



**Matthew Rodriguez**  
Secretary for  
Environmental Protection



## Department of Toxic Substances Control

Barbara A. Lee, Director  
8800 Cal Center Drive  
Sacramento, California 95826-3200



**Edmund G. Brown Jr.**  
Governor

February 2, 2017

Mr. Arthur Forma  
3043 Gold Canal Drive, Suite 100  
Rancho Cordova, California 95670

### FINAL TARGETED SITE INVESTIGATION WORKPLAN, DECEMBER 2016, CRESCENT MILLS INDUSTRIAL SITE, PLUMAS COUNTY, CALIFORNIA

Dear Mr. Forma:

The Department of Toxic Substances Control (DTSC) has reviewed the revised December 2016 Targeted Site Investigation (TSI) Work Plan (Report), Crescent Mills Industrial Site (Site), prepared by Geosyntec under Contract No. 16-T4205, Work Order No. 1-205-1.0-102305. The Site is located along California Highway 89 in Crescent Mills, Plumas County, California. The Site consists of approximately 26.27 acres of property, within three (3) parcels identified by Plumas County Assessor's Parcel Numbers (APNs) 111-050-065, 111-050-066, and 111-050-067.

The Site was initially developed as a lumber mill in the late 1940s and was purchased by Louisiana Pacific (LP) in the early 1970s. The Site was expanded until operations ceased in 1986. The objective of the investigation is to further characterize the extent of contamination that may have originated from past operations at the Site. The chemicals of concern are total petroleum hydrocarbons as diesel, gasoline and oil, volatile organic compounds, pentachlorophenol, arsenic, metals, carbamates pesticides, and dioxins/furans. Since the revised Report addresses DTSC comments, DTSC concurs with the Report.

Mr. Arthur Forma  
February 2, 2017  
Page 2

Geosyntec is scheduled to be in the field the week of February 6 – February 10, 2017 to implement the Report. If you have any questions, please contact me at (916) 255-3745.

Sincerely,



Melessia Downham  
Project Manager  
Brownfields and Environmental Restoration Program

cc: Mr. Peter Dennehy, P.G.  
3043 Gold Canal Drive, Suite 100  
Rancho Cordova, California 95670

Mr. Jerry Sipe  
Plumas County Environmental Health  
270 County Hospital Road #127  
Quincy, California 95971

Ms. Camille Swezy  
Sierra Institute for Community and Environment  
4438 Main Street  
P.O. Box 11  
Taylorsville, California 95983

Mr. Steven Becker, P.G., Chief (Sent via email)  
Site Evaluation and Remediation Unit  
Cleanup Program – Sacramento Office  
Department of Toxic Substances Control  
8800 Cal Center Drive  
Sacramento, California 95826-3200



PLUMAS COUNTY ENVIRONMENTAL HEALTH DEPARTMENT  
270 COUNTY HOSPITAL RD., Ste 127 QUINCY, CALIFORNIA 95971 530-283-6355  
APPLICATION FOR PERMIT TO DRILL A SOIL BORING

APPLICATION VALID  
FOR ONE YEAR ONLY

APPLICANT'S NAME Peter Dennehy  
MAILING ADDRESS 3043 Gold Canal Drive ZIP 95670  
PARCEL NO. & AREA APN 111-050-065, -066, and -067 PHONE 916-637-8341

STREET NUMBER

LOT NUMBER

# OF Borings ( 14 ) to 10 to 15 feet below ground surface

SEWAGE DISPOSAL FOR PREMISES: On-site ( ) Off-Site Community ( ) Sanitary Sewer ( ) Other ( )

DRILLER Cascade Drilling LICENSE # 938110

X Peter Dennehy

APPLICANT'S SIGNATURE

DRAW PLOT PLAN BELOW (See Instructions on Reverse Side) SEE ATTACHED INVESTIGATION SITE PLAN

PER WORK PLAN APPENDIX B

- SOIL BORINGS TO BE BACKFILLED WITH CEMENT-BASED GROUT, PREPARED ABOVE GROUND.
- IF SOIL BORING EXTENDS BELOW GROUNDWATER, TREMIE PIPE WILL BE USED TO POUR GROUT.

ENVIRONMENTAL HEALTH  
DEPT ONLY  
APPROVED AS NOTED

[Signature] 12/29/16  
Checker Date

FOR OFFICE USE ONLY

Location Approved by: [Signature]

Date: 12/29/16

Surface Seal Depth: VARIES

Type of Material: PER WORK PLAN

Surface Seal Inspection Approved by: \_\_\_\_\_

Date: \_\_\_\_\_



**ENVIRONMENTAL HEALTH  
COUNTY OF PLUMAS**

270 County Hospital Rd., Ste 127, Quincy CA 95971  
Phone: 530-283-6355 FAX 530-283-6241

**Owner: Peter Dennehy**

3043 Gold Canal Drive  
Rancho Cordova, CA 95670

**Contractor: Cascade Drilling**

**Mailing Address:**

3632 Omec Cir  
Rancho Cordova, CA 95742

**Job Site Address:**

Crescent Mills, CA

**Type Of Permit: SOIL BORING**

**No. of Borings: 14**

**Permit No : 16-122716**

**Permit Expires : n/a**

**Cell Phone: N/A**

**Bus. Phone: (916) 637-8341**

**FAX No:**

**Bus. Phone: (916) 638-1169**

**FAX No:**

**Parcel No: 115-160-002/003**

**Description of Work - Soil Boring**

**THIS PERMIT AUTHORIZES APPLICATION FOR SOIL BORING**

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**Installation Detail:**

|                     |              |
|---------------------|--------------|
| Surface Seal Depth: | Entire Hole  |
| Material:           | Cement Based |
| No. of borings      | 14           |

**Standard Installation Instructions:**

1. Maintain all applicable setbacks
2. See Approved Plot Plan for installation location
3. Install system according to Approved Plot Plan as noted.
4. Contact Environmental Health before changing location

**Inspection of Work Instructions:**

1. Before sealing the well, contact Environmental Health to schedule an inspection. Twenty- four (24) hour notice is **REQUIRED.**

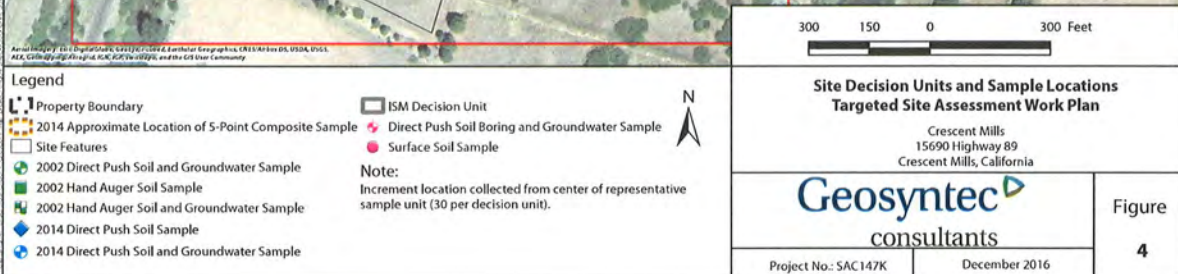
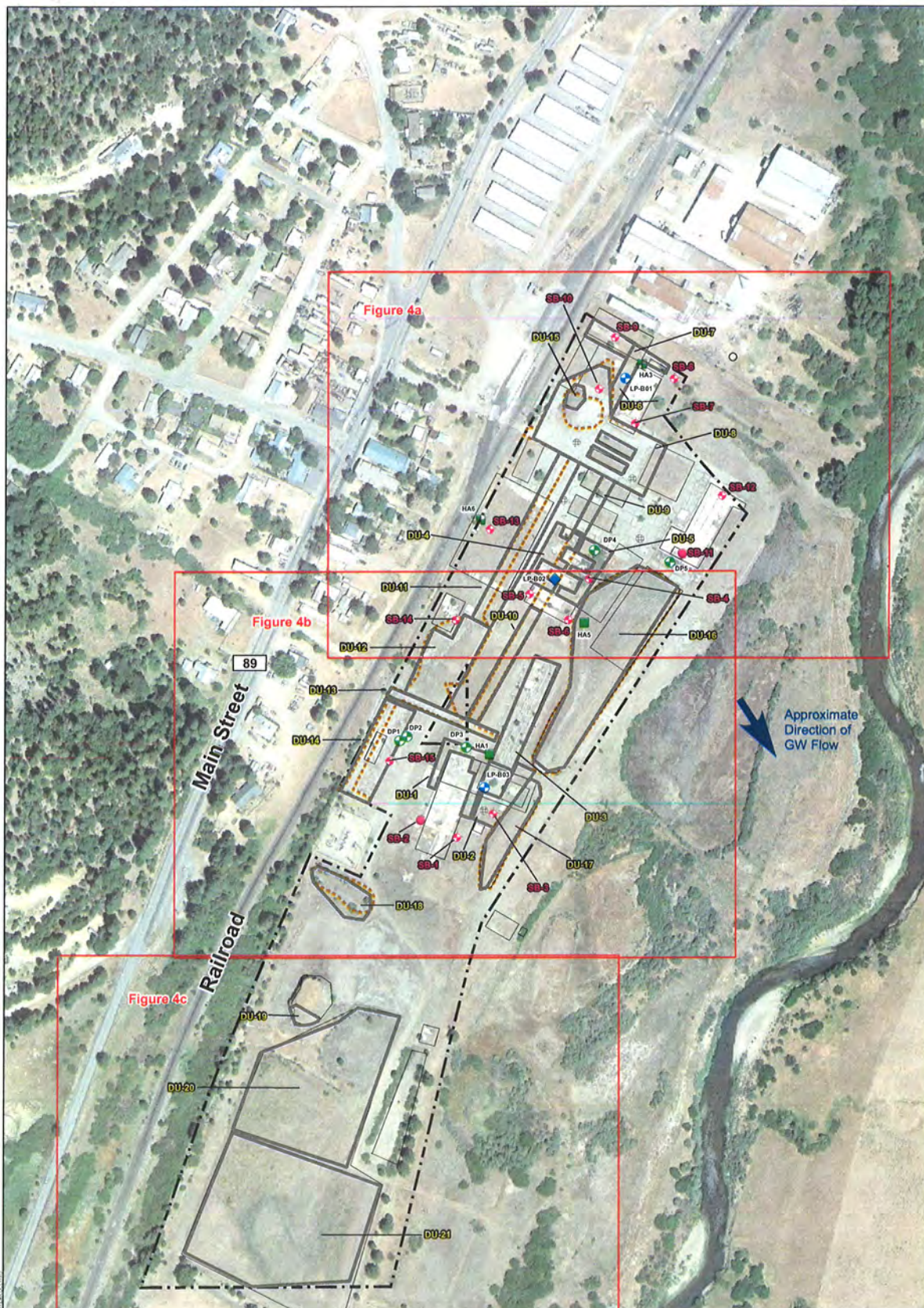
**PLUMAS COUNTY ENVIRONMENTAL HEALTH**

