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Alameda County
Environmental Health

September 20, 2012

Ms. Donna Drogos
Alameda County Environmental Health
1131 Harbor Parkway, Suite 250
Oakland, CA 94502-6577

Subject: Fourth Quarter 2008 Monitoring Report
Stop N Save Inc.
20570 Stanton Avenue, Castro Valley, Alameda County, California
RO #0000179
ECG # SNS.18281

Dear Ms. Drogos:

Enclosed please find a copy of the February 9, 2009 Fourth Quarter 2008 Monitoring Report for the above referenced site prepared by our consultant Apex Envirotech Inc.

I declare, under penalty and perjury, that the information and/or recommendations contained in this report are true and correct to the best of my knowledge.

Respectfully,


Sean Kapoor



3446 N. Golden State Blvd., Suite C • Turlock, CA 95382
Phone: 209.667.6874 • Fax: 209.667.9668

February 9, 2009

Ms. Donna Drogos
Alameda County Health Care Services Agency
1131 Harbor Parkway, Suite 250
Oakland, California 94502-6577

Subject: **Fourth Quarter 2008 Groundwater Monitoring Report**
Stop 'N' Save
20570 Stanton Avenue, Castro Valley, California
Apex Project No. STS08.001

Dear Ms. Drogos:

Apex Envirotech, Inc. (Apex) has been authorized by Stop 'N' Save to provide this report documenting the fourth quarter groundwater monitoring event conducted December 30, 2008. Groundwater monitoring results are provided in the attached figures and tables. Apex standard operating procedures, field data, and analytical results are provided as appendices.

This report is based, in part, on information obtained by Apex from Stop 'N' Save and Enviro Soil Tech Consultants (ESTC), and is subject to modification as newly acquired information may warrant.

SITE DESCRIPTION

The site is located at 20570 Stanton Avenue, Castro Valley, Alameda County, California (Figure 1). The site is situated in a commercial and residential area and is currently being used as a convenience store.

BACKGROUND

February 24, 2000 – Two 10,000-gallon gasoline underground storage tanks (USTs) were removed by Johnson Tank Testing and Maintenance. Results are detailed in ESTC's *Soil Sampling Beneath Removed USTs*, dated March 8, 2000.

May 18, 2000 – ESTC submitted a *Proposed Work Plan for Preliminary Site Assessment*.

July 25 and 26, 2000 – ESTC overexcavated, and treated by bioremediation, 150 cubic yards of contaminated soil in the vicinity of former UST areas. Results of the bioremediation activities

are detailed in ESTC's *Interim Corrective Action*, dated August 17, 2000. Results of the sampling and disposal activities are detailed in ESTC's *Soil Sampling, Treatment and Disposal of Contaminated Stockpiled Soil*, dated August 21, 2000.

September 2000 – ESTC performed a preliminary soil and groundwater assessment of the subject property. Results are detailed in ESTC's *Preliminary Soil and Groundwater Assessment* report, dated October 13, 2000.

October 2000 – ESTC installed three groundwater monitoring wells at the subject site (STMW-1 through STMW-3).

September 2007 – Apex was contracted by Stop 'N' Save to bring the site into compliance with all regulatory agencies.

GENERAL SITE INFORMATION

Site name	Stop 'N' Save
Site address	20570 Stanton Avenue, Castro Valley, California
Responsible party	Stop 'N' Save, Inc.
Current site use	Active gasoline station
Current phase of project	Groundwater monitoring
Tanks at site	Three USTs
Number of wells	Three groundwater monitoring wells

GROUNDWATER MONITORING SUMMARY

Gauging and sampling date	December 30, 2008
Wells gauged and sampled	STMW-1, STMW-2, and STMW-3
Wells gauged only	None
Groundwater flow direction	East-southeast
Groundwater gradient	0.067 ft/ft
Floating liquid hydrocarbon	None
State-certified laboratory	Argon Laboratories, Ceres, California

Analyses Performed

Analysis	Abbreviation	Designation	USEPA Method No.
Total Petroleum Hydrocarbons as Gasoline	TPHg	Gas-Range Hydrocarbons	8260B
Benzene	BTEX	Aromatic Volatile Organics	
Toluene			
Ethylbenzene			
Xylenes (Total)			
Tertiary Butyl Alcohol	TBA	Five Fuel Oxygenates	
Methyl Tertiary Butyl Ether	MTBE		
Di-isopropyl Ether	DIPE		
Ethyl Tertiary Butyl Ether	ETBE		
Tertiary Amyl Methyl Ether	TAME		
1,2-Dichloroethane	1,2-DCA	Lead Scavengers	
Ethylene Dibromide	EDB		

Analytical data for water samples are summarized in Table 3. Copies of the laboratory analytical report and chain-of-custody form are included in Appendix C.

Modifications from Standard Monitoring Program

None.

CONCLUSIONS

Based on analytical laboratory data, benzene and MTBE concentrations are centered around well STMW-1. Well STMW-3 was reported below laboratory detection limits for all analyzed constituents. The presence of TBA and the declining trends of contaminant concentrations suggest natural attenuation may be occurring in the shallow zone aquifer at the site.

Groundwater levels have increased an average of 0.62 feet since the last sampling event.

RECOMMENDATIONS

Apex will continue quarterly groundwater monitoring. The next quarterly sampling event is scheduled for March 2009.

ATTACHMENTS

Figures

Figure 1: Site Vicinity Map

Figure 2: Site Plan Map

Figure 3: Groundwater Contour Map: December 30, 2008

Figure 4: Benzene in Groundwater Isoconcentration Map: December 30, 2008

Figure 5: MTBE in Groundwater Isoconcentration Map: December 30, 2008

Tables

Table 1: Well Construction Details

Table 2: Groundwater Elevation Data

Table 3: Groundwater Analytical Data

Appendices

Appendix A: Apex Standard Operating Procedures

Appendix B: Field Data Sheets

Appendix C: Laboratory Analytical Report and Chain-of-Custody Form

REPORT DISTRIBUTION

Apex submitted a copy of this report, in final form, to:

Regulatory Oversight: PDF to Alameda FTP Site
Ms. Donna Drogos
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Oakland, California 94502
Telephone: 510.567.6777

GeoTracker Only
Mr. Chuck Headless
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612
Telephone: 510.622.2300

Responsible Party: One Bound Copy
Mr. Sean Kapoor

REMARKS AND SIGNATURES

The information contained within this report reflects our professional opinions and was developed in accordance with currently available information, and accepted hydrogeologic and engineering practices.

The work described above was performed under the direct supervision of the professional geologists, registered with the State of California, whose signatures appear below.

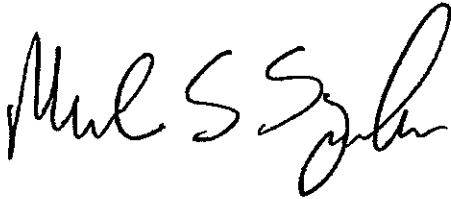
We appreciate the opportunity to provide Stop 'N' Save geologic, engineering, and environmental consulting services, and trust this report meets your needs. If you have any questions or comments, please call us at 209.667.6874.

