

**RECEIVED**

By Alameda County Environmental Health 11:24 am, Sep 19, 2017

September 18, 2017

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

Subject: Well Destruction 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 September 17, 2017 Well Destruction 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

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## WELL DESTRUCTION REPORT

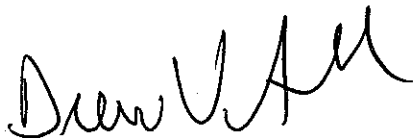
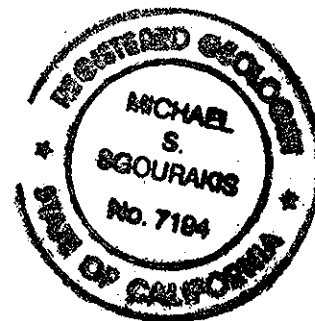
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STOP N SAVE INC. FACILITY  
20570 STANTON AVENUE  
CASTRO VALLEY, CALIFORNIA

Prepared for: Stop N Save Inc.

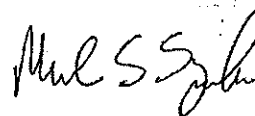
ECG Project Number: SNS.18281  
Alameda County Fuel Leak Case No. RO0000179

September 17, 2017



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Drew Van Allen  
Senior Project Manager



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Michael S. Sgourakis  
Principal Geologist  
CA P.G. No. 7194

## **TABLE OF CONTENTS**

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Introduction.....	2
Limitations .....	2
Site Description.....	2
Well Destruction Activities.....	2

### **Figures**

- Figure 1: Site Location Map
- Figure 2: Site Map

### **Tables**

- Table 1: Well Construction Details

### **Appendices**

- Appendix A: County Permits and DWR Logs
- Appendix B: Standard Operating Procedures
- Appendix C: Soil and Waste Water Manifests

## INTRODUCTION

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Environmental Compliance Group (ECG) has been authorized by Stop N Save, Inc. to provide this report for the groundwater well destruction activities at the site.

Site Location: 20570 Stanton Avenue  
Castro Valley, California

Geotracker Global ID: T0600183405

## LIMITATIONS

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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

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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.

## WELL DESTRUCTION ACTIVITIES

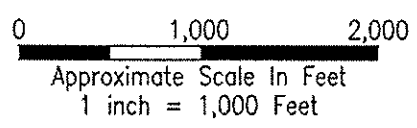
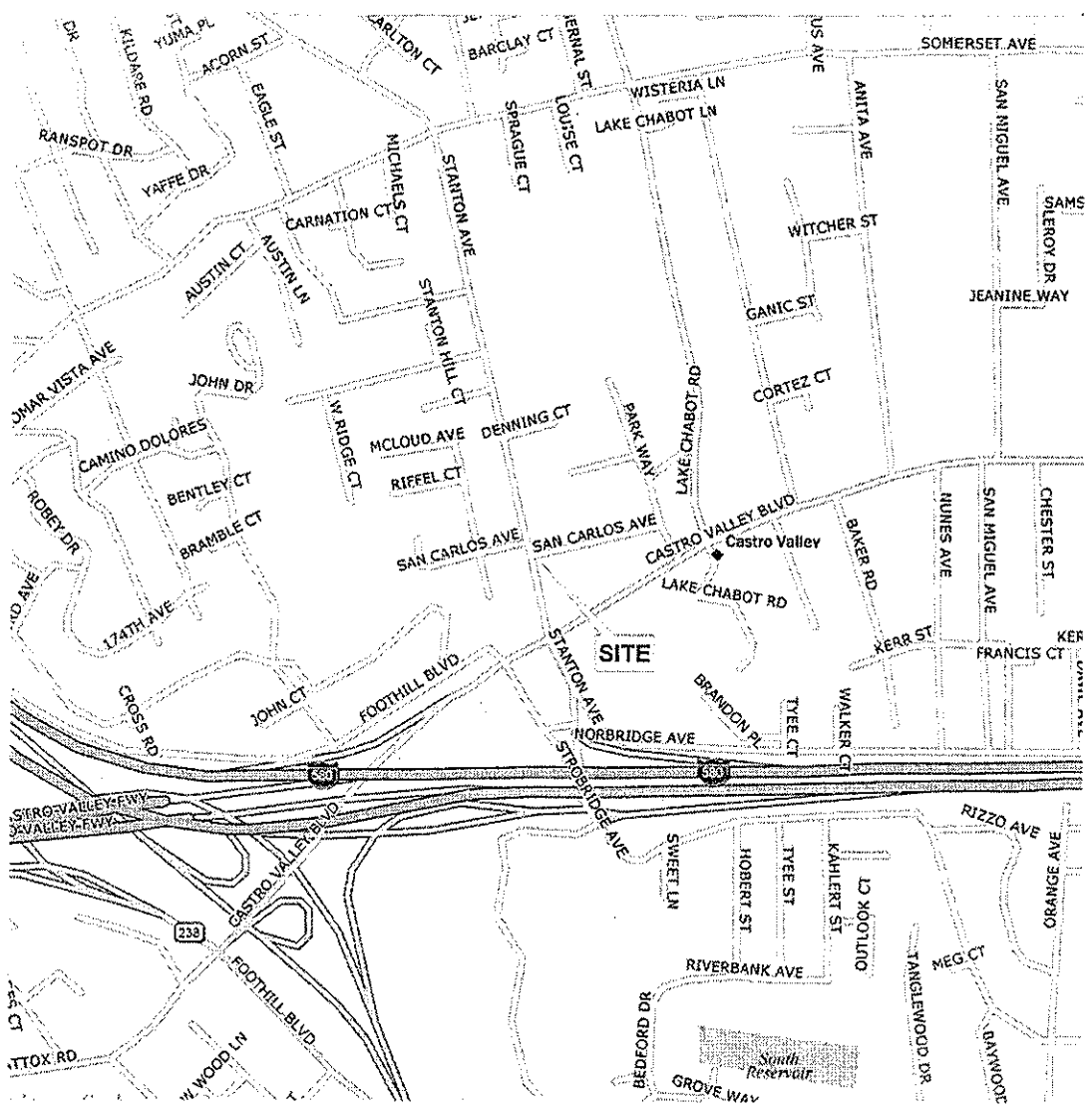
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Prior to conducting any subsurface work at the site, Underground Services Alert (USA) was contacted to delineate subsurface utilities near the site with surface markings. A well destruction permit was obtained from Alameda County Public Works Agency (Appendix A). All work was done in accordance to ECG standard operating procedures included as Appendix B.