**By:**

**Date:**

December 29, 2016







Project Name: DTSC Crescent Mills Project Number: SAC 147K Page 1 of 1  
Date: 2/6/17 Location: Crescent Mills, CA Logged By: P. Denny  
Weather Conditions: Cloudy, scattered rain, 40's-50's  
Tailgate Safety Meeting Time: 1030 Contractor: Cascade, Subtronic

| Personnel: Name | Company   | Time In | Time Out |
|-----------------|-----------|---------|----------|
| Peter Denny     | Geosyntec | 0830    | 1715     |
| Orin Regier     | "         | 0830    | 1715     |
| Bill Martinez   | DTSC      | 1015    | ~1230    |
| Lora Jamison    | "         | 1015    | ~1230    |
| Pierre          | Subtronic | 1015    | 1700     |
| Rodrigo Cano    | Cascade   | 1015    | 1715     |
| Ernesto Tasso   | Cascade   | 1015    | 1715     |

| Time | Activities  |
|------|---|
| 0830 | On-site Health and safety briefing w/ O. Regier<br>walked site and marked boring locations<br>observed that no utility marking were at the site |
| 1015 | Contractors and DTSC on-site  |
| 1030 | HAS tailgate meeting - see separate form  |
| 1100 | Started drilling pt. SB-15 Started geophysical survey - see field sheets for notes. Set well in dual tube casing from 9-10' @ 55                |
| 1130 | pH probe for gw sampling appeared to malfunction. Measurements drifting substantially - poss faulty connection                                  |
| 1300 | Planned location for SB-6 was flooded. Attempted to advance boring inside ramp with hard auger Hit refusal on concrete 12' @ 55                 |
| 1545 | Advanced SB-6 ~10' from planned location on outside of ramp   |
| 1900 | calibrated pH meter - pH 4 soln reading 3.55<br>pH 7 reading 7.19, pH 10 reading 10.18  |
| 1600 | subtronic identified pipe or small UST at NE corner of maintenance shop   |

Copy to:

Total Hrs.:

Signature:

Project Name: Crescent Mills Project Number: SAC 147K Page 1 of 1  
Date: 2/7/17 Location: Crescent Mills Logged By: P. Denny  
Weather Conditions: Rainy, windy, 40's  
Tailgate Safety Meeting Time: 0700 Contractor: Cascade

| Personnel: Name | Company   | Time In | Time Out |
|-----------------|-----------|---------|----------|
| Peter Denny     | Geosyntec | 0700    | 1600     |
| Orin Regier     | Geosyntec | 0700    | 1730     |
| Ernesto         | Cascade   | 0700    | 1700     |
| Rodrigo         | Cascade   | 0700    | 1700     |

| Time  | Activities   |
|---|--|
| 0700  | On-site  |
| 0745  | Advanced boring SB-10 - no water recovery after pulling casing to 9' or 21'. Pulled to 5'  |
| 0830  | Attempted to dig to possible pipe or UST at NE corner of maintenance shop. Hit refusal on boulder/cement layer at 0.5' bgs. Adjusted SB-8 so that it was down gradient |
| 1330  | Added Crb, metals and TPH - d/no soil and gw samples per recommendation of A. Formula to SB-12 due to green soil at water table.                                       |
| 1600  | Off-site to UPS - mailed samples to Test America   |
| General - ISM and soil boring locations adjusted in order to avoid standing water, concrete foundations and construction debris. ISM sample boundaries remained the same. |  |

Copy to: \_\_\_\_\_ Total Hrs.: \_\_\_\_\_ Signature: \_\_\_\_\_

|  |                                     |                                 |                              |
|--|-------------------------------------|---------------------------------|------------------------------|
| Project Name: <u>Crescent Mills</u>          |                                     | Project Number: <u>SAC 147K</u> | Page <u>1</u> of <u>1</u>    |
| Date: <u>2/8/17</u>                          | Location: <u>Crescent Mills, CA</u> |                                 | Logged By: <u>P. Dennehy</u> |
| Weather Conditions: <u>Rain, 40's - 50's</u> |                                     |                                 |                              |
| Tailgate Safety Meeting Time: <u>0700</u>    |                                     | Contractor: <u>Cascade</u>      |                              |

| Personnel: Name | Company   | Time In | Time Out |
|-----------------|-----------|---------|----------|
| P. Dennehy      | Geosyntec | 0700    | 1530     |
| O. Regier       | Geosyntec |         | 1700     |
| Ernesto         | Cascade   |         |          |
| Alberto Rodrigo | Cascade   |         |          |
|                 |           |         |          |
|                 |           |         |          |
|                 |           |         |          |

| Time | Activities   |
|------|--|
| 0700 | On-site. Conducted HAS tailgate  |
| 0730 | significant standing water in sorter/stacker bin. Adjusted borings to locations that were dry.   |
| 1500 | Collected equipment blank off of decon'd drillers shoe.  |
| 1100 | Plumas County EHD rep Pat Sanders stopped by site for govt inspection. Hadn't started grouting borings. Instructed to call when we were going to start |
| 1530 | P. Dennehy off-site to drop samples at UPS   |
|      |  |
|      |  |
|      |  |
|      |  |
|      |  |
|      |  |
|      |  |
|      |  |
|      |  |

|                |                   |                  |
|----------------|-------------------|------------------|
| Copy to: _____ | Total Hrs.: _____ | Signature: _____ |
|----------------|-------------------|------------------|



Project Name: Crescent Mills Project Number: SAC 147K Page 1 of 1  
Date: 2/9/17 Location: Crescent Mills, CA Logged By: P. Dennehy  
Weather Conditions: Rain, 40's - 50's  
Tailgate Safety Meeting Time: 0700 Contractor: Cascade

| Personnel: Name | Company   | Time In | Time Out |
|-----------------|-----------|---------|----------|
| P. Dennehy      | Geosyntec | 0700    | 1630     |
| D. Regier       | "         |         |          |
| Rodrigo Ernesto | Cascade   |         |          |

| Time     | Activities   |
|----------|--|
| 0700     | Conducted HAS tailgate meeting   |
| 1015     | Scale stopped working. PD to Quincy to get new one.  |
| 1130     | Broke for lunch  |
| 1245     | Collected DU-16-1-3. Practical refusal w/ shovel at 3' bgs throughout DU.  |
|          | General note: Collected soil stockpile samples w/ shovel and ISM probe. Shovel to get to depth, probe to collect fresh sample if possible - if not shovel. |
| 1300     | DU-10 flooded w/ 1 ft of water - not sampling unless water recedes.  |
| (PD)     | General soil characteristics of soil stockpiles  |
|          | - DU-15 - 10am   |
|          | DU-16 - mix of clay to cobbles   |
|          | DU-17 - mix of clay to cobbles   |
|          | DU-18 - mostly cobbles, gravel, and bark   |
|          | DU-19 - 10am   |
|          | DU-20 - Adjusted location to only include gravel pile, with debris metal w/ silt   |
|          | DU-21 - Adjusted to only include silt and clay wetland that was elevated and not flooded   |
| 1500     | collected EB off shovel and probe for most analytes and off  |
| Copy to: | Drillers shoe for Total Hrs.: Signature:   |

1615 - Off-site. Roads washed out by landslides - stranded in  
1630 Greenville.

