

THRIFTY OIL CO.

February 2, 2000

O.00651

Mr. Roland William
Castro Valley Sanitary District
21040 Marshall St.
Castro Valley, CA. 94546-6098

Ref. **Temporary Special Discharge Permit**
Thrifty Oil Co. Station # 54
2504 Castro Valley Blvd.
Castro Valley, CA. 94546

Dear Mr. William:

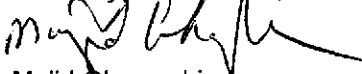
This is a follow up on our application package which was sent to you on November 10, 1999. We requested to renew / reinstate our Special Discharge Permit for the remediation system at the above referenced site. The following documents were sent to you:

- New Special Discharge Permit application
- A map showing the location of the site
- Site plan showing the location of all monitoring wells
- Process description and flow charts
- Laboratory analysis of pollutants concentration in ground water
- A laboratory analysis report of Influent and Effluent water
- 3rd Quarter 1999, Status report addressed to Mr. Scott Seery at the Alameda County Health Care Services Agency

Since we need to provide the copy of the permit to the Alameda County Health Care Services Agency, please review the application package, reinstate our Special Discharge Permit, and forward us the copy of the permit with any applicable fees.

Thank you again for your cooperation. If you have any questions or comments, please do not hesitate and contact me at (562) 921-3581 Ext. 370.

Sincerely,



Majid Ghorayshi
Environmental Compliance Manager

cc: Mr. Chris Panaitescu
Mr. Ray Friedrichsen
Mr. Scott O. Seery, CHMM
Hazardous Materials Specialist
1131 Harbor Bay Parkway, Suite 250
Alameda, CA. 94502
Earth Management Co. File



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ENVIRONMENTAL
PROTECTION

THRIFTY OIL CO.

January 31, 2000

O.00604

Mr. Scott O. Seery, CHMM
Hazardous Material Specialist
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

RE: **Former Thrifty Oil Co. Station #054**
2504 Castro Valley Boulevard
Castro Valley, CA 94541
Request for Shutdown and Removal of the Vapor Extraction System

Dear Mr. Seery,

Attached is the Request for Shutdown and Removal of the Vapor Extraction System on Former Thrifty Oil Co. Station #054 at 2504 Castro Valley Boulevard, Castro Valley, California. Since TASC0 is starting to remodel the station, it would be to the benefit of both Thrifty and TASC0 for the removal of the system during this construction phase. The reason for the system shutdown and removal is discussed in the enclosed letter.

If you have any question or comments, please contact Raymond C. Friedrichsen or myself at (562) 921-3581. X 390

Sincerely,



Chris Panaitescu
General Manager
Environmental Affairs



THRIFTY OIL CO.

January 31, 2000

Mr. Scott O. Seery, CHMM
Hazardous Material Specialist
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

RE: **Former Thrifty Oil Co. Station #054**
2504 Castro Valley Boulevard
Castro Valley, CA 94541
Request for Shutdown and Removal of the Vapor Extraction System

Dear Mr. Seery,

As per our telephone conversation on January 20, 2000, Thrifty requests the shutdown and removal of the vapor extraction system because of the following reasons:

- When the monitoring wells connected to the soil vapor extraction system were installed and operating in January 1991, groundwater was encountered at 10 feet below surface grade (bsg) in monitoring well MW-7 and 15 feet bsg in monitoring well RE-1. Groundwater was not encountered in monitoring wells RE-3 or RE-6 with total depths of 19 and 15 feet bsg, respectively. Since the installation of the groundwater monitoring wells, groundwater has risen to a depth of approximately 5 feet bsg or higher in the vapor extraction wells when last gauged in December 1, 1999. Therefore, the top of the screen of the monitoring wells, which are set at five feet (bgs), are either close to or covered by the groundwater. This renders these wells ineffective as vapor extraction wells. The groundwater has fluctuated above and below the top of the well screens over the past few years.
- After examining the boring logs (**Appendix A**) of the groundwater monitoring wells (RE-1, RE-3, RE-6, and RE-7) that are connected to the vapor extraction system, the logs show that the vadose zone from 0 to 5 feet is mainly consisting of clay. Therefore, it is not feasible for Thrifty to continue operating a vapor extraction system with these tight soil conditions.
- The vadose soil zone extends to approximately four feet bsg, and TOSCO removed and replaced the underground storage tanks piping with double walled piping during the summer of 1999. With the UST piping replacement, Thrifty believes that the potential for any possible future releases has been corrected.
- **Table 2** presents the vapor extraction operating data from January 1991 through December 30, 1999 (please note that **Table 2** was revised from the Fourth Quarter 1999, Status Report). The inlet concentrations are calculated by using the average flow in cubic feet per minute (cfm) and the average FID concentration reading from a field screening instrument. Once