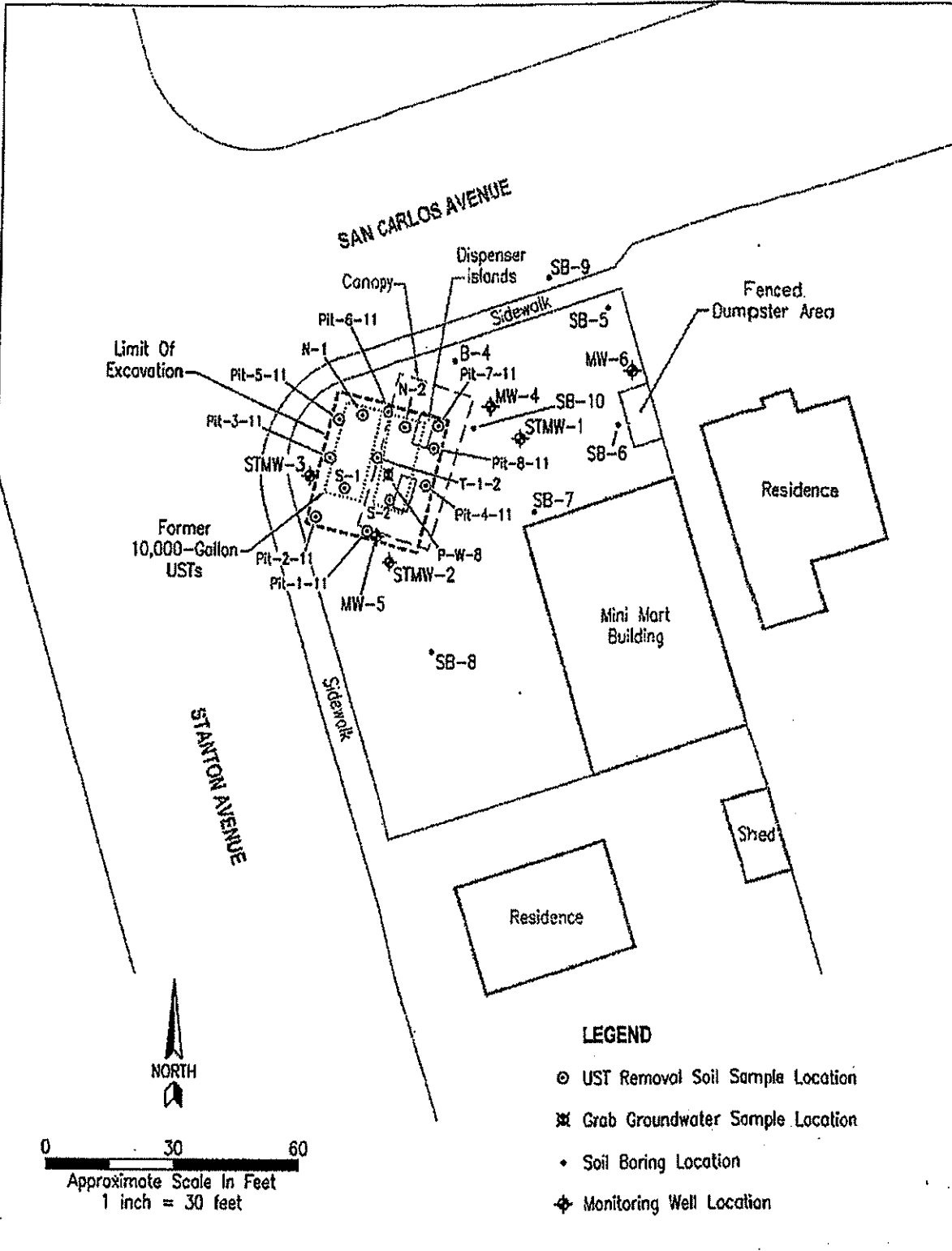
On September 15, 2017, ECG supervised Cascade Drilling (a California licensed C57 driller) during the pressure grouting of groundwater wells STMW-1, STMW-2, STMW-3, MW-4, MW-5, and MW-6. The wells were pressure grouted with a Portland cement slurry from the bottom of the well to the surface. Each 2-inch well was placed under 25 pounds per square inch pressure for five minutes. Each well box was broken out and a concrete cap was placed over each former well top.


