461 S. MILPITAS BLVD., SUITE #1 MILPITAS, CA 95035 PH, 408/933-4422 FAX 408/933-4545

April 24, 2013

#### RECEIVED

By Alameda County Environmental Health at 3:49 pm, Apr 25, 2013

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

Subject:

First Quarter 2013 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 April 24, 2013 First Quarter 2013 Monitoring Report for the above referenced site prepared by our consultant Environmental Compliance Group, LLC.

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,

Frank W. Adamson

Zer Quy



270 Vintage Drive Turlock, CA 95382 P: 209.664.1035 F: 209.664.1040

# FIRST QUARTER 2013 MONITORING REPORT

STOP N SAVE INC. FACILITY 20570 STANTON AVENUE CASTRO VALLEY, CALIFORNIA

Prepared for: Stop N Save Inc.

ECG Project Number: SNS.18281 Alameda County Fuel Leak Case No. RO0000179

April 19, 2013

MICHAEL

S. S. SGOURAKIS

No. 7194

CALROS

Drew Van Allen Senior Project Manager Michael S. Sgourakis Principal Geologist CA P.G. No. 7194

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#### INTRODUCTION

Environmental Compliance Group (ECG) has been authorized by Stop N Save, Inc. to provide this Results Report for the Stop N Save Inc. facility (the site).

This report describes activities conducted during First Quarter 2013 groundwater monitoring event. Site information is as follows:

Site Location:

20570 Stanton Avenue

Castro Valley, California

Geotracker Global ID:

T0600183405

#### LIMITATIONS

This report has been prepared for use by Stop N Save, Inc. and the relevant regulatory agencies. The conclusions in this report are professional opinions based on the data presented in this report. This report was prepared in general accordance with hydrogeologic and engineering methods and standards. No other warranties are made as to the findings or conclusions presented in this report. The work described in this report was performed under the direct supervision of the professional geologist whose signature and State of California registration are shown above.

#### SITE DESCRIPTION AND HYDROGEOLOGIC CONDITIONS

#### SITE DESCRIPTION

The site occupies a parcel on the southeast corner of Stanton Avenue and San Carlos Avenue in, Castro Valley, California (Figure 1). The site is situated in a commercial and residential area in central Castro Valley and is currently operated as a gasoline station. The area of interest at the site is the former location of two 10,000 gallon underground storage tanks (USTs) and fuel dispensers where impacted soil and groundwater was first identified in 2000. A detailed site plan is shown on Figure 2.

#### HYDROGEOLOGIC CONDITIONS

The site is underlain by Quaternary-aged alluvium. Mapped bedrock outcrops near the site include the Penoche Formation, a conglomerate, and the Knoxville Formation, a micaceous shale. The site is located in the Castro Valley Groundwater Basin (designated 2.8), which is approximately 4 miles square and drains into San Lorenzo Creek.

Based on boring logs from the installation of the three groundwater monitoring wells and the advancement of one soil boring, the stratigraphy of the site and vicinity consists of silty clay to silt with sand from the surface to 23-feet below ground surface (bgs). Discontinuous thin intervals of sands and/or gravels appear to be present in the area at minor thicknesses.

Groundwater monitoring has been ongoing for 13 years. Depth to groundwater is shallow, ranging between 4- to 9-feet bgs. The groundwater flow direction has been consistently toward the northeast generally following the surface topography.

#### **CLEANUP GOALS**

It is prudent to establish cleanup goals for soil and groundwater based upon reaching the residential Environmental Screening Levels (ESLs) established by Region II for sites where shallow soil has been impacted and groundwater is a current or potential drinking water source. The San Francisco Bay Regional Water Quality Board's Water Quality Plan lists Municipal and Domestic Water Supply, Industrial Process Water Supply, Industrial Service Water Supply, and Agricultural Water supply as Potential Beneficial Uses for the Castro Valley Groundwater Basin. The primary constituents of concern relative to the site appear to be total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and xylenes (BTEX), methyl tertiary butyl ether (MTBE), tertiary amyl ether (TAME), and tertiary butyl alcohol (TBA). Accordingly, the following cleanup goals are proposed:

Constituent	Soil (mg/kg)	Groundwater (ug/L)
TPHg	83	100
Benzene	0.044	1.0
Toluene	2.9	40
Ethylbenzene	3.3	30
Xylenes	2.3	20
MTBE	0.023	5.0
TBA	0.075	12

#### PROJECT BACKGROUND

#### INVESTIGATIONS

In February 2000, two 10,000-gallon USTs and associated dispensers were removed. Results are detailed in Enviro Soil Tech Consultants' (ETSC) *Soil Sampling Beneath Removed USTs Report*, dated March 8, 2000.

In July 2000, overexcavation occurred and sampling showed reported concentrations in soil at 11-feet bgs at the north end of the excavation.

In September 2000, ETSC supervised the installation of three groundwater monitoring wells (STMW-1 through STMW-3) and the advancement of one soil boring (B-4). Results are detailed in ETSC's *Preliminary Soil and Groundwater Assessment Report*, dated October 13, 2000.

In November 2010, ECG supervised the advancement of six soil borings (SB-5 through SB-10) and the installation of three groundwater monitoring wells (MW-4 through MW-6). Results are detailed in ECG's Site Investigation and Fourth Quarter 2010 Monitoring Report, dated January 28, 2011.

Well construction details are provided on Table 1.

#### DISTRIBUTION OF MASS CONTAMINANTS

Five UST removal soil samples, eight over excavation soil samples, six groundwater monitoring wells and seven soil borings (Figure 2) have not adequately characterized the lateral and vertical extent of impacted soil. Soil analytical results are summarized on Tables 2a and 2b and show reported soil concentrations did exceed ESLs for TPHg, BTEX, MTBE and TBA, with the highest

First Quarter 2013 Monitoring Report Stop N Save Inc. Facility 20570 Stanton Avenue, Castro Valley, California

reported concentrations at sample locations Pit-7-11, Pit-8-11, and MW-4 which are all located at the northern end of the former UST basin. A smear zone exists from 8- to 10-feet bgs located from MW-5 to the southwest, through the source to SB-6 to the east. Additional definition is needed east of boring SB-6. Soil boring SB-10 was advanced to 25-feet bgs with no detections deeper than 10-feet bgs providing vertical definition.

Six groundwater monitoring wells and three groundwater grab sample have not adequately characterized the lateral extent of impacted groundwater downgradient from the site. Groundwater analytical results are summarized on Tables 3a, 3b, 4a, and 4b and show current reported groundwater concentrations exceed ESLs for MTBE and TBA constituents at location STMW-1, MW-4, MW-5, and MW-6.

#### **RISK ASSESSMENTS**

In July 2010, ECG conducted a preferential pathway study for the site. Results are on file with ACDEH.

In December 2010, ECG conducted a sensitive receptor survey for the site. Results are on file with ACDEH.

A soil vapor survey has not been completed for the site.

#### CORRECTIVE ACTIONS

In July 2000, ETSC over-excavated and treated with bioremediation techniques, approximately 150 cubic yards of impacted soil. Results of the sampling, treatment, and disposal activities are detailed in ETSC's Soil Sampling, Treatment, and Disposal of Stockpiled Soil Report, dated August 21, 2000.

#### RECENT ACTIVITIES

#### WORK PERFORMED AND PROPOSED

The following is a summary of work performed and work proposed at the site.

#### Work Performed

1. On March 22, 2013, ECG performed the first quarter 2013 monitoring event.

#### Work Scheduled for Next Quarter

1. Prepare the first quarter 2013 monitoring report.

#### FIRST QUARTER 2013 GROUNDWATER MONITORING EVENT

ECG performed the first quarter 2013 groundwater monitoring and sampling event at the site on March 22, 2013. Gauging, development, purging, and sampling were conducted in accordance with ECG's SOPs included in Appendix A. The collected groundwater samples were submitted to Argon Labs in Ceres, California for laboratory analysis under COC protocols

The following is a summary of the current status of the groundwater monitoring program at the site:

First Quarter 2013 Monitoring Report Stop N Save Inc. Facility 20570 Stanton Avenue, Castro Valley, California

**Current Phase of Project:** 

Groundwater Sampling Schedule:

Assessment Semi-annual

Wells MW-1 through MW-6

Analysis:

TPHg, BTEX, 5 oxygenates, and 2 lead

scavengers by EPA Method 8260B

Is Free Product Present On-Site:

The following is a summary of recent field and analytical data:

Average Depth to Groundwater

Average Groundwater Elevation **Groundwater Gradient Direction** 

Groundwater Gradient

**TPHg Detected Range** 

Benzene Detected Range MTBE Detected Range **TBA Detected Range** 

7.52-feet bgs

156.92-feet above mean sea level

East

0.067 feet/foot

95 micrograms per liter (ug/L) (MW-5) to

290 ug/L (MW-4)

1.7 ug/L (MW-5) to 16 ug/L (MW-4) 14 ug/L (MW-5) to 690 (MW-4)

2,500 ug/L (STMW-1) to 2,800 (MW-4)

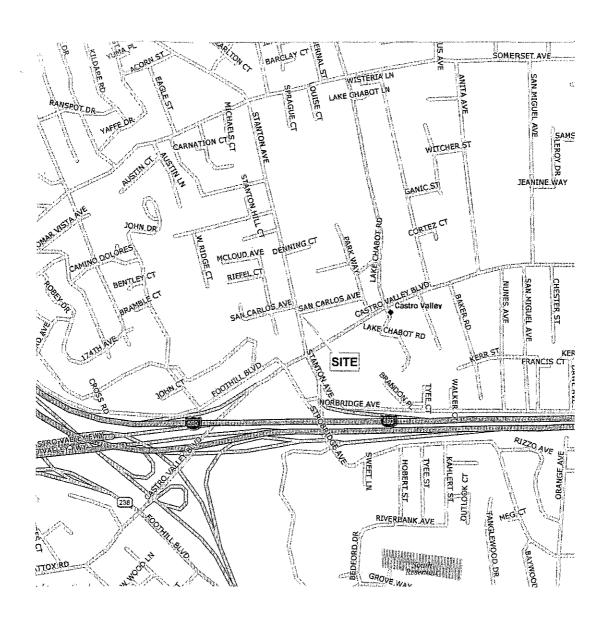
Laboratory analytical reports and COCs are provided in Appendix B. Field notes are located in Appendix C. Summaries of groundwater monitoring and analytical data are presented in Tables 4a and 4b.

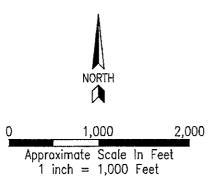
#### CONCLUSIONS

The groundwater elevations and gradient direction from the first quarter 2013 are consistent with historical results. Groundwater isoconcentration maps from the first quarter 2013 are provided as Figures 4 through 7. Based on analytical data from subsurface investigation activities, the vertical and lateral extent of impacted soil appears to be defined except for moderate smear zone concentrations at boring SB-6.

It does not appear that additional assessment activities are required. ECG recommends preparing a Corrective Action Plan that will evaluate three potential remedial options for the site. One of the remedial options evaluated should be natural attenuation as MTBE concentrations have been naturally decreasing over time with no remedial activities.