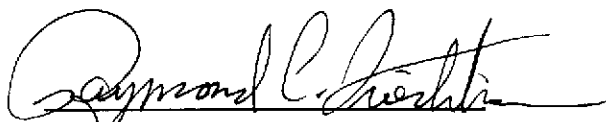


the inlet concentrations have been calculated, the results are pounds of hydrocarbons removed. During the course of the systems operation, approximately 5,629 pounds of hydrocarbons has been removed using this criteria. This number is inflated by a factor of approximately ~~10~~¹⁶ fold, due to the use of a field screening instrument (FID) which is calibrated by using Methane gas, as compared to laboratory analytical results which uses a Hexane standard. *Converting this mass to gasoline equivalents requires an additional decrease by a factor of 10.*


- A review of groundwater historical tables over the past 12 year time period indicates that contamination concentrations have decreased to asymptotic levels over time. Furthermore, the groundwater wells with the highest concentrations of TPHg, benzene, and MTBE on or off site is 930 ug/L, 9.7 ug/L, and 880 ug/L, respectively. The other well concentrations on and off site are significantly lower. Therefore, there is no justification for operating the vapor extraction system; it is not economically or technically feasible.

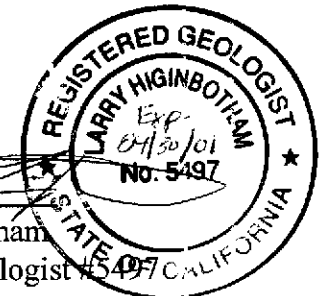
In conclusion, Thrifty believes that the RSI vapor extraction system should be removed from the site. The RSI remediation system operates both the groundwater and vapor extraction system and since groundwater still has MTBE contamination, Thrifty will remove the RSI system and will submit a proposal to install an independent groundwater system along with a time schedule for implementation. Once the MTBE concentrations have dropped to a significant level where Thrifty believes that it is no longer feasible to operate the groundwater system, then Thrifty will request that the groundwater system be shut down and removed from site.

Written by:


Raymond C. Friedrichsen, REA II
Project Manager
Senior Hydrogeologist

Reviewed by:


Larry Higinbotham
Registered Geologist



* Modifications based on conversation with R. Friedrichsen on 2/16/00. This amounts to a total gasoline volume of ~ 84 gallons.

TABLES

TABLE 2
Vapor Extraction Operating Data
Thrifty Oil Station # 054, CASTRO VALLEY, CA