Sincerely,

APEX ENVIROTECH, INC.



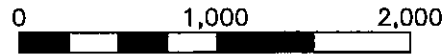
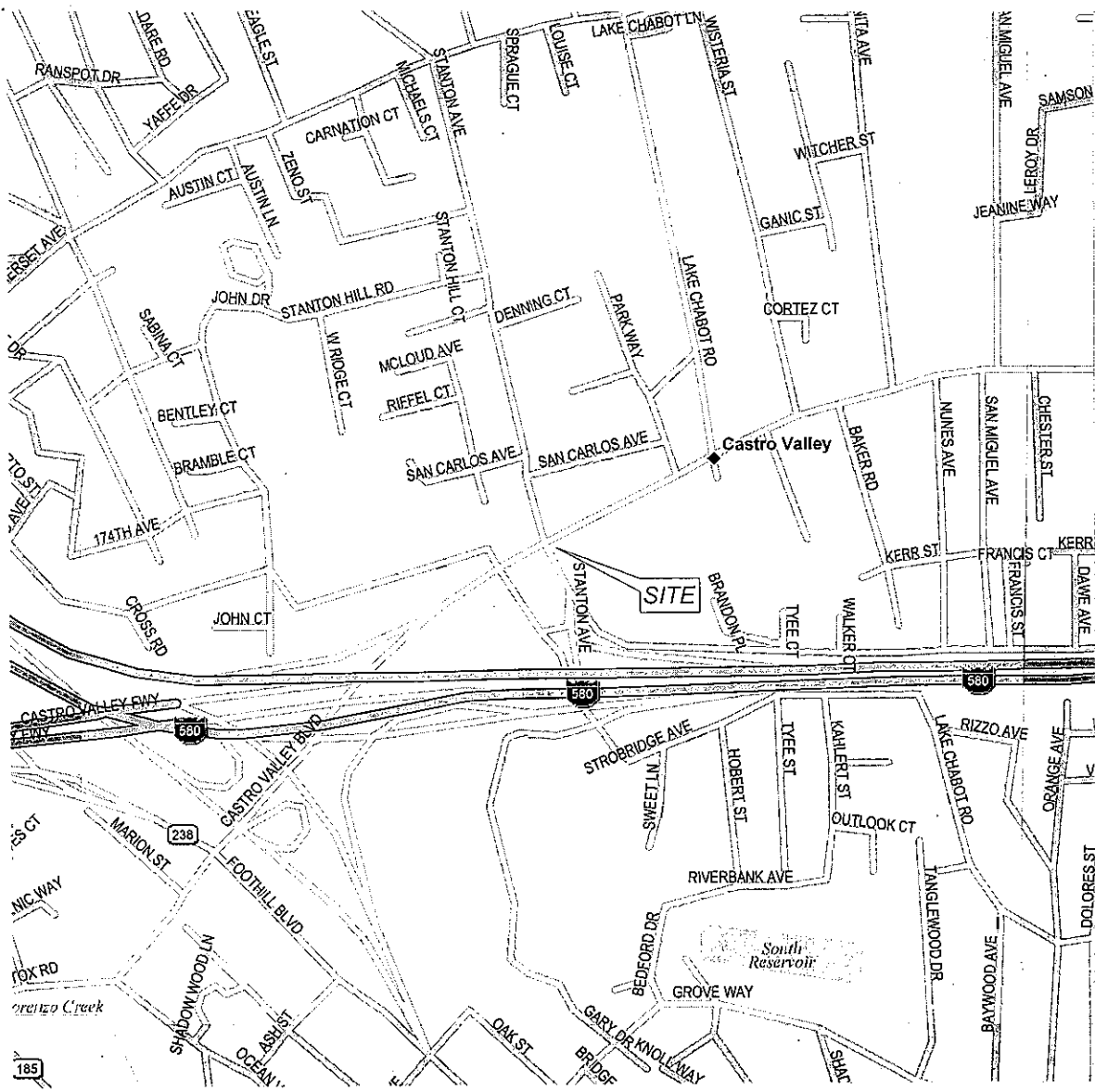
Drew Van Allen
Senior Project Manager



Michael S. Sgourakis, P.G.
Senior Geologist
California Professional Geologist No. 7194



FIGURES



Approximate Scale
1 inch = 1,000 feet



DRAWN BY:	D. Alston
DATE:	10/29/07
REVISIONS	

SITE VICINITY MAP

Stop 'N' Save
20570 Stanton Avenue
Castro Valley, California

FIGURE

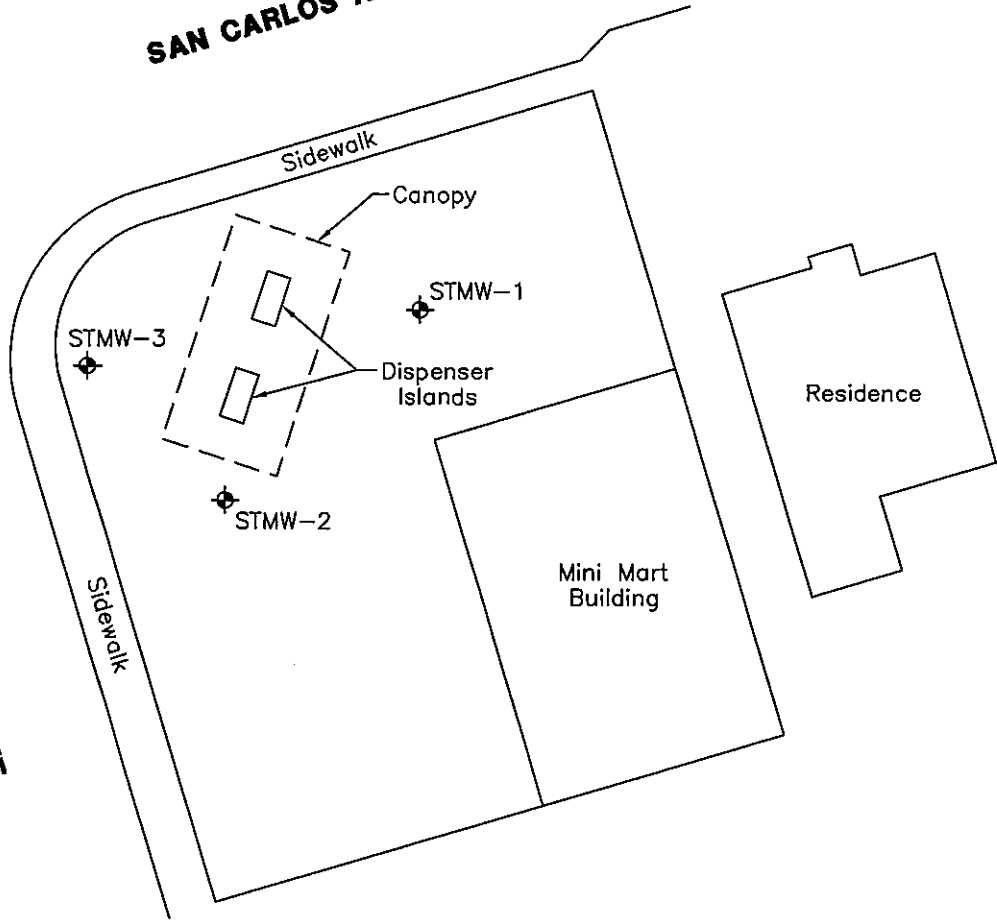
1

PROJECT NUMBER:

STS08.001

SAN CARLOS AVENUE

STANTON AVENUE



LEGEND

◆ Monitoring Well Location



Approximate Scale
1 inch = 30 feet



DRAWN BY: D. Alston
DATE: 10/26/07

REVISIONS

NO.	DESCRIPTION

SITE PLAN MAP

Stop 'N' Save
20570 Stanton Avenue
Castro Valley, California

FIGURE

2

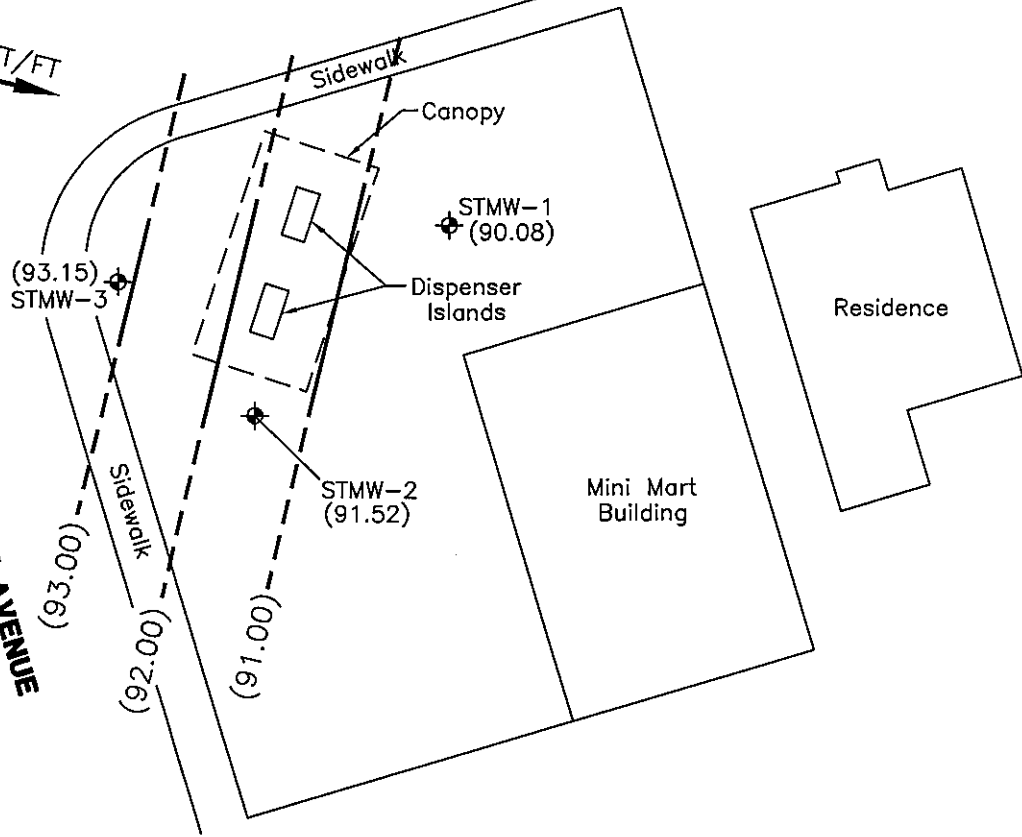
PROJECT NUMBER:

STS08.001

SAN CARLOS AVENUE

0.067 FT/FT

STANTON AVENUE



LEGEND

⊕ Monitoring Well Location

— (93.00) — Groundwater Contour Line; Dashed Where Inferred (Contour Interval = 1.0 ft.)

0.067 FT/FT Approximate Groundwater Gradient And Flow Direction



0 30 60
Approximate Scale
1 inch = 30 feet



DRAWN BY:	D. Alston
DATE:	2/9/09
REVISIONS	

GROUNDWATER CONTOUR MAP, DECEMBER 30, 2008

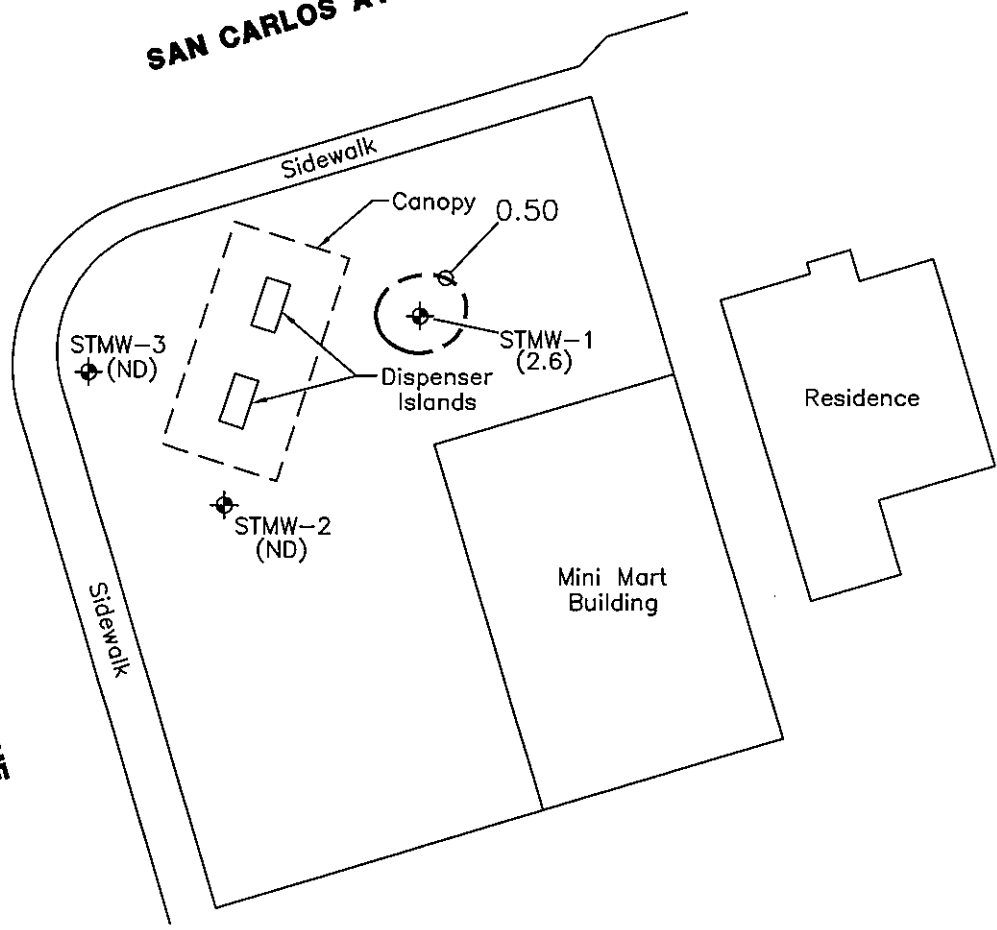
Stop 'N' Save
20570 Stanton Avenue
Castro Valley, California

