sample. When these non-fuel related compounds are reported in the sample results, the reported value is skewed high.

² - After the application of Silica Gel Cleanup, TPH-o levels are below the screening criteria. TPH-o detects heavy oils and greases. JP-5 is not a heavy oil or grease.

³ - Low-flow method – sample with bladder pump, after purging and from approximately mid-screen.

⁴ - Bailer method – sample without purging and from the top of the water column.

J - estimated value

U - nondetect value

ID - identification

TPH-g - total petroleum hydrocarbons gasoline

TPH-d - total petroleum hydrocarbons diesel (JP-5)

TPH-o - total petroleum hydrocarbons oil/grease

"-" - not applicable

Red Hill Bulk Fuel Storage Facility

Notice of Interest 20210507-0852 JP-5 spill that occurred on 6 May 2021

2.c. Monitoring Wells: RHMW01R, RHMW02, RHMW03 - Groundwater Sampling

DISCLAIMER: Preliminary Data: Undergoing Validation - Subject to Change.

2021 NOI Emergency Groundwater Sampling Event	SDG #		96682	96682	96682	96682
	Sample ID		ERH1448	ERH1450	ERH1452	ERH1454
	Collected		6/24/2021	6/24/2021	6/24/2021	6/24/2021
	Sampling Method ^{1, 2}		Bailer	Bailer	Bailer	-
Final results provided (validation pending)	Sample Type		Primary	Primary	Primary	Primary
	Location		RHMW01R	RHMW02	RHMW03	RHSF
SVOC - Cindy Complete	Screening Criteria	Units	Result Q	Result Q	Result Q	Result Q
1,2,4-Trichlorobenzene	70	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
1,2-Dichlorobenzene	10	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
1,3-Dichlorobenzene	5.0	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
1,4-Dichlorobenzene	5.0	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
1,4-Dioxane	#N/A	ug/L	<0.50 U	<0.50 U	<0.50 U	<0.50 U
1-Methylnaphthalene	10	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
2,4,5-Trichlorophenol	17	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
2,4,6-Trichlorophenol	7.1	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
2,4-Dichlorophenol	0.3	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
2,4-Dimethylphenol	#N/A	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
2,4-Dinitrophenol	40	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
2,4-Dinitrotoluene	0.25	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
2,6-Dinitrotoluene	0.052	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
2-Chloronaphthalene	-	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
2-Chlorophenol	0.18	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
2-Methylnaphthalene	10	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
2-Methylphenol	-	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
2-Nitroaniline	-	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
2-Nitrophenol	-	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
3,3'-Dichlorobenzidine	0.17	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
3-Nitroaniline	-	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
3/4-Methylphenol	-	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
4,6-Dinitro-2-Methylphenol	-	ug/L	<5.00 U	<5.00 U	<5.00 U	5.2 J
4-Bromophenyl Phenyl Ether	-	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
4-Chloro-3-Methylphenol	-	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
4-Chloroaniline	0.39	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
4-Chlorophenyl Phenyl Ether	-	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
4-Nitroaniline	-	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
4-Nitrophenol	-	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Acenaphthene	20	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Acenaphthylene	236	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Anthracene	0.18	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Benz (a) Anthracene	0.029	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Benzo (a) Pyrene	0.20	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Benzo (b) Fluoranthene	0.22	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Benzo (g,h,i) Perylene	0.13	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Benzo (k) Fluoranthene	0.40	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Benzyl Alcohol	-	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Bis (2-chlorethoxy) Methane	-	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Bis (2-chloroethyl) Ether	0.014	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Bis (2-ethylhexyl) Phthalate	6.0	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Bis(2-chloro-1-methylethyl)ethe	0.37	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Butyl Benzyl Phthalate	-	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Carbazole	-	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Chrysene	1.0	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U

Red Hill Bulk Fuel Storage Facility

Notice of Interest 20210507-0852 JP-5 spill that occurred on 6 May 2021

2.c. Monitoring Wells: RHMW01R, RHMW02, RHMW03 - Groundwater Sampling

DISCLAIMER: Preliminary Data: Undergoing Validation - Subject to Change.

