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May 2, 2012

11:46 am, Oct 08, 2012

Alameda County Environmental Health

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

Subject:

First Quarter 2012 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 May 2, 2012 First Quarter 2012 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,

Sean Kapooi



270 Vintage Drive Turlock, CA 95382 P: 209.664.1035

F: 209.664.1040

# FIRST QUARTER 2012 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

May 2, 2012

Drew Van Allen Senior Project Manager MICHAEL

S.
SGOURAKIS

No. 7194

OF CALIFORNIA

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 2012 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 11 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 2012 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 30, 2012, ECG performed the first quarter 2012 monitoring event.

### Work Scheduled for Next Quarter

1. Prepare the first quarter 2012 monitoring report.

### FIRST QUARTER 2012 GROUNDWATER MONITORING EVENT

ECG performed the first quarter 2012 groundwater monitoring and sampling event at the site on March 30, 2012. 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 2012 Monitoring Report Stop N Save Inc. Facility 20570 Stanton Avenue, Castro Valley, California

Analysis:

Current Phase of Project:

Groundwater Sampling Schedule:

Assessment

Semi-annual

Wells MW-1 through MW-6

TPHg, BTEX, 5 oxygenates, and 2 lead

scavengers by EPA Method 826 OB

Is Free Product Present On-Site:

No

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

Benzene Detected Range
MTBE Detected Range
TBA Detected

6.53-feet bgs

157.91-feet above mean sea level

East Northeast 0.10 feet/foot

120 micrograms per liter (ug/L) (MW-5)

7.8 ug/L (MW-5) to 26 ug/L (MW-4) 1.7 ug/L (STMW-2) to 2,100 (MW-4) 13 ug/L (MW-5) to 4,700 (STMW-1)

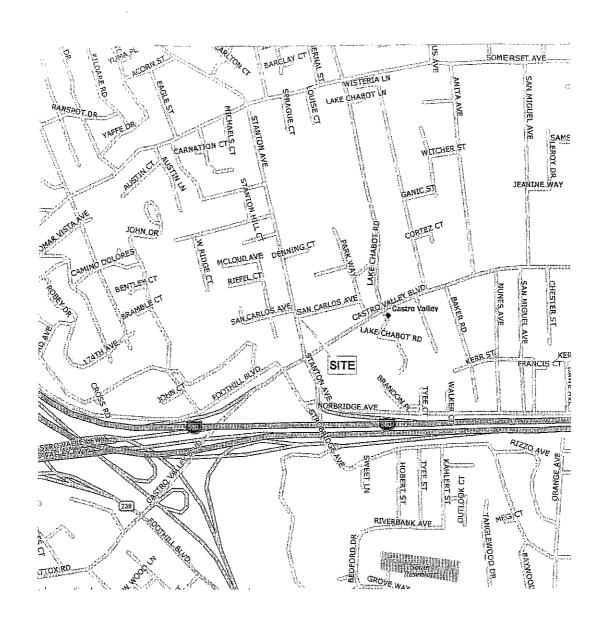
Laboratory analytical reports and COCs are provided in Appendix B. Field notes are located in Appendix C. Summaries of groundwater monitoring and analytical data are presented in Tables 4a and 4b.

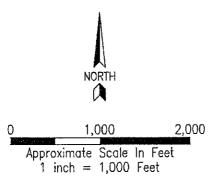
### CONCLUSIONS

The groundwater elevations and gradient direction from the first quarter 2012 are consistent with historical results. Groundwater isoconcentration maps from the first quarter 2012 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