### **FIGURES**





#### FIGURE 1

Project Number: SNS.18281

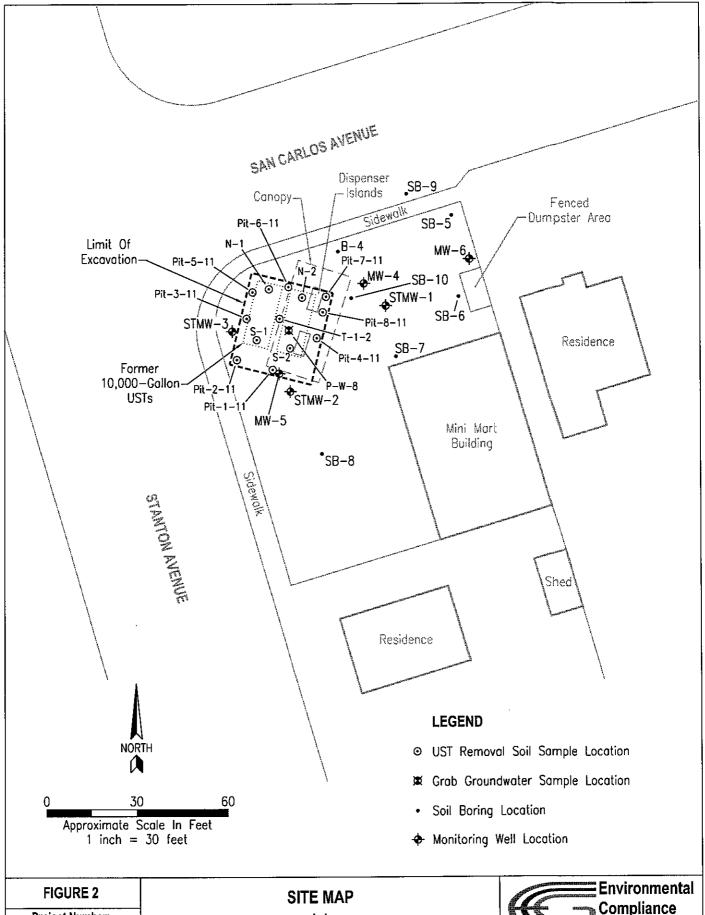
Date: July 21, 2010

#### SITE LOCATION MAP

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



270 Vintage Drive, Turlock, CA 95382 Phone: (209) 664-1035



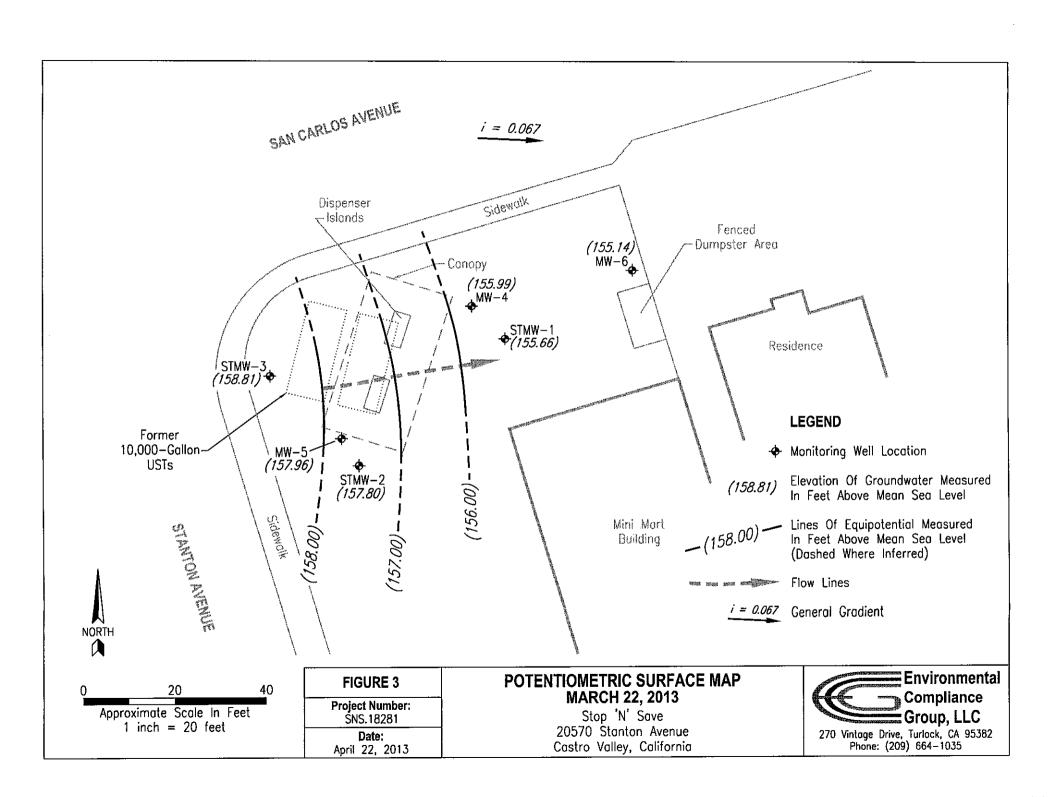
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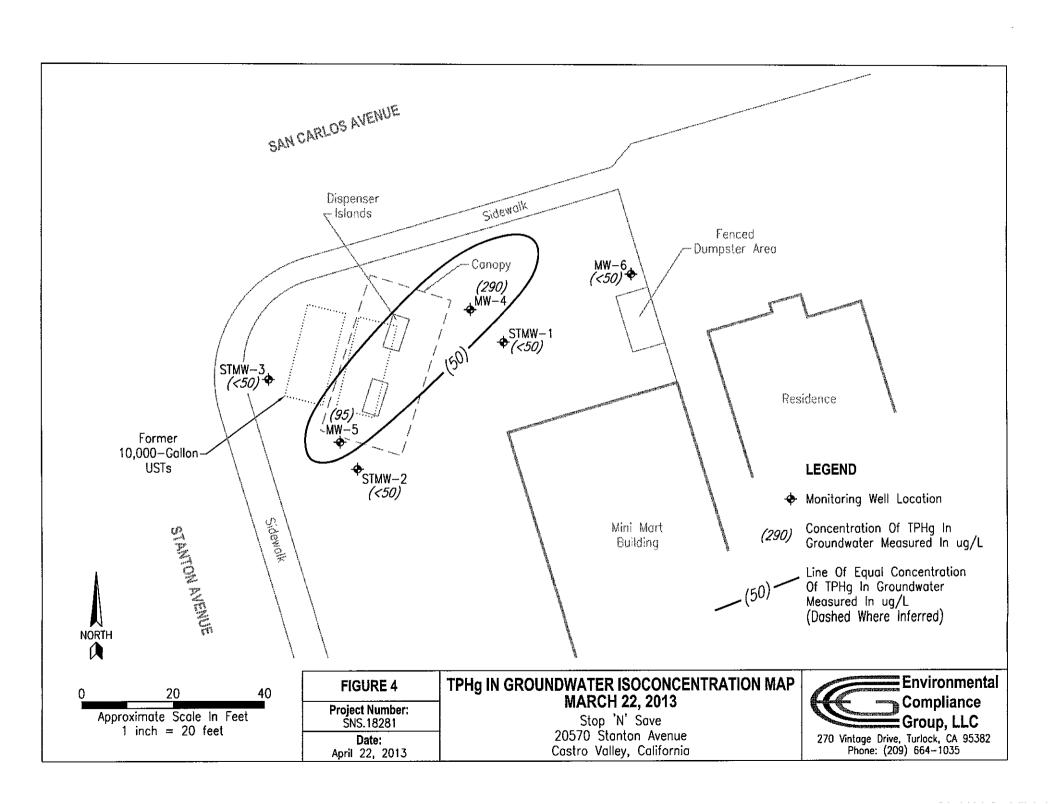
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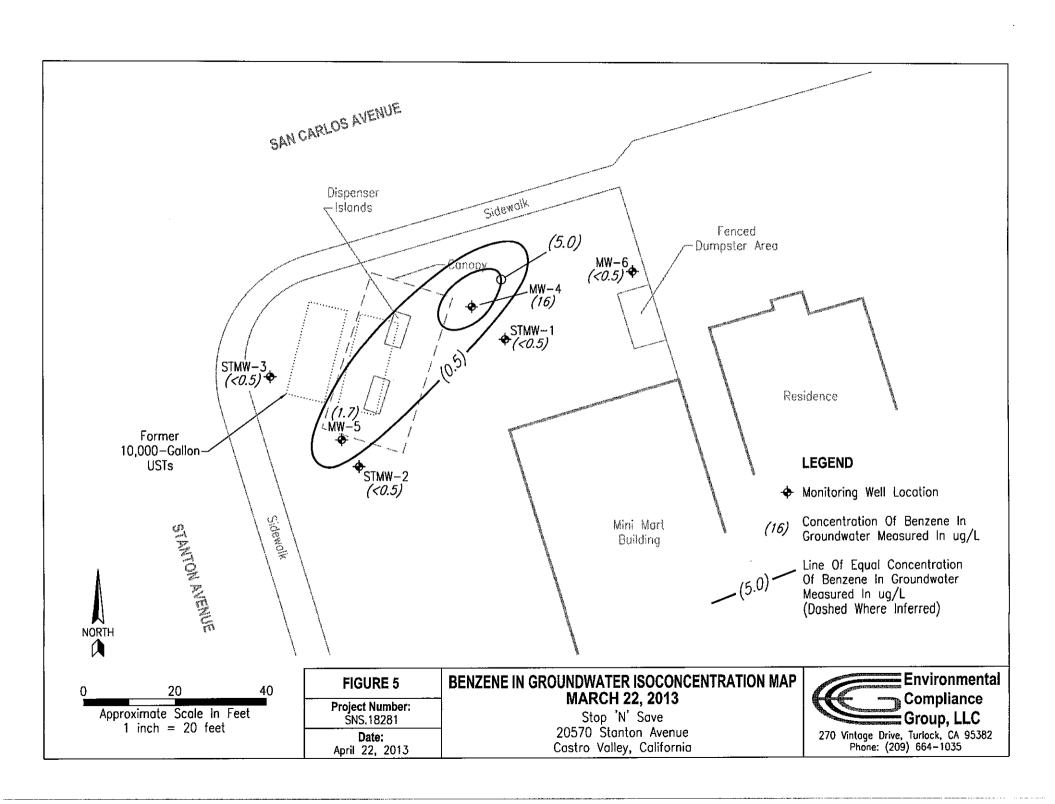
Stop 'N' Save 20570 Stanton Avenue Castro Valley, California

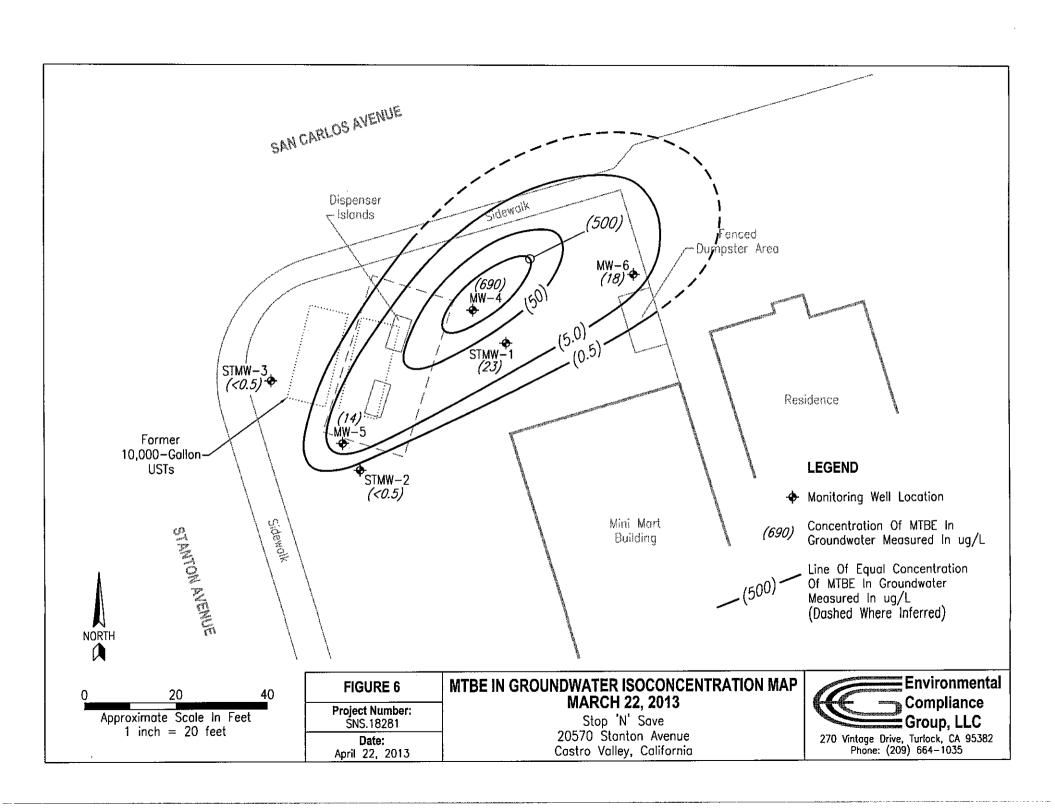


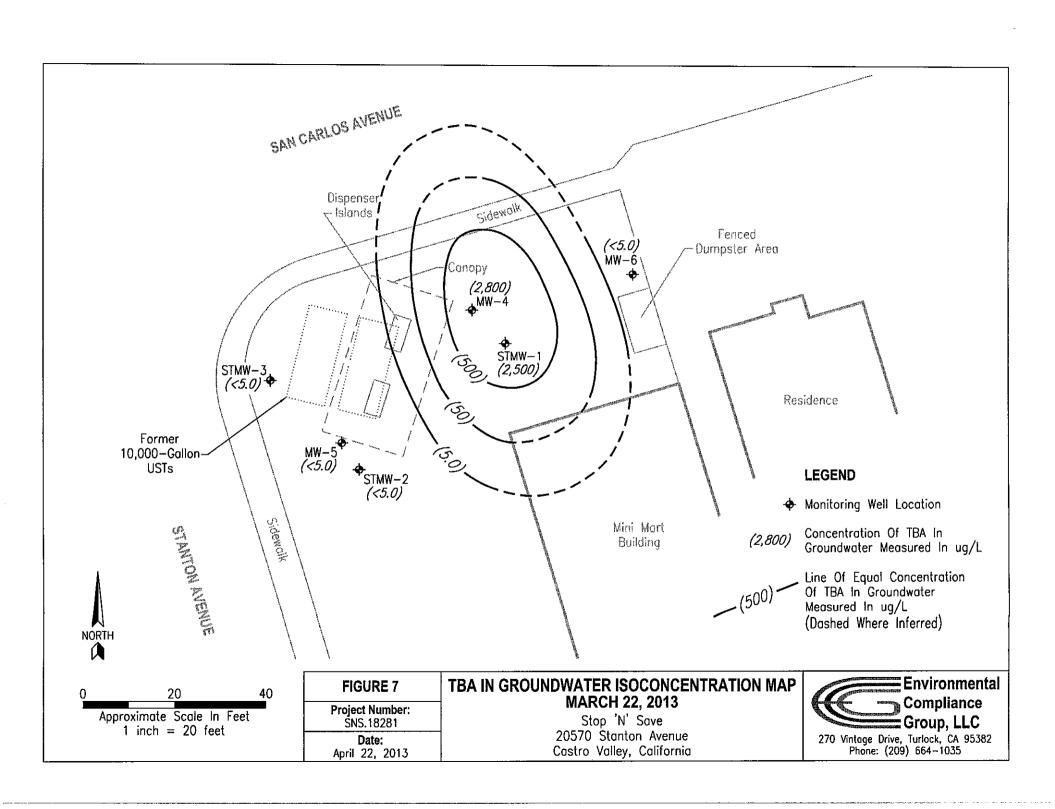
270 Vintage Drive, Turlock, CA 95382 Phone: (209) 664-1035