2021 NOI Emergency Groundwater Sampling Event	SDG #		96682	96682	96682	96682
	Sample ID		ERH1448	ERH1450	ERH1452	ERH1454
	Collected		6/24/2021	6/24/2021	6/24/2021	6/24/2021
	Sampling Method ^{1, 2}		Bailer	Bailer	Bailer	-
Final results provided (validation pending)	Sample Type		Primary	Primary	Primary	Primary
	Location		RHMW01R	RHMW02	RHMW03	RHSF
SVOC - Cindy Complete	Screening Criteria	Units	Result Q	Result Q	Result Q	Result Q
Di-n-butyl Phthalate	-	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Di-n-octyl Phthalate	-	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Dibenz (a,h) Anthracene	0.022	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Dibenzofuran	-	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Diethyl Phthalate	980	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Dimethyl Phthalate	#N/A	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Diphenylamine	-	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Fluoranthene	#N/A	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Fluorene	236	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Hexachlorobenzene	0.00030	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Hexachlorobutadiene	0.20	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Hexachlorocyclopentadiene	-	ug/L	<20.00 UJ	<20.00 UJ	<20.00 UJ	<20.00 UJ
Hexachloroethane	0.40	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Indeno (1,2,3-cd) Pyrene	0.095	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Isophorone	82	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
N-nitrosodi-n-propylamine	-	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Naphthalene	17	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Nitrobenzene	0.14	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Pentachlorophenol	1.0	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Phenanthrene	214	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Phenol	300	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U
Pyrene	68	ug/L	<5.00 U	<5.00 U	<5.00 U	<5.00 U

Notes:

Screening criteria based on DOH Tier 1 EALs, Table D-1b Groundwater Action Levels, where groundwater is a current or potential drinking water resource, and surface water body is not located within 150m of release site (DOH 2017).

¹ - Low-flow method – sample with bladder pump, after purging and from approximately mid-screen.

² - Bailer method – sample without purging and from the top of the water column.

J - estimated value

B - blank method contamination

U - nondetect value

ID - identification

"-" - not applicable

Red Hill Bulk Fuel Storage Facility

Notice of Interest 20210507-0852 JP-5 spill that occurred on 6 May 2021

2.c. Monitoring Wells: RHMW01R, RHMW02, RHMW03 - Groundwater Sampling

DISCLAIMER: Preliminary Data: Undergoing Validation - Subject to Change.