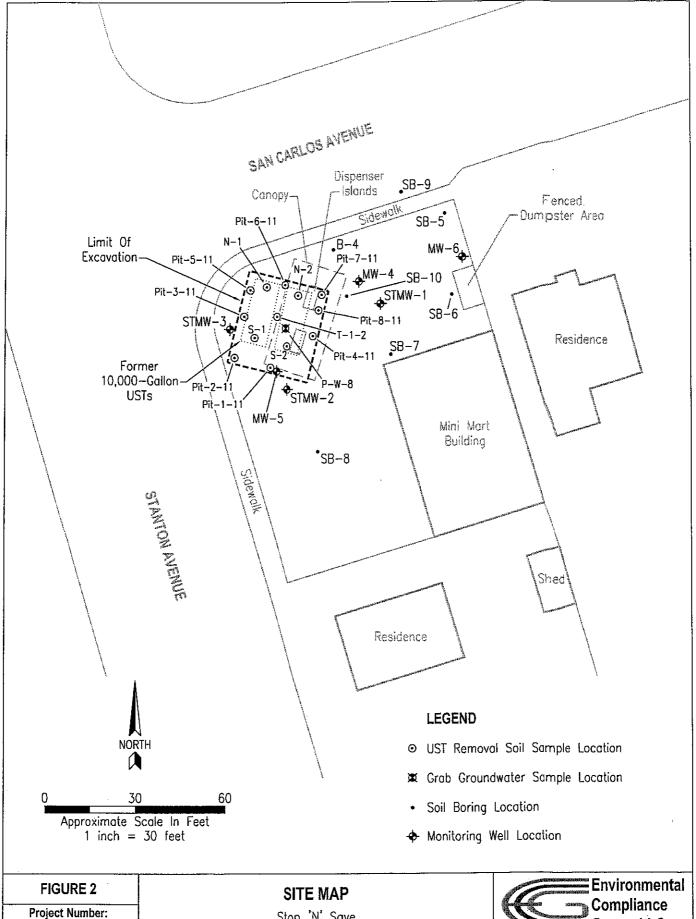
**Date:** July 21, 2010

### SITE LOCATION MAP

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



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