### **TABLES**

### Table 1 Well Construction Details

#### Stop N Save Inc. 20570 Stanton Avenue Castro Valley, California

Well ID	Date Installed	TOC Elevation	Total Depth	Casing Diameter	Casing Material	Screen/ Filter	Screen Interval		
		(ft amsl)	(ft bgs)	(inches)			(ft bgs)		
Monitoring Wells									
STMW-1	October 2000	163.76	23	2	PVC	0.020/#3	9-23		
STMW-2		164.94	22	2	PVC	0.020/#3	9-22		
STMW-3		165.48	22	2	PVC	0.020/#3	9-22		
MW-4		163.94	13	2	PVC	0.020/#3	5-13		
MW-5	November 2010	165.31	15	2	PVC	0.020/#3	5-15		
MW-6	2313	163.19	15	2	PVC	0.020/#3	5-15		

#### Notes:

TOC - denotes top-of-casing

ft - denotes feet

amsi - denotes above mean sea level

bgs - denotes below ground surface

--- - denotes no data

pvc - denotes polyvinyl chloride

#### Table 2a Historical Soil Analytical Data TPH and BTEX

Stop N Save Inc. 20570 Stanton Avenue Castro Valley, California

	Sample		<del></del>		1	Ethyl-	Total
	Depth	Collection	TPHg	Benzene	Toluene	benzene	Xylenes
Sample ID	(feet)	Date	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Near Surface		<u> </u>			<del>\(\)</del>		·
N-1	10*		5.6	0.07	0.26	0.15	0.98
N-2	10*	1	11	0.068	0.26	0.13	1.1
S-1	10*	February	<1.0	<0.005	<0.005	<0.005	0.012
S-2	10*	2000	1.2	<0.005	<0.005	0.006	0.037
T-1-2	10*	i	71	0.22	0.47	0.49	3.7
Pit-1-11	11		91	0.38	0.35	1.6	8.4
Pit-2-11	11		<1.0	<0.005	<0.005	<0.005	<0.005
Pit-3-11	11	]	<1.0	<0.005	0.005	<0.005	0.038
Pit-4-11	11	July 2000	<1.0	<0.005	<0.005	<0.005	<0.005
Pit-5-11	11		130	0.14	0.26	1.1	8.5
Pit-6-11	11		8.2	0.077	0.13	0.08	0.76
Pit-7-11	11		220	0.58	1.3	1.8	24
Pit-8-11	11	]	1,000	5.7	3.9	14	25
Soil Boring							<u>.</u>
B-4	5	September	<1.0	<0.10	<0.10	<0.10	<0.10
B-4	10	2000	<1.0	0.02	<0.02	<0.02	<0.02
SB-5-4	4		<1.0	<0.005	<0.005	<0.005	<0.005
SB-5-8	8	]	<1.0	<0.005	<0.005	<0.005	<0.005
SB-6-4	4	1	2.6	0.093	<0.005	0.020	0.047
SB-6-10	10	]	24	<0.025	<0.025	0.17	0.50
SB-7-8	8	]	<1.0	<0.005	<0.005	<0.005	<0.005
SB-7-10	10	1	<1.0	<0.005	<0.005	<0.005	<0.005
SB-8-4	4	November	<1.0	<0.005	<0.005	<0.005	<0.005
SB-8-10	10	2010	<1.0	<0.005	<0.005	<0.005	<0.005
SB-9-4	4	2010	<1.0	<0.005	<0.005	<0.005	<0.005
SB-9-12	12		<1.0	<0.005	<0.005	<0.005	<0.005
SB-10-4	4		<1.0	<0.005	<0.005	<0.005	<0.005
SB-10-8	8	]	150	<0.10	<0.10	0.70	4.9
SB-10-12	12		<1.0	<0.005	<0.005	<0.005	<0.005
SB-10-20	20		<1.0	<0.005	<0.005	<0.005	<0.005
SB-10-25	25	]	<1.0	<0.005	<0.005	<0.005	<0.005

#### Table 2a Historical Soil Analytical Data TPH and BTEX

Stop N Save Inc. 20570 Stanton Avenue Castro Valley, California

	Sample					Ethyl-	Total
	Depth	Collection	TPHg	Benzene	Toluene	benzene	Xylenes
Sample ID	(feet)	Date	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Monitoring W	/ells			****			
STMW-1	5		18	<0.25	<0.25	<0.25	1.1
STMW-1	10	1 [	76	<1.0	<1.0	<1.0	7.7
STMW-2	5	September	<1.0	<0.005	<0.005	<0.005	<0.005
STMW-2	10	2000	<1.0	<0.005	<0.005	<0.005	<0.005
STMW-3	5		1.3	<0.005	<0.005	<0.005	<0.005
STMW-3	10	]	<1.0	<0.005	<0.005	<0.005	<0.005
MW-4-4	4		8.3	0.038	<0.025	0.038	0.43
MW-4-8	8	]	4,300	7.2	76	49	440
MW-4-12	12	]	<1.0	<0.005	<0.005	<0.005	<0.005
MW-5-4	4	November	<1.0	<0.005	<0.005	<0.005	<0.005
MW-5-8	8		60	<0.050	<0.050	0.26	<0.10
MW-5-12	12	2010	<1.0	<0.005	<0.005	<0.005	<0.005
MW-6-4	4	1	<1.0	<0.005	<0.005	<0.005	<0.005
MW-6-8	8		<1.0	<0.005	<0.005	<0.005	<0.005
MW-6-12	12	]	<1.0	<0.005	<0.005	<0.005	<0.005

#### Notes:

TPHg - denotes total petroleum hydrocarbons as gasoline

mg/kg - denotes milligrams per kilogram

- < denotes less than the detection limit
- \* denotes approximate depth based on tank diameter and sample notes

# Table 2b Historical Soil Analytical Data Oxygenates and Lead Scavengers

Stop N Save Inc. 20570 Stanton Avenue Castro Valley, California

	Sample								
	Depth	Collection	DIPE	ETBE	MTBE	TAME	TBA	1,2-DCA	EDB
Boring ID	(feet)	Date	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)_	(mg/kg)	(mg/kg)	(mg/kg)
Near Surface S			<u>, 0, 0, </u>	<u> </u>	<u>, , , , , , , , , , , , , , , , , , , </u>		. Minau		
N-1	10*				0.74				
N-2	10*	E 1			3.8				
S-1	10*	February			0.18				
S-2	10*	2000			0.11				
T-1-2	10*	1			1.2				
Pit-1-11	11				<0.005				
Pit-2-11	11				<0.005			•	
Pit-3-11	11	]			0.094				
Pit-4-11	11	1			<0.005				
Pit-5-11	11	July 2000			<0.005				
Pit-6-11	11	1			0.42				
Pit-7-11	. 11	]			<0.005				
Pit-8-11	11				16				
Soil Borings								V.	
B-4	5	September	<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
B-4	10	2000	<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
SB-5-4	4		<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
SB-5-8	8	]	<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
SB-6-4	4	]	<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
SB-6-10	10	]	<0.025	<0.025	0.046	<0.025	<0.25	<0.025	<0.025
SB-7-8	8	]	<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
SB-7-10	10		<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
SB-8-4	4	November	<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
SB-8-10	10	2010	<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
SB-9-4	4	] 2010	<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
SB-9-12	12		<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
SB-10-4	4	]	<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
SB-10-8	8	]	<0.10	<0.10	<0.10	<0.10	<1.0	<0.10	<0.10
SB-10-12	12		<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
SB-10-20	20	]	<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
SB-10-25	25		<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005

# Table 2b Historical Soil Analytical Data Oxygenates and Lead Scavengers

Stop N Save Inc. 20570 Stanton Avenue Castro Valley, California

	Sample	1							
	Depth	Collection	DIPE	ETBE	MTBE	TAME	TBA	1,2-DCA	EDB
Boring ID	(feet)	Date	(mg/kg)						
Monitoring Wells									
STMW-1	5		<0.25	<0.25	1.5	<0.25	<1.0	<0.25	<0.25
STMW-1	10		<1.0	<1.0	1.6	<1.0	<4.0	<1.0	<1.0
STMW-2	5	September	<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
STMW-2	10	2000	<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
STMW-3	5	]	<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
STMW-3	10	]	<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
MW-4-4	4		<0.025	<0.025	2.1	<0.025	1.3	<0.025	<0.025
MW-4-8	8		<4.0	<4.0	<4.0	<4.0	<40	<4.0	<4.0
MW-4-12	12	]	<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
MW-5-4	4 -	] ,,	<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
MW-5-8	8	November	<0.050	<0.050	<0.050	<0.050	<0.50	<0.050	<0.050
MW-5-12	12	2010	<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
MW-6-4	4	1	<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
MW-6-8	8		<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005
MW-6-12	12		<0.005	<0.005	<0.005	<0.005	<0.050	<0.005	<0.005

#### Notes:

mg/kg - denotes milligrams per kilogram	DIPE -	denotes di-isopropyl ether
denotes not analyzed	ETBE -	denotes ethyl tertiary butyl ether
< - denotes less than the detection limit	TAME -	denotes tertiary amyl ether
MTBE - denotes methyl tertiary butyl ether	TBA -	denotes tertiary butyl alcohol
1,2-DCA - denotes 1,2-dichloroethane	EDB -	denotes ethyl dibromide

## Table 3a Grab Groundwater Sample Results TPH and BTEX

Stop N Save Inc. 20570 Stanton Avenue Castro Valley, California

Sample ID	Date Measured	Sample Depth (ft bgs)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl- benzene (ug/L)	Total Xylenes (ug/L)		
UST Pit Samples									
P-W-8	July 2000	11	110	2.6	0.83	0.95	1.7		
Soil Boring	Samples								
SB-7	November	10	790	6.3	2.1	5.7	19		
SB-9	2010	20	<50	<0.5	<0.5	<0.5	<1.0		

#### Notes:

TPHg - denotes total petroleum hydrocarbons as gasoline

ug/L - denotes micrograms per liter

< - denotes less than the detection limit

\* - denotes approximate depth based on tank diameter and sample notes

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## Table 3b Grab Groundwater Sample Results Oxygenates and Lead Scavengers

Stop N Save Inc. 20570 Stanton Avenue Castro Valley, California

Sample ID	Date Measured	Sample Depth (ft bgs)	DIPE (ug/L)	ETBE (ug/L)	MTBE (ug/L)	TAME (ug/L)	TBA (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)
UST Pit Sar	nples			· · · · · · · · · · · · · · · · · · ·					
P-W-8	July 2000	11			130				
Soil Boring	Samples								
SB-7	November	10	<0.5	<0.5	4.0	<0.5	14	<0.5	<0.5
SB-9	2010	20	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5