2021 NOI Emergency Groundwater Sampling Event		SDG #						96701	96701	96714	96714	96714	96714	96701	96714	96714		
		Sample ID						ERH1456	ERH1529	ERH1530	ERH1458	ERH1531	ERH1460	ERH1455	ERH1457	ERH1459		
		Collected						6/30/2021	6/30/2021	6/30/2021	6/30/2021	6/30/2021	6/30/2021	6/30/2021	6/30/2021	6/30/2021		
		Sampling Method ^{3,4}						Low-Flow	Bailer	Low-Flow	Bailer	Low-Flow	Bailer	-	-	-		
Final results provided (validation pending)		Sample Type						Primary	Primary	Primary	Primary	Primary	Primary	Trip Blank	Trip Blank	Trip Blank		
Final results provided (validation completed)		Location						RHMW01R	RHMW01R	RHMW02	RHMW02	RHMW03	RHMW03	RHMW01R	RHMW02	RHMW03		
Analyte	Screening Criteria	SSRBL	RHMW01 2018-2021 Historical Ranges (min/max)		RHMW02 2018-2021 Historical Ranges (min/max)		RHMW03 2018-2021 Historical Ranges (min/max)		Units	Result Q	Result Q	Result Q	Result Q	Result Q	Result Q	Results Q	Result Q	Result Q
Benzene	5	750	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
Ethylbenzene	30	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	ug/L	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U
Toluene	40	-	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
Xylenes (Total)	20	-	<0.30	<0.30	<0.30	0.37	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
TPH-g	300	-	<18.0	<18.0	<18.0	95	<18.0	<18.0	ug/L	<18.0 U	<18.0 U	170	130	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U
TPH-d	400	4500	<300.0	350	1500	2900	150	380	ug/L	200 J	270 J	1800	1800	160 J	220 J	-	-	-
TPH-d w/ Silica Gel Cleanup ¹	400	-	<300.0	67	260	690	<25.0	<300.0	ug/L	<300.0 U	<300.0 U	520	570	<300.0 U	<300.0 U	-	-	-
TPH-o	500	-	<40.0	<300.0	<300.0	330	<300.0	310	ug/L	<300.0 U	210 J	210 J	320	200 J	350	-	-	-
TPH-o w/ Silica Gel Cleanup ¹	500	-	<40.0	<300.0	<40.0	<300.0	<40.0	<300.0	ug/L	<300.0 U	<300.0 U	<300.0 U	<300.0 U	<300.0 U	150 J	-	-	-
1-Methylnaphthalene	10	-	<0.025	<0.10	8.7	52	<0.025	<0.10	ug/L	<0.10 U	0.22	13	20	<0.10 U	<0.10 U	-	-	-
2-Methylnaphthalene	10	-	<0.025	<0.10	7.2	51	<0.025	<0.10	ug/L	<0.10 U	<0.10 U	11	10	<0.10 U	<0.10 U	-	-	-
Naphthalene	17	-	<0.10	0.19	32	98	<0.025	<0.10	ug/L	<0.10 U	<0.10 U	26	32	<0.10 U	<0.10 U	-	-	-

Notes:
¹ - Silica Gel Cleanup is an EPA approved methodology (SW-846 Method 3630C) that separates fuel related compounds from non-fuel related or naturally-occurring compounds from the sample. When these non-fuel related compounds are reported in the sample results, the reported value is skewed high.
² - After the application of Silica Gel Cleanup, TPH-o levels are below the screening criteria. TPH-o detects heavy oils and greases. JP-5 is not a heavy oil or grease.
³ - Low-flow method – sample with bladder pump, after purging and from approximately mid-screen.
⁴ - Bailer method – sample without purging and from the top of the water column.
 J - estimated value
 U - nondetect value
 ID - identification
 TPH-g - total petroleum hydrocarbons gasoline
 TPH-d - total petroleum hydrocarbons diesel (JP-5)
 TPH-o - total petroleum hydrocarbons oil/grease
 "-" - not applicable

Red Hill Bulk Fuel Storage Facility

Notice of Interest 20210507-0852 JP-5 spill that occurred on 6 May 2021

2.c. Monitoring Wells: RHMW01R, RHMW02, RHMW03 - Groundwater Sampling

DISCLAIMER: Preliminary Data: Undergoing Validation - Subject to Change.

2021 NOI Emergency Groundwater Sampling Event	SDG #	96778	96778	96778	96778	96778
	Sample ID	ERH1464	ERH1466	ERH1468	ERH1463	ERH1465
	Collected	7/8/2021	7/8/2021	7/8/2021	7/8/2021	7/8/2021
	Sampling Method ^{3,4}	Bailer	Bailer	Bailer	Bailer	Bailer
	Sample Type	Primary	Primary	Primary	Trip Blank	Trip Blank
	Location	RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02

Preliminary results provided (final results pending)

Final results provided (validation pending)