FIGURE
3

PROJECT NUMBER:
STS08.001

SAN CARLOS AVENUE

STANTON AVENUE



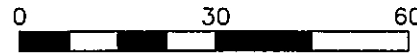
LEGEND

⊕ Monitoring Well Location

(2.6) Concentration Of Benzene In Groundwater Measured In ug/L

—0.50— Line Of Equal Concentration Of Benzene In Groundwater Measured In ug/L; Dashed Where Inferred

(ND) Not Detected



Approximate Scale
1 inch = 30 feet



DRAWN BY: D. Alston

DATE: 2/9/09

REVISIONS

BENZENE IN GROUNDWATER ISOCONCENTRATION MAP, DECEMBER 30, 2008

Stop 'N' Save
20570 Stanton Avenue
Castro Valley, California

FIGURE

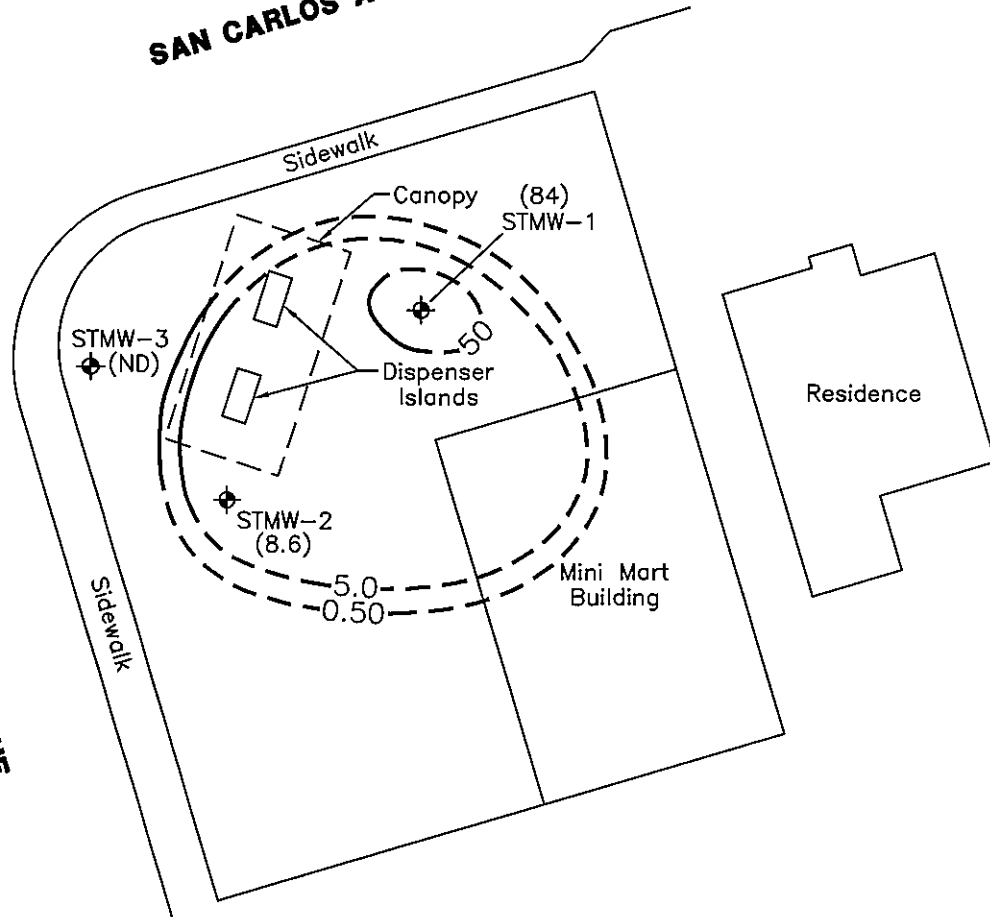
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PROJECT NUMBER:

STS08.001

SAN CARLOS AVENUE

STANTON AVENUE



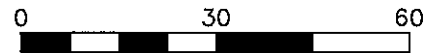
LEGEND

⊕ Monitoring Well Location

(84) Concentration Of MTBE In Groundwater Measured In ug/L

—50— Line Of Equal Concentration Of MTBE In Groundwater Measured In ug/L; Dashed Where Inferred

(ND) Not Detected



Approximate Scale
1 inch = 30 feet



DRAWN BY: D. Alston

DATE: 2/9/09

REVISIONS

**MTBE IN GROUNDWATER ISOCONCENTRATION
MAP, DECEMBER 30, 2008**

Stop 'N' Save
20570 Stanton Avenue
Castro Valley, California

FIGURE

5

PROJECT NUMBER:

STS08.001

TABLES

TABLE 1
WELL CONSTRUCTION DETAILS

Stop 'N' Save
20570 Stanton Avenue
Castro Valley, California

Well Number	Well Installation Date	Elevation TOC (feet)	Casing Material	Total Depth (feet)	Well Depth (feet)	Casing Diameter (inches)	Screened Interval (feet)	Filter Pack Interval (feet)
STMW-1	10/2000	97.93	PVC	23	23	2	9-23	8-23
STMW-2	10/2000	99.04	PVC	23	22	2	9-22	8-22
STMW-3	10/2000	99.60	PVC	23	22	2	9-22	8-22

Note:
TOC - Top of Casing

**TABLE 2
GROUNDWATER ELEVATION DATA**

Stop 'N' Save
20570 Stanton Avenue
Castro Valley, California

Monitoring Well	Date	Reference Elevation* (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Groundwater Flow Direction
STMW-1	10/4/00	97.93	8.34	89.59	---
	1/4/01		7.86	90.07	---
	3/16/04		5.70	92.23	---
	7/5/04		4.82	93.11	---
	12/28/04		6.82	91.11	---
	3/24/05		5.63	92.30	---
	7/20/05		5.75	92.18	---
	9/15/05		7.44	90.49	---
	12/12/05		5.32	92.61	---
	3/16/06		3.90	94.03	---
	6/22/06		7.12	90.81	---
	9/21/06		7.78	90.15	---
	12/18/06		9.12	88.81	---
	3/22/07		6.82	91.11	---
	6/29/07		9.86	88.07	E
	9/28/07		6.88	91.05	NE
	12/20/07		7.81	90.12	E
	3/27/08		7.37	90.56	ENE
	6/6/08		7.98	89.95	ENE
	8/14/08		8.50	89.43	E
12/30/08	7.85	90.08	ESE		
STMW-2	10/4/00	99.04	8.22	90.82	---
	1/4/01		6.70	92.34	---
	3/16/04		6.08	92.96	---
	7/5/04		6.86	92.18	---
	12/28/04		6.22	92.82	---
	3/24/05		5.12	93.92	---
	7/20/05		5.66	93.38	---
	9/15/05		6.14	92.90	---
	12/12/05		6.68	92.36	---
	3/16/06		5.54	93.50	---
	6/22/06		6.02	93.02	---
	9/21/06		6.94	92.10	---
	12/18/06		6.46	92.58	---
	3/22/07		6.16	92.88	---
	6/29/07		9.06	89.98	E
	9/28/07		7.63	91.41	NE
	12/20/07		7.43	91.61	E
	3/27/08		6.16	92.88	ENE
	6/6/08		7.09	91.95	ENE
	8/14/08		7.85	91.19	E
12/30/08	7.52	91.52	ESE		