Month	Representative Date	Hour Meter Reading (hrs)	Operation Duration (hrs)	Inlet		Hydrocarbons Removed		Remark
				Average Flow (cfm)	Average FID Conc. (ppmV)	Period (lbs)	Cumulative (lbs)	
Jan-91	1/9/91	929	0	30	est. 10,000	0.0	0	
Feb-91	2/6/91	979	50	30	est. 10,000	38.0	38	
Mar-91	3/6/91	1,028	49	5	est. 10,000	6.2	44	System off 4/91 - 9/91
Oct-91	10/23/91	1,786	758	15	est. 10,000	288.0	332	
Nov-91	11/6/91	1,789	3	14	est. 10,000	1.1	333	
Dec-91	12/4/91	1,896	107	14	est. 10,000	37.9	371	
Jan-92	1/29/92	2,025	129	14	est. 10,000	45.7	417	
Feb-92	2/26/92	2,293	268	14	est. 10,000	95.0	512	System off 3/92 - 7/92
Aug-93	8/11/93	2,293	0	18	est. 10,000	0.0	512	
Sep-93	9/8/93	2,446	153	17	est. 10,000	65.9	578	
Oct-93	10/7/93	2,960	514	18	est. 10,000	234.4	812	
Nov-93	11/3/93	3,381	421	18	est. 10,000	191.9	1,004	
Dec-93	12/1/93	3,705	324	18	est. 10,000	147.7	1,152	
Jan-94	1/3/94	4,313	608	18	est. 10,000	277.2	1,429	
Feb-94	2/7/94	4,849	536	17	10,000	230.8	1,660	
Mar-94	3/7/94	5,196	347	20	10,000	175.8	1,836	
Apr-94	4/4/94	5,597	401	16	10,000	162.5	1,998	
May-94	5/2/94	6,003	406	17	est. 10,000	174.8	2,173	
Jun-94	6/6/94	6,514	511	16	10,000	207.1	2,380	
Jul-94	7/18/94	6,679	165	15	10,000	62.7	2,443	
Aug-94	8/1/94	6,735	56	16	est. 10,000	22.7	2,466	
Sep-94	9/20/94	7,340	605	16	est. 10,000	245.2	2,711	
Oct-94	10/5/94	7,554	214	15	est. 10,000	81.3	2,792	
Dec-94	12/13/94	7,656	102	15	est. 10,000	38.8	2,831	
Jan-95	1/6/95	7,742	86	12	est. 10,000	26.1	2,857	
Feb-95	2/14/95	7,906	164	13	est. 10,000	54.0	2,911	
Mar-95	3/2/95	7,976	70	15	est. 10,000	26.6	2,938	
Apr-95	4/7/95	8,009	33	8	est. 10,000	6.7	2,944	
May-95	5/5/95	8,405	396	16	est. 10,000	160.5	3,105	
Jun-95	6/1/95	8,436	31	16	est. 10,000	12.6	3,117	
Jul-95	7/7/95	8,834	398	16	est. 10,000	161.3	3,279	
Aug-95	8/3/95	8,910	76	16	10,000	30.8	3,309	
Sep-95	9/5/95	9,068	158	16	est. 10,000	64.0	3,373	
Oct-95	10/24/95	9,163	95	14	est. 10,000	33.7	3,407	
Nov-95	11/2/95	9,194	31	16	est. 10,000	12.6	3,420	
Jan-96	1/4/96	8,930	0	9	est. 10,000	0.0	3,420	Replaced hour meter (8930)
Feb-96	2/1/96	8,991	61	8	est. 10,000	12.4	3,432	System off 2/96 - 4/96
Apr-96	4/25/96	9,084	93	8	210	0.4	3,432	
May-96	5/2/96	9,124	40	12	220	0.3	3,433	
Jun-96	6/3/96	9,279	155	9	1,000	3.5	3,436	
Jul-96	7/2/96	9,370	91	17	420	1.6	3,438	
Aug-96	8/1/96	9,391	21	9	340	0.2	3,438	
Sep-96	9/5/96	9,721	330	17	est. 340	4.8	3,443	
Oct-96	10/24/96	9,773	52	7	est. 340	0.3	3,443	
Dec-96	12/26/96	9,776	3	8	est. 340	0.0	3,443	System off 10/96 - 12/96
Apr-97	4/3/97	9,781	5	15	10,000	1.9	3,445	System off 1/97 - 4/97
May-97	5/1/97	10,032	251	15	9,800	93.5	3,539	
Jun-97	6/12/97	10,663	631	11	est. 9,000	158.2	3,697	
Jul-97	7/3/97	10,712	49	12	est. 9,000	13.4	3,710	
Aug-97	8/7/97	10,950	238	12	est. 9,000	65.1	3,775	
Sep-97	9/3/97	11,136	186	16	est. 9,000	67.8	3,843	
Oct-97	10/9/97	11,320	184	12	est. 9,000	50.3	3,893	
Nov-97	11/6/97	11,452	132	17	est. 9,000	51.2	3,945	
Dec-97	12/4/97	11,510	58	19	9,000	25.1	3,970	
Jan-98	1/8/98	11,784	274	17	10,000	118.0	4,088	
Feb-98	2/3/98	12,180	396	18	10,000	160.5	4,248	