Analyte	Screening Criteria	SSRBL	RHMW01 2018-2021 Historical Ranges (min/max)		RHMW02 2018-2021 Historical Ranges (min/max)		RHMW03 2018-2021 Historical Ranges (min/max)		Units	Result Q	Result Q	Result Q	Results Q	Result Q
Benzene	5	750	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
Ethylbenzene	30	–	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	ug/L	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U
Toluene	40	–	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
Xylenes (Total)	20	–	<0.30	<0.30	<0.30	0.37	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
TPH-g	300	–	<18.0	<18.0	<18.0	95	<18.0	<18.0	ug/L	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U
TPH-d	400	4500	<300.0	350	1500	2900	150	380	ug/L	310 J	3400	310 J	–	–
TPH-d w/ Silica Gel Cleanup ¹	400	–	<300.0	67	260	690	<25.0	<300.0	ug/L	<300.0 U	920	<300.0 U	–	–
TPH-o	500	–	<40.0	<300.0	<300.0	330	<300.0	310	ug/L	410	370	660 ²	–	–
TPH-o w/ Silica Gel Cleanup ¹	500	–	<40.0	<300.0	<40.0	<300.0	<40.0	<300.0	ug/L	<300.0 U	<300.0 U	<300.0 U	–	–
1-Methylnaphthalene	10	–	<0.025	<0.10	8.7	52	<0.025	<0.10	ug/L	0.28	19	<0.10 U	–	–
2-Methylnaphthalene	10	–	<0.025	<0.10	7.2	51	<0.025	<0.10	ug/L	<0.10 U	6.9	<0.10 U	–	–
Naphthalene	17	–	<0.10	0.19	32	98	<0.025	<0.10	ug/L	<0.10 U	37	<0.10 U	–	–

Notes:

¹ - Silica Gel Cleanup is an EPA approved methodology (SW-846 Method 3630C) that separates fuel related compounds from non-fuel related or naturally-occurring compounds from the sample. When these non-fuel related compounds are reported in the sample results, the reported value is skewed high.

² - After the application of Silica Gel Cleanup, TPH-o levels are below the screening criteria. TPH-o detects heavy oils and greases. JP-5 is not a heavy oil or grease.

³ - Low-flow method – sample with bladder pump, after purging and from approximately mid-screen.

⁴ - Bailer method – sample without purging and from the top of the water column.

J - estimated value

U - nondetect value

ID - identification

TPH-g - total petroleum hydrocarbons gasoline

TPH-d - total petroleum hydrocarbons diesel (JP-5)

TPH-o - total petroleum hydrocarbons oil/grease

"-" - not applicable

Red Hill Bulk Fuel Storage Facility

Notice of Interest 20210507-0852 JP-5 spill that occurred on 6 May 2021

2.c. Monitoring Wells: RHMW01R, RHMW02, RHMW03 - Groundwater Sampling

DISCLAIMER: Preliminary Data: Undergoing Validation - Subject to Change.

2021 NOI Emergency Groundwater Sampling Event	SDG #	96846	96846	96846	96846	96846	96846
	Sample ID	ERH1533	ERH1535	ERH1537	ERH1532	ERH1534	ERH1536
	Collected	7/15/2021	7/15/2021	7/15/2021	7/15/2021	7/15/2021	7/15/2021
	Sampling Method 1,2	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer
	Sample Type	Primary	Primary	Primary	Trip Blank	Trip Blank	Trip Blank
	Location	RHMW01R	RHMW02	RHMW03	RHMW01R	RHMW02	RHMW03

Preliminary results provided (final results pending)

Final results provided (validation pending)