**TABLE 2
GROUNDWATER ELEVATION DATA**

Stop 'N' Save
20570 Stanton Avenue
Castro Valley, California

Monitoring Well	Date	Reference Elevation* (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Groundwater Flow Direction
STMW-3	10/4/00	99.60	8.42	91.18	---
	1/4/01		6.16	93.44	---
	3/16/04		7.18	92.42	---
	7/5/04		6.27	93.33	---
	12/28/04		5.64	93.96	---
	3/24/05		5.12	94.48	---
	7/20/05		5.50	94.10	---
	9/15/05		5.56	94.04	---
	12/12/05		6.26	93.34	---
	3/16/06		5.14	94.46	---
	6/22/06		5.92	93.68	---
	9/21/06		6.14	93.46	---
	12/18/06		5.50	94.10	---
	3/22/07		5.88	93.72	---
	6/29/07		8.82	90.78	E
	9/28/07		8.14	91.46	NE
	12/20/07		6.56	93.04	E
	3/27/08		6.21	93.39	ENE
6/6/08	6.84	92.76	ENE		
8/14/08	7.34	92.26	E		
12/30/08	6.45	93.15	ESE		

Notes:

- * - Wells Surveyed to Mean Sea Level by ESTC in October 2000
- E - East
- NE - Northeast
- ENE - East-northeast
- ESE - East-southeast

**TABLE 3
GROUNDWATER ANALYTICAL DATA**

Stop 'N' Save
20570 Stanton Avenue
Castro Valley, California

Sample ID	Date	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	Five Oxygenates by USEPA Method 8260					Lead Scavengers	
							DIPE (µg/L)	ETBE (µg/L)	MTBE (µg/L)	TAME (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
STMW-1	10/4/00	60,000	<2,500	<2,500	<2,500	<2,500	---	---	69,000	---	<10,000	---	---
	1/4/01	71,000	<5,000	<5,000	<5,000	<5,000	---	---	89,000	---	<20,000	---	---
	3/16/04	260	52	64	7.9	27	---	---	39	---	<10	---	---
	7/5/04	2,100	17	240	2.6	12	---	---	520	---	<50	---	---
	12/28/04	310	89	90	11	43	---	---	32	---	<20	---	---
	3/24/05	630	43	140	16	110	---	---	20	---	<20	---	---
	7/20/05	330 ^b	12	22	<2.5	9.3	---	---	310	---	<50	---	---
	9/15/05	15,000	<100	<100	<100	<100	---	---	13,000	---	2,500	---	---
	12/12/05	130	4.4	7.5	<1.0	3	---	---	170	---	100	---	---
	3/16/06	<50	0.9	3.3	<0.5	<0.5	---	---	21	---	<10	---	---
	6/22/06	130	4.4	54	<1.0	7.1	---	---	70	---	<20	---	---
	9/21/06	880	110	32	18	110	---	---	1,600	---	2,300	---	---
	12/18/06	240	7.5	130	1.4	7.6	---	---	130	---	180	---	---
	3/22/07	190	17	13	2.9	14	---	---	360	---	170	---	---
	6/29/07	2,700	340	45	52	310	---	---	3,100	---	2,200	---	---
	9/28/07	1,000	85	2.5	11	72	<2.5	<2.5	1,000	<2.5	5,300	<2.5	<2.5
	12/20/07	690	92	<5.0	<5.0	36	<5.0	<5.0	1,200	<5.0	15,000	<5.0	<5.0
	3/27/08	160	36	0.92	<0.50	5.1	<1.0	<1.0	590	<1.0	4,900	<1.0	<1.0
6/6/08	170	44	<5.0	<5.0	<15	<10	<10	1,000	<10	5,700	<10	<10	
8/14/08	<1,000	24	<10	<10	<20	<10	<10	450	<10	10,000	<10	<10	
12/30/08	<100	2.6	<1.0	<1.0	<2.0	<1.0	<1.0	84	<1.0	7,700	<1.0	<1.0	

**TABLE 3
GROUNDWATER ANALYTICAL DATA**

Stop 'N' Save
20570 Stanton Avenue
Castro Valley, California

Sample ID	Date	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	Five Oxygenates by USEPA Method 8260					Lead Scavengers	
							DIPE (µg/L)	ETBE (µg/L)	MTBE (µg/L)	TAME (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
STMW-2	10/4/00	69	<5.0	<5.0	<5.0	<5.0	---	---	66	---	<20	---	---
	1/4/01	110	<5.0	<5.0	<5.0	<5.0	---	---	120	---	<20	---	---
	3/16/04	1,100 ^a	<10	<10	<10	<20	---	---	1,700	---	<200	---	---
	7/5/04	1,800 ^b	<10	<10	<10	<20	---	---	1,800	---	<200	---	---
	12/28/04	1,000 ^b	<13	<13	<13	<13	---	---	1,400	---	<250	---	---
	3/24/05	760	<5.0	<5.0	<5.0	<5.0	---	---	930	---	180	---	---
	7/20/05	64	<1.0	<1.0	<1.0	<1.0	---	---	43	---	920	---	---
	9/15/05	53	<1.0	<1.0	<1.0	<1.0	---	---	88	---	130	---	---
	12/12/05	<50	2.2	<0.5	0.6	<0.5	---	---	23	---	22	---	---
	3/16/06	<50	<0.5	<0.5	<0.5	<0.5	---	---	34	---	150	---	---
	6/22/06	<50	<0.5	<0.5	<0.5	<0.5	---	---	12	---	200	---	---
	9/21/06	<50	<0.5	<0.5	<0.5	<0.5	---	---	16	---	41	---	---
	12/18/06	<50	<0.5	<0.5	<0.5	<0.5	---	---	15	---	71	---	---
	3/22/07	<50	<0.5	<0.5	<0.5	<0.5	---	---	15	---	71	---	---
	6/29/07	<50	<0.5	<0.5	<0.5	<0.5	---	---	14	---	<10	---	---
	9/28/07	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	14	<0.5	<5.0	<0.5	<0.5
	12/20/07	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	6.2	<0.5	54	<0.5	<0.5
	3/27/08	<50	<0.50	<0.50	<0.50	<1.5	<1.0	<1.0	14	<1.0	<12	<1.0	<1.0
6/6/08	<50	<0.50	<0.50	<0.50	<1.5	<1.0	<1.0	5.6	<1.0	<12	<1.0	<1.0	
8/14/08	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	2.0	<0.5	<5.0	<0.5	<0.5	
12/30/08	<50	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	8.6	<0.5	<5.0	0.9	<0.5	