Project Name: DTSC Crescent Mills Project Number: SAC 147k Page 1 of 1

Date: 2/10/17 Location: Crescent Mills, CA Logged By: P. Denney

| Time   | Activities   |
|--|--|
| 0900 - On-Site.  | O. Regier (Glossyntec), Eduardo Rodriguez (Cascadia)   |
| 0915 - HAS tailgate  |  |
| 0930 - set-up  | to advance borings for Arsenic background sample. Conduct 10 boring on <del>northern</del> west side of site. East side of site flooded.   |
| 0930 - spoke w/ Pat Sanders  | from Plumas county EHD. Had not grouted borings, some inaccessible due to water. Instructions were to grout borings to our water level and cover others to avoid tripping hazards. |
| 1000 - Collected EB off  | drilling shoe for arsenic.   |
| 1015 - Advanced 10x borings  | to 10' bgs in order to collect arsenic background samples in native material. Borings in dry areas along E fence line near entrance.   |
| 1045 - cleaned up site   | to mobilize. Grouted accessible borings  |
| 1215 - off-site  |  |
| 1500 - Left Greenville.  | Only road out is to Susanville → Portola → Quincy → Hotel to pick up belongings → Reno → Sacramento  |
| Note: 3 drums w/ IDW at site - labeled w/ non-haz labels. 2 soil drums, 1 gw drum. |  |

Project Name: Crescent Mills Project Number: SAC147K Page 1 of 2  
Date: 3/29/17 (W) Location: Crescent Mills Logged By: O.D.R.  
Weather Conditions: Sunny & Warm  
Tailgate Safety Meeting Time: N/A Contractor: N/A

| Personnel: Name    | Company           | Time In    | Time Out    |
|--------------------|-------------------|------------|-------------|
| <u>Orin Regier</u> | <u>Geosyntec.</u> | <u>900</u> | <u>1930</u> |
|                    |                   |            |             |
|                    |                   |            |             |
|                    |                   |            |             |
|                    |                   |            |             |

| Time        | Activities   |
|-------------|--|
| <u>900</u>  | <u>Orin On-Site but Gate Locked</u><br><u>Orin goes to buy bolt cutters in</u><br><u>Greenville.</u>   |
| <u>945</u>  | <u>Chain on Gate Cut Orin mobs</u><br><u>to ISM location &amp; begins</u><br><u>marking locations</u>  |
| <u>1015</u> | <u>Locations marked, begin decon</u><br><u>of hand auger &amp; shovel.</u>   |
| <u>1030</u> | <u>Collect EB-1</u>  |
| <u>1100</u> | <u>Begin sample collection of DU-2-0.5-1.0</u><br><u>(ISM Sampling -&gt; Collect 33gram sample</u><br><u>@ 30 locations for a total sample weight</u><br><u>of 1kg)</u>            |
| <u>1230</u> | <u>NE corner of Grid = 40° 5' 33" N 120° 54' 43" W</u>   |
| <u>1240</u> | <u>NE Corner of Grid = 40° 5' 33.54" N 120° 54' 43.03" W</u>   |
| <u>1245</u> | <u>NW Corner of Grid = 40° 5' 33.59" N 120° 54' 43.42" W</u>   |
| <u>1250</u> | <u>SE Corner of Grid = 40° 5' 27.84" N 120° 54' 45.63" W</u>   |
| <u>1252</u> | <u>SW Corner of Grid = 40° 5' 27.94" N 120° 54' 46.03" W</u><br><u>Grid Coordinates WGS 84</u>   |
| <u>1300</u> | <u>Orin takes Lunch</u>  |
| <u>1330</u> | <u>Orin MOBS to <del>SB-16</del> <u>OR</u> <del>SB-20</del></u>  |
| <u>1345</u> | <u>Collect Soil Sample <del>SB-05-1.0</del> <u>OR</u></u><br><u>↳ Collect sample <u>SB-20-0.5-1.0</u></u><br><u><u>SB</u> Coordinates <u>40° 5' 32.72" N 120° 54' 39.48" W</u></u> |

Copy to: \_\_\_\_\_ Total Hrs.: 10 Signature: O. Regier



Project Name: Crescent Mills Project Number: SAC147K Page 2 of 2  
Date: 3/29/17 (W) Location: Crescent Mills Logged By: O. D.R.

| Time            | Activities  |
|-----------------|---|
| 1410            | Collect Sample SB-19-0.5-1.0<br>SB-19 Coordinates 40°5'41.84"N 120°54'37.02W  |
| 1430            | Collect Sample SB-18-0.5-1.0  |
| <del>1445</del> | <del>SB-18 Coordinates 40°5'44.23"N 120°54'32.81"W</del>  |
| 1445            | Collect Sample SB-17-0.5-1.0<br>SB-17 Coordinates = 40°5'44.19"N 120°54'33.60W  |
| 1515            | Collect Sample SB-16-0.5-1.0<br>SB-16 Coordinates 40°5'49.01"N 120°54'30.32W  |
| 1545            | Log Deck Supply WELL DTW = 5.16 ft btoC<br>Supply Well TD = 58 ft btoC (soft tag)   |
| 1600-1700       | Orin tremmie grouts SB-1 → SB-15<br>And Clean up Acetate Liners<br>from PHASE II Activities   |
| 1715            | Orin Checks Buckets Near SB-13<br>and discovers one is filled w/ what appears<br>to be motor and the motor oil bucket<br>has a premade hole in the lid (Redol Logo)<br>The 2nd bucket has a yellow/gray<br>putty inside and Orin will discuss w/<br>Peter. (76) Label on outside of bucket #2<br>The 3rd can is very difficult to open  |
| 1930            | Orin successfully grouts SB-10, 7, 12, 4<br>Unable to locate other borings<br>due to flood, and animal burrows<br>Orin secures gate w/ new combo<br>lock → combination = 19404<br>5 Drums of IDW remain on site<br>Buckets remain along fence near<br>SB-13<br>Acetate liners taken to Rancho<br>Cordova for disposal.<br>minimal flooding remains @ north<br>end of site. South end<br>Very muddy w/ many areas w/<br>standing H <sub>2</sub> O<br>→ Orin offsite. |

# LOG OF BORING SB-1

Page 1 of 1

|                                      |  |                                     |  |  |           |
|--------------------------------------|--|-------------------------------------|--|--|-----------|
| Location: <u>Crescent Mills, CA</u>  |  | Project Name: <u>SAC 147K Mills</u> |  | Project Number: <u>SAC 147K</u>          |           |
| Start Date and Time: <u>2/8 1230</u> |  | Finish Date and Time: <u>(PD)</u>   |  | Total Depth Drilled (ft bgs): <u>10'</u> |           |
| Drilling Method: <u>Geoprobe DPT</u> |  | Drilling Contractor: <u>Cascade</u> |  | Total Depth Cored (ft bgs):              |           |
| Drill Rig: <u>7700</u>               |  | Hammer Type:                        |  | Boring Diameter (in): <u>2</u>           |           |
| Sampling Method:                     |  | Hammer Weight/Drop:                 |  | Borehole Backfill:                       |           |
| Depth to Water (ft bgs): <u>1.5</u>  |  | Ground Surface Elevation (ft MSL):  |  | Coordinates (X,Y):                       |           |
| Comments:                            |  |                                     |  | Logger: <u>PD</u>                        | Reviewer: |

| Depth (ft bgs) | Sample Interval | Sample ID and Type | Blow Per 6 Inches | Sample Recovery (%) | MATERIAL DESCRIPTION<br><small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small>                      | PID Reading (ppm) | Time (00:00) | COMMENTS |
|----------------|-----------------|--------------------|-------------------|---------------------|---|-------------------|--------------|----------|
|                |                 | <u>None</u>        |                   |                     | <u>0-6 - wet, tan to dark brown, dense f-c sand, little silt, little gravel. Fill (SP)</u><br><u>6-10 - wet black to dark brown silty clay, little f-c sand, little gravel. H<sub>2</sub>S-like odor (SC)</u> |                   |              |          |

Location: Crescent Mills, CA

Project Name: SAC 147K

Project Number: SAC 147K

Start Date and Time: 7/8 0930

Finish Date and Time:

Total Depth Drilled (ft bgs): 10

Drilling Method: Geoprobe DPI

Drilling Contractor: Cascade

Total Depth Cored (ft bgs):

Drill Rig: 7700

Hammer Type:

Boring Diameter (in): 2"

Sampling Method:

Hammer Weight/Drop:

Borehole Backfill:

Depth to Water (ft bgs): 8.7

Ground Surface Elevation (ft MSL):

Coordinates (X,Y):

Comments:

Logger: PD

Reviewer:

| Depth (ft bgs) | Sample Interval | Sample ID and Type | Blow Per 6 Inches | Sample Recovery (%) | MATERIAL DESCRIPTION<br><small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small>                       | PID Reading (ppm) | Time (00:00) | COMMENTS |
|----------------|-----------------|--------------------|-------------------|---------------------|--|-------------------|--------------|----------|
|                |                 | 2-4                |                   |                     | 0-2- Brown, wet, organics and Fill (GP)<br>2-7- Tan and green brown f-c sand and silt. Dense. Little gravel. Moist (SM)<br>7-10- wet, green brown to black silt and clay, little f-c sand, little gravel. (SC) | 10                |              |          |



Location: Crescent Mills, CA Project Name: Crescent Mills Project Number: SAC 147K

|                                      |                                     |   |
|--------------------------------------|-------------------------------------|---|
| Start Date and Time: <u>2/7 1430</u> | Finish Date and Time: <u>PD</u>     | Total Depth Drilled (ft bgs): <u>15</u> |
| Drilling Method: <u>Geoprobe DPT</u> | Drilling Contractor: <u>Cascade</u> | Total Depth Cored (ft bgs):             |
| Drill Rig: <u>7700</u>               | Hammer Type:                        | Boring Diameter (in): <u>2"</u>         |
| Sampling Method:                     | Hammer Weight/Drop:                 | Borehole Backfill:                      |
| Depth to Water (ft bgs): <u>10</u>   | Ground Surface Elevation (ft MSL):  | Coordinates (X,Y):                      |
| Comments:                            |                                     | Logger: <u>PD</u> Reviewer:             |

| Depth (ft bgs) | Sample Interval | Sample ID and Type | Blow Per 6 Inches | Sample Recovery (%) | MATERIAL DESCRIPTION<br><small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small> | PID Reading (ppm) | Time (00:00) | COMMENTS  |
|----------------|-----------------|--------------------|-------------------|---------------------|--|-------------------|--------------|---|
|                |                 | NONE               |                   |                     | 0-5 - Moist Fill (SP)<br>5-15 - wet, silt and fc sand,<br>little gravel. Red Brown.<br>(SM)  | 0.4               |              | 6" recovery<br>from 5-10"<br>No GCL<br>in boring<br>so advanced<br>to 15' bgs |