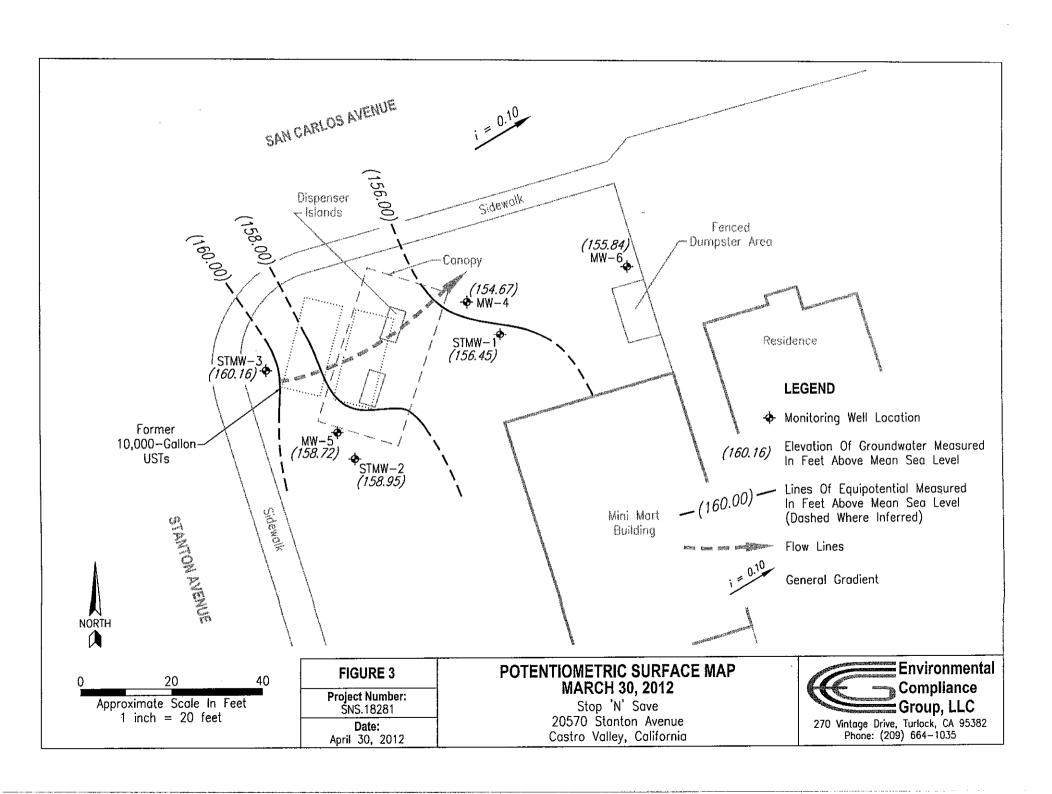
SNS.18281

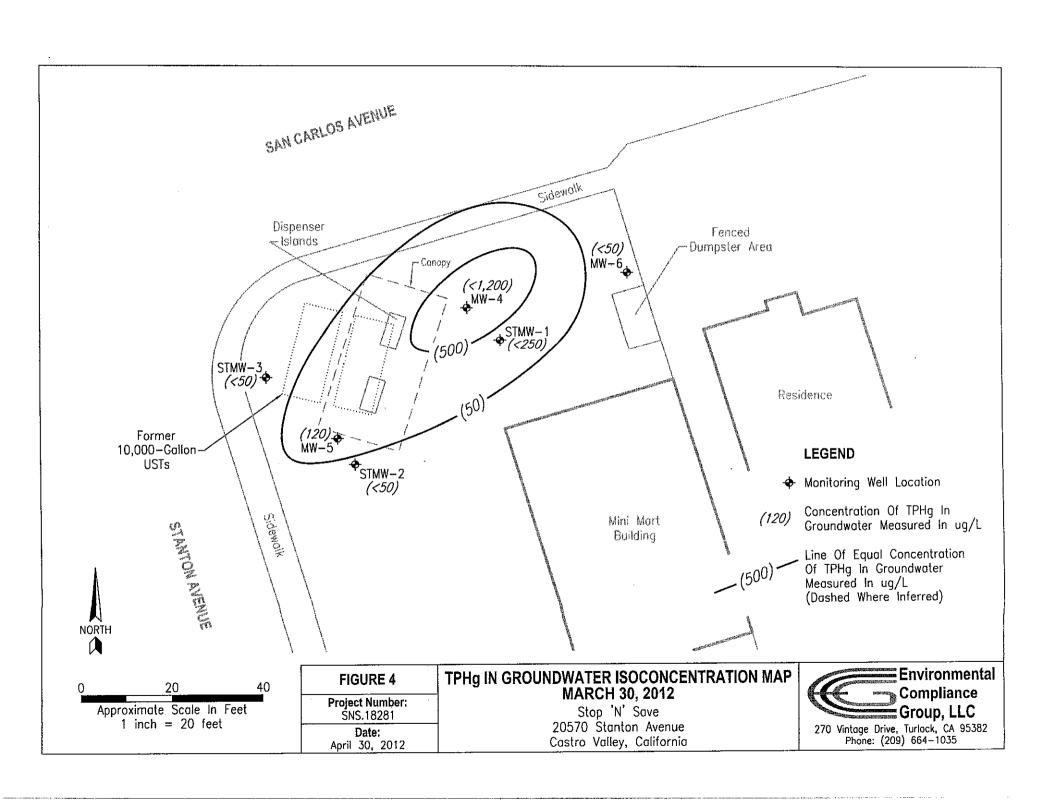
Date: January 17, 2011

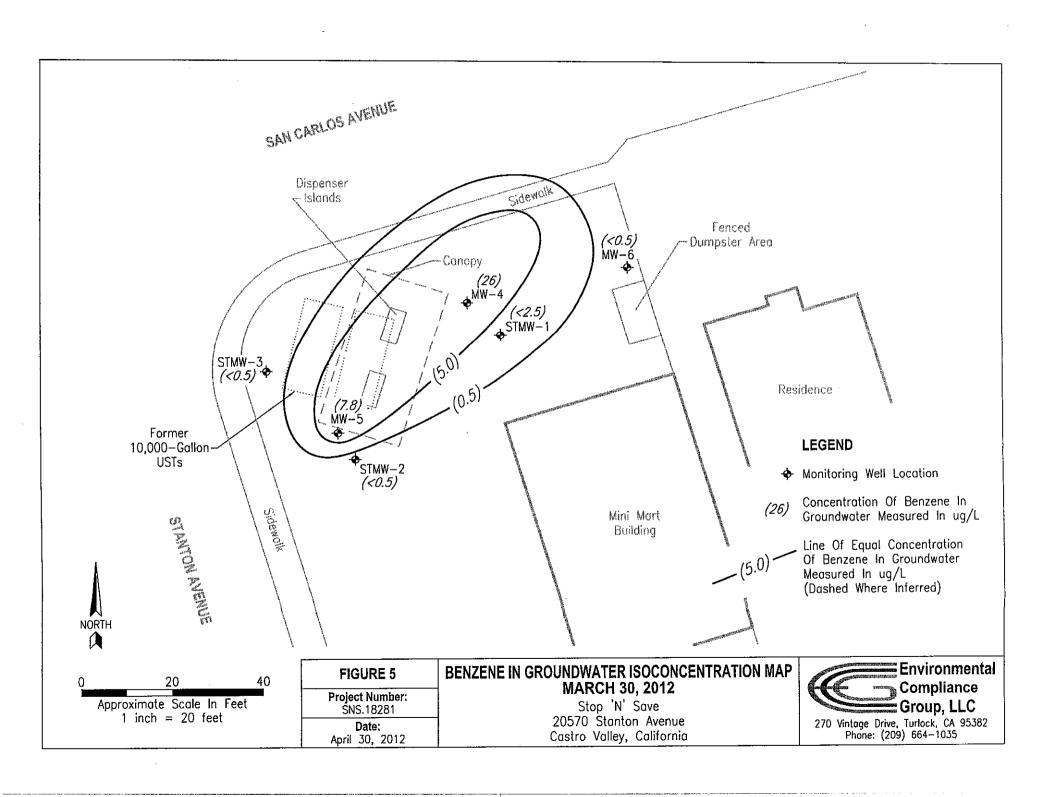
Stop 'N' Save 20570 Stanton Avenue Castro Valley, California