**TABLE 3
GROUNDWATER ANALYTICAL DATA**

Stop 'N' Save
20570 Stanton Avenue
Castro Valley, California

Sample ID	Date	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	Five Oxygenates by USEPA Method 8260					Lead Scavengers	
							DIPE (µg/L)	ETBE (µg/L)	MTBE (µg/L)	TAME (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
STMW-3	10/4/00	<50	<5.0	<5.0	<5.0	<5.0	---	---	<5.0	---	<20	---	---
	1/4/01	<50	<5.0	<5.0	<5.0	<5.0	---	---	<5.0	---	<20	---	---
	3/16/04	<50	<0.5	<0.5	<.5	<1.0	---	---	2.8	---	<10	---	---
	7/5/04	<25	<0.5	<0.5	<0.5	<1.0	---	---	2.5	---	<10	---	---
	12/28/04	<25	<0.5	<0.5	<0.5	<0.5	---	---	2.0	---	<10	---	---
	3/24/05	<25	<0.5	<0.5	<0.5	<0.5	---	---	1.4	---	<10	---	---
	7/20/05	<50	<0.5	<0.5	<0.5	<0.5	---	---	1.5	---	<10	---	---
	9/15/05	<50	<0.5	<0.5	<0.5	<0.5	---	---	1.2	---	<10	---	---
	12/12/05	<50	<0.5	<0.5	<0.5	<0.5	---	---	<1.0	---	<0.5	---	---
	3/16/06	<50	<0.5	<0.5	<0.5	<0.5	---	---	<1.0	---	<10	---	---
	6/22/06	<50	<0.5	<0.5	<0.5	<0.5	---	---	<1.0	---	<10	---	---
	9/21/06	<50	<0.5	<0.5	<0.5	<0.5	---	---	<1.0	---	<10	---	---
	12/18/06	<50	<0.5	<0.5	<0.5	<0.5	---	---	<1.0	---	<10	---	---
	3/22/07	<50	<0.5	<0.5	<0.5	<0.5	---	---	<1.0	---	<10	---	---
	6/29/07	<50	<0.5	<0.5	<0.5	<0.5	---	---	<1.0	---	<10	---	---
	9/28/07	<50	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
	12/20/07	<50	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
	3/27/08	<50	<0.50	<0.50	<0.50	<0.50	<1.5	<1.0	<1.0	<1.0	<12	<1.0	<1.0
6/6/08	<50	<0.50	<0.50	<0.50	<0.50	<1.5	<1.0	<1.0	<1.0	<12	<1.0	<1.0	
8/14/08	<50	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	
12/30/08	<50	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	

Notes:

- | | |
|---|------------------------------------|
| a - No other indication of gasoline besides MTBE | EDB - Ethylene dibromide |
| b - TPH as gasoline reported value due to high concentration of MTBE present in the TPHg quantitation range | ETBE - Ethyl tertiary butyl ether |
| µg/L - Micrograms per liter | MTBE - Methyl tertiary butyl ether |
| 1,2-DCA - 1,2-Dichloroethane | TAME - Tertiary amyl methyl ether |
| DIPE - Di-isopropyl ether | TBA - Tertiary butyl alcohol |
| | TPH - Total petroleum hydrocarbons |

APPENDIX A

APEX STANDARD OPERATING PROCEDURES

APEX ENVIROTECH, INC.
STANDARD OPERATING PROCEDURES
Quarterly Monitoring Reports

SOP – 4
SAMPLE IDENTIFICATION AND CHAIN-OF-CUSTODY PROCEDURES

Sample identification and chain-of-custody procedures ensure sample integrity as well as document sample possession from the time of collection to ultimate disposal. Each sample container submitted for analysis is labeled to identify the job number, date, time of sample collection, a sample number unique to the sample, any in-field measurements made, other pertinent field observations also recorded on the field excavation or boring logs.

Chain-of-custody forms are used to record possession of the sample from time of collection to arrival at the laboratory. During shipment, the person with custody of the samples will relinquish them to the next person by signing the chain-of-custody form(s) and noting the date and time. The sample control officer at the laboratory will verify sample integrity, correct preservation, confirm collection in the proper container(s), and ensure adequate volume for analysis.

If these conditions are met, the samples will be assigned unique laboratory log numbers for identification throughout analysis and reporting. The log numbers will be recorded on the chain-of-custody forms and in the legally-required log book maintained in the laboratory. The sample description, date received, client's name, and any other relevant information will also be recorded.

SOP – 5
LABORATORY ANALYTICAL QUALITY ASSURANCE AND CONTROL

In addition to routine instrument calibration, replicates, spikes, blanks, spiked blanks, and certified reference materials are routinely analyzed at method-specific frequencies to monitor precision and bias. Additional components of the laboratory Quality Assurance/Quality Control program include:

1. Participation in state and federal laboratory accreditation/certification programs;
2. Participation in both U.S. EPA Performance Evaluation studies (WS and WP studies) and inter-laboratory performance evaluation programs;
3. Standard operating procedures describing routine and periodic instrument maintenance;
4. "out-of-Control"/Corrective Action documentation procedures; and,
5. Multi-level review of raw data and client reports.

SOP – 7
GROUNDWATER PURGING AND SAMPLING

Prior to water sampling, each well is purged by evacuating a minimum of three wetted well-casing volumes of groundwater. When required, purging will continue until either the discharge water temperature, conductivity, or pH stabilize, a maximum of ten wetted-casing volumes of groundwater have been recovered, or the well is bailed dry.

When practical, the groundwater sample should be collected when the water level in the well recovers to at least 80 percent of its static level.

The sampling equipment consists of either a "Teflon" bailer, PVC bailer, or stainless steel bladder pump with a "Teflon" bladder. If the sampling system is dedicated to the well, then the bailer is usually "Teflon," but the bladder pump is PVC with a polypropylene bladder. In general and depending on the intended laboratory analysis, 40-milliliter glass, volatile organic analysis (VOA) vials, with "Teflon" septa, are used as sample containers.

SOP – 12
MEASURING LIQUID LEVELS USING WATER LEVEL METER OR INTERFACE PROBE

Field equipment used for liquid-level gauging typically includes the measuring instrument (water-level meter or interface probe and product bailer(s)). The field kit also includes cleaning supplies (buckets, solution, spray bottles, and deionized water) to be used in cleaning the equipment between wells.

Prior to measurements, the instrument tip is lowered into the well until it touches bottom. Using the previously established top-of-casing or top-of-box (i.e., wellhead vault) point, the probe cord (or halyard) is marked and a measuring tape (graduated in hundredths of a foot) is used to determine the distance between the probe end and the marking on the cord. This measurement is then recorded on the liquid-level data sheet as the "Measured Total Depth" of the well.