|                                      |  |  |  |   |           |
|--------------------------------------|--|--|--|---|-----------|
| Location: <u>Crescent Mills, CA</u>  |  | Project Name: <u>SAC 14 Crescent Mills</u> |  | Project Number: <u>SAC 147K</u>         |           |
| Start Date and Time: <u>2/8 1330</u> |  | Finish Date and Time: <u>(PD)</u>          |  | Total Depth Drilled (ft bgs): <u>10</u> |           |
| Drilling Method: <u>Geoprobe DPT</u> |  | Drilling Contractor: <u>Cascade</u>        |  | Total Depth Cored (ft bgs):             |           |
| Drill Rig: <u>7700</u>               |  | Hammer Type:                               |  | Boring Diameter (in): <u>2"</u>         |           |
| Sampling Method:                     |  | Hammer Weight/Drop:                        |  | Borehole Backfill:                      |           |
| Depth to Water (ft bgs): <u>1.6</u>  |  | Ground Surface Elevation (ft MSL):         |  | Coordinates (X,Y):                      |           |
| Comments:                            |  |  |  | Logger: <u>PD</u>                       | Reviewer: |

| Depth (ft bgs) | Sample Interval | Sample ID and Type | Blow Per 6 Inches | Sample Recovery (%) | MATERIAL DESCRIPTION<br><small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small> | PID Reading (ppm) | Time (00:00) | COMMENTS |
|----------------|-----------------|--------------------|-------------------|---------------------|--|-------------------|--------------|----------|
| 3-5            |                 |                    |                   |                     | 0-5 - Moist to wet, brown f-c sand, little clay, little gravel. Fill (GP) PD (SP)<br>5-10 - Wet, red brown, silty clay, little f-c sand, little gravel. (SC)                             | 0.2               |              |          |

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LOG OF BORING SB-6

Page 1 of 1

|                                      |   |   |
|--------------------------------------|---|---|
| Location: <u>Crescent Mills, CA</u>  | Project Name: <u>SAC Crescent Mills</u> | Project Number: <u>SAC 147K</u>         |
| Start Date and Time: <u>2/6 1545</u> | Finish Date and Time: <u>(P)</u>        | Total Depth Drilled (ft bgs): <u>10</u> |
| Drilling Method: <u>Geoprobe DPT</u> | Drilling Contractor: <u>Cascade</u>     | Total Depth Cored (ft bgs):             |
| Drill Rig: <u>7780</u>               | Hammer Type:                            | Boring Diameter (in): <u>2"</u>         |
| Sampling Method:                     | Hammer Weight/Drop:                     | Borehole Backfill:                      |
| Depth to Water (ft bgs): <u>5.5</u>  | Ground Surface Elevation (ft MSL):      | Coordinates (X,Y):                      |
| Comments:                            | Logger: <u>PD</u>                       | Reviewer:                               |

| Depth (ft bgs) | Sample Interval | Sample ID and Type | Blow Per 6 Inches | Sample Recovery (%) | MATERIAL DESCRIPTION<br><small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small> | PID Reading (ppm) | Time (00:00) | COMMENTS  |
|----------------|-----------------|--------------------|-------------------|---------------------|--|-------------------|--------------|---|
|                | 3-5             |                    |                   |                     | D-7 - Brown, moist, F-C<br>sandy, little gravel, little<br>silt. Fill (SP)   |                   |              | Boring<br>collapsed<br>beyond 7'<br>- no record |



|                                      |  |                                     |   |
|--------------------------------------|--|-------------------------------------|---|
| Location: <u>Crescent Mills, CA</u>  |  | Project Name: <u>SAL 147K</u>       | Project Number: <u>Crescent Mills</u>   |
| Start Date and Time: <u>2/7 1200</u> |  | Finish Date and Time:               | Total Depth Drilled (ft bgs): <u>10</u> |
| Drilling Method: <u>Geoprobe DPT</u> |  | Drilling Contractor: <u>Cascade</u> | Total Depth Cored (ft bgs):             |
| Drill Rig: <u>7700</u>               |  | Hammer Type:                        | Boring Diameter (in): <u>2"</u>         |
| Sampling Method:                     |  | Hammer Weight/Drop:                 | Borehole Backfill:                      |
| Depth to Water (ft bgs): <u>1.5</u>  |  | Ground Surface Elevation (ft MSL):  | Coordinates (X,Y):                      |
| Comments:                            |  |                                     | Logger: <u>PD</u> Reviewer:             |

| Depth (ft bgs) | Sample Interval | Sample ID and Type | Blow Per 6 Inches | Sample Recovery (%) | MATERIAL DESCRIPTION<br><small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small> | PID Reading (ppm) | Time (00:00) | COMMENTS |
|----------------|-----------------|--------------------|-------------------|---------------------|--|-------------------|--------------|----------|
|                |                 | <u>None</u>        |                   |                     | <u>0-4 - Brown, wet, Fill (SP)</u><br><u>4-10 - Red brown, f-c sand,</u><br><u>some silt, little gravel,</u><br><u>wet (SP) (SM)</u><br><u>(PD)</u>                                      | <u>0.9</u>        |              |          |

Location: Crescent Mills, CA Project Name: Crescent Mills Project Number: SAC 147K

|                                      |                                     |   |
|--------------------------------------|-------------------------------------|---|
| Start Date and Time: <u>2/7 0900</u> | Finish Date and Time:               | Total Depth Drilled (ft bgs): <u>10</u> |
| Drilling Method: <u>Geoprobe OPT</u> | Drilling Contractor: <u>Cascade</u> | Total Depth Cored (ft bgs):             |
| Drill Rig: <u>7700</u>               | Hammer Type: <u>PD</u>              | Boring Diameter (in): <u>2"</u>         |
| Sampling Method:                     | Hammer Weight/Drop:                 | Borehole Backfill:                      |
| Depth to Water (ft bgs): <u>0.5</u>  | Ground Surface Elevation (ft MSL):  | Coordinates (X,Y):                      |
| Comments:                            |                                     | Logger: <u>PD</u> Reviewer:             |

| Depth (ft bgs) | Sample Interval | Sample ID and Type | Blow Per 6 Inches | Sample Recovery (%) | MATERIAL DESCRIPTION<br><small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small> | PID Reading (ppm) | Time (00:00) | COMMENTS |
|----------------|-----------------|--------------------|-------------------|---------------------|--|-------------------|--------------|----------|
|                |                 | None               |                   |                     | 0-4 - Brown wet, F-L sand, little silt, little gravel (SP)<br>4-10 - Red brown, wet, F-L sand little silt, little gravel (SP) (SM)<br><u>PD</u>  | 1.3               |              |          |

Location: Crescent Mills, CA Project Name: Crescent Mills Project Number: SAC 147K

|                                      |                                     |   |
|--------------------------------------|-------------------------------------|---|
| Start Date and Time: <u>2/7 1030</u> | Finish Date and Time:               | Total Depth Drilled (ft bgs): <u>10</u> |
| Drilling Method: <u>Geoprobe DPT</u> | Drilling Contractor: <u>Cascade</u> | Total Depth Cored (ft bgs):             |
| Drill Rig: <u>7700</u>               | Hammer Type:                        | Boring Diameter (in): <u>2"</u>         |
| Sampling Method:                     | Hammer Weight/Drop:                 | Borehole Backfill:                      |
| Depth to Water (ft bgs): <u>1.2</u>  | Ground Surface Elevation (ft MSL):  | Coordinates (X,Y):                      |
| Comments:                            |                                     | Logger: <u>PD</u> Reviewer:             |

| Depth (ft bgs) | Sample Interval | Sample ID and Type | Blow Per 6 Inches | Sample Recovery (%) | MATERIAL DESCRIPTION<br><small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small> | PID Reading (ppm) | Time (00:00) | COMMENTS |
|----------------|-----------------|--------------------|-------------------|---------------------|--|-------------------|--------------|----------|
|                |                 | None               |                   |                     | 0-4-wet, brown Fill (sp)<br>4-10-wet, red brown, Fc<br>sand, some silt, little<br>gravel (sm)  | 0.8               |              |          |



**Location:** Crescent Mills, CA **Project Name:** Crescent Mills **Project Number:** SAC 147K

|                                      |                                     |   |
|--------------------------------------|-------------------------------------|---|
| Start Date and Time: <u>2/7 0800</u> | Finish Date and Time:               | Total Depth Drilled (ft bgs): <u>10</u> |
| Drilling Method: <u>Geoprobe-DT</u>  | Drilling Contractor: <u>Cascade</u> | Total Depth Cored (ft bgs):             |
| Drill Rig: <u>7700</u>               | Hammer Type:                        | Boring Diameter (in): <u>2"</u>         |
| Sampling Method:                     | Hammer Weight/Drop:                 | Borehole Backfill:                      |
| Depth to Water (ft bgs): <u>2.3</u>  | Ground Surface Elevation (ft MSL):  | Coordinates (X,Y):                      |
| Comments:                            |                                     | Logger: <u>PD</u> Reviewer:             |

| Depth (ft bgs) | Sample Interval | Sample ID and Type | Blow Per 6 Inches | Sample Recovery (%) | MATERIAL DESCRIPTION<br><small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small> | PID Reading (ppm) | Time (00:00) | COMMENTS |
|----------------|-----------------|--------------------|-------------------|---------------------|--|-------------------|--------------|----------|
|                |                 | <u>None</u>        |                   |                     | <u>0-4 - Fill (brown) (SP)</u><br><u>4-6 - Black Fill (SP)</u><br><u>6-10 - Red silty clay, little</u><br><u>fc sand, little gravel. (SC)</u>  |                   | <u>0.8</u>   |          |