Department of Water Resources well destruction logs are contained in Appendix B. All purge water and well destruction debris have been disposed of properly (Appendix C).

# FIGURES



<p><b>FIGURE 1</b></p>	<p align="center"><b>SITE LOCATION MAP</b></p> <p align="center">Stop 'N' Save 20570 Stanton Avenue Castro Valley, California</p>	 <p><b>Environmental Compliance Group, LLC</b> 270 Vintage Drive, Turlock, CA 95382 Phone: (209) 664-1035</p>
<p>Project Number: SNS.18281</p>		
<p>Date: July 21, 2010</p>		



<p><b>FIGURE 2</b></p>	<p align="center"><b>SITE MAP</b></p> <p align="center">Stop 'N' Save 20570 Stanton Avenue Castro Valley, California</p>	 <p><b>Environmental Compliance Group, LLC</b> 270 Vinlage Drive, Turlock, CA 95382 Phone: (209) 664-1035</p>
<p>Project Number: SNS.18281</p>		
<p>Date: January 17, 2011</p>		

# **TABLES**



**Table 1**  
**Well Construction Details**  
 Stop N Save Inc.  
 20570 Stanton Avenue  
 Castro Valley, California

Well ID	Date Installed	TOC Elevation (ft amsl)	Total Depth (ft bgs)	Casing Diameter (inches)	Casing Material	Screen/ Filter	Screen Interval (ft bgs)
<b>Monitoring Wells</b>							
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	November 2010	163.94	13	2	PVC	0.020/#3	5-13
MW-5		165.31	15	2	PVC	0.020/#3	5-15
MW-6		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

# APPENDICES

# Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street  
Hayward, CA 94544-1395  
Telephone: (510)670-6633 Fax:(510)782-1939

**Application Approved on: 09/14/2017 By jameisy**

**Permit Numbers: W2017-0716 to W2017-0721**  
**Permits Valid from 09/15/2017 to 09/15/2017**

<b>Application Id:</b> 1504646407040	<b>City of Project Site:</b> Castro Valley
<b>Site Location:</b> 20570 Stanton Avenue	
<b>Project Start Date:</b> 09/15/2017	<b>Completion Date:</b> 09/15/2017
<b>Assigned Inspector:</b> Contact Eneyew Amberber at (510) 670-5759 or eneyew@acpwa.org	

<b>Applicant:</b> ECG, LLC - Drew Van Allen 270 Vintage Drive, Turlock, CA 95382	<b>Phone:</b> 209-664-1035
<b>Property Owner:</b> Attention: Frank Stop N Save, Inc. 461 S. Milpitas Boulevard, Suite #1, Milpitas, CA 95035	<b>Phone:</b> 408-933-4422
<b>Client:</b> Attention: Drew ECG, LLC 270 Vintage Drive, Turlock, CA 95382	<b>Phone:</b> 209-664-1035
<b>Contact:</b> Drew Van Allen	<b>Phone:</b> 209-648-0647 <b>Cell:</b> 209-648-0647