#### Notes:

ug/L - denotes micrograms per liter

< - denotes less than the detection limit

DCA - denotes dichloroethane

EDB - denotes ethylene dibromide

MTBE - denotes methyl tertiary butyl ether

\* - denotes approximate depth based on tank diameter and sample notes

DIPE - denotes di-isopropyl ether

ETBE - denotes ethyl tertiary butyl ether

TAME - denotes tertiary amyl ether

TBA - denotes tertiary butyl alcohol

Stop N Save Inc. 20570 Stanton Avenue Castro Valley, California

Well	Date	Depth to	Groundwater	*			Ethyl-	Total
D D	Measured	Groundwater	Elevation	TPHg	Benzene	Toluene	benzene	Xylenes
(TOC)		(ft bgs)	(ft amsl)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
ļ								
STMW-1	10/4/2000	8.34	155.42	60,000	<2,500	<2,500	<2,500	<2,500
163.76	1/4/2001	7.86	155.90	71,000	<2,500	<2,500	<2 <i>,</i> 500	<5,000
	3/16/2004	5.70	158.06	260	52	64	7.9	27
	7/5/2004	4.82	158.94	2,100	17	240	2.6	12
	12/28/2004	6.82	156.94	310	89	90	11	43
	3/24/2005	5.63	158.13	630	43	140	16	110
	7/20/2005	5.75	158.01	330	12	22	<2.5	9.3
	9/15/2005	7.44	156.32	15,000	<100	<100	<100	<100
	12/12/2005	5.32	158.44	130	4.4	7.5	<1.0	3
	3/16/2006	3.90	159.86	<50	0.9	3.3	<0.5	<0.5
	6/22/2006	7.12	156.64	130	4.4	54	<1.0	7.1
	9/21/2006	7.78	155.98	880	110	32	18	110
	12/18/2006	9.12	154.64	240	7.5	130	1.4	7.6
	3/22/2007	6.82	156.94	190	17	13	2.9	14
	6/29/2007	9.86	153.90	2,700	340	45	52	310
	9/28/2007	6.88	156.88	1,000	85	2.5	11	72
	12/20/2007	7.81	155.95	690	92	<5.0	<5.0	36
	3/27/2008	7.37	156.39	160	36	0.92	<0.50	5.1
	6/6/2008	7.98	155.78	170	44	<5.0	<5.0	<15
	8/14/2008	8.50	155.26	<1,000	24	<10	<10	<20
	12/30/2008	7.85	155.91	<100	2.6	<1.0	<1.0	<2.0
	3/6/2009	7.48	156.28	57	<5.0	<5.0	<5.0	<15
[	6/12/2009	7.92	155.84	70	<5.0	<5.0	<5.0	<15
	12/1/2009	8.20	155.56	<50	<5.0	<5.0	<5.0	<15
[	9/20/2010	8.44	155.32	<500	<5.0	<5.0	<5.0	<10
	11/30/2010	7.71	156.05	<500	<5.0	<5.0	<5.0	<10
	3/8/2011	7.26	156.50	<500	<5.0	14	<5.0	<10
	9/23/2011	8.60	155.16	<250	<2.5	<2.5	<2.5	<5.0
	3/30/2012	7.31	156.45	<250	<2.5	<2.5	<2.5	<5.0
	8/24/2012	8.60	155.16	<50	<2.5	<2.5	<2.5	<5.0
	3/22/2013	8.10	155.66	<50	<0.5	<0.5	<0.5	<1.0
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Stop N Save Inc. 20570 Stanton Avenue Castro Valley, California

Well	Date	Depth to	Groundwater				Ethyl-	Total
ID	Measured	Groundwater	Elevation	TPHg	Benzene	Toluene	benzene	Xylenes
(TOC)		(ft bgs)	(ft amsl)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
STMW-2	10/4/2000	8.22	156.72	69	<5.0	<5.0	<5.0	<5.0
164.94	1/4/2001	6.70	158.24	110	<5.0	<5.0	<5.0	<5.0
	3/16/2004	6.08	158.86	1,100	<10	<10	<10	<20
	7/5/2004	6.86	158.08	1,800	<10	<10	<10	<20
	12/28/2004	6.22	158.72	1,000	<13	<13	<13	<13
	3/24/2005	5.12	159.82	760	<5.0	<5.0	<5.0	<5.0
	7/20/2005	5.66	159.28	64	<1.0	<1.0	<1.0	<1.0
	9/15/2005	6.14	158.80	53	<1.0	<1.0	<1.0	<1.0
	12/12/2005	6.68	158.26	<50	2.2	<0.5	0.6	<0.5
	3/16/2006	5.54	159.40	<50	<0.5	<0.5	<0.5	<0.5
	6/22/2006	6.02	158.92	<50	<0.5	<0.5	<0.5	<0.5
	9/21/2006	6.94	158.00	<50	<0.5	<0.5	<0.5	<0.5
	12/18/2006	6.46	158.48	<50	<0.5	<0.5	<0.5	<0.5
	3/22/2007	6.16	158.78	<50	<0.5	<0.5	<0.5	<0.5
	6/29/2007	9.06	155.88	<50	<0.5	<0.5	<0.5	<0.5
	9/28/2007	7.63	157.31	<50	<0.5	<0.5	<0.5	<1.0
	12/20/2007	7.43	157.51	<50	<0.5	<0.5	<0.5	<1.0
	3/27/2008	6.16	158.78	<50	<0.50	<0.50	<0.50	<1.5
	6/6/2008	7.09	157.85	<50	<0.50	<0.50	<0.50	<1.5
	8/14/2008	7.85	157.09	<50	<0.5	<0.5	<0.5	<1.0
	12/30/2008	7.52	157.42	<50	<0.5	<0.5	<0.5	<1.0
	3/6/2009	6.90	158.04	<50	<0.50	<0.50	<0.50	<1.5
	6/12/2009	6.65	158.29	<50	<0.50	<0.50	<0.50	<1.5
	12/1/2009	7.43	157.51	<50	<0.50	<0.50	<0.50	<1.5
	9/20/2010	7.58	157.36	<50	<0.50	<0.50	<0.50	<1.0
ľ	11/30/2010	6.94	158.00	<50	<0.50	<0.50	<0.50	<1.0
ľ	3/8/2011	6.00	158.94	<50	<0.50	<0.50	<0.50	<1.0
ļ	9/23/2011	7.68	157.26	<50	<0.50	<0.50	<0.50	<1.0
	3/30/2012	5.99	158.95	<50	<0.50	<0.50	<0.50	<1.0
	8/24/2012	7.75	157.19	<50	<0.50	<0.50	<0.50	<1.0
	3/22/2013	7.14	157.80	<50	<0.5	<0.5	<0.5	<1.0
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Stop N Save Inc. 20570 Stanton Avenue Castro Valley, California

Well	Date	Depth to	Groundwater				Ethyl-	Total
ID	Measured	Groundwater	Elevation	TPHg	Benzene	Toluene	benzene	Xylenes
(TOC)		(ft bgs)	(ft amsl)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
STMW-3	10/4/2000	8.42	157.06	<50	<5.0	<5.0	<5.0	<5.0
165.48	1/4/2001	6.16	159.32	<50	<5.0	<5.0	<5.0	<5.0
<b> </b>	3/16/2004	7.18	158.30	<50	<0.5	<0.5	<0.5	<1.0
	7/5/2004	6.27	159.21	<25	<0.5	<0.5	<0.5	<1.0
	12/28/2004	5.64	159.84	<25	<0.5	<0.5	<0.5	<0.5
	3/24/2005	5.12	160.36	<25	<0.5	<0.5	<0.5	<0.5
	7/20/2005	5.50	159.98	<50	<0.5	<0.5	<0.5	<0.5
	9/15/2005	5.56	159.92	<50	<0.5	<0.5	<0.5	<0.5
	12/12/2005	6.26	159.22	<50	<0.5	<0.5	<0.5	<0.5
	3/16/2006	5.14	160.34	<50	<0.5	<0.5	<0.5	<0.5
	6/22/2006	5.92	159.56	<50	<0.5	<0.5	<0.5	<0.5
	9/21/2006	6.14	159.34	<50	<0.5	<0.5	<0.5	<0.5
	12/18/2006	5.50	159.98	<50	<0.5	<0.5	<0.5	<0.5
	3/22/2007	5.88	159.60	<50	<0.5	<0.5	<0.5	<0.5
	6/29/2007	8.82	156.66	<50	<0.5	<0.5	<0.5	<0.5
	9/28/2007	8.14	157.34	<50	<0.5	<0.5	<0.5	<1.0
	12/20/2007	6.56	158.92	<50	<0.5	<0.5	<0.5	<1.0
	3/27/2008	6.21	159.27	<50	<0.50	<0.50	<0.50	<1.5
	6/6/2008	6.84	158.64	<50	<0.50	<0.50	<0.50	<1.5
	8/14/2008	7.34	158.14	<50	<0.5	<0.5	<0.5	<1.0
	12/30/2008	6.45	159.03	<50	<0.5	<0.5	<0.5	<1.0
	3/6/2009	5.06	160.42	<50	<0.50	<0.50	<0.50	<1.5
	6/12/2009	6.54	158.94	<50	<0.50	<0.50	<0.50	<1.5
	12/1/2009	6.79	158.69	<50	<0.50	<0.50	<0.50	<1.5
	9/20/2010	7.14	158.34	<50	<0.50	<0.50	<0.50	<1.0
	11/30/2010	6.20	159.28	<50	<0.50	<0.50	<0.50	<1.0
	3/8/2011	5.61	159.87	<50	<0.50	<0.50	<0.50	<1.0
	9/23/2011	7.34	158.14	<50	<0.50	<0.50	<0.50	<1.0
	3/30/2012	5.32	160.16	<50	<0.50	<0.50	<0.50	<1.0
] [	8/24/2012	7.41	158.07	<50	<0.50	<0.50	<0.50	<1.0
	3/22/2013	6.67	158.81	<50	<0.5	<0.5	<0.5	<1.0

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Stop N Save Inc. 20570 Stanton Avenue Castro Valley, California

Well	Date	Depth to	Groundwater	•			Ethyl-	Total	
ID	Measured	Groundwater	Elevation	TPHg	Benzene	Toluene	benzene	Xylenes	
(TOC)		(ft bgs)	(ft amsl)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	
	ern. 1-						<u></u>		
MW-4	11/30/2010	8.18	155.76	2,700	56	30	46	430	
163.94	3/8/2011	7.23	156.71	1,900	350	25	29	140	
	9/23/2011	8.46	155.48	<1,000	120	<10	22	<20	
	3/30/2012	9.27	154.67	<1,200	26	<12	<12	<25	
	8/24/2012	10.58	153.36	330	<10	<10	<10	<20	
	3/22/2013	7.95	155.99	290	16	<5.0	<5.0	<10	
MW-5	11/30/2010	7.68	157.63	200	1.8	<0.50	2.1	4.1	
165.31	3/8/2011	6.24	159.07	130	8.8	<0.50	6.7	<1.0	
	9/23/2011	7.71	157.60	160	6.7	<0.50	8.4	1.5	
	3/30/2012	6.59	158.72	120	7.8	<0.50	6.9	<1.0	
	8/24/2012	7.90	157.41	58	3.9	<0.50	4.8	<1.0	
_	3/22/2013	7.35	157.96	95	1.7	<0.5	1.5	<1.0	
	:								
MW-6	11/30/2010	7.70	155.49	<50	<0.50	<0.50	<0.50	<1.0	
163.19	3/8/2011	7.09	156.10	<50	<0.50	<0.50	<0.50	<1.0	
	9/23/2011	8.60	154.59	<50	<0.50	<0.50	<0.50	<1.0	
	3/30/2012	7.35	155.84	<50	<0.50	<0.50	<0.50	<1.0	
	8/24/2012	8.72	154.47	<50	<0.50	<0.50	<0.50	<1.0	
	3/22/2013	8.05	155.14	<50	<0.5	<0.5	<0.5	<1.0	

#### Notes:

TPHg - denotes total petroleum hydrocarbons as gasoline

ug/L - denotes micrograms per liter

< - denotes less than the detection limit

Stop N Save Inc. 20570 Stanton Avenue Castro Valley, California

Well	Date						:	
ID	Measured			1,2-DCA	EDB			
		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
STMW-1	10/4/2000			69,000		<10,000		
97.93	1/4/2001			89,000		<20,000		
	3/16/2004			39		<10		
	7/5/2004			520		<50		
	12/28/2004			32		<20		
	3/24/2005			20		<20		
	7/20/2005			310		<50		
	9/15/2005			13,000		2,500		
	12/12/2005			170		100		
	3/16/2005			21		<10		
	6/22/2006			70		<20		
	9/21/2006	200	-	1,600		2,300	~~-	
	12/18/2006			130		180		
	3/22/2007			360		170		
[	6/29/2007			3,100		2,200		
	9/28/2007	<2.5	<2.5	1,000	<2.5	5,300	<2.5	<2.5
	12/20/2007	<5.0	<5.0	1,200	<5.0	15,000	<5.0	<5.0
	3/27/2008	<1.0	<1.0	590	<1.0	4,900	<1.0	<1.0
	6/6/2008	<10	<10	1,000	<10	5,700	<10	<10
	8/14/2008	<10	<10	450	<10	10,000	<10	<10
	12/30/2008	<1.0	<1.0	84	<1.0	7,700	<1.0	<1.0
	3/6/2009	<10	<10	340	<10	5,400	<10	<10
	6/12/2009	<10	<10	170	<10	5,000	<10	<10
	12/1/2009	<10	<10	42	<10	5,600	<10	<10
ļ	9/20/2010	<5.0	<5.0	51	<5.0	8,100	<5.0	<5.0
	11/30/2010	<5.0	<5.0	42	<5.0	4,100	<5.0	<5.0
	3/8/2011	<5.0	<5.0	66	<5.0	3,800	<5.0	<5.0
	9/23/2011	<2.5	<2.5	30	<2.5	4,800	<2.5	<2.5
	3/30/2012	<2.5	<2.5	40	<2.5	4,700	<2.5	<2.5
	8/24/2012	<2.5	<2.5	33	<2.5	5,500	<2.5	<2.5
ŀ	3/22/2013	<0.5	<0.5	23	<0.5	2,500	<0.5	<0.5