|                                      |  |  |  |   |           |
|--------------------------------------|--|--|--|---|-----------|
| Location: <u>Crescent Mills, CA</u>  |  | Project Name: <u>SAC 147 <sup>Crescent</sup> Mills</u> |  | Project Number: <u>SAC 147K</u>         |           |
| Start Date and Time: <u>2/7 1245</u> |  | Finish Date and Time: <u>(PS)</u>                      |  | Total Depth Drilled (ft bgs): <u>10</u> |           |
| Drilling Method: <u>Geoprobe DPT</u> |  | Drilling Contractor: <u>Cascade</u>                    |  | Total Depth Cored (ft bgs):             |           |
| Drill Rig: <u>7700</u>               |  | Hammer Type:   |  | Boring Diameter (in): <u>2"</u>         |           |
| Sampling Method:                     |  | Hammer Weight/Drop:                                    |  | Borehole Backfill:                      |           |
| Depth to Water (ft bgs): <u>5.0</u>  |  | Ground Surface Elevation (ft MSL):                     |  | Coordinates (X,Y):                      |           |
| Comments:                            |  |  |  | Logger: <u>PD</u>                       | Reviewer: |

| Depth (ft bgs) | Sample Interval | Sample ID and Type | Blow Per 6 Inches | Sample Recovery (%) | MATERIAL DESCRIPTION<br><small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small> | PID Reading (ppm) | Time (00:00) | COMMENTS                           |
|----------------|-----------------|--------------------|-------------------|---------------------|--|-------------------|--------------|------------------------------------|
|                |                 | 4-5                |                   |                     | 0-4' - Moist, brown fill (SP)<br>4-10' - Green, gravel w/ F-C sand, little silt. wet. (GM)   | 0.9               |              | Poor Recovery from 4-10' bgs (~6") |

| Depth (ft bgs) | Sample Interval | Sample ID and Type | Blow Per 6 Inches | Sample Recovery (%) | MATERIAL DESCRIPTION<br><small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small> | PID Reading (ppm) | Time (00:00) | COMMENTS |
|----------------|-----------------|--------------------|-------------------|---------------------|--|-------------------|--------------|----------|
| 2-5            |                 |                    |                   |                     | 0-1.5 - Moist to dry fill. (SP) 0.3<br><del>See SB 15 for description</del><br>1.5-10 - Reddish wet F-C sand<br>little silt, little gravel (SM)  |                   |              |          |

|                               |  |                                    |  |                                  |           |
|-------------------------------|--|------------------------------------|--|----------------------------------|-----------|
| Location: Crescent Mills, CA  |  | Project Name: Crescent Mills       |  | Project Number: SAC 147K         |           |
| Start Date and Time: 2/8 0800 |  | Finish Date and Time:              |  | Total Depth Drilled (ft bgs): 10 |           |
| Drilling Method: Geoprobe DPT |  | Drilling Contractor: Cascade       |  | Total Depth Cored (ft bgs):      |           |
| Drill Rig: 7700               |  | Hammer Type:                       |  | Boring Diameter (in): 2"         |           |
| Sampling Method:              |  | Hammer Weight/Drop:                |  | Borehole Backfill:               |           |
| Depth to Water (ft bgs): 2    |  | Ground Surface Elevation (ft MSL): |  | Coordinates (X,Y):               |           |
| Comments:                     |  |                                    |  | Logger: PD                       | Reviewer: |

| Depth (ft bgs) | Sample Interval | Sample ID and Type | Blow Per 6 Inches | Sample Recovery (%) | MATERIAL DESCRIPTION<br><small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small>                   | PID Reading (ppm) | Time (00:00) | COMMENTS |
|----------------|-----------------|--------------------|-------------------|---------------------|--|-------------------|--------------|----------|
|                |                 | 1-4                |                   |                     | 0-2- wet, organic fill (SP)<br>2-6- moist greenish brown and tan f-c sand, little silt, little gravel likely fill. dense. (SP)<br>6-10- wet, tan to black silty clay, little f-c sand, little gravel. (SC) | 1.0               |              |          |



|                                      |  |   |  |  |           |
|--------------------------------------|--|---|--|--|-----------|
| Location: <u>Crescent Mills CA</u>   |  | Project Name: <u>DTX Crescent Mills</u>       |  | Project Number: <u>SAC R7K</u>           |           |
| Start Date and Time: <u>2/6 1100</u> |  | Finish Date and Time: <u>1300</u>             |  | Total Depth Drilled (ft bgs): <u>10'</u> |           |
| Drilling Method: <u>Geoprobe DPT</u> |  | Drilling Contractor: <u>Cascade</u>           |  | Total Depth Cored (ft bgs):              |           |
| Drill Rig: <u>7700</u>               |  | Hammer Type:                                  |  | Boring Diameter (in): <u>2"</u>          |           |
| Sampling Method:                     |  | Hammer Weight/Drop:                           |  | Borehole Backfill:                       |           |
| Depth to Water (ft bgs): <u>1.7'</u> |  | Ground Surface Elevation (ft MSL): <u>17'</u> |  | Coordinates (X,Y):                       |           |
| Comments:                            |  |   |  | Logger: <u>PD</u>                        | Reviewer: |

| Depth (ft bgs) | Sample Interval | Sample ID and Type | Blow Per 6 Inches | Sample Recovery (%) | MATERIAL DESCRIPTION<br><small>SOIL NAME (USCS SYMBOL): Color, Moisture, Grain Size and Percentage, Plasticity, Consistency/Density, Other (Odor, Dry Strength, Mineral Content)</small> | PID Reading (ppm) | Time (00:00) | COMMENTS |
|----------------|-----------------|--------------------|-------------------|---------------------|--|-------------------|--------------|----------|
|                |                 |                    |                   |                     | 0-5 - Dry, med dense, brown to gray brown f-c sand, little silt, little gravel. Fill   | 0.1               |              | (SP)     |
|                |                 |                    |                   |                     | 5-10 - wet, red brown, med dense, f-c sand, little silt, little gravel. (SP)   |                   |              |          |

# Low Flow Sampling Form

[illegible]

## Low Flow Sampling Form

[illegible]

# Low Flow Sampling Form

[illegible]



# Low Flow Sampling Form

[illegible]

# Low Flow Sampling Form

[illegible]

# Low Flow Sampling Form

Job No.

Site

Well ID

SAC 147K

Crescent Mills

SB-7

Date:

Start Time:

Finish Time:

2/7

1200

Sheet 1 of 1

Initials

Weather

Key No.

PD

Cloudy

1. Well Water Level/Pump Information:

a. Well Diameter (in)

b. M.P. Desc. (e.g., 2" PVC, notched)

c. M.P. Elevation (ft)

d. G.S. Elevation (ft)

e. Depth of well from G.S. (ft)

f. Initial depth to water from M.P. (ft)

g. Water column length [d-e+f](ft)

h. Depth to top of screen (ft)

i. Depth to pump intake (ft)

j. Saturated well volume (gal)

0.75

GS

1.5

2. Field Water Quality Measurements

a. EquipmentDescription (type, model number, serial number)

Pump:

Meters

Flow through cell

b. Purging Information

Geopump Peristaltic

YSI 556

4

Time:

Cumulative Purge Vol. (L)

Pump Rate (ml/min)

Temp (deg C)

Conductivity (m-ohm/cm)

Dis. Oxy (mg/l)

Redox (mV)

pH

Turbidity (NTU)

Water Level (ft)

1225

12.00

190

1.21

79.5

5.78

1.5

1230

18

200

12.07

187

0.90

73.1

5.72

1.5

3. Sample Collection Information

Sample ID

Time Collected

Container Type/No./Vol.

Preservation

Analytical Method

1. SB-7-66W

1235

Various

2.

3.

4.

notes:

NA = not applicable

NM = not measured/recorded

4. Comments:

Silty water

# Low Flow Sampling Form

[illegible]

# Low Flow Sampling Form

[illegible]



# Low Flow Sampling Form

[illegible]

# Low Flow Sampling Form

Job No.

Site

Well ID

SAC 147K

Crescent Mills

SB-12

Date:

Start Time:

Finish Time:

2/7

1305

1350

Sheet 1 of 1

Initials

Weather

Key No.

PD

Cloudy

1. Well Water Level/Pump Information:

a. Well Diameter (in)

b. M.P. Desc. (e.g., 2" PVC, notched)

c. M.P. Elevation (ft)

d. G.S. Elevation (ft)

e. Depth of well from G.S. (ft)

2"

GS

f. Initial depth to water from M.P. (ft)

g. Water column length [d-e+f](ft)

h. Depth to top of screen (ft)

i. Depth to pump intake (ft)

j. Saturated well volume (gal)

8.0

2. Field Water Quality Measurements

a. Equipment Description (type, model number, serial number)

Pump:

Meters

Flow through cell

Geopump Peristaltic

451 556

vi

b. Purging Information

Time:

Cumulative Purge Vol. (L)

Pump Rate (ml/min)

Temp (deg C)

Conductivity (m-ohm/cm)

Dis. Oxy. (mg/l)

Redox (mV)

pH

Turbidity (NTU)

Water Level (ft)

1330

10.27

284

1.92

-60.6

6.05

9.0

1335

17.6

200

10.07

284

0.78

-62.7

5.73

9.8

(80)

3. Sample Collection Information

Sample ID

Time Collected

Container Type/No./Vol.

Preservation

Analytical Method

1. SB-12-66W

1350

Various

2.

3.