When necessary in using the interface probe to measure liquid levels, the probe is first electrically grounded to either the metal stove pipe or another metal object nearby. When no ground is available, reproducible measurements can be obtained by clipping the ground lead to the handle of the interface probe case.

The probe tip is then lowered into the well and submerged in the groundwater. An oscillating (beeping) tone indicates the probe is in water. The probe is slowly raised until either the oscillating tone ceases or becomes a steady tone. In either case, this is the depth-to-water (DTW) indication of the DTW measurement is made accordingly. The steady tone indicates floating liquid hydrocarbons (FLH). In this case, the depth-to-product (DTP) indication and the DTP measurement is made accordingly.

The process of lowering and raising the probe must be repeated several times to ensure accurate measurements. The DTW and DTP measurements are recorded on the liquid-level data sheet. When FLH are indicated by the probe's response, a product bailer is lowered partially through the FLH water interface to confirm the FLH thickness, particularly in cases where the FLH layer is quite thin. This measurement is recorded on the data sheet as "FLH thickness."

In order to avoid cross-contamination of wells during the liquid-level measurement process, wells are measured in the order of "clean" to "dirty" (where such information is available). In addition, all measurement equipment is cleaned with solution and thoroughly rinsed with deionized water before use, between measurements in respective wells, and at the completion of the day's use.

APPENDIX B
FIELD DATA SHEETS

PURGE/DEVELOPMENT LOG

SITE INFORMATION

Project Name: Stop-N-Save #108 Project #: STS08.001 Well ID: Stmw-1
 Project Manager: Drew Van Allen Task #: 204.08 Date: 12/30/08
 Recorded by: _____ Type of Well: Monitoring
 Project Address: 20570 Stanton Avenue, Castro Valley, CA

PURGE VOLUME

Well Casing Diameter: X 2-inch _____ 4-inch _____ other
 Well Total Depth: 21.35 feet below Top of Casing, TD
 Depth to Water: 7.85 feet below Top of Casing, WL
 Water Column Length: 13.5 feet
 Purge Volume Calculation (Water Column Length x Multiplier x No. Volumes = Purge Volume)

$$\frac{13.5}{\text{Water Column Length}} \times \frac{0.16}{\text{Multiplier}} \times \frac{3}{\text{No. Volumes}} = \text{_____ gallons}$$
 Multiplier: Casing Diameter (inches) = Gallons/linear foot: 2 = 0.16, 4 = 0.65, 6 = 1.5, 8 = 2.5

PURGE METHOD

SAMPLE METHOD

- | | |
|---|--|
| <input type="checkbox"/> Disposable Bailer
<input type="checkbox"/> PVC Bailer
<input type="checkbox"/> Submersible Pump
<input type="checkbox"/> Centrifugal Pump
<input type="checkbox"/> Other | <input type="checkbox"/> Disposable Bailer
<input type="checkbox"/> Pump
<input type="checkbox"/> Grab
<input type="checkbox"/> Other |
|---|--|

TIME	TEMP. (deg C)	pH	COND (uS/cm)	DO (mg/L)	REDOX (mV)	TOTAL VOLUME PURGED	COMMENTS
830	20.7	6.55	90			2.25	
855	20.6	6.64	91			5.00	
900	20.7	6.68	93			6.50	sampled w

Notes: _____

Drum Count: _____

PURGE/DEVELOPMENT LOG

SITE INFORMATION

Project Name: Stop-N-Save #108 Project #: STS08.001 Well ID: Stmw-2
 Project Manager: Drew Van Allen Task #: 204.08 Date: 12/30/08
 Recorded by: _____ Type of Well: _____ Monitoring
 Project Address: 20570 Stanton Avenue, Castro Valley, CA

PURGE VOLUME

Well Casing Diameter: X 2-inch _____ 4-inch _____ other
 Well Total Depth: 21.60 feet below Top of Casing, TD
 Depth to Water: 7.52 feet below Top of Casing, WL
 Water Column Length: 14.08 feet
 Purge Volume Calculation (Water Column Length x Multiplier x No. Volumes = Purge Volume)

$$\frac{14.08}{\text{Water Column Length}} \times \frac{0.16}{\text{Multiplier}} \times \frac{3}{\text{No. Volumes}} = \text{_____ gallons}$$
 Multiplier: Casing Diameter (inches) = Gallons/linear foot: 2 = 0.16, 4 = 0.65, 6 = 1.5, 8 = 2.5

PURGE METHOD

SAMPLE METHOD

- | | |
|---|--|
| <input type="checkbox"/> Disposable Bailer
<input type="checkbox"/> PVC Bailer
<input type="checkbox"/> Submersible Pump
<input type="checkbox"/> Centrifugal Pump
<input type="checkbox"/> Other | <input type="checkbox"/> Disposable Bailer
<input type="checkbox"/> Pump
<input type="checkbox"/> Grab
<input type="checkbox"/> Other |
|---|--|

TIME	TEMP. (deg C)	pH	COND. (uS/cm)	DO (mg/L)	REDOX (mV)	TOTAL VOLUME PURGED	COMMENTS
833	21.4	7.01	93			2.25	
838	21.4	6.99	96			5.00	
843	21.4	7.01	99			6.75	Sampled @

Notes: _____

Drum Count: _____

APPENDIX C

**LABORATORY ANALYTICAL REPORT AND
CHAIN-OF-CUSTODY FORM**

argon laboratories

13 January 2009

Drew Van Allen
Apex Envirotech, Inc.
3446 North Golden State Blvd., Suite C
Turlock, CA 95382

RE: Stop-N-Save #108 Project Data

Enclosed are the results for sample(s) received on 12/31/08 12:50 by Argon Laboratories. The sample(s) were analyzed according to instructions in accompanying chain-of-custody. Results are summarized on the following pages.

Please see quality control report for a summary of QC data pertaining to this project.

The sample(s) will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Sample(s) may be archived by prior arrangement.

Thank you for the opportunity to service the needs of your company.

Sincerely,



Hiram Cueto
Lab Manager

2905 Railroad Avenue, Ceres, CA 95307 • Phone (209) 581-9280 • Fax (209) 581-9282

email: main@argonlabs.com

Argon Laboratories Sample Receipt Checklist

Client Name: Apex Envirotech, Inc. Date & Time Received: 12/31/08 12:50

Project Name: Stop-N-Save #108 Client Project Number: STS08.001

Received By: S.H. Matrix: Water Soil Sludge

Sample Carrier: Client Laboratory Fed Ex UPS Other

Argon Labs Project Number: I812076

Shipper Container in good condition? Samples received in proper containers? Yes No

N/A Yes No Samples received intact? Yes No

Samples received under refrigeration? Yes No Sufficient sample volume for requested tests? Yes No

Chain of custody present? Yes No Samples received within holding time? Yes No

Chain of Custody signed by all parties? Yes No Do samples contain proper preservative?
N/A Yes No

Chain of Custody matches all sample labels? Do VOA vials contain zero headspace?
Yes No (None submitted) Yes No

ANY "No" RESPONSE MUST BE DETAILED IN THE COMMENTS SECTION BELOW

Date Client Contacted: _____ Person Contacted: _____

Contacted By: _____ Subject: _____

Comments:

Action Taken:

ADDITIONAL TEST(S) REQUEST / OTHER

Contacted By: _____ Date: _____ Time: _____

Call Received By: _____

Comments:





Apex Envirotech, Inc.