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Well ID	Date	DIPE	ЕТВЕ	MTBE	TAME	ТВА	1,2-DCA	EDB
טו	Measured	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
STMW-2	10/4/2000			66		<20		
99.04	1/4/2001		3	120		<20		
	3/16/2004		TIME:	1,700	***	<200		***
	7/5/2004			1,800		<200		
	12/28/2004			1,400		<250		
	3/24/2005		mar 2	930	447	180		
	7/20/2005			43		920		
	9/15/2005			88		130	7-7	
	12/12/2005			23		22		
	3/16/2005			34		150		
	6/22/2006			12		200		
	9/21/2006			16		41		
	12/18/2006			15		71	<del></del> -	-
	3/22/2007		<del></del>	15		71		
	6/29/2007			14	445	<10		200
	9/28/2007	<0.5	<0.5	14	<0.5	<5.0	<0.5	<0.5
	12/20/2007	<0.5	<0.5	6.2	<0.5	54	<0.5	<0.5
	3/27/2008	<1.0	<1.0	14	<1.0	<12	<1.0	<1.0
	6/6/2008	<1.0	<1.0	5.6	<1.0	<12	<1.0	<1.0
	8/14/2008	<0.5	<0.5	2.0	<0.5	<5.0	<0.5	<0.5
	12/30/2008	<0.5	<0.5	8.6	<0.5	<5.0	<0.5	<0.5
	3/6/2009	<1.0	<1.0	3.0	<1.0	<12	<1.0	<1.0
	6/12/2009	<1.0	<1.0	3.8	<1.0	<12	<1.0	<1.0
	12/1/2009	<1.0	<1.0	5.4	<1.0	<12	<1.0	<1.0
	9/20/2010	<0.5	<0.5	4.2	<0.5	<5.0	<0.5	<0.5
	11/30/2010	<0.5	<0.5	2.2	<0.5	<5.0	<0.5	<0.5
	3/8/2011	<0.5	<0.5	1.5	<0.5	<5.0	<0.5	<0.5
	9/23/2011	<0.5	<0.5	3.0	<0.5	<5.0	<0.5	<0.5
	3/30/2012	<0.5	<0.5	1.7	<0.5	<5.0	<0.5	<0.5
	8/24/2012	<0.5	<0.5	2.4	<0.5	7.5	<0.5	<0.5
	3/22/2013	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5

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Well	Date							
ID	Measured	DIPE	ETBE	MTBE	TAME	ТВА	1,2-DCA	EDB
		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
STMW-3	10/4/2000			<5.0		<20		
99.60	1/4/2001			<5.0		<20		
	3/16/2004			2.8		<10		
	7/5/2004			2.5		<10		
	12/28/2004			2.0		<10		
	3/24/2005		au u	1.4	ane.	<10		
	7/20/2005			1.5		<10	7	
	9/15/2005			1.2		<10		
	12/12/2005		-4	<1.0		<10		
	3/16/2005			<1.0		<10	775	
	6/22/2006	***		<1.0		<10		
	9/21/2006			<1.0		<10		
	12/18/2006		• • • • • • • • • • • • • • • • • • • •	<1.0		<10		
	3/22/2007			<1.0		<10		
	6/29/2007		<b></b>	<1.0	***	<10		
	9/28/2007	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
	12/20/2007	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
	3/27/2008	<1.0	<1.0	<1.0	<1.0	<12	<1.0	<1.0
	6/6/2008	<1.0	<1.0	<1.0	<1.0	<12	<1.0	<1.0
	8/14/2008	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
	12/30/2008	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
	3/6/2009	<1.0	<1.0	<1.0	<1.0	<12_	<1.0	<1.0
	6/12/2009	<1.0	<1.0	<1.0	<1.0	<12	<1.0	<1.0
	12/1/2009	<1.0	<1.0	<1.0	<1.0	<12	<1.0	<1.0
	9/20/2010	<0.5	<0.5	0.6	<0.5	<5.0	<0.5	<0.5
	11/30/2010	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
	3/8/2011	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
	9/23/2011	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
	3/30/2012	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
	8/24/2012	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
	3/22/2013	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5

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Stop N Save Inc. 20570 Stanton Avenue Castro Valley, California

Well	Date						***	
ID	Measured	DIPE	ETBE	MTBE	TAME	ТВА	1,2-DCA	EDB
		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
MW-4	11/30/2010	<2.5	<2.5	510	<2.5	510	<2.5	<2.5
	3/8/2011	<10	<10	1,800	<10	1,200	<10	<10
	9/23/2011	<10	<10	3,100	<10	2,400	<10	<10
	3/30/2012	<12	<12	2,100	<12	3,200	<12	<12
	8/24/2012	<10	<10	1,500	<10	2,900	<10	<10
	3/22/2013	<5.0	<5.0	690	<5.0	2,800	<5.0	<5.0
MW-5	11/30/2010	<0.5	<0.5	62	<0.5	26	<0.5	<0.5
	3/8/2011	<0.5	<0.5	53	<0.5	14	<0.5	<0.5
	9/23/2011	<0.5	<0.5	50	<0.5	17	<0.5	<0.5
	3/30/2012	<0.5	<0.5	35	<0.5	13	<0.5	<0.5
	8/24/2012	<0.5	<0.5	26	<0.5	7.4	<0.5	<0.5
	3/22/2013	<0.5	<0.5	14	<0.5	<5.0	<0.5	<0.5
MW-6	11/30/2010	<0.5	<0.5	75	<0.5	<5.0	<0.5	<0.5
	3/8/2011	<0.5	<0.5	64	<0.5	<5.0	<0.5	<0.5
	9/23/2011	<0.5	<0.5	44	<0.5	<5.0	<0.5	<0.5
	9/23/2011	<0.5	<0.5	22	<0.5	<5.0	<0.5	<0.5
	8/24/2012	<0.5	<0.5	33	<0.5	<5.0	<0.5	<0.5
	3/22/2013	<0.5	<0.5	18	<0.5	<5.0	<0.5	<0.5

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#### Notes:

ug/L - denotes micrograms per liter

< - denotes less than the detection limit

DCA - denotes dichloroethane

EDB - denotes ethylene dibromide

MTBE - denotes methyl tertiary butyl ether

DIPE - denotes di-isopropyl ether

ETBE - denotes ethyl tertiary butyl ether

TAME - denotes tertiary amyl ether

TBA - denotes tertiary butyl alcohol

SNS.18281

### Table 5 Sensitive Receptor Survey Data

Stop N Save Inc. 20570 Stanton Avenue Castro Valley, California

Figure ID	Well Owner	Well Location Description on DWR Log	Well Type	Total Depth	Screen Interval	Seal Inteval	Installation Date	Distance/ Direction	Notes:
				(feet bgs.)	(feet bgs.)	(feet bgs.)		(feet)	
1-5	Unocal	2445 Castro Valley Boulevard, Castro Valley	Manitoring	25.5	8-25.5	0-6	1990	900/SW	Unable to Locate
6	Clark's Woodworking	2620 Norbridge Avenue, Castro Valley	Monitoring	52.5	None	0-52.5	Unknown	900/S	Unable to Locate
7	Anthony Varni	2691 Castro Valley Boulevard, Castro Valley	Test Hole	205	None	0-205	6/10/05	800/E	Unable to Locate
8-17	Thrifty Oil	2504 Castro Valley Boulevard, Castro Valley	Monitoring	15-20	5-20	0-4	1988-1991	450/S	Unable to Locate
18	Castro Valley Autohaus	20697 Parkway, Castro Valley	Monitoring	11.5	5.5-11.5	0-4.5	1991	600/E	Unable to Locate
19-26	Shell Oil	2724 Castro Valley Boulevard, Castro Valley	Monitoring Cooling	15-25	5-25	0-4	1990-1993	1000/E	Unable to Locate
27	Eden Township Hospital	Castro Valley	System Return	60	None	Unknown	1952	1300/NE	Unable to Locate
28	Eden Township Hospital	Castro Valley	Domestic	250	None	Unknown	1952	1300/NE	Unable to Locate
29	Eden Township Hospital	Castro Valley	Test Well	150	100-110 132-140	Unknown	1953	1300/NE	Unable to Locate

Notes:

DWR - denotes Department of Water Resources

--- denotes no data available

bgs - denotes below ground surface

### **APPENDICES**

### ENVIRONMENTAL COMPLIANCE GROUP, LLC STANDARD OPERATING AND SAFETY AND LOSS CONTROL PROCEDURES

#### 1.0 SOIL BORING/DRILLING SAMPLE COLLECTION AND CLASSIFICATION PROCEDURES

ECG will prepare a site-specific Health and Safety Plan as required by the Occupational Health and Safety Administration (OSHA) Standard "Hazardous Waste Operations and Emergency Response" guidelines (29 CFR.1910.120). The document will be reviewed and signed by all ECG personnel and subcontractors prior to performing work at the site.

Prior to conducting and subsurface work at the site, Underground Services Alert (USA) will be contacted to delineate subsurface utilities near the site with surface markings. In addition, the first five feet of every location will be hand cleared to a diameter larger than the diameter of the auger or probe as a further precaution against damaging underground utilities. Sites that are currently operated as gas stations will be cleared with a private utility locator prior to drilling activities.

Soil samples to be submitted for chemical analyses are collected into brass or stainless steel tubes. The tubes are placed in an 18-inch long split-barrel sampler. The split-barrel sampler is driven its entire length hydraulically or by 140-pound drop hammer. The split-barrel sampler is removed from the borehole and the tubes are removed. When the tubes are removed from the split-barrel sampler, the tubes are trimmed and capped with Teflon sheets and plastic caps or the soil is removed from the tubes and placed in other appropriate sample containers. The samples are sealed, labeled, and placed in ice under chain-of-custody to be delivered to the analytical laboratory. All samples will be kept refrigerated until their delivery to the analytical laboratory.

One soil sample collected from each split-barrel sampler is field screened with a photoionization detector (PID), flame ionization detector (FID), or other equivalent field screening meter. The soil sample is sealed in a plastic bag or other appropriate container to allow volatilization of volatile organic compounds (VOCs). The field meter is used to measure the VOC concentration in the container's headspace and is recorded on the boring logs at the appropriate depth interval.

Other soil samples collected from each split-barrel sampler are inspected and documented to identify the soil stratigraphy beneath the site and classify the soil types according to the United Soil Classification System. The soil types are recorded on boring logs with the appropriate depth interval and any pertinent field observations. Drilling and sampling equipment are steam cleaned or washed in solution and rinsed in deionized water prior to use, between sample collections and boreholes and after use.

#### 2.0 SOIL EXCAVATION SAMPLE COLLECTION AND CLASSIFICATION PROCEDURES

Soil samples to be submitted for chemical analyses are collected into brass or stainless steel tubes or other appropriate containers. The samples are sealed, labeled, and placed in ice under chain-of-custody (COC) to be delivered to the analytical laboratory. All samples will be kept refrigerated until their delivery to the analytical laboratory.

Select soil samples are placed into a sealed plastic bag or other appropriate container and field screened using a PID, FID, or equivalent meter. Other soil samples collected are inspected and documented to identify the soil stratigraphy beneath the site and classify the soil types according to the United Soil Classification System. The soil types are recorded field notes with the appropriate depth interval and any pertinent field observations. Sampling equipment are steam cleaned or washed in solution and rinsed in deionized water prior to use, between sample collections, and after use. Soil cuttings and rinseate water are temporarily stored onsite pending laboratory analytical results and proper transport and disposal.

#### 3.0 SAMPLE IDENTIFICATION AND COC PROCEDURES

Sample containers are labeled with job number, job name, sample collection time and date, sample collection point, and analyses requested. Sampling method, sampler's name, and any pertinent field observations are recorded on boring logs or excavation field notes. COC forms track the possession of the sample from the time of its collection until the time of its delivery to the analytical laboratory. During sample transfers, the person with custody of the samples will relinquish them to the next person by signing the COC and documenting the time and date. The analytical laboratory Quality Control/Quality Assurance (QA/QC) staff will document the receipt of the samples and confirm the analyses requested on the COC matches the sample containers and preservative used, if any. The analytical laboratory will assign unique log numbers for identification during the analyses and reporting. The log numbers will be added to the COC form and maintained in a log book maintained by the analytical laboratory.