4.

notes:

NA = not applicable

NM = not measured/recorded

4. Comments:

Pumped 1 gal - well ran dry - stopped for 15 mins and resampled at 1320. Water greenish and silty. Ran again at 1339. Sampled after

## Low Flow Sampling Form

[illegible]

# Low Flow Sampling Form

|                |  |                       |                     |  |             |                 |  |             |           |  |          |
|----------------|--|-----------------------|---------------------|--|-------------|-----------------|--|-------------|-----------|--|----------|
| <b>Job No.</b> |  | <b>SAC 14JK</b>       | <b>Date:</b>        |  | <b>2/8</b>  | <b>Sheet</b>    |  | <b>1</b>    | <b>of</b> |  | <b>1</b> |
| <b>Site</b>    |  | <b>Crescent Mills</b> | <b>Start Time:</b>  |  | <b>0810</b> | <b>Initials</b> |  | <b>PJ</b>   |           |  |          |
| <b>Well ID</b> |  | <b>SB-14</b>          | <b>Finish Time:</b> |  | <b>0935</b> | <b>Weather</b>  |  | <b>Rain</b> |           |  |          |
|                |  |                       |                     |  |             | <b>Key No.</b>  |  |             |           |  |          |

**1. Well Water Level/Pump Information:**

|                                       |                |  |          |
|---------------------------------------|----------------|--|----------|
| a. Well Diameter (in)                 | <u>20 0.75</u> | f. Initial depth to water from M.P. (ft) | <u>2</u> |
| b. M.P. Desc. (e.g., 2" PVC, notched) | <u>GS</u>      | g. Water column length [d-e+f](ft)       |          |
| c. M.P. Elevation (ft)                |                | h. Depth to top of screen (ft)           |          |
| d. G.S. Elevation (ft)                |                | i. Depth to pump intake (ft)             |          |
| e. Depth of well from G.S. (ft)       |                | j. Saturated well volume (gal)           |          |

**2. Field Water Quality Measurements**

a. Equipment Description (type, model number, serial number)

Pump: Geopump

Meters: YSI 556

Flow through cell: 1

b. Purging Information

| Time | Cumulative Purge Vol. (L) | Pump Rate (ml/min) | Temp (deg C) | Conductivity (m-ohm/cm) | Dis. Oxy (mg/l) | Redox (mV) | pH   | Turbidity (NTU) | Water Level (ft) |
|------|---------------------------|--------------------|--------------|-------------------------|-----------------|------------|------|-----------------|------------------|
| 0840 |                           |                    | 6.49         | 158                     | 2.67            | 188.3      | 4.16 |                 | 2'               |
| 0900 |                           |                    | 6.49         | 157                     | 6.80            | 241.7      | 2.97 |                 | 2'               |
| 0935 | 20                        | 200                | 6.47         | 179                     | 6.96            | 93.9       | 6.70 |                 | 2'               |
|      |                           |                    |              |                         |                 |            |      |                 |                  |
|      |                           |                    |              |                         |                 |            |      |                 |                  |
|      |                           |                    |              |                         |                 |            |      |                 |                  |
|      |                           |                    |              |                         |                 |            |      |                 |                  |
|      |                           |                    |              |                         |                 |            |      |                 |                  |
|      |                           |                    |              |                         |                 |            |      |                 |                  |
|      |                           |                    |              |                         |                 |            |      |                 |                  |
|      |                           |                    |              |                         |                 |            |      |                 |                  |
|      |                           |                    |              |                         |                 |            |      |                 |                  |
|      |                           |                    |              |                         |                 |            |      |                 |                  |
|      |                           |                    |              |                         |                 |            |      |                 |                  |
|      |                           |                    |              |                         |                 |            |      |                 |                  |
|      |                           |                    |              |                         |                 |            |      |                 |                  |
|      |                           |                    |              |                         |                 |            |      |                 |                  |
|      |                           |                    |              |                         |                 |            |      |                 |                  |
|      |                           |                    |              |                         |                 |            |      |                 |                  |
|      |                           |                    |              |                         |                 |            |      |                 |                  |
|      |                           |                    |              |                         |                 |            |      |                 |                  |
|      |                           |                    |              |                         |                 |            |      |                 |                  |
|      |                           |                    |              |                         |                 |            |      |                 |                  |

**3. Sample Collection Information**

| Sample ID             | Time Collected | Container Type/No./Vol. | Preservation | Analytical Method |
|-----------------------|----------------|-------------------------|--------------|-------------------|
| 1. SB-14-GW           | 0900           | Various                 |              |                   |
| 2. DUP=3 (TPH-g) ONLY | 0920           | Various                 |              |                   |
| 3.                    |                |                         |              |                   |
| 4.                    |                |                         |              |                   |

notes: NA = not applicable      NM = not measured/recorded




  




**4. Comments:** After sampling recalibrated YSI due to low pH. purged to get final YSI readings.

# Low Flow Sampling Form



[illegible]





|  |  |   |
|--|--|---|
| <p align="center"><b>GEOSYNTEC CONSULTANTS</b></p> <p align="center">Photographic Record</p> |  |  |
| Client:  | DTSC   | Project Number: SAC147K   |
| Site Address:  | 15690 CA Highway 89  | Site Location: Crescent Mills, California   |
| <p>Photograph 1</p>  |   |   |
| Date:  |  |   |
| 10 November 2016   |  |   |
| <p>Direction:</p> <p>South</p>   |  |   |
| <p>Comments:</p> <p>Drop inlet along current mill road</p>                                   |  |   |
| <p>Photograph 2</p>  |  |   |
| Date:  |  |   |
| 10 November 2016   |  |   |
| <p>Direction:</p> <p>South</p>   |  |   |
| <p>Comments:</p> <p>Wood waste stockpile #3</p>  |  |   |



|   |  |
|---|--|
| <p align="center"><b>GEOSYNTEC CONSULTANTS</b></p> <p align="center">Photographic Record</p> <p align="right">  </p>   |  |
| Client: DTSC  | Project Number: SAC147K  |
| Site Address: 15690 CA Highway 89   | Site Location: Crescent Mills, California  |
| <p>Photograph 3</p> <hr/> <p>Date:</p> <p>10 November 2016</p> <hr/> <p>Direction:</p> <p>South</p> <hr/> <p>Comments:</p> <p>Trench drain on west side of maintenance shop</p>   |   |
| <p>Photograph 4</p> <hr/> <p>Date:</p> <p>10 November 2016</p> <hr/> <p>Direction:</p> <p>North</p> <hr/> <p>Comments:</p> <p>Approximate location of former waste oil AST north of maintenance shop along northern property boundary. Sacramento Valley Moulding buildings shown in picture.</p> |  |




| <p>GEOSYNTEC CONSULTANTS</p> <p>Photographic Record</p>  |  | <p>Geosyntec<br/>consultants</p>          |
|--|--|---|
| Client:  | DTSC   | Project Number: SAC147K                   |
| Site Address:  | 15690 CA Highway 89  | Site Location: Crescent Mills, California |
| Photograph 5   |   |   |
| Date:  |  |   |
| 10 November 2016   |  |   |
| Direction: NA  |  |   |
| Comments: Date of concrete foundation for dry lumber storage #4 – concrete foundation laid over former mill road   |  |   |
| Photograph 6   |  |   |
| Date:  |  |   |
| 10 November 2016   |  |   |
| Direction:   |  |   |
| West   |  |   |
| Comments: Depression in center of photo was location for SB-11, collected east of the new planing mill transformer |  |   |






| <p>GEOSYNTEC CONSULTANTS</p> <p>Photographic Record</p>  |  | <p>Geosyntec<br/>consultants</p>          |
|--|--|---|
| Client:  | DTSC   | Project Number: SAC147K                   |
| Site Address:  | 15690 CA Highway 89  | Site Location: Crescent Mills, California |
| Photograph 7   |   |   |
| Date:  |  |   |
| 10 November 2016   |  |   |
| Direction:<br>West   |  |   |
| Comments:<br>Former boiler   |  |   |
| Photograph 8   |  |   |
| Date:  |  |   |
| 10 November 2016   |  |   |
| Direction:<br>South  |  |   |
| Comments:<br>Former boiler fuel shed<br>foundation and ramp that<br>was lower to left and<br>higher to right of photo. |  |   |

| <div> <div>GEOSYNTEC CONSULTANTS</div> <div>Photographic Record</div> <div> <div>Geosyntec</div> <div>consultants</div> </div> </div>  |  |
|--|--|
| Client: DTSC   | Project Number: SAC147K  |
| Site Address: 15690 CA Highway 89  | Site Location: Crescent Mills, California  |
| <div>Photograph 9</div> <div>Date:</div> <div>10 November 2016</div> <div>Direction:</div> <div>South</div> <div> <div>Comments:</div> <div>Former sorter/stacker building</div> </div>  |   |
| <div>Photograph 10</div> <div>Date:</div> <div>10 November 2016</div> <div>Direction:</div> <div>South</div> <div> <div>Comments:</div> <div>Dead vegetation and construction debris including sprayer nozzle between sorter/stacker building, green chain (pictured), and saw mill (to right).</div> </div> |  |



| <p>GEOSYNTEC CONSULTANTS</p> <p>Photographic Record</p>  |  | <p>Geosyntec<br/>consultants</p>          |
|--|--|---|
| Client:  | DTSC   | Project Number: SAC147K                   |
| Site Address:  | 15690 CA Highway 89  | Site Location: Crescent Mills, California |
| Photograph 11  |   |   |
| Date:  |  |   |
| 10 November 2016   |  |   |
| Direction:   |  |   |
| West   |  |   |
| Comments:  |  |   |
| Former saw mill septic tank to west of former saw mill building  |  |   |
| Photograph 12  |  |   |
| Date:  |  |   |
| 10 November 2016   |  |   |
| Direction:   |  |   |
| East   |  |   |
| Comments:  |  |   |
| Transformer conduit and pits to west of former saw mill building Soil sample SB-2 collected in vegetated area on left side of photo. |  |   |