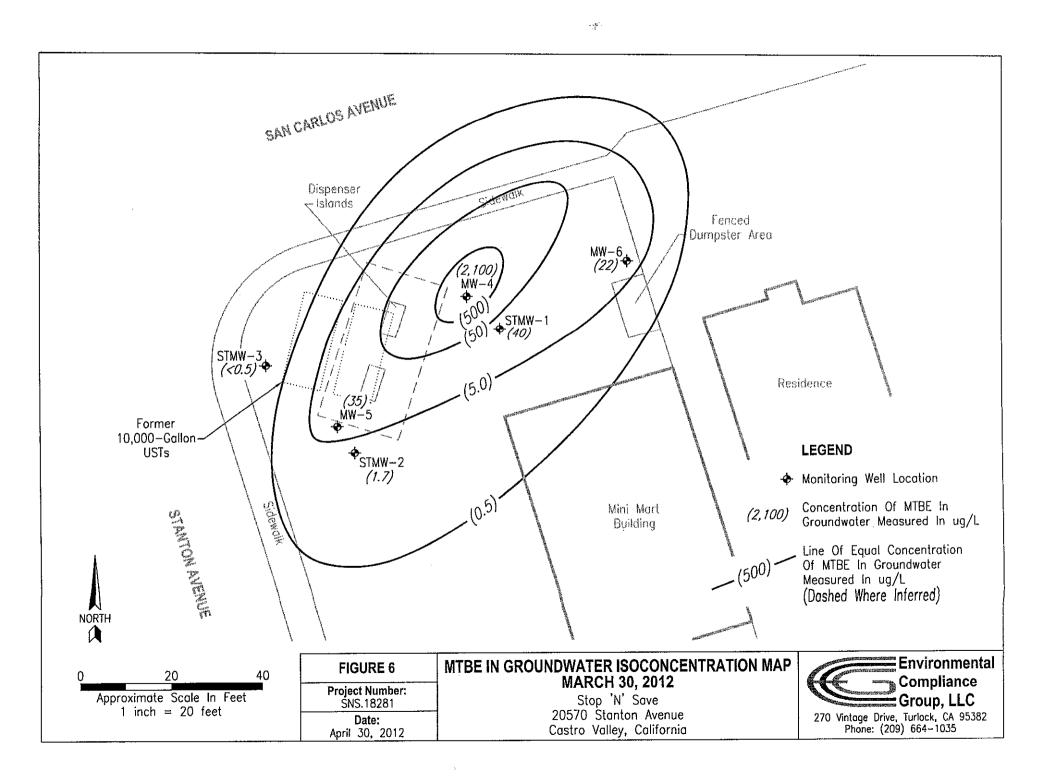


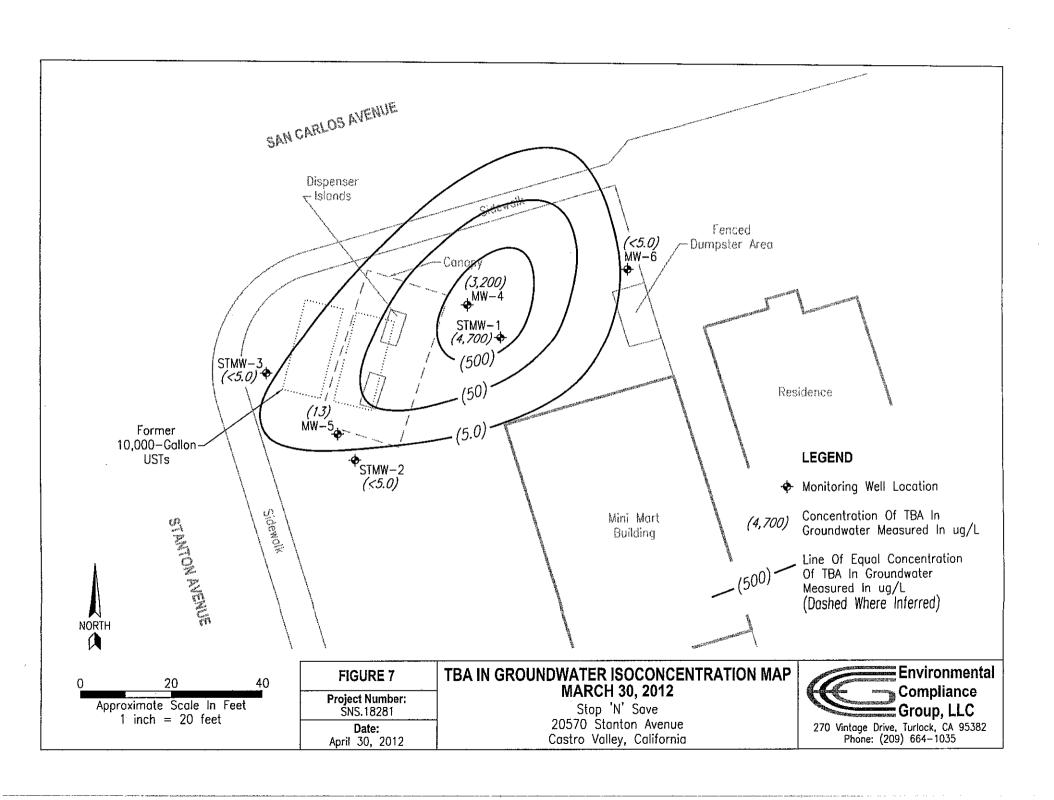
270 Vintage Drive, Turlock, CA 95382 Phone: (209) 664-1035











### **TABLES**

## Table 1 Well Construction Details

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

Well ID	Date Installed	TOC	Total	Casing Diameter	Casing Material	Screen/ Filter	Screen Interval			
טוי	installeu	Elevation (ft amsl)	Depth (ft bgs)	(inches)	Material	inter	(ft bgs)			
Monitoring Wells										
STMW-1		163.76	23	2	PVC	0.020/#3	9-23			
STMW-2	October 2000	164.94	22	2	PVC	0.020/#3	9-22			
STMW-3	2000	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	2010	163.19	15	2	PVC	0.020/#3	5-15			

### Notes:

TOC - denotes top-of-casing

ft - denotes feet

amsl - 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

	Sample					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			(···Oi··Oi	, <u>, , , , , , , , , , , , , , , , , , </u>	<u>, , , , , , , , , , , , , , , , , , , </u>		
N-1	10*		5.6	0.07	0.26	0.15	0.98
N-2	10*	F-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*		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	1.1.2000	<1.0	<0.005	<0.005	<0.005	<0.005
Pit-5-11	11	July 2000	130	0.14	0.26	1.1	8.5
Pit-6-11	11	<u> </u>	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							
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	1	24	<0.025	<0.025	0.17	0.50
SB-7-8	8	Ì	<1.0	<0.005	<0.005	<0.005	<0.005
SB-7-10	10		<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		<u></u>			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	September	76	<1.0	<1.0	<1.0	7.7
STMW-2	5		<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		<1.0	<0.005	<0.005	<0.005	<0.005
MW-5-8	8	November	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		<1.0	<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

	Sample								
	Depth	Collection	DIPE	ETBE	MTBE	TAME	ТВА	1,2-DCA	EDB
Boring ID	(feet)	Date	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Near Surface		<del></del>	<u> </u>	\ 0, 0,	<u> </u>				
N-1	10*				0.74				
N-2	10*	1			3.8				
S-1	10*	February			0.18				
S-2	10*	2000			0.11				
T-1-2	10*	<b>i</b> i			1.2				
Pit-1-11	11				<0.005				
Pit-2-11	11	1 1			<0.005				
Pit-3-11	11	1 1			0.094				
Pit-4-11	11	1			<0.005				
Pit-5-11	11	July 2000			<0.005				
Pit-6-11	11	]			0.42				
Pit-7-11	11	]			<0.005				
Pit-8-11	11	]			16				
Soil Borings								,	
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	Mayanahan	<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-isopropy! 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	тва -	denotes tertiary butyl alcohol
1.2-DCA - denotes 1.2-dichloroethane	FDB -	denotes ethvi 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)					
<b>UST Pit Sar</b>	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)
<b>UST Pit Sar</b>	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

Well ID	Date Measured	Depth to Groundwater	Groundwater Elevation	TPHg	Benzene	Toluene	Ethyl- be nzene	Total Xylenes
(TOC)		(ft bgs)	(ft amsl)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
		·						
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	<2,500	<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
	3/16/2005	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

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

Well	Date	Depth to	Groundwater				Ethyl-	Total
ID (TOC)	Measured	Groundwater	Elevation	TPHg	Benzene	Toluene	benzene	Xylenes
(TOC)		(ft bgs)	(ft amsl)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
<b>STMW-2</b> 164.94	10/4/2000	8.22	156.72	69	<5.0	<5.0	<5.0	<5.0
104.34	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
	3/16/2005	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
. <u> </u>	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
L	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
ſ	12/1/2009	7.43	157.51	<50	<0.50	<0.50	<0.50	<1.5
Γ	9/20/2010	7.58	157.36	<50	<0.50	<0.50	<0.50	<1.0
	11/30/2010	6.94	158.00	<50	<0.50	<0.50	<0.50	<1.0
Ī	3/8/2011	6.00	158.94	<50	<0.50	<0.50	<0.50	<1.0
Ī	9/23/2011	7.68	157.26	<50	<0.50	<0.50	<0.50	<1.0
Ī	3/30/2012	5.99	158.95	<50	<0.50	<0.50	<0.50	<1.0

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Well	Date	Depth to	Groundwater				Ethyl-	Total
l 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
	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
	3/16/2005	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
<u> </u>	11/30/2010	6.20	159.28	<50	<0.50	<0.50	<0.50	<1.0
Ĺ	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
						<u> </u>		