TABLE 2
Vapor Extraction Operating Data
Thrifty Oil Station # 054, CASTRO VALLEY, CA

Month	Representative Date	Hour Meter Reading (hrs)	Operation Duration (hrs)	Inlet		Hydrocarbons Removed		Remark
				Average Flow (cfh)	Average FID Conc. (ppmV)	Period (lbs)	Cumulative (lbs)	
Mar-98	3/10/98	13,011	831	17	10,000	357.8	4,606	
Apr-98	4/15/98	13,060	49	17	est. 10,000	21.1	4,627	
May-98	5/7/98	13,311	251	16	10,000	101.7	4,729	
Jun-98	6/2/98	13,658	347	17	10,000	149.4	4,878	
Jul-98	7/6/98	14,340	682	16	est. 10,000	276.4	5,155	
Sep-98	9/21/98	14,542	202	12	est. 10,000	61.4	5,216	System shut down, 10/98
Nov-98	11/16/98	14,730	188	12	est. 10,000	57.1	5,273	
Dec-98	12/7/98	15,124	394	11	est. 10,000	109.8	5,383	
Feb-99	2/9/99	16,115	991	10	2,800	70.3	5,453	
Mar-99	3/12/99	16,698	583	13	210	4.0	5,457	
Apr-99	4/6/99	17,009	311	13	est. 210	2.2	5,459	
May-99	5/3/99	17,098	89	10	est. 210	0.5	5,460	
Jun-99	6/28/99	18,130	1,032	10	4,100	107.2	5,567	
Jul-99	7/7/99	18,163	33	10	est. 4,000	3.3	5,570	
Aug-99	8/2/99	18,196	33	11	est. 4,000	3.7	5,574	
Sep-99	9/13/99	18,318	122	12	est. 4,000	14.8	5,589	
Oct-99	10/18/99	18,348	30	13	est. 4,000	4.0	5,593	
Nov-99	11/29/99	18,617	269	12	est. 4,000	32.7	5,626	
Dec-99	12/27/99	19,096	479	12	210	3.1	5,629	

Note: 1. The "duration" is derived from subtracting the hour meter from a representative day of the month by the hour meter from a representative day of the previous month. Some months may have more than 30 days.

2. In January 2000, the "hydrocarbons removed" calculation was corrected to reflect the actual calibration gas (methane) of the instrument used. Therefore, the corrected cumulative total value is different than the previous versions of this table.

APPENDIX A

THRIFTY OIL COMPANY MONITORING WELL LOG DATE: 2-17-88
 054 Castro Valley 2504 Castro Valley Logged By: DD
 Drilling Contractor: BEYLIK DRILLING COMPANY Rig Type: HOLLOW STEM AUGER
 Time Started: 1:10 Boring/Well #: RE-6 Elevation:
 Sampling Method: DRIVE Casing Size: 4" Screen Type: PVC Filter Pack: #3 SAND

DEPTH (FEET)	SAMP INT	PID ppm	BPF*	WELL DETAILS	USCS	SOIL DESCRIPTION AND NOTES
5		20	21, 22, 27		CL *	GRAY CLAY WITH WHITE EVAPORITE DEPOSITS, VERY MOIST, NO HYDROCARBON ODOR.
10		50	9, 17, 36			MOTTLED GRAY AND GREEN-BROWN GRAVELLY CLAY WITH EVAPORITE DEPOSITS, MORE GRAVEL AT BASE, VERY MOIST, NO HYDROCARBON ODOR.
15		5	50/3"			SHALE - REFUSAL. T.D. AT 15 FEET. NO GROUNDWATER FOUND DURING DRILLING 2-17-88. *AFTER BUILDING THE WELL AND WAITING SEVERAL HOURS, GROUNDWATER FILLED THE WELL TO 8 FEET.
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Done A. [Signature]

*BLOWS PER HALF FOOT

RE-6

THRIFTY OIL COMPANY MONITORING WELL LOG DATE: 2-14-88
 054 Castro Valley CA 2504 Castro Valley Logged By: DD
 Drilling Contractor: BEYLIK DRILLING COMPANY Rig Type: HOLLOW STEM AUGER
 Time Started: 12:30 Boring/Well #: RE-3 Elevation:
 Sampling Method: DRIVE Casing Size: 4" Screen Type: PVC Filter Pack: #3 SAND