|   |  |   |
|---|--|---|
| <p align="center"><b>GEOSYNTEC CONSULTANTS</b></p> <p align="center"><b>Photographic Record</b></p>   |  |  |
| Client:   | DTSC   | Project Number: SAC147K   |
| Site Address:   | 15690 CA Highway 89  | Site Location: Crescent Mills, California   |
| <p>Photograph 13</p> <hr/> <p>Date:</p> <p>10 November 2016</p> <hr/> <p>Direction:</p> <p>West</p> <hr/> <p>Comments:</p> <p>Typical wood waste and fill stockpile #2 materials.</p>                               |   |   |
| <p>Photograph 14</p> <hr/> <p>Date:</p> <p>10 November 2016</p> <hr/> <p>Direction:</p> <p>West</p> <hr/> <p>Comments:</p> <p>Wood waste stockpile #5. DU-19 was collected on left side of pile shown in photo.</p> |  |   |



| <p>GEOSYNTEC CONSULTANTS</p> <p>Photographic Record</p>  |  | <p>Geosyntec<br/>consultants</p>          |
|--|--|---|
| Client:  | DTSC   | Project Number: SAC147K                   |
| Site Address:  | 15690 CA Highway 89  | Site Location: Crescent Mills, California |
| <p>Photograph 15</p>   |   |   |
| Date:  |  |   |
| 10 November 2016   |  |   |
| Direction:   |  |   |
| South  |  |   |
| <p>Comments:</p> <p>Log Deck Recycle Pond</p>  |  |   |
| <p>Photograph 16</p>   |  |   |
| Date:  |  |   |
| 10 November 2016   |  |   |
| Direction:   |  |   |
| Northwest  |  |   |
| <p>Comments:</p> <p>Apparent trace of pipe running from former UST area to sawmill. SB-15 collected adjacent to this linear feature.</p> |  |   |



GEOSYNTEC CONSULTANTS  
PHOTOGRAPHIC RECORD



CLIENT: DTSC PROJECT NUMBER: SAC147K

SITE ADDRESS: 15690 CA HIGHWAY 89 SITE LOCATION: CRESCENT MILLS,  
CALIFORNIA

Photograph 17

Date:

10 November 2016

Direction:  
South

Comments:  
Cans of unidentified  
substances, possibly  
paint, along the western  
property boundary near  
the Old Dry Kiln.



Photograph 18

Date:

10 November 2016



Direction:

South



Comments:  
Above ground piping  
associated with Old Dry  
Kiln. Sample SB-13  
collected to east of  
location.









| <p>GEOSYNTEC CONSULTANTS</p> <p>Photographic Record</p>  |  | <p>Geosyntec<br/>consultants</p> |
|--|--|----------------------------------|
| Client:  | DTSC   | Project Number: SAC147K          |
| Site Address: 15690 CA Highway 89  | Site Location: Crescent Mills, California  |                                  |
| Photograph 19  |   |                                  |
| Date:  |  |                                  |
| 6 February 2017  |  |                                  |
| Direction:   |  |                                  |
| North  |  |                                  |
| Comments:  |  |                                  |
| Pooling water at former saw mill.  |  |                                  |
| Photograph 20  |  |                                  |
| Date:  |  |                                  |
| 6 February 2017  |  |                                  |
| Direction:   |  |                                  |
| North  |  |                                  |
| Comments:  |  |                                  |
| Wood waste and fill stockpile #6 and location of DU-20. Northern portion of Site shown in background of photo. |  |                                  |



| <p>GEOSYNTEC CONSULTANTS</p> <p>Photographic Record</p>  |  | <p>Geosyntec<br/>consultants</p>          |
|--|--|---|
| Client:  | DTSC   | Project Number: SAC147K                   |
| Site Address:  | 15690 CA Highway 89  | Site Location: Crescent Mills, California |
| <p>Photograph 21</p>   |   |   |
| Date:  |  |   |
| 6 February 2017  |  |   |
| Direction:   |  |   |
| West   |  |   |
| <p>Comments: Wood waste stockpile #5. DU-19 collected on left side of pile.</p>  |  |   |
| <p>Photograph 22</p>   |  |   |
| Date:  |  |   |
| 6 February 2017  |  |   |
| Direction:   |  |   |
| East   |  |   |
| <p>Comments: Proposed location of SB-6 was inundated with water. Advanced boring on dry ground on the southern side of the ramp.</p> |  |   |

|  |  |
|--|--|
| <p align="center"><b>GEOSYNTEC CONSULTANTS</b></p> <p align="center">Photographic Record</p> <p align="right"><b>Geosyntec</b><br/>consultants</p>   |  |
| Client: DTSC   | Project Number: SAC147K  |
| Site Address: 15690 CA Highway 89  | Site Location: Crescent Mills, California  |
| <p>Photograph 23</p> <hr/> <p>Date:</p> <p>6 February 2017</p> <hr/> <p>Direction:</p> <p>Northwest</p> <hr/> <p>Comments:</p> <p>Site flooding between new planing mill and maintenance shop as seen from wood waste and fill stockpile #2.</p> |   |
| <p>Photograph 24</p> <hr/> <p>Date:</p> <p>6 February 2017</p> <hr/> <p>Direction:</p> <p>North</p> <hr/> <p>Comments:</p> <p>Location of SB-11 and SB-12 at new planing mill, east of the extent of flooding.</p>                               |  |





|   |  |
|---|--|
| <p align="center"><b>GEOSYNTEC CONSULTANTS</b></p> <p align="center">Photographic Record</p> <p align="right"><b>Geosyntec</b><br/>consultants</p>                      |  |
| Client: DTSC  | Project Number: SAC147K  |
| Site Address: 15690 CA Highway 89   | Site Location: Crescent Mills, California  |
| <p>Photograph 25</p> <p>Date:</p> <p>6 February 2017</p> <p>Direction:</p> <p>North</p> <p>Comments:</p> <p>Typical casing left in ground for groundwater sampling.</p> |   |
| <p>Photograph 26</p> <p>Date:</p> <p>6 February 2017</p> <p>Direction:</p> <p>North</p> <p>Comments:</p> <p>Pressure washer setup for drilling rod decontamination.</p> |  |



|   |  |
|---|--|
| <p align="center"><b>GEOSYNTEC CONSULTANTS</b></p> <p align="center">Photographic Record</p> <p align="right"><b>Geosyntec</b><br/>consultants</p>  |  |
| Client: DTSC  | Project Number: SAC147K  |
| Site Address: 15690 CA Highway 89   | Site Location: Crescent Mills, California  |
| <p>Photograph 27</p> <p>Date:<br/>7 February 2017</p> <p>Direction:<br/>Northeast</p> <p>Comments:<br/>Location of potential UST to the east of maintenance shop as noted by flagging. Another potential UST location was noted behind the pine tree.</p> |   |
| <p>Photograph 28</p> <p>Date:<br/>7 February 2017</p> <p>Direction:<br/>West</p> <p>Comments:<br/>Direct push technology drill rig advancing soil boring SB-7</p>   |  |


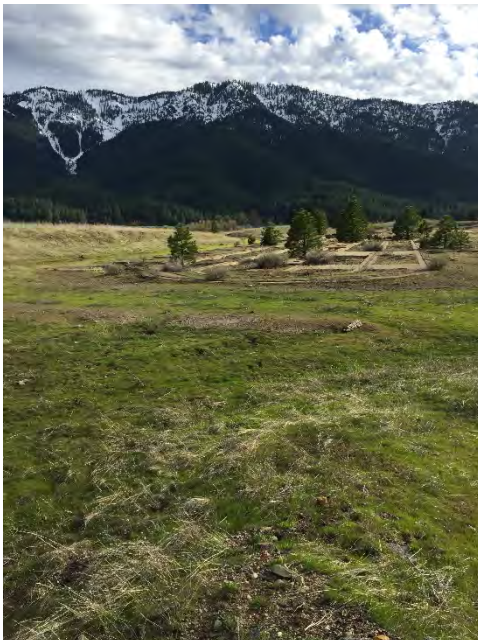


| <div style="text-align: center;"> <b>GEOSYNTEC CONSULTANTS</b><br/> <b>Photographic Record</b> </div> <div style="text-align: right;">  </div>  |  |
|--|--|
| Client: DTSC   | Project Number: SAC147K  |
| Site Address: 15690 CA Highway 89  | Site Location: Crescent Mills, California  |
| <div>Photograph 29</div> <div>Date:</div> <div>7 February 2017</div> <div>Direction:</div> <div>NA</div> <div> Comments:<br/> Soil samples from SB-12.<br/> Green color to soil from 5<br/> to 10 feet below ground<br/> surface. Note, poor<br/> recovery due to gravel in<br/> sediment trap. </div> |   |
| <div>Photograph 30</div> <div>Date:</div> <div>7 February 2017</div> <div>Direction:</div> <div>NA</div> <div> Comments:<br/> Soil samples from SB-13<br/> showing fill to<br/> approximately 5 feet bgs<br/> and oxidized clay from 5<br/> to 10 feet bgs. </div>                                     |  |





| <p>GEOSYNTEC CONSULTANTS</p> <p>Photographic Record</p>              |  | <p>Geosyntec<br/>consultants</p>          |
|--|--|---|
| Client:  | DTSC   | Project Number: SAC147K                   |
| Site Address:  | 15690 CA Highway 89  | Site Location: Crescent Mills, California |
| Photograph 31  |   |   |
| Date:  |  |   |
| 9 February 2017  |  |   |
| Direction:   |  |   |
| South  |  |   |
| Comments:  |  |   |
| Flooding in the sorter stacker area in late afternoon on 9 February. |  |   |
| Photograph 32  |  |   |
| Date:  |  |   |
| 9 February 2017  |  |   |
| Direction:   |  |   |
| South  |  |   |
| Comments:  |  |   |
| Flooding in the sorter stacker area in early morning on 10 February. |  |   |