#### 4.0 ANALYTICAL LABORATORY QA/QC PROCEDURES

The analytical laboratory analyzes spikes, replicates, blanks, spiked blanks, and certified reference materials to verify analytical methods and results. The analytical laboratory QA/QC also includes:

Routine instrument calibration,

Complying with state and federal laboratory accreditation and certification programs,

Participation in U.S. EPA performance evaluation studies,

Standard operating procedures, and

Multiple review of raw data and client reports

#### 5.0 HOLLOW STEM AUGER WELL INSTALLATION

Boreholes for wells are often drilled with a truck-mounted hollow stem auger drill rig. The borehole diameter is at least 4 inches wider than the outside diameter of the well casing. Soil samples are collected and screened as described in **Section 1.0** and decontamination procedures are also the same as described in **Section 1.0**.

Wells are cased with both blank and factory-perforated Schedule 40 PVC. The factory perforations are typically 0.020 inches wide by 1.5 inch long slots, with 42 slots per foot. A PVC cap is typically installed at the bottom of the casing with stainless steel screws. No solvents or cements are used in the construction of the wells. Well stabilizers or centering devices may be installed around the casing to ensure the filter material and grout in the annulus are evenly distributed. The casing is purchased pre-cleaned or steam cleaned and washed prior to installation in the borehole.

The casing is set inside the augers and sand, gravel, or other filter material is poured into the annulus to fill the borehole from the bottom to approximately 1-2 feet above the perforations. A two foot thick bentonite plug is placed above the filter material to prevent the grout from filling the filter pack. Neat cement or sand-cement grout is poured into the annulus from the top of the bentonite plug to the surface. For wells located in parking lots or driveways, or roads, a traffic rated well box is installed around the well. For wells located in landscaped areas or fields, a stovepipe well protection device is installed around the well. Soil cuttings and rinseate water are temporarily stored onsite pending laboratory analytical results and proper transport and disposal.

#### 6.0 MUD AND AIR ROTARY WELL INSTALLATION

Boreholes for wells can also be drilled with a truck-mounted air rotary or mud rotary drill rig. Air or mud can be used as a drill fluid to fill the borehole and prevent the borehole from caving in and remove drill cuttings. Mud or air can be chosen depending on the subsurface conditions. Soil samples are collected and screened as described in **Section 1.0** and decontamination procedures are also the same as described in **Section 1.0**.

Wells are cased with both blank and factory-perforated Schedule 40 PVC. The factory perforations are typically 0.020 inches wide by 1.5 inch long slots, with 42 slots per foot. A PVC cap is typically installed at the bottom of the casing with stainless steel screws. No solvents or cements are used in the construction of the wells. Well stabilizers or centering devices may be installed around the casing to ensure the filter material and grout in the annulus are evenly distributed. The casing is purchased pre-cleaned or steam cleaned and washed prior to installation in the borehole. Soil cuttings and drilling fluids are temporarily stored onsite pending laboratory analytical results and proper transport and disposal.

The casing is set inside the augers and sand, gravel, or other filter material is poured into the annulus to fill the borehole from the bottom to approximately 1-2 feet above the perforations. A two foot thick bentonite plug is placed above the filter material to prevent the grout from filling the filter pack. Neat cement or sand-cement grout is poured into the annulus from the top of the bentonite plug to the surface. For wells located in parking lots or driveways, or roads, a traffic rated well box is installed around the well. For wells located in landscaped areas or fields, a stovepipe well protection device is installed around the well. Soil cuttings and rinseate water are temporarily stored onsite pending laboratory analytical results and proper transport and disposal.

#### 7.0 WELL DEVELOPMENT

After well installation, the wells are developed to remove residual drilling materials from the annulus and to improve well production by fine materials from the filter pack. Possible well development methods include pumping, surging, bailing, jetting, flushing, and air lifting. Development water is temporarily stored onsite pending laboratory analytical results and proper transport and disposal. Development equipment are steam cleaned or washed in solution and rinsed in deionized water prior to use, between sample collections and after use. After well development the wells are typically allowed to stabilize for at least 24 hours prior to purging and sampling.

#### 8.0 LIQUID LEVEL MEASUREMENTS

Liquid level measurements are made with a water level meter and/or interface probe and disposable bailers. The probe tip attached to a measuring tape is lowered into the well and into the groundwater when a beeping tone indicates the probe is in the groundwater. The probe and measuring tape (graduated to hundredths of a foot) are slowly raised until the beeping stops and the depth to water measurement is recorded. If the meter makes a steady tone, this indicates the presence of floating liquid hydrocarbons (FLH) and the probe and measuring tape are raised until the steady tone stops and the depth to the FLH is measured. Once depth to water and depth to FLH (if present) has been recorded, the probe and measuring tape are lowered to the bottom of the well where the total depth of the well is measured. The depth to water, depth to FLH, and depth to bottom are measured again to confirm the results.

If FLH is encountered in the well, a disposable bailer is lowered into the well and brought back to the surface to confirm the thickness/presence of FLH. To minimize potential for cross contamination between wells, all measurements are done from cleanest to dirtiest well. Prior to beginning liquid level measurements, in between measurements in all wells, and at the completion of liquid level measurements, the water level probe and measuring tape is cleaned with solution (Alconox, Simple Green, or equivalent) and rinsed with deionized water.

#### 9.0 WELL PURGING AND SAMPLING

Each well is typically purged of at least three well casing volumes of groundwater prior to collecting a groundwater sample. Purging can continue beyond three well casing volumes if field parameters including pH, temperature, electrical conductivity are not stabilizing during the purging process. If the well is purged dry before the three well casing volumes has been purged, the well is typically allowed to recharge to 80 percent of its initial water level before a groundwater sample is collected.

Purging equipment can include submersible pumps, PVC purging bailers, disposable bailers, air lift pumps, or pneumatic pumps. Prior to beginning well purging, in between each well purging, and at the completion of purging activities, all non-dedicated purging equipment is cleaned with solution (Alconox, Simple Green, or equivalent) and rinsed with deionized water.

Once the well has been purged, it will be sampled with a disposable bailer, PVC bailer, stainless steel bailer, or through a low flow groundwater pump. The groundwater sample is transferred from the bottom of the bailer to reduce volatilization to the appropriate sample container. The sample containers are specified by the analytical laboratory depending on the analyses requested. Sample containers typically include volatile organic compound (VOA) vials with septa of Teflon like materials. The groundwater sample is collected into the VOAs to minimize air bubbles and once the cap has been placed on the VOA, the VOA is tipped upside down to see if air bubbles are present in the VOA. Typically a duplicate VOA is collected from each well to be analyzed by the analytical laboratory, if warranted, to verify results.

Sample containers are labeled as described in **Section 3.0** and placed immediately in an ice chest and kept refrigerated until its delivery to the analytical laboratory. A trip blank may also be prepared by the analytical laboratory to travel with the ice chest during transport to the laboratory. Field blanks from equipment that has been decontaminated may be collected in between use in different wells to verify the decontamination procedure is effective. To minimize potential for cross contamination between wells, all wells are purged and sampled from cleanest to dirtiest well.

#### 10.0 TEDLAR BAG SOIL VAPOR SAMPLING

Sampling equipment to collect Tedlar bag soil vapor samples includes an air pump, a Tedlar bag which can range in size from 1 to 10 liters, and 3/16-inch diameter polyethylene tubing. The air pump should be equipped with 3/16-inch hose barbs for the polyethylene tubing to attach to. The Tedlar bag must be equipped with a valve for filling and sealing the bag.

When soil vapor samples are collected from remediation equipment, the sample collection port on the remediation equipment is typically fitted with a 3/16-inch hose barb. Prior to collecting soil vapor samples from remediation equipment, air flow, temperature, and pressure or vacuum of the sampling point/remediation equipment are recorded. One end of the polyethylene tubing is connected to the sample collection port and one end is connected to the influent of the air pump, creating an air tight seal. The air pump is turned on and soil vapor from the sample collection port is pumped through the air pump for at least one minute. The air pump is turned off and one end of another piece of polyethylene tubing is connected to the effluent of the air pump and one end is connected to the valve on the Tedlar bag. The valve is opened and the air pump is turned on filling the Tedlar bag with the soil vapor sample until the bag has reached 75% capacity, when the valve on the Tedlar bag is closed and the air pump is turned off.

Tedlar bags are labeled as described in **Section 3.0** and placed immediately in an empty ice chest and kept dry and unrefrigerated until its delivery to the analytical laboratory. After each soil vapor sample collection, the air pump is turned on for five minutes to allow ambient air to clear the air pump and polyethylene tubing.

#### 11.0 SUMMA CANISTER SOIL VAPOR SAMPLING

Sampling equipment to collect Summa canister soil vapor samples includes a sterilized Summa stainless steel canister under vacuum, ¼-inch diameter polyethylene tubing, and a laboratory calibrated flow meter, if required.

When soil vapor samples are collected from remediation equipment, the sample collection port on the remediation equipment is typically fitted with brass connection with silicone septa that has been threaded into a tapped hole on the piping network. Prior to collecting soil vapor samples from remediation equipment, air flow, temperature, and pressure or vacuum of the sampling point/remediation equipment are recorded. One end of the polyethylene tubing is connected to the brass sample collection port and one end is connected to the canister valve or flow meter, creating an air tight seal. Prior to collecting the soil vapor sample, the valve on the Summa canister is opened to verify the Summa canister has the required vacuum which is recorded. Three well volumes of vapor will be purged at a rate less than 200 milliliters per minute (ml/min.), including sand pack pore volume from each soil vapor probe prior to sample collection. The sample valve or flow meter is opened and the soil vapor sample is collected into the Summa canister and the sample valve is closed and the final vacuum reading (typically greater than 5 inches per square inch) on the Summa canister is recorded.

Per the DTSC Advisory Active Soil Gas Investigations, April 2012, high quality soil gas data collection is driven by project-specific data quality objectives (DQOs) and can be enhanced by using a shroud and a gaseous tracer compound. This method of leak detection ensures that soil gas wells are properly constructed and the sample train components do not leak. Most gaseous tracer compounds do not affect target analyte measurements nor does their detection require sample dilution. Also, gaseous leak tracer compounds allow a quantitative determination of a leak either in the sampling train or from ambient air intrusion down the borehole.

The shroud will be designed to contain the entire sampling train and the soil gas well annulus. The sampling train will be constructed of material that does not react with the sample analytes and will not off gas or adsorb volatile compounds. The sampling equipment will be clean and shut-in tested prior to use. The gaseous leak tracer compound (isobutylene 100 ppm) concentration inside the shroud will be monitored frequently to verify initial concentrations. A photoionization detector will be used to monitor tracer gas concentrations.

Summa canisters are labeled as described in **Section 3.0** and placed immediately in an empty ice chest and kept dry and unrefrigerated until its delivery to the analytical laboratory.

### 12.0 SYRINGE SOIL VAPOR SAMPLING

Sampling equipment to collect syringe soil vapor samples includes a sterilized, 100 cubic centimeter, gas tight syringe and silicone septa.

When soil vapor samples are collected from remediation equipment, the sample collection port on the remediation equipment is typically fitted with brass connection with silicone septa that has been threaded into a tapped hole on the piping network. Prior to collecting soil vapor samples from remediation equipment, air flow, temperature, and pressure or vacuum of the sampling point/remediation equipment are recorded. The syringe is inserted into the silicone septa and the plunger is purged or pumped at least three times. The sample is collected the fourth time the syringe plunger is extracted and the syringe is removed from the sample collection port and the needle on the syringe is capped with a rubber stopper.

Syringes are labeled as described in **Section 3.0** and placed immediately in an empty ice chest and kept dry and unrefrigerated until its delivery to the analytical laboratory.

#### 13.0 TEMPORARY SAMPLING POINTS

A temporary borehole is advanced using either a slam bar or a direct push drill rig. In the case of the slam bar, once the borehole has been created, a temporary soil vapor probe is inserted into the borehole and advanced with a slide hammer or other physical force two additional feet. A bentonite seal is then placed in the borehole above the soil vapor probe to create an air tight seal and prevent ambient air from entering the sample collection space. In the case of the direct push drill rig, the sampling rod is advanced to the desired depth with a 6-inch retractable vapor screen at the tip. The sample screen on the 6-inch vapor screen is removed and a bentonite seal is then placed in the borehole above the soil vapor probe to create an air tight seal and prevent ambient air from entering the sample collection space.

Once the bentonite seal has set, at least one hour, the soil vapor survey samples are collected into Tedlar bags as described in **Section 10.0** or Suma canisters as described in **Section 11.0**. Samples are labeled as described in **Section 3.0** and placed immediately in an empty ice chest and kept dry and unrefrigerated until its delivery to the analytical laboratory. After each soil vapor sample collection, the air pump is turned on for five minutes to allow ambient air to clear the air pump and polyethylene tubing.

#### 14.0 REPEATABLE SAMPLING POINTS

A borehole is advanced using either a hand auger or a drill rig. A 6-inch slotted probe with caps on both ends is placed in the borehole. A Swagelok fitting is attached to one end cap and 3/16-inch diameter Nylon tubing is attached to the Swagelok fitting. A one foot sand pack is placed around the probe and the remainder of the borehole is sealed with a layer of dry bentonite powder, followed by a layer of bentonite chips, and an additional layer of dry bentonite powder. A well box is placed on the surface of the repeatable sampling point and the excess Nylon tubing is placed inside the well box.