<b>Total Due:</b>	\$2382.00
<b>Receipt Number: WR2017-0433</b>	<b>Total Amount Paid:</b> \$2382.00
<b>Payer Name : Environmental Compliance</b>	<b>PAID IN FULL</b>
<b>Group, LLC</b>	

**Works Requesting Permits:**

Well Destruction-Monitoring - 6 Wells  
Driller: Cascade Drilling - Lic #: 938110 - Method: press

**Work Total: \$2382.00**

**Specifications**

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth	State Well #	Orig. Permit #	DWR #
W2017-0716	09/14/2017	12/14/2017	MW-4	8.00 in.	2.00 in.	13.00 ft	5.00 ft			
W2017-0717	09/14/2017	12/14/2017	MW-5	8.00 in.	2.00 in.	15.00 ft	5.00 ft			
W2017-0718	09/14/2017	12/14/2017	MW-6	8.00 in.	2.00 in.	15.00 ft	5.00 ft			
W2017-0719	09/14/2017	12/14/2017	STMW-1	8.00 in.	2.00 in.	9.00 ft	23.00 ft			
W2017-0720	09/14/2017	12/14/2017	STMW-2	8.00 in.	2.00 in.	9.00 ft	22.00 ft			
W2017-0721	09/14/2017	12/14/2017	STMW-3	8.00 in.	2.00 in.	9.00 ft	22.00 ft			

**Specific Work Permit Conditions**

1. Drilling Permit(s) can be voided/ cancelled only in writing. It is the applicant's responsibility to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.

2. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the

## Alameda County Public Works Agency - Water Resources Well Permit

permits and requirements have been approved or obtained.

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 30 days. Include permit number and site map.

4. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost and liability in connection with or resulting from the exercise of this Permit including, but not limited to, property damage, personal injury and wrongful death.

5. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

6. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

7. Remove the Christy box or similar structure.

Destroy well by grouting neat cement with a tremie pipe or pressure grouting (25 psi for 5min.) to the bottom of the well and by filling with neat cement to three (3-5) feet below surface grade. Allow the sealing material to spill over the top of the casing to fill any annular space between casing and soil.

After the seal has set, backfill the remaining hole with concrete or compacted material to match existing conditions.

8. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

9. Electronic Reporting Regulations (Chapter 30, Division 3 of Title 23 & Division 3 of Title 27, CCR) require electronic submission of any report or data required by a regulatory agency from a cleanup site. Submission dates are set by a Regional Water Board or by a regulatory agency. Once a report/data is successfully uploaded, as required, you have met the reporting requirement (i.e. the compliance measure for electronic submittals is the actual upload itself). The upload date should be on or prior to the regulatory due date.

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**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

**CONFIDENTIAL**

**STATE OF CALIFORNIA DWR  
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STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

# **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 rinsewater 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 rinsewater 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 rinsewater 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 Summa 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.

# NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No.	Manifest Document No. <b>EG17-0113</b>	2. Page 1 of 1
3. Generator's Name and Mailing Address <b>Stop N Save, Inc 20570 Stanton Ave. Castro Valley, California 94546</b>		Environmental Compliance Group		
4. Generator's Phone	5. Transporter 1 Company Name <b>In Strat Inc</b>	6. US EPA ID Number	A. State Transporter's ID	
	7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter 1 Phone <b>(707) 374-3834</b>	
	9. Designated Facility Name and Site Address <b>INSTRAL INC 1105 C AIRPORT RD. PIO VISTA, CA 94571</b>	10. US EPA ID Number	C. State Transporter's ID	
			D. Transporter 2 Phone	
			E. State Facility's ID	
			F. Facility's Phone <b>(707) 374-3834</b>	

11. WASTE DESCRIPTION	12. Containers		13. Total Quantity	14. Unit Wt./Vol
	No.	Type		
a. <b>PURGE / MONITORING WELL WATER</b>	7	Drum	300	GAL
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above	H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

**16. GENERATOR'S CERTIFICATION:** I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name	Signature	Date
		Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials		
Printed/Typed Name <b>Ruben Gonzalez</b>	Signature <i>Ruben Gonzalez</i>	Date <b>3/16/17</b>

18. Transporter 2 Acknowledgement of Receipt of Materials		
Printed/Typed Name	Signature	Date
		Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator, Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.		
Printed/Typed Name <b>J. S. T</b>	Signature <i>J. McLaughlin</i>	Date <b>3/16/17</b>

NON-HAZARDOUS WASTE