Analyte	Screening Criteria	SSRBL	RHMW01 2018-2021 Historical Ranges (min/max)		RHMW02 2018-2021 Historical Ranges (min/max)		RHMW03 2018-2021 Historical Ranges (min/max)		Units	Result Q	Result Q	Result Q	Results Q	Result Q	Result Q
Benzene	5	750	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
Ethylbenzene	30	–	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	ug/L	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U
Toluene	40	–	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
Xylenes (Total)	20	–	<0.30	<0.30	<0.30	0.37	<0.30	<0.30	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
TPH-g	300	–	<18.0	<18.0	<18.0	95	<18.0	<18.0	ug/L	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U
TPH-d	400	4500	<300.0	350	1500	2900	150	380	ug/L	260 J	2700	250 J	–	–	–
TPH-d w/ Silica Gel Cleanup ¹	400	–	<300.0	67	260	690	<25.0	<300.0	ug/L	<300.0 U	660	<300.0 U	–	–	–
TPH-o	500	–	<40.0	<300.0	<300.0	330	<300.0	310	ug/L	180 J	530 ²	610 ²	–	–	–
TPH-o w/ Silica Gel Cleanup ¹	500	–	<40.0	<300.0	<40.0	<300.0	<40.0	<300.0	ug/L	<300.0 U	<300.0 U	<300.0 U	–	–	–
1-Methylnaphthalene	10	–	<0.025	<0.10	8.7	52	<0.025	<0.10	ug/L	0.23	19	<0.10 U	–	–	–
2-Methylnaphthalene	10	–	<0.025	<0.10	7.2	51	<0.025	<0.10	ug/L	<0.10 U	11	<0.10 U	–	–	–
Naphthalene	17	–	<0.10	0.19	32	98	<0.025	<0.10	ug/L	<0.10 U	38	<0.10 U	–	–	–

Notes:

¹ - Silica Gel Cleanup is an EPA approved methodology (SW-846 Method 3630C) that separates fuel related compounds from non-fuel related or naturally-occurring compounds from the sample. When these non-fuel related compounds are reported in the sample results, the reported value is skewed high.

² - After the application of Silica Gel Cleanup, TPH-o levels are below the screening criteria. TPH-o detects heavy oils and greases. JP-5 is not a heavy oil or grease.

³ - Low-flow method – sample with bladder pump, after purging and from approximately mid-screen.

⁷ - Bailer method – sample without purging and from the top of the water column.

J - estimated value

U - nondetect value

ID - identification

TPH-g - total petroleum hydrocarbons gasoline

TPH-d - total petroleum hydrocarbons diesel (JP-5)

TPH-o - total petroleum hydrocarbons oil/grease

"-" - not applicable

Red Hill Bulk Fuel Storage Facility

Notice of Interest 20210507-0852 JP-5 spill that occurred on 6 May 2021

Drinking Water Sampling - RHMW2254-01 Pre-Chlorination

DISCLAIMER: Preliminary Data: Undergoing Validation - Subject to Change.

2021 NOI Emergency Drinking Water Sampling Event		SDG #	96439	96439	96537	96537	96623	96623	96682	96682	
		Sample ID	ERH1430	ERH1429	ERH1432	ERH1431	ERH1446	ERH1445	ERH1454	ERH1453	
		Collected	6/3/2021	6/3/2021	6/10/2021	6/10/2021	6/17/2021	6/17/2021	6/24/2021	6/24/2021	
Final results provided (validation pending)		Sample Type	Primary	Trip Blank	Primary	Trip Blank	Primary	Trip Blank	Primary	Trip Blank	
Final results provided (validation completed)		Location	RHSF	RHSF	RHSF	RHSF	RHSF	RHSF	RHSF	RHSF	
Analyte	Screening Criteria	SSRBL	Units	Result Q	Results Q	Result Q	Results Q	Result Q	Results Q	Result Q	Results Q
Benzene	5	750	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
Ethylbenzene	30	-	ug/L	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U
Toluene	40	-	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
Xylenes (Total)	20	-	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
TPH-g	300	-	ug/L	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U
TPH-d	400	4500	ug/L	<300.0 U	-	<300.0 U	-	<300.0 U	-	<300.0 U	-
TPH-d w/ Silica Gel Cleanup	400	-	ug/L	<300.0 U	-	-	-	<300.0 U	-	<300.0 U	-
TPH-o	500	-	ug/L	<300.0 U	-	<300.0 U	-	<300.0 U	-	<300.0 U	-
TPH-o w/ Silica Gel Cleanup	500	-	ug/L	<300.0 U	-	-	-	<300.0 U	-	<300.0 U	-
1-Methylnaphthalene	10	-	ug/L	<0.10 U	-	<0.10 U	-	<0.10 U	-	<0.10 U	-
2-Methylnaphthalene	10	-	ug/L	<0.10 U	-	<0.10 U	-	<0.10 U	-	<0.10 U	-
Naphthalene	17	-	ug/L	<0.10 U	-	<0.10 U	-	<0.10 U	-	<0.10 U	-