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)
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
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
ļ	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
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
<u></u> i								

### Notes:

TPHg - denotes total petroleum hydrocarbons as gasoline

ug/L - denotes micrograms per liter

< - denotes less than the detection limit

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Well	Date	0.000			-					
ID	Measured	DIPE	ETBE	MTBE	TAME	ТВА	1,2-DCA	EDB		
		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L) (ug/L) (ug				
STMW-1	10/4/2000			69,000		<10,000				
97.93	1/4/2001			89,000		<20,000				
	3/16/2004		- 4-4	39		<10				
	7/5/2004		77-	520	***	<50	<b></b> -			
	12/28/2004			32		<20		m=-		
	3/24/2005		****	20		<20				
[	7/20/2005			310		<50				
ĺ	9/15/2005	~~~		13,000	<del></del>	2,500				
	12/12/2005			170		100				
	3/16/2005			21		<10		<b>4</b> 2122		
	6/22/2006			70		<20				
	9/21/2006			1,600		2,300				
	12/18/2006		Series of URB	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		
ĺ	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	<1.0	<10		
ſ	6/12/2009	<10	<10	170	<10	5,000	<10	<10		
	12/1/2009	<10	<10	42	<10	5,600	<10	<10		
Ī	9/20/2010	<5.0	<5.0	51	<5.0	8,100	<5.0	<5.0		
ſ	11/30/2010	<5.0	<5.0	42	<5.0	4,100	<5.0	<5.0		
Ī	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		
Ī	3/30/2012	<2.5	<2.5	40	<2.5	4,700	<2.5	<2.5		

Well	Date							
ID	Measured	DIPE	ETBE	МТВЕ	TAME	ТВА	1,2-DCA	EDB
		(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			120		<20		NAME OF THE PARTY
	3/16/2004			1,700		<200	<u></u>	
	7/5/2004			1,800		<200		
ļ	12/28/2004			1,400		<250		***
	3/24/2005			930		180		
	7/20/2005			43		920		
	9/15/2005	N-14		88		130		
	12/12/2005			23		22		
	3/16/2005			34	4444	150		
	6/22/2006			, 12		200		
Ĺ	9/21/2006			16		41		
	12/18/2006			15		71		
]	3/22/2007		775	15		71		
	6/29/2007			14		<10		
[	9/28/2007	<0.5	<0.5	14	<0.5	<5.0	<0.5	<0.5
1	12/20/2007	<0.5	<0.5	6.2	<0.5	54	<0.5	<0.5
Ĺ	3/27/2008	<1.0	<1.0	14	<1.0	<1.2	<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

Well	Date							
ID	Measured	ed DIPE ETBE M		MTBE	TAME	TBA	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		<b></b>
	3/16/2004			2.8		<10		
	7/5/2004			2.5		<10		
	12/28/2004			2.0		<10		
	3/24/2005			1.4		<10		
	7/20/2005			1.5		<10		
	9/15/2005			1.2		<10		
Į	12/12/2005			<1.0		<10	,	
	3/16/2005		****	<1.0		<10		
	6/22/2006	lan marketal		<1.0		<10		
	9/21/2006		111	<1.0		<10		
	12/18/2006	<b>3</b>		<1.0		<10		
	3/22/2007		-1006	<1.0		<10		
	6/29/2007	Nation and		<1.0	_44	<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

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
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
			·					•
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
	3/30/2012	<0.5	<0.5	22	<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

### 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 (feet bgs.)	Screen Interval (feet bgs.)	Seal Inteval (feet bgs.)	Installation Date	Distance/ Direction (feet)	Notes:
1-5	Unocal	2445 Castro Valley Boulevard, Castro Valley	Monitoring	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/\$	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 avallable

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. 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.

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 TEDLAR BAG SOIL VAPOR SURVEY, TEMPORARY SAMPLING POINTS

Sampling equipment to collect Tedlar bag soil vapor survey samples includes an air pump, a Tedlar bag which can range in size from 1 to 10 liters, 3/16-inch diameter polyethylene tubing, and possibly a soil vapor probe. 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.

A temporary borehole is advanced using either a stam bar or a direct push drill rig. In the case of the stam 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 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.

## 13.0 TEDLAR BAG SOIL VAPOR SURVEY, TEMPORARY AND REPEATABLE SAMPLING POINTS

Sampling equipment to collect Tedlar bag soil vapor survey samples includes an air pump, a Tedlar bag which can range in size from 1 to 10 liters, 3/16-inch diameter polyethylene tubing, and possibly a soil vapor probe. 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.

#### 13.1 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 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.

#### 13.2 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

12 April 2012

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 04/04/12 13:55 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

# Argon Analytical Services, Inc. CHAIN OF CUSTODY

Project Information:							Report Yo:							Samples Submitted To:				
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EUGAHOII:		Valley,				Contac	٠.	Drew Va							Contact	t:		
Sampler's Name:	Casir	valley,	CA			Phone:		209.864							Phone:			(209) 581-9280
						Fax:									Fax:			(209) 581-9282
(print)						rux:		209.664		Bill To:						sults Req	uired!	(220) 101 0202
Sampler's Signatur	e:									BIR 10:					Date No.	344123 1424	unuui	
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# **Argon Laboratories Sample Receipt Checklist**

Client Name:	Environmental (	Compliar	nce Grou	ıp, LL	.C			Date	& Time Re	eceived:	04	/04/12_	1	3:55
Project Name:	Stop N Save Inc	D						Clie	nt Project I	Number:		SNS	.18281	
Received By:	1.C.			Matr	ix:	Water	7	Soil			Slud	ge		
Sample Carrier:	Client	Labora	tory		Fed Ex		UPS		Other					
Argon Labs Project	Number:	M2040	<u>)4</u>											
Shipper Container in	good condition?					Sample	s received	d in prop	er containe	rs?	Yes	<u> </u>	No	
	N/A	Yes [		No		Sample	s received	d intact?	1		Yes	<b>4</b>	No	
Samples received und	der refrigeration?	Yes [	7	No		Sufficie	nt sample	volume	for request	ed tests?	Yes	J	No	
Chain of custody pres	sent?	Yes [	2	No		Sample	es receive	d within	holding time	e?	Yes	<b>4</b>	No	
Chain of Custody sign	ned by all parties?	Yes [	/	No		Do san	nples cont	ain prop	er preserva N/A	tive?	Yes	1	No	
Chain of Custody mal	tches all sample la	els?				Do VOA	vials conta	ain zero l	eadspace?					
		Yes [	7	No				(None	submitted	□)	Yes	1	No	
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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.:

M204004

## ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
STMW-1	M204004-01	Water	03/30/12 10:17	04/04/12 13:55
STMW-2	M204004-02	Water	03/30/12 09:09	04/04/12 13:55
STMW-3	M204004-03	Water	03/30/12 10:05	04/04/12 13:55
MW-4	M204004-04	Water	03/30/12 08:24	04/04/12 13:55
MW-5	M204004-05	Water	03/30/12 09:38	04/04/12 13:55
MW-6	M204004-06	Water	03/30/12 08:16	04/04/12 13:55

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.: M204004

TPH-gas & Volatile Organic Compounds by GC/MS

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Note
STMW-1 (M204004-01) Water	Sampled: 30-Mar-12 10:17	Received: 04-A	pr-12 13:	55			
Total Petroleum Hydrocarbons @ Gasoline	ND	250	ug/L	5	06-Apr-12	EPA 8260B	, and
Benzene	ND	2.5		rr .	n	η	
Toluene	ND	2.5	u	n	10	n	
Xylenes, total	ND	5.0	0	U	u	U	
Ethyl Benzene	ND	2.5	4	n	#	,	
-Butanol	4700	25	11	a a	ų	4	
Methyl tert-Butyl Ether	40	2.5	11	u	ıı		
Di-Isopropyl Ether	ND	2.5	п	It	g g	u u	
Ethyl tert-Butyl Ether	ND	2.5	и	H	#	а	
ert-Amyl Methyl Ether	ND	2.5	10	n	"	11	
1,2-Dichloroethane	ND	2.5	*	U	u	11	
,2-Dibromoethane (EDB)	ND	2,5	•	i)	*	19	
Surr. Rec.;		98 %			н	μ	
STMW-2 (M204004-02) Water	Sampled: 30-Mar-12 09:09	Received: 04-A	Apr-12 13:	55			
Total Petroleum Hydrocarbons @	ND	50	ug/L	1	06-Apr-12	EPA 8260B	
Benzene	ND	0,5	11	"	u u	11	
Toluene	ND	0.5	it	u	it	19	
Kylenes, total	ND	1.0	H	1/	н	n	
Ethyl Benzene	ND	0.5	n	п	(I	n	
-Butanol	ND	5,0		Ħ	Ħ	n	
Methyl tert-Butyl Ether	1.7	0.5	,,	"	p	u u	

Surr. Rec.:

1,2-Dichloroethane

Di-Isopropyl Ether

Ethyl tert-Butyl Ether

tert-Amyl Methyl Ether

1,2-Dibromoethane (EDB)

0.5 91%

0.5

0.5

0.5

0.5

ND

ND

ND

ND

ND

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.: M204004

TPH-gas & Volatile Organic Compounds by GC/MS

Analyte	Result	Reporting Limit	Units	Dilution	Analyzed	Method	Notes
STMW-3 (M204004-03) Water S	Sampled: 30-Mar-12 10:05	Received: 04-A	pr-12 13:	55			
Total Petroleum Hydrocarbons @	ND	50	ug/L	1	06-Apr-12	EPA 8260B	
Gasoline							
Benzene	ND	0.5	n	Ψ	n	11	
Toluene	ND	0,5	ij	n	n n	п	
Xylenes, total	ND	1.0		n	11	14	
Ethyl Benzene	ND	0.5		II .		*	
t-Butanol	ND	5.0	11	II .	"	**	
Methyl tert-Butyl Ether	NĐ	0,5	н	16	п	**	
Di-Isopropyl Ether	ND	0.5	н	14	tf	"	
Ethyl tert-Butyl Ether	ND	0,5	"	**	n	n	
tert-Amyl Methyl Ether	ND	0.5		"	n n		
1,2-Dichloroethane	ND	0.5	п	u .	11	u	
1,2-Dibromoethane (EDB)	ND	0.5		H .	"	ur .	
Surr. Rec.:		93 %			п	н	
MW-4 (M204004-04) Water San	npled: 30-Mar-12 08:24 R	eceived: 04-Apr	-12 13:55				
Total Petroleum Hydrocarbons @	ND	1200	ug/L	25	06-Apr-12	EPA 8260B	

Total Petroleum Hydrocarbons @	ND	1200	ug/L	25	06-Apr-12 EPA 8260B
Gasoline	**		4	**	n tt
Benzene	26	12			
Toluene	ND	12	it	n	44 17
Xylenes, total	ND	25	Ħ	il	п н
Ethyl Benzene	ND	12	"	ut .	п
t-Butanol	3200	120	"	11	я п
Methyl tert-Butyl Ether	2100	12	**	n	r e
Di-Isopropyl Ether	ND	12	н		U 17
Ethyl tert-Butyl Ether	ND	12	n	tr.	н
tert-Amyl Methyl Ether	ND	12	n.	19	и и
1,2-Dichloroethane	ND	12	U	n	d d
1,2-Dibromoethane (EDB)	ND	12	и	*	H H

Surr. Rec.:

104%

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.: M204004

## TPH-gas & Volatile Organic Compounds by GC/MS

Analyte	Result	Reporting Limit	Units	Dilution		Analyzed	Method	Notes
MW-5 (M204004-05) Water Sampled: 30-	-Mar-12 09:38 Rec	eived: 04-Apr	-12 13:55					
Total Petroleum Hydrocarbons @	120	50	ug/L	1		06-Apr-12	EPA 8260B	
Gasoline								
Вепzепе	7.8	0.5	18	u		ut	u	
l'oluene	ND	0,5	Ħ	"		19	10	
Xylenes, total	ND	1.0	Ħ	17		"	**	
Ethyl Benzene	6.9	0.5	"	rt		a	10	
-Butanol	13	5.0	н	n		*	17	
Methyl tert-Butyl Ether	35	0.5		n		n	н	
Di-Isopropyl Ether	ND	0.5		п		n	#	
Ethyl tert-Butyl Ether	ND	0.5				«	"	
ert-Amyl Methyl Ether	ND	0.5		ø		11	11	
,2-Dichloroethane	ND	0.5		18		n	n	
1,2-Dibromoethane (EDB)	ND	0.5	u	1*			u	
Surr. Rec.:		94%			· · · · · ·	и	н	

## MW-6 (M204004-06) Water Sampled: 30-Mar-12 08:16 Received: 04-Apr-12 13:55

Total Petroleum Hydrocarbons @	ND	50	ug/L	1	06-Apr-12	EPA 8260B	
Gasoline							
Benzene	ND	0,5	"	1*	"	"	
Toluene	ND	0.5		n	а	II	
Xylenes, total	ND	1.0	"		11	u	
Ethyl Benzene	ND	0.5	11	"	n	11	
t-Butanol	ND	5.0	H	я	u	H	
Methyl tert-Butyl Ether	22	0.5	"	i <del>t</del>	i <del>t</del>	n	
Di-Isopropyl Ether	ND	0.5	"	н	U	ii .	
Ethyl tert-Butyl Ether	ND	0,5	п	ji	u	U	
tert-Amyl Methyl Ether	ND	0,5	ú	п	n	11	
1,2-Dichloroethane	ND	0.5	18	17	н	11	
1,2-Dibromoethane (EDB)	ND	0.5	ıı	"	11	H	
						,,	

Surr. Rec.:

88 %

Approved By

ETSOID | Idooratories 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.:

M204004

## 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 M200420 - EPA 5030B										
Blank (M200420-BLK1)				Prepared 8	Analyzed:	04/06/12				
Surrogate: Fluorobenzene	51.5		ug/L	50		103	70-130			
Total Petroleum Hydrocarbons @ Gasoline	ND	50	n n							
Benzene	ND	0.5	"							
Toluene	ND	0.5	"							
Xylenes, total	ND	1.0								
Ethyl Benzene	ND	0.5	u							
t-Butanol	ND	5.0	a							
Methyl tert-Butyl Ether	ND	0,5	u							
Di-Isopropyl Ether	ND	0,5	**							
Ethyl tert-Butyl Ether	ND	0.5	a							
tert-Amyl Methyl Ether	ND	0.5	н							
1,2-Dichloroethane	ND	0.5	n							
1,2-Dibromoethane (EDB)	ND	0,5	"							
LCS (M200420-BS1)				Prepared &	k Analyzed	: 04/06/12				
Methyl tert-Butyl Ether	25,6		ug/L	25		102	80-120	-		
LCS Dup (M200420-BSD1)				Prepared &	k Analyzed	: 04/06/12				
Methyl tert-Butyl Ether	26.2		ug/L	25		105	80-120	2,	20	
Matrix Spike (M200420-MS1)	Sou	rce: M204004	-03	Prepared &	k Analyzed	: 04/06/12				
Benzene	25.4		ug/L	25	ND	102	70-130			
Matrix Spike Dup (M200420-MSD1)	Sou	rce; M204004	-03	Prepared &	& Analyzed	: 04/06/12				
Benzene	24.2		ug/L	25	ND	97	70-130	5	20	

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.:

M204004

### 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

# **GROUNDWATER LEVEL DATA FORM**

PROJECT NAME:Stop N SavePROJECT NUMBER:SNS.18281PROJECT MANAGER:DVATASK 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	0753	22.15	7.3				
STMW-2	0749	21.63	5.99				·
STMW-3	07.45	21.62	5.32				
MW-4	0751	12.11	9.77				
MW-5	0747	14.53	6.59				
MW-6	0755	14.59	7.35				,
					1		
i de la companya de l			<b>*</b> ,				
	·			۹	• ,	22	
					-	: <b>A</b>	
	-	\ \{\gamma}				·	-v <sup>3</sup>

FIELD TECHNICIAN:	10	DW.	1	
DATE:	6.90°	3 3	2 2	

SITE ADDRESS: 20570 Stanton Avenue, Castro Valley, CA	
WELL ID: STAW-1 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 VOLUME CALCULATION:	
Water Column Length x Multiplier x No. Volumes = Purge Volume    Yellow   Y	
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 PVC Bailer Submersible Pump Other Other	
TIME PURGED pH (°C) COND. (uS/cm) DO (mg/l) ORP (mV) COMMENTS	
0944 7 5 7-19 18-9 1585	
0949 5.0 6.90 18-4 566	
1012 7.5 7.0 18.6 56.6 Squy	12

FIELD TECHNICIAN:	town 1		 	
DATE:	3/20	7	 	

PROJECT N PROJECT N SITE ADDR	/IANAGER:	Stop N Save DVA 20570 Stanto	on Avenue, Ca	stro Valley,	PROJECT NU TASK NUMBE CA		SNS.1 8281
	WELL ID:	STAW.	-2		TYPE C	F WELL:	Monitoring
WATER CO	De	Total Depth: pth to Water: lumn Length:	5.99		WELL DIAME 2-inch: 4-inch: 6-inch:		
PURGE VO	L <b>UME CALCU</b> Water Colum		ultiplier x No. \	/olumes = 1	Purge Volume		
Wa	15-64 ter Column Le		Multiplier		No. Volumes	=	Purge Volume
MULTIPLIE		2-inch:	0.17 0.65	∟inear Foot	Based on Casi	ng Diamet	er:
PURGE ME	Disp	osable Bailer PVC Bailer ersible Pump Other		SAMPLE I		able Bailer Pump: Other:	
TIME	VOLUME PURGED (gal)	рН	TEMP. (°C)	COND. (uS/cm)	DO (mg/l)	ORP (mV)	COMMENTS
035S	2.7-2	7.50	18.4	SSS		7	
0800	\$.5	7.42	19.9	0.00			
Ø{ <b>0</b> }	8	7.38	(8.8)	604			Sand
5107	····						3400
		1		!	·		.
<del></del>							