3446 North Golden State Blvd., Suite C

Turlock, CA 95382

Project Number: STS08.001

Project Name: Stop-N-Save #108

Project Manager: Drew Van Allen

Work Order No.:

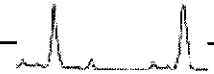
1812076

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
STMW-1	I812076-01	Water	12/30/08 09:25	12/31/08 12:50
STMW-2	I812076-02	Water	12/30/08 09:15	12/31/08 12:50
STMW-3	I812076-03	Water	12/30/08 09:10	12/31/08 12:50

Approved By

Argon Laboratories, Inc. California D.O.H.S. Cert. #2359



Apex Envirotech, Inc.
3446 North Golden State Blvd., Suite C
Turlock, CA 95382

Project Number: STS08.001
Project Name: Stop-N-Save #108
Project Manager: Drew Van Allen

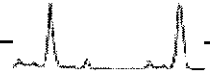
Work Order No.:
1812076

TPH-gas & Volatile Organic Compounds by GC/MS

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
STMW-1 (1812076-01) Water Sampled: 30-Dec-08 09:25 Received: 31-Dec-08 12:50							
Total Petroleum Hydrocarbons @	ND	100	ug/L	2	08-Jan-09	EPA 8260B	
Gasoline							
Benzene	2.6	1.0	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	
Xylenes, total	ND	2.0	"	"	"	"	
Ethyl Benzene	ND	1.0	"	"	"	"	
t-Butanol	7700	10	"	"	"	"	
Methyl tert-Butyl Ether	84	1.0	"	"	"	"	
Di-Isopropyl Ether	ND	1.0	"	"	"	"	
Ethyl tert-Butyl Ether	ND	1.0	"	"	"	"	
tert-Amyl Methyl Ether	ND	1.0	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	
Surr. Rec.:		91 %			"	"	
STMW-2 (1812076-02) Water Sampled: 30-Dec-08 09:15 Received: 31-Dec-08 12:50							
Total Petroleum Hydrocarbons @	ND	50	ug/L	1	08-Jan-09	EPA 8260B	
Gasoline							
Benzene	ND	0.5	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	
Ethyl Benzene	ND	0.5	"	"	"	"	
t-Butanol	ND	5.0	"	"	"	"	
Methyl tert-Butyl Ether	8.6	0.5	"	"	"	"	
Di-Isopropyl Ether	ND	0.5	"	"	"	"	
Ethyl tert-Butyl Ether	ND	0.5	"	"	"	"	
tert-Amyl Methyl Ether	ND	0.5	"	"	"	"	
1,2-Dichloroethane	0.9	0.5	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.5	"	"	"	"	
Surr. Rec.:		98 %			"	"	

Approved By

Argon Laboratories, Inc. California D.O.H.S. Cert. #2359



Apex Envirotech, Inc.
3446 North Golden State Blvd., Suite C
Turlock, CA 95382

Project Number: STS08.001
Project Name: Stop-N-Save #108
Project Manager: Drew Van Allen

Work Order No.:
1812076

TPH-gas & Volatile Organic Compounds by GC/MS

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
STMW-3 (I812076-03) Water Sampled: 30-Dec-08 09:10 Received: 31-Dec-08 12:50							
Total Petroleum Hydrocarbons @	ND	50	ug/L	1	08-Jan-09	EPA 8260B	
Gasoline							
Benzene	ND	0.5	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	
Ethyl Benzene	ND	0.5	"	"	"	"	
t-Butanol	ND	5.0	"	"	"	"	
Methyl tert-Butyl Ether	ND	0.5	"	"	"	"	
Di-Isopropyl Ether	ND	0.5	"	"	"	"	
Ethyl tert-Butyl Ether	ND	0.5	"	"	"	"	
tert-Amyl Methyl Ether	ND	0.5	"	"	"	"	
1,2-Dichloroethane	ND	0.5	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.5	"	"	"	"	
Surr. Rec.:		103 %			"	"	

Approved By

Argon Laboratories, Inc. California D.O.H.S. Cert. #2359



Apex Envirotech, Inc.
3446 North Golden State Blvd., Suite C
Turlock, CA 95382

Project Number: STS08.001
Project Name: Stop-N-Save #108
Project Manager: Drew Van Allen

Work Order No.:
1812076

TPH-gas & Volatile Organic Compounds by GC/MS - Quality Control

Argon Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch J900025 - EPA 5030B

Blank (J900025-BLK1)

Prepared & Analyzed: 01/08/09

<i>Surrogate: Fluorobenzene</i>	54.0		ug/L	50		108	70-130			
Total Petroleum Hydrocarbons @ Gasoline	ND	50	"							
Benzene	ND	0.5	"							
Toluene	ND	0.5	"							
Xylenes, total	ND	1.0	"							
Ethyl Benzene	ND	0.5	"							
t-Butanol	ND	5.0	"							
Methyl tert-Butyl Ether	ND	0.5	"							
Di-Isopropyl Ether	ND	0.5	"							
Ethyl tert-Butyl Ether	ND	0.5	"							
tert-Amyl Methyl Ether	ND	0.5	"							
1,2-Dichloroethane	ND	0.5	"							
1,2-Dibromoethane (EDB)	ND	0.5	"							

LCS (J900025-BS1)

Prepared & Analyzed: 01/08/09

Methyl tert-Butyl Ether	25.2		ug/L	25		101	80-120			
-------------------------	------	--	------	----	--	-----	--------	--	--	--

LCS Dup (J900025-BSD1)

Prepared & Analyzed: 01/08/09

Methyl tert-Butyl Ether	25.3		ug/L	25		101	80-120	0.4	20	
-------------------------	------	--	------	----	--	-----	--------	-----	----	--

Matrix Spike (J900025-MS1)

Source: 1812076-03

Prepared & Analyzed: 01/08/09

Total Petroleum Hydrocarbons @ Gasoline	960		ug/L	1000	ND	96	70-130			
---	-----	--	------	------	----	----	--------	--	--	--

Matrix Spike Dup (J900025-MSD1)

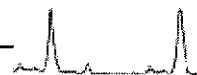
Source: 1812076-03

Prepared & Analyzed: 01/08/09

Total Petroleum Hydrocarbons @ Gasoline	910		ug/L	1000	ND	91	70-130	5	20	
---	-----	--	------	------	----	----	--------	---	----	--

Approved By

Argon Laboratories, Inc. California D.O.H.S. Cert. #2359



Apex Envirotech, Inc.
3446 North Golden State Blvd., Suite C
Turlock, CA 95382

Project Number: STS08.001
Project Name: Stop-N-Save #108
Project Manager: Drew Van Allen

Work Order No.:
1812076

Notes and Definitions

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Approved By
Argon Laboratories, Inc. California D.O.H.S. Cert. #2359