Notes:
 J - estimated value
 U - nondetect value
 ID - identification
 TPH-g - total petroleum hydrocarbons gasoline
 TPH-d - total petroleum hydrocarbons diesel (JP-5)
 TPH-o - total petroleum hydrocarbons oil/grease
 "-" - not applicable
 RHSF - Drinking water samples collected from an operating pump, each equipped with a tap or spigot for sampling.

Red Hill Bulk Fuel Storage Facility

Notice of Interest 20210507-0852 JP-5 spill that occurred on 6 May 2021

Drinking Water Sampling - RHMW2254-01 Pre-Chlorination

DISCLAIMER: Preliminary Data: Undergoing Validation - Subject to Change.

2021 NOI Emergency Drinking Water Sampling Event		SDG #	96714	96714	96778	96778	96846	96846	96919	96919	97004	97004	
		Sample ID	ERH1462	ERH1461	ERH1470	ERH1469	ERH1539	ERH1538	ERH1547	ERH1546	ERH1555	ERH1554	
		Collected	7/1/2021	7/1/2021	7/8/2021	7/8/2021	7/15/2021	7/15/2021	7/22/2021	7/22/2021	7/29/2021	7/29/2021	
Final results provided (validation pending)		Sample Type	Primary	Trip Blank	Primary	Trip Blank	Primary	Trip Blank	Primary	Trip Blank	Primary	Trip Blank	
Final results provided (validation completed)		Location	RHSF	RHSF	RHSF	RHSF	RHSF	RHSF	RHSF	RHSF	RHSF	RHSF	
Analyte	Screening Criteria	SSRBL	Units	Result Q	Results Q	Result Q	Results Q	Result Q	Results Q	Result Q	Results Q	Result Q	Results Q
Benzene	5	750	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
Ethylbenzene	30	-	ug/L	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U
Toluene	40	-	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
Xylenes (Total)	20	-	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
TPH-g	300	-	ug/L	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U
TPH-d	400	4500	ug/L	<300.0 U	-	<300.0 U	-	<300.0 U	-	<300.0 U	-	<300.0 U	-
TPH-d w/ Silica Gel Cleanup	400	-	ug/L	<300.0 U	-	<300.0 U	-	<300.0 U	-	<300.0 U	-	<300.0 U	-
TPH-o	500	-	ug/L	<300.0 U	-	370.0	-	480	-	<300.0 U	-	<300.0 U	-
TPH-o w/ Silica Gel Cleanup	500	-	ug/L	<300.0 U	-	<300.0 U	-	<300.0 U	-	<300.0 U	-	<300.0 U	-
1-Methylnaphthalene	10	-	ug/L	<0.10 U	-	<0.10 U	-	<0.10 U	-	<0.10 U	-	<0.10 U	-
2-Methylnaphthalene	10	-	ug/L	<0.10 U	-	<0.10 U	-	<0.10 U	-	<0.10 U	-	<0.10 U	-
Naphthalene	17	-	ug/L	<0.10 U	-	<0.10 U	-	<0.10 U	-	<0.10 U	-	<0.10 U	-

Notes:
 J - estimated value
 U - nondetect value
 ID - identification
 TPH-g - total petroleum hydrocarbons gasoline
 TPH-d - total petroleum hydrocarbons diesel (JP-5)
 TPH-o - total petroleum hydrocarbons oil/grease
 "-" - not applicable
 RHSF - Drinking water samples collected from an operating pump, each equipped with a tap or spigot for sampling.