Soil vapor survey samples will be collected at least one week after probe installation. In addition, soil vapor survey samples will only be collected after five consecutive precipitation free days and after any onsite irrigation has been suspended.

The soil vapor survey samples are collected into Tedlar bags as described in **Section 10.0** or Summa canisters as described in **Section 11.0**. Tedlar bags or Summa canisters are labeled as described in **Section 3.0** and placed immediately in an empty ice chest and kept dry and unrefrigerated until its delivery to the analytical laboratory. After each soil vapor sample collection, the air pump is turned on for five minutes to allow ambient air to clear the air pump and polyethylene tubing.

# argon laboratories

15 April 2013

Drew Van Allen Environmental Compliance Group, LLC 270 Vintage Drive Turlock, CA 95382

RE: Stop N Save Inc. Project Data

Enclosed are the results for sample(s) received on 03/26/13 15:15 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

Lab Manager

**Argon Labs CHAIN OF CUSTODY** 2905 Railroad Ave., Ceres, CA 95307 (209)581-9280 Fax (209)581-9282 Data@argonlabs.com Project No: Project Title: SP 325 The Standard Control Constion: Cast Standard Control Cast Standard Eco'cce Sampler's Name: Phone: Fax: (print) BIII To: Client: Address: Sampler's Signature: Sterl gard ANALYSIS TURN AROUND TIME RUSH IPHS BAS 24 Hour other 48 Hour (10 days) COMMENTS Sample ID. 3 Z43 Time 5-WW-72 STMW-> P-um 2- WM MW-60 nduished By: Date: 3 26 B (5:15 SPECIAL INSTRUCTIONS: Time: Received By: 3/20/13

Received By:

Date:

Date:

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lingulshed By:

# **Argon Laboratories Sample Receipt Checklist**

Client Name:	Environmental (	Comp	liance G	′ા				Date	& Time Ro	eceived:	03	/26/13	1	5:15
Project Name:	Stop N Save							Clier	nt Project I	Number:		SNS	18281	
Received By:	HC			Matr	ix:	Water	<b>4</b>	Soil			Slud	ge		
Sample Carrier:	Client 🗹	Lab	oratory		Fed Ex		UPS		Other					
Argon Labs Project	Number:	<u>N30</u>	<u>3056</u>											
Shipper Container in	good condition?					Sample	s received	in prop	oer containe	ers?	Yes	7	No	
	N/A	Yes	<b>✓</b>	No		Sample	s received	d intact?	<b>&gt;</b>		Yes	J	No	
Samples received un	der refrigeration?	Yes	<b>✓</b>	No		Sufficie	nt sample	volume	for request	ted tests?	Yes	1	No	
Chain of custody pres	sent?	Yes	v	No		Sample	es received	d within	holding tim	e?	Yes	7	No	
Chain of Custody sign	ned by all parties?	Yes	V	No		Do sam	ples cont	ain prop	er preserva N/A	itive?	Yes	<b>y</b>	No	
Chain of Custody ma	tches all sample la	ibels?				Do VOA	vials conta	ain zero l	neadspace?					
		Yes	V	No				(None	submitted	$\Box$ )	Yes	7	No	
	ΔNY "3	ام» Ri	FSPONS	TRIM:	RE DETA	III FD IN	THE COL	MMFNT	'S SECTIOI	N RFI OV	v			
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Environmental Compliance Group, LLC

270 Vintage Drive Turlock, CA 95382 Project Number: SNS.18281

Project Name: Stop N Save Inc. Project Manager:Drew Van Allen Work Order No.: N303056

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
STMW-1	N303056-01	Water	03/22/13 08:00	03/26/13 15:15
STMW-2	N303056-02	Water	03/22/13 08:05	03/26/13 15:15
STMW-3	N303056-03	Water	03/22/13 08:10	03/26/13 15:15
MW-4	N303056-04	Water	03/22/13 08:15	03/26/13 15:15
MW-5	N303056-05	Water	03/22/13 08:20	03/26/13 15:15
MW-6	N303056-06	Water	03/22/13 08:25	03/26/13 15:15

# **laboratories** 2905 Railroad Ave. Ceres, CA 95307 (209)581-9280 Fax (209)581-9282

Environmental Compliance Group, LLC

270 Vintage Drive Turlock, CA 95382 Project Number: SNS.18281
Project Name: Stop N Save Inc.
Project Manager: Drew Van Allen

Work Order No.: N303056

### Total Petroleum Hydrocarbons @ Gasoline

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Note
STMW-1 (N303056-01) Water Sampl	ed: 22-Mar-13 08:00	Received: 26-M	far-13 15:	15			
Total Petroleum Hydrocarbons @ Gasoline	ND	50	ug/L	1	04-Apr-13	8015M	
Surr, Rec.:		97 %			n	n	
STMW-2 (N303056-02) Water Sample	led: 22-Mar-13 08:05	Received: 26-M	far-13 15:	15			
Total Petroleum Hydrocarbons @ Gasoline	ND	50	ug/L	I	04-Apr-13	8015M	
Surr. Rec.:		91 %			<i>n</i>	n	
STMW-3 (N303056-03) Water Sample	led: 22-Mar-13 08:10	Received: 26-M	íar-13 15:	15			
Total Petroleum Hydrocarbons @ Gasoline	ND	50	ug/L	1	04-Apr-13	8015M	
Surr. Rec.:	-	95 %				"	
MW-4 (N303056-04) Water Sampled	: 22-Mar-13 08:15 R	eceived: 26-Mar	-13 15:15				
Total Petroleum Hydrocarbons @ Gasoline	290	50	ug/L	1	04-Apr-13	8015M	
Surr. Rec.;		88 %			n,	"	
MW-5 (N303056-05) Water Sampled	: 22-Mar-13 08:20 R	eceived: 26-Mar	-13 15:15				
Total Petroleum Hydrocarbons @ Gasoline	95	50	ug/L	1	04-Apr-13	8015M	
Surr. Rec.:		94 %			n	tt .	
MW-6 (N303056-06) Water Sampled	: 22-Mar-13 08:25 R	eceived: 26-Mar	-13 15:15				
Total Petroleum Hydrocarbons @ Gasoline	ND	50	ug/L	1	04-Apr-13	8015M	
Surr. Rec.:		104 %			"	n	

Approved By

# **EXECUTION laboratories** 2905 Railroad Ave. Ceres, CA 95307 (209)581-9280 Fax (209)581-9282

Environmental Compliance Group, LLC

270 Vintage Drive Turfock, CA 95382 Project Number: SNS.18281

Project Name: Stop N Save Inc. Project Manager:Drew Van Allen

Work Order No.:

N303056

### Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
STMW-1 (N303056-01) Water	Sampled: 22-Mar-13 08:00	Received: 26-M	Iar-13 15:	15			100
Benzene	ND	0.5	ug/L	1	28-Mar-13	8260B	
Toluene	ND	0.5	1+	Ħ	u	**	
Xylenes, total	ND	1.0	n	n	u	n	
Ethylbenzene	ND	0.5	n	m .	11	n	
t-Butanol	2500	5.0	"	n .	n	n	
Methyl tert-Butyl Ether	23	0.5	"	u	n .	u	
Di-Isopropyl Ether	ND	0.5	u	4	ıı .	н	
Ethyl tert-Butyl Ether	ND	0.5	н	14	"	u	
tert-Amyl Methyl Ether	ND	0.5	11	TT .	11	**	
I,2-Dichloroethane	ND	0.5	17	ii .	ħ	**	
1,2-Dibromoethane (EDB)	ND	0.5	n	п	ıı	n	
Surr. Rec.:		93 %			"	"	
STMW-2 (N303056-02) Water	Sampled: 22-Mar-13 08:05	Received: 26-M	1ar-13 15:	:15			
Benzene	ND	0.5	ug/L	1	28-Mar-13	8260B	
Toluene	ND	0.5	**	n	Ü	H.	
Xylenes, total	ND	1.0	п	U	1†	11	
Ethylbenzene	ND	0.5	"		n n	n	
t-Butanol	ND	5.0	"	ч	II	"	
Methyl tert-Butyl Ether	ND	0.5	п	tf .	ш	ii .	
Di-Isopropyl Ether	ND	0.5	u	н	#	4	
Ethyl tert-Butyl Ether	ND	0.5	4	n	n	u	
tert-Amyl Methyl Ether	ND	0.5	#	п	ü	Ħ	
1,2-Dichloroethane	ND	0.5	*	и	"	"	
1,2-Dibromoethane (EDB)	ND	0.5	"	11	17		
		00 %			n	н	

Surr. Rec.:

90%

Environmental Compliance Group, LLC

270 Vintage Drive Turlock, CA 95382 Project Number: SNS.18281

Project Name: Stop N Save Inc. Project Manager:Drew Van Allen Work Order No.: N303056

### Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dílution	Analyzed	Method	Notes
STMW-3 (N303056-03) Water	Sampled: 22-Mar-13 08:10	Received: 26-M	lar-13 15:	15			
Benzene	ND	0,5	ug/L	1	28-Mar-13	8260B	
Toluene	ND	0.5	11	II .	17	11	
Xylenes, total	ND	1.0	**	u	n	"	
Ethylbenzene	ND	0.5	**	"	II .	п	
t-Butanol	ND	5.0	**	11	II .	ii	
Methyl tert-Butyl Ether	ND	0.5	u	n	11	u	
Di-Isopropyl Ether	ND	0.5	0	n	p	"	
Ethyl tert-Butyl Ether	ND	0.5	u	n	п	17	
tert-Amyl Methyl Ether	ND	0.5	u	II .	n n	11	
1,2-Dichloroethane	ND	0.5	11	ú	TP .	n	
1,2-Dibromoethane (EDB)	ND	0.5	17	11		n	
Surr. Rec.:		93 %			ı	n	
MW-4 (N303056-04) Water S	ampled: 22-Mar-13 08:15 R	eceived: 26-Mar	-13 15:15				
Benzene	16	5.0	ug/L	10	28-Mar-13	8260B	
Toluene	ND	5.0	"	N	n	#	
Xylenes, total	ND	10	11	19	п	"	
Ethylbenzene	ND	5.0	11	"	"	u	
t-Butanol	2800	50	**	H	Aff	u u	
Methyl tert-Butyl Ether	690	5.0	ij	н	n	u u	
Di-Isopropyl Ether	ND	5.0	п	Ü	п	"	
Ethyl tert-Butyl Ether	ND	5.0	"	11	n n	"	
tert-Amyl Methyl Ether	ND	5.0	19	#	Ħ	n	
			,,	"	,,	,,	
1,2-Dichloroethane	ND	5.0	"	"			

Surr. Rec.:

91%

Approved By

Environmental Compliance Group, LLC

270 Vintage Drive Turlock, CA 95382 Project Number: SNS.18281
Project Name: Stop N Save Inc.
Project Manager: Drew Van Allen

Work Order No.: N303056

### Volatile Organic Compounds by EPA Method 8260B

Analyte	Resul	Reporting t Limit	Units	Dilution	Analyzed	Method	Notes
MW-5 (N303056-05) Water	Sampled: 22-Mar-13 08:20	Received: 26-Mar	-13 15:15				
Benzene	1.7	0.5	ug/L	1	28-Mar-13	8260B	
Toluene	NE	0.5	**	If	u	"	
Xylenes, total	NE	1.0	*	rt .	10	U	
Ethylbenzene	1.5	0.5	н	n	If	п	
t-Butanol	NE	5.0	11	n	n	и	
Methyl tert-Butyl Ether	14	0,5	"	11	))	u	
Di-Isopropyl Ether	NE	0.5	11	п	U	"	
Ethyl tert-Butyl Ether	NE	0.5	n	(I	(1	11	
tert-Amyl Methyl Ether	NE	0.5	и	ď	q	11	
1,2-Dichloroethane	NE	0.5	n	10	17	н	
1,2-Dibromoethane (EDB)	NE	0,5	u	If	Ħ	n	
Surr. Rec.:		92 %	-		n	"	
MW-6 (N303056-06) Water	Sampled: 22-Mar-13 08:25	Received: 26-Mar	-13 15:15				
Benzene	NE	0,5	ug/L	1	28-Mar-13	8260B	
Toluene	NE	0.5	n	II	п		
Xylenes, total	NE	1.0		"	H	u	
Ethylbenzene	NE	0.5	и	11	"	"	
t-Butanol	NE	5.0		Й	u	**	
Methyl tert-Butyl Ether	18	0.5	"	"	ч	11	
Di-Isopropyl Ether	NE	0.5	19	n	Ħ	n	
Ethyl tert-Butyl Ether	NE	0.5	17	U	ti.	n	
tert-Amyl Methyl Ether	NE	0.5	"	u	11	11	
CIL-MILLY INICHIAL DUICE							
1,2-Dichloroethane	NE	0.5	"	4	•	"	

Surr. Rec.:

91 %

Approved By

Environmental Compliance Group, LLC

270 Vintage Drive Turlock, CA 95382 Project Number: SNS.18281
Project Name: Stop N Save Inc.
Project Manager: Drew Van Allen

Work Order No.: N303056

### Total Petroleum Hydrocarbons @ Gasoline - Quality Control

### **Argon Laboratories**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch N300359 - EPA 5030B				•••						
Blank (N300359-BLK1)				Prepared &	Analyzed	04/04/13				
Surrogate: a,a,a-Trifluorotoluene	47.5		ug/L	50	···	95	70-130			
Total Petroleum Hydrocarbons @ Gasoline	ND	50	ш							
LCS (N300359-BS1)				Prepared &	k Analyzed	04/04/13				
Total Petroleum Hydrocarbons @ Gasoline	1060		ug/L	1000		106	80-120			
LCS Dup (N300359-BSD1)				Prepared &	Analyzed	04/04/13				
Total Petroleum Hydrocarbons @ Gasoline	1100		ug/L	1000		110	80-120	4	20	
Matrix Spike (N300359-MS1)	Sour	ce: N303056	-02	Prepared &	Ł Analyzed	: 04/04/13				
Total Petroleum Hydrocarbons @ Gasoline	950		ug/L	1000	ND	95	70-130			
Matrix Spike Dup (N300359-MSD1)	Sour	ce: N303056-	-02	Prepared 8	k Analyzed	: 04/04/13				
Total Petroleum Hydrocarbons @ Gasoline	910		ug/L	1000	ND	91	70-130	4	20	

Approved By

## EFSON | **laboratories** 2905 Railroad Ave. Ceres, CA 95307 (209)581-9280 Fax (209)581-9282

Environmental Compliance Group, LLC

270 Vintage Drive Turlock, CA 95382 Project Number: SNS.18281

Reporting

Source: N303056-06

23,4

Project Name: Stop N Save Inc. Project Manager:Drew Van Allen Work Order No.: N303056

RPD

20

%REC

70-130

#### Volatile Organic Compounds by EPA Method 8260B - Quality Control

Spike

Source

Prepared & Analyzed: 03/28/13

ND

### **Argon Laboratories**

Analyte	Result	Reporting Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch N300360 - EPA 5030B										
Blank (N300360-BLK1)				Prepared &	Analyzed:	03/28/13		<u> </u>		
Surrogate; Fluorobenzene	46.0		ug/L	50		92	70-130			
Benzene	ND	0.5	"							
Toluene	ND	0.5	"							
Xylenes, total	ND	1.0								
Ethylbenzene	ND	0.5	u							
t-Butanol	ND	5,0	u							
Methyl tert-Butyl Ether	ИD	0.5								
Di-Isopropyl Ether	ND	0,5	11							
Ethyl tert-Butyl Ether	ND	0.5	19							
tert-Amyl Methyl Ether	ND	0,5	#							
1,2-Dichloroethane	ND	0.5	IT							
1,2-Dibromoethane (EDB)	ND	0,5	n							
LCS (N300360-BS1)				Prepared &	: Analyzed:	03/28/13				
1,2-Dibromoethane (EDB)	24.6		ug/L	25		98	80-120			•
LCS Dup (N300360-BSD1)				Prepared &	Analyzed:	03/28/13				
1,2-Dibromoethane (EDB)	23.9		ug/L	25		96	80-120	3	20	
Matrix Spike (N300360-MS1)	Sou	rce: N303056	-06	Prepared &	Analyzed:	03/28/13				
Toluene	22.9		ug/L	25	ND	92	70-130		·	

ug/L

Approved By

Toluene

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

Matrix Spike Dup (N300360-MSD1)

Environmental Compliance Group, LLC

270 Vintage Drive Turlock, CA 95382 Project Number: SNS.18281

Project Name: Stop N Save Inc. Project Manager: Drew Van Allen Work Order No.: N303056

#### **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

## **GROUNDWATER LEVEL DATA FORM**

PROJECT NAME:	Stop N Save	PROJECT NUMBER:	SNS.18281
PROJECT MANAGER:	DVA	TASK NUMBER:	
SITE ADDRESS:	20570 Stanton Avenue, Castro	Valley, CA	·

WELL ID	TIME	DEPTH TO BOTTOM	DEPTH TO WATER	DEPTH TO PRODUCT	PRODUCT THICKNESS	PRODUCT THICKNESS X 0.8	COMMENTS
STMW-1	0920	22.15	8,10				71
STMW-2	U916		7.14				
STMW-3	0915	21.65	6.67				
MW-4	0918	12.12	7.95				
MW-5	0917	14.53	7.35				
MW-6	0921	14.57	8,05				***
							:
			ø				
							*****
							.,
						*	
+:							

FIELD TECHNICIAN:	1)W2	
DATE:	3/27/1/2	

PROJECT NAME:	Stop N Save	)			ROJECT NUMBER: SNS.18281 ASK NUMBER:			
PROJECT MANAGER: SITE ADDRESS:	DVA 20570 Stanto	on Avenue, Ca	stro Valley		EK:			
OHE ADDRESS.	20070 Otani	on Attonia, oa	ono vanoy,	<u> </u>		,		
WELL IC	: STM	W-(		TYPE (	OF WELL:	Monitoring		
WATER COLUMN DATA We D Water C	A: Il Total Depth: epth to Water: olumn Length:	(feet) 72. i S 9. (O		WELL DIAME 2-inch: 4-inch: 6-inch:	TER:			
PURGE VOLUME CALC		ultiplier x No. \	/olumes = I	Purge Volume				
して、こと Water Column L	x ength	O, () Multiplier	x	No. Volumes	=	7.25 Purge Volume		
MULTIPLIER DATA: Multiplier fo	r Schedule 40 2-inch: 4-inch: 6-inch:	0.65	_inear Foot	Based on Cas	ing Diame	ter:		
PURGE METHOD:			SAMPLE I	METHOD:				
	posable Bailer				able Bailer			
	PVC Bailer				Pump:			
Subr	nersible Pump				Other:			
	Otner							
TIME PURGED (gal)	рН	TEMP. (°C)	COND. (uS/cm)	DO (mg/l)	ORP (mV)	COMMENTS		
100 7.5	6.46	17.+	257=					
1006 5.0	665	187	277					
1011 +.10	6.85	(8.3	254			say		
<del>'''                                 </del>	:				****	1 1007		
-		·						

FIELD TECHNICIAN: \_\_\_\_ DATE: \_\_

PROJECT NAME: Stop N Save PROJECT MANAGER: DVA 20570 Stanton Avenue, Castro V					PROJECT NU TASK NUMB CA		SNS.18281		
	WELL ID:	STM	v-2		TYPE OF WELL: Monitoring				
WATER COLUMN DATA:  Well Total Depth:  Depth to Water:  Water Column Length:				- -	WELL DIAMETER: 2-inch: 4-inch: 6-inch:				
PURGE VO	LUME CALCU		ultiplier x No. \	Volumes = 1	Purae Volume		ø		
Wa	ter Column Le		Multiplier		No. Volumes	=	7.5 Purge Volume		
MULTIPLIE									
Multiplier for Schedule 40 PVC; Gallons/Linear Foot Based on Casing Diameter: 2-inch: 0.17 4-inch: 0.65 6-inch: 1.5									
PURGE METHOD:  Disposable Bailer  PVC Bailer  Submersible Pump  Other					/IETHOD: Dispos	able Baile Pump Other			
TIME	VOLUME PURGED (gal)	рН	TEMP.	COND. (uS/cm)	DO (mg/l)	ORP (mV)	COMMENTS		
1025	2,5	6.80	19.7	Z64 795					
1036	7.5	7.00	(पेन	306			saw		
					•				
FIELD T	TECHNICIAN:	$g_{r}$	War I						

DATE:

PROJECT N		Stop N Save  DVA			PROJECT NU TASK NUMBE	_	SNS.18281	
SITE ADDRI	ADDRESS: 20570 Stanton Avenue, Cas				CA		·	
	WELL ID:	u-3		TYPE OF WELL: Monitoring				
WATER CO	<b>LUMN DATA:</b> Well De Water Co	2 (feet) 6 5 6 5 14 7 0		WELL DIAME 2-inch: _ 4-inch: _ 6-inch: _				
PURGE VOL	LUME CALCL		ultiplier x No. \	/olumos = [	Burgo Volume			
,	ter Column Le	. x	Multiplier	x	No. Volumes	= .	7-5 Purge Volume	
MULTIPLIER DATA:  Multiplier for Schedule 40 PVC; Gallons/Linear Foot Based on Casing Diameter:  2-inch: 0.17  4-inch: 0.65  6-inch: 1.5								
PURGE MET	<b>THOD:</b> Disp Subm		SAMPLE N		able Bailer Pump: Other:			
TIME	VOLUME PURGED (gal)	рН	TEMP. (°C)	COND. (uS/cm)	DO (mg/l)	ORP (mV)	COMMENTS	
107	2,5	7.07	17.9	300 302				
112	45	300	19.5	409		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
1120			<del>- ( • </del>				Sawy	
				<u> </u>				
	<u></u>			<u> </u>	<u> </u>			

FIELD TECHNICIAN: \_ DATE: \_

PROJECT NAME: Stop N Save  PROJECT MANAGER: DVA  SITE ADDRESS: 20570 Stanton Avenue, Cas				•	PROJECT NU TASK NUMBE CA		SNS.18281	
	WELL ID:	-4		TYPE C	OF WELL:	Monitoring		
WATER COLUMN DATA:  Well Total Depth:  Depth to Water:  Water Column Length:  4 17					WELL DIAME 2-inch: _ 4-inch: _ 6-inch: _	TER:		
	4.17	ultiplier x No. \	√olumes = F	Purge Volume  3	=	7.25 Purge Volume		
MULTIPLIER	Water Column Length x							
PURGE MET	Disp		SAMPLE P - - -		able Bailer Pump: Other:			
· · · · · · · · · · · · · · · · · · ·								
TIME	VOLUME PURGED	рН	TEMP. (°C)	COND. (uS/cm)	DO (mg/l)	ORP (mV)	COMMENTS	
TIME OPTO OPTO		pH 0.37 9.49 6.53	l	1	DO (mg/l)		COMMENTS	

PROJECT NAME: PROJECT MANAGER SITE ADDRESS:	ROJECT MANAGER: DVA					SNS.18281		
WELL	ID: MW-S	<u> </u>	TYPE OF WELL: Monitoring					
	TA: Vell Total Depth: Depth to Water: Column Length:	<u> </u>	WELL DIAMETER: 2-inch: 4-inch: 6-inch:					
PURGE VOLUME CAI Water Co	_CULATION: lumn Length x M	ultiplier x No. \	Volumes =	Purge Volume				
710 Water Column	_	O_17 Multiplier		No. Volumes	=	7 75 Purge Volume		
MULTIPLIER DATA:  Multiplier for Schedule 40 PVC; Gallons/Linear Foot Based on Casing Diameter:  2-inch: 0.17  4-inch: 0.65  6-inch: 1.5								
	bmersible Pump			E METHOD:  Disposable Bailer  Pump: Other:				
VOLUM TIME PURGE (gal)	1	TEMP. (°C)	COND. (uS/cm)	DO (mg/l)	ORP (mV)	COMMENTS		
1046 1.25 1050 2.5 1054 3.75	7,10	15 0 17 8 17 9	307 307		1 11 1 2 11 11 11 11 11 11 11 11 11 11 1	Souple		
(976)			visit deliver ( 1 miles (			<u> </u>		

FIELD TECHNICIAN: 500 DATE: 3(101)

PROJECT NAME: PROJECT MANAGER SITE ADDRESS:			PROJECT NUMBER: TASK NUMBER: stro Valley, CA			SNS.18281		
WELL	ID: <u>MW</u> -	6	-	TYPE	OF WELL:	Monitoring		
Water	Well Total Depth: Depth to Water: Column Length:	405	- - -	WELL DIAME 2-inch: 4-inch: 6-inch:				
PURGE VOLUME CA Water Co	L <b>CULATION:</b> lumn Length x M	ultiplier x No.	Volumes = I	Purge Volume				
Water Column	_	O. 7 Multiplier		No. Volumes		3.25 Purge Volume		
MULTIPLIER DATA:  Multiplier for Schedule 40 PVC; Gallons/Linear Foot Based on Casing Diameter:  2-inch: 0.17  4-inch: 0.65  6-inch: 1.5								
PURGE METHOD:	Disposable Bailer	·/	SAMPLE METHOD:  Disposable Bailer					
	PVC Bailer bmersible Pump Other		- - -	·				
TIME PURGE		TEMP. (°C)	COND. (uS/cm)	DO (mg/l)	ORP (mV)	COMMENTS		
1939 27	\$ 6.79	10.0	19 3 7.54					
0938 2.2	5 7.01	17.0	291			Co. (A)		
0943						Same		
	<del></del>					***************************************		

FIELD TECHNICIAN: DATE: B7