PROJECT N PROJECT N SITE ADDR	//ANAGER:	Stop N Save DVA 20570 Stanto	on Avenue, Ca	•	PROJECT NU TASK NUMBI CA		SNS.1 8281
	WELL ID:	STAW-	3		TYPE (	OF WELL:	Monitoring
WATER CO	LUMN DATA: Well De Water Co	Total Depth: pth to Water: lumn Length:	21.C2 5.32 16.30		WELL DIAME 2-inch: 4-inch: 6-inch:	TER:	- - -
PURGE VOI	LUME CALCU Water Colum		ultiplier x Ño. \	Volumes = F	Purge Volume		
	(6.30 ter Column Le	x ngth	O.17 Multiplier	. x	3 No. Volumes	=	Purge Volume
MULTIPLIE		Schedule 40 I 2-inch: 4-inch: 6-inch:	0.17 0.65	Linear Foot	Based on Cas	ing Diame	ter:
PURGE MET	Disp	osable Bailer PVC Bailer ersible Pump Other		SAMPLE N	METHOD: Dispos	able Bailei Pump Other	
TIME	VOLUME PURGED (gal)	рН	TEMP. (°C)	COND. (uS/cm)	DO (mg/l)	ORP (mV)	COMMENTS
0835	2.75	1.38	17.5	600			
(00 s (000 (000	9.11	7.41	18.0	702			
000	<b>५.</b> ७	7-03	(8.)	911			
(DC) 2				<u> </u>			
							1

FIELD TECHNICIAN: \_ DATE: \_

PROJECT I PROJECT I SITE ADDR	MANAGER:	Stop N Save DVA 20570 Stanto	on Avenue, Ca	•	PROJECT NU TASK NUMBE CA		SNS.1 8281		
	WELL ID:	μω-"	4		TYPE C	OF WELL:	Monito ring		
	De	Total Depth: pth to Water: lumn Length:	9.27	• •	WELL DIAME 2-inch: _ 4-inch: _ 6-inch: _		• •		
, 01102 00.		_	ultiplier x No. \	√olumes = F	Purge Volume				
• Wa	2.64 ter Column Le	x ngth	O・(テ Multiplier	. x	No. Volumes	=	Purge Volume		
MULTIPLIE	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 ME		osable Bailer		SAMPLE		able Bailer			
	·	PVC Bailer		•					
	Subme	ersible Pump Other				Other.			
TIME	VOLUME PURGED (gal)	рН	TEMP. (°C)	COND. (uS/cm)	DO (mg/l)	ORP (mV)	COMMENTS		
0 F 57 0 <b>8</b> 00	0.5	1.7	(6.8)	1591					
080 081 0814	1A 1.5	7.8/	17.2	(100					
0824							sam 9		
						<del></del>			
			· · · · · · · · · · · · · · · · · · ·						
						<del> </del>			
				<u> </u>		<del></del>			

FIELD TECHNICIAN: DATE: 3/20

PROJECT NA PROJECT MA SITE ADDRE	ANAGER:	Stop N Save DVA 20570 Stant	on Avenue, C	– astro Valley,	PROJECT NU TASK NUMBE CA		SNS.1 8281
	WELL ID:	<u>/w-5</u>	<u>-</u>	_	TYPE C	F WELL:	: Monitoring
WATER COL	Well De	Total Depth: pth to Water: lumn Length:	6.59	- -	WELL DIAME 2-inch: _ 4-inch: _ 6-inch: _		- - -
PURGE VOLI			ultiplier x No.	Volumes = I	Purge Volume		
Wate	구,94 r Column Le	x ngth	O-17 Multiplier	_ x	No. Volumes	=	Purge Volume
MULTIPLIER  N  PURGE METI	Multiplier for A	Schedule 40 2-inch: 4-inch: 6-inch: osable Bailer	0.17 0.65 1.5	/Linear Foot		ng Diame	
	·	PVC Bailer PVC Bailer ersible Pump Other			ызроза	Pump Other	:
TIME	VOLUME PURGED (gal)	рН	TEMP. (°C)	COND. (uS/cm)	DO (mg/l)	ORP (mV)	COMMENTS
0921	1-5	4.72	17.9	670			
0925	3.0 4.27	7.22					
0975 0992 0998	4-25	7-19	17-9 17-9	696			
		hus	I		<u> </u>		<u></u>

PROJECT N PROJECT W SITE ADDRE	IANAGER:	Stop N Save DVA 20570 Stanto	on Avenue, Ca	astro Valley,	PROJECT NU TASK NUMBE CA	-	SNS.18281		
	WELL ID:	Mw	-6	-	TYPE C	OF WELL:	Monitoring		
WATER COLUMN DATA:  Well Total Depth:  Depth to Water:  Water Column Length:  WELL DIAMETER:  2-inch:  4-inch:  6-inch:									
			ultiplier x No. '	Volumes = I	⊃urge Volume				
_	子。24 er Column Le	. × . ngth	O .(7-	_ x	No. Volumes	= .	3,75 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								
PURGE MET	Dispo	osable Bailer PVC Bailer ersible Pump Other		SAMPLE I		able Bailer Pump: Other:			
TIME	VOLUME PURGED (gal)	рН	TEMP. (°C)	COND. (uS/cm)	DO (mg/l)	ORP (mV)	COMMENTS		
0000	1.25	7.97	(6.9	879 829					
0812 0814 0816	3.75	7,07	16.9	681					
2180					· .		sayey		
							,		

FIELD TECHNICIAN:	Dus 1	
DATE:	3/20112	