DEPTH (FEET)	SAMP INT	PID ppm	BPF*	WELL DETAILS	USCS	SOIL DESCRIPTION AND NOTES
5	X	140	17, 14, 21			ASPHALT DARK GRAY-BLACK CLAY WITH WOOD, FILL MATERIAL.
10	X	140	13, 21, 33		CL	BLACK ORGANIC CLAY, VERY MOIST, STRONG HYDROCARBON ODOR. GREEN-BROWN GRAVELLY CLAY, WEATHERED QUARTZITE GRAVEL WITH SAND AND CLAY, CLUMPS, MOIST, STRONG HYDROCARBON ODOR
15	X	<5	9, 11, 17			DARK OLIVE-BROWN GRAVELLY CLAY, GRAVEL IS SHALE, WITH SAND, ROOTS, MOIST, NO HYDROCARBON ODOR. REFUSAL ON SHALE BEDROCK.
20						T.D. AT 19 FEET. NO GROUNDWATER 2-14-88.
25						NOTE: AFTER WAITING OVERNIGHT, THE BORING (NOT SET AS A WELL YET) HAD WATER AT APPROXIMATELY 7 FEET. THE BORING WAS THEN REAMED, AND A 4 INCH WATER WELL WAS BUILT 2-15-88.
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Francis R. Henry R.E. 4342

*BLOWS PER HALF FOOT

THRIFTY OIL COMPANY MONITORING WELL LOG DATE: 2-15-88
 054; Castro Valley CA 2504 Castro Valley Logged By: DD
 Drilling Contractor: BEYLIK DRILLING COMPANY Rig Type: HOLLOW STEM AUGER
 Time Started: 9:30 Boring/Well #: RE-1 Elevation:
 Sampling Method: DRIVE Casing Size: 4" Screen Type: PVC Filter Pack: #3 SAND

DEPTH (FEET)	SAMP INT	PID ppm	BPF*	WELL DETAILS	USCS	SOIL DESCRIPTION AND NOTES
5	X	7	4, 16, 14			GRAY CLAY WITH GRAVEL, MOIST, STRONG HYDROCARBON ODOR.
10	X	110	11, 19, 18			MOTTLED BROWN AND GRAY CLAY WITH GRAVEL AT BASE, WET, LIGHT HYDROCARBON ODOR.
15	X	50	8, 18, 37			LIGHT BROWN SLIGHTLY GRAVELLY (SHALE) CLAY, MOIST - NOT WET, NO HYDROCARBON ODOR.
20	X					BLACK WEATHERED SHALE, DRY, HYDROCARBON ODOR.
25	X					BLACK CLAY WITH SHALE, MOIST, HYDROCARBON ODOR.
26						T.D. AT 26 FEET. 2-15-88
30					INDWATER AT 10 FEET	
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*BLOWS PER HALF FOOT

THRIFTY OIL COMPANY MONITORING WELL LOG DATE: 2-17-88
 54 Castro Valley CA 2504 Castro Valley Logged By: DD
 Drilling Contractor: BEYLIK DRILLING COMPANY Rig Type: HOLLOW STEM AUGER
 Time Started: 10:00 Boring/Well #: RE-7 Elevation:
 Sampling Method: DRIVE Casing Size: 4" Screen Type: PVC Filter Pack: #3 SAND

EPH FEET	SAMP INT	PID ppm	BPF*	WELL DETAILS	USCS	SOIL DESCRIPTION AND NOTES
5		110	6, 9, 14			BLACK CLAY OVER GREEN CLAY WITH EVAPORITE DEPOSITS, VERY MOIST, STRONG HYDROCARBON ODOR.
10		150	12, 16, 19		CL	GREEN GRAVELLY (SHALE) AND CLAY, WET, STRONG HYDROCARBON ODOR.
15		18	43, 65/6"			SHALE - REFUSAL. T.D. AT 15 FEET.
20						GROUNDWATER AT 10 FEET 2-17-88
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Steve K. H. ... 4292