| <p>GEOSYNTEC CONSULTANTS</p> <p>Photographic Record</p>  |  | <p>Geosyntec<br/>consultants</p>          |
|--|--|---|
| Client:  | DTSC   | Project Number: SAC147K                   |
| Site Address:  | 15690 CA Highway 89  | Site Location: Crescent Mills, California |
| Photograph 33  |   |   |
| Date:  |  |   |
| 10 February 2017   |  |   |
| Direction:   |  |   |
| Southeast  |  |   |
| Comments:  |  |   |
| Flooding at the Site as seen from wood waste stockpile #3  |  |   |
| Photograph 34  |  |   |
| Date: 26 March 2017  |  |   |
| Direction:   |  |   |
| North  |  |   |
| Comments:  |  |   |
| Location where Arsenic DU-2, the arsenic background ISM sample, was collected in two rows covering top of berm to left of frame and open area to right of frame. |  |   |

| <p>GEOSYNTEC CONSULTANTS</p> <p>Photographic Record</p>   |  | <p>Geosyntec<br/>consultants</p> |
|---|--|----------------------------------|
| Client: DTSC  | Project Number: SAC147K  |                                  |
| Site Address: 15690 CA Highway 89   | Site Location: Crescent Mills, California  |                                  |
| <p>Photograph 35</p> <p>Date:</p> <p>26 March 2017</p> <p>Direction:</p> <p>NA</p> <p>Comments:</p> <p>Three bucket wash decontamination system for hand auger used in sampling.</p>                        |   |                                  |
| <p>Photograph 36</p> <p>Date: 26 March 2017</p> <p>Direction:</p> <p>South</p> <p>Comments:</p> <p>General condition of the Saw Mill and Sorter/Stacker area. Water from February flooding had receded.</p> |  |                                  |



| <p style="text-align: center;">GEOSYNTEC CONSULTANTS</p> <p style="text-align: center;">Photographic Record</p>   |  | <p style="text-align: right;">Geosyntec<br/>consultants</p> |
|---|--|---|
| Client: DTSC  | Project Number: SAC147K  |   |
| Site Address: 15690 CA Highway 89   | Site Location: Crescent Mills, California  |   |
| <p>Photograph 37</p> <p>Date:</p> <p>26 March 2017</p> <p>Direction:</p> <p>East</p> <p>Comments:</p> <p>Log deck water supply well. The water level and depth to the bottom of the well were measured using the water level meter shown.</p>     |   |   |
| <p>Photograph 38</p> <p>Date: 26 March 2017</p> <p>Direction:</p> <p>NA</p> <p>Comments:</p> <p>Poured grout through tremie pipe into borings that could be located that were not sealed prior to Site flooding during initial investigation.</p> |  |   |



# **SUBTRONIC CORPORATION**



National Utility Location  
Contractors Association Member

5031 Blum Road, Suite 2  
Martinez, California 94553  
Telephone: (925) 228-8771  
Fax No: (925) 228-8737  
[www.subtronic.com](http://www.subtronic.com)

## **GEOPHYSICAL SUBSURFACE INVESTIGATION for Geosyntec Site Crescent Mills Crescent Mills, California**

### **OBJECTIVE**

Geophysical investigation for underground storage tanks.

### **SITE LOCATION AND DESCRIPTION**

On April 12, 2017, Subtronic conducted a subsurface geophysical survey at the former lumber mill property located in the town of Crescent Mills, California. The area of concern described by the client is a 10 foot swath surrounding the concrete slab which belonged to the now demolished maintenance shop. The slab dimensions are approximately 185 feet by 68 feet.

### **GEOPHYSICAL EQUIPMENT**

The specialized equipment used at the site includes a RD 8000, TW-6 M-Scope, Schonstedt GA-72CV, and GSSI system 4000 ground penetrating radar (GPR).

#### ***Radiodetection RD 8000 Cable and Pipe Tracer***

The RD 400-cable locator is a hand-held instrument used to detect buried utilities. The primary application of the RD 400 is to pinpoint the path of electric lines and other power conductors such as CATV and telephone cables. Pipes made of steel or copper and pipes with tracer wire are also easily traced.

#### ***TW-6 M-Scope***

The Fisher TW-6 M-Scope is a split box inductive locator and metal detector mounted on a four-foot rod. The split box locator can detect metal lines "inductively". The M-Scope is also used to detect buried metallic objects such as manhole covers,

underground storage tanks, etc... The limits of detection with a TW-6 M-SCOPE is about 5 feet deep.

### ***Schondstedt***

The Schonstedt is a hand held magnetic locator about 2 ½ feet long which functions as a magnetometer but does not log any data. The Schonstedt produces audio signals over buried of metal objects. The limits of detection with a Schondstedt is about 8 to 10 feet deep in an open field.

### ***GSSI SIR-4000***

A ground penetrating radar system graphically records subsurface structures. Both geological and manmade structures are recorded by the introduction of a pulse of electromagnetic energy into the ground. Reflected pulses received by the antenna are then processed for measurable contrast in electrical properties. The result is a visual pseudo-cross-sectional profile.

Primary applications of the GPR are detecting UST's, buried drums, previously excavated areas, i.e., UST excavation, and detecting metallic and non-metallic utilities.

The GPR depth penetration is severely limited by clay-rich soil. Radar waves penetrate deeper in sandy and gravelly soils.

### **Survey Methodology:**

First, a visual inspection was conducted at the site. Underground utilities, vaults, boxes, exposed piping, topographic mounds and depressions were noted. Exposed piping or risers found on the site were energized, traced out and the surface location was spray painted on the ground.

Then the split box locator and Schondstedt were scanned along the perimeter of the concrete slab up to 10 feet off the slab edge. Buried piping and metal detected by the instruments were marked on the ground. The location of the buried metal was marked on a sketch map.

### **SURVEY RESULTS**

A visual inspection of the site indicated several pipe risers. Most of the pipe risers were interpreted to be abandoned electric lines. The electric lines traced to the center of the concrete slab. This suggests that they were installed for machinery located in the center of the shop. A 4 inch cast iron sewer riser was found in the northeast corner of the slab, it was traced southeastward toward the empty field.

The figure below shows the limits of the subsurface survey and the electric line previously discussed. Also shown on this map is reinforced concrete detected during the metal detection scan.

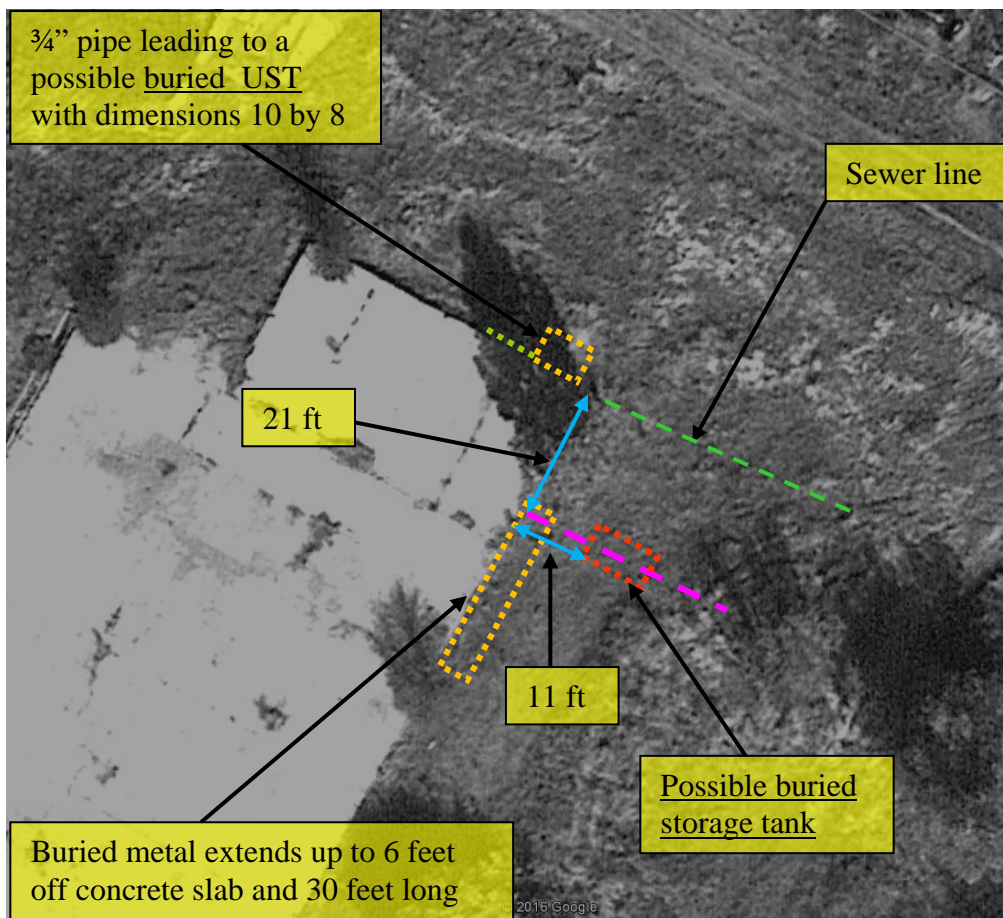


The photograph below shows a 3/4 in riser.





The figure below shows the buried metal detected on the eastside of the slab. Beginning at the northeast side of the concrete slab, a 10 foot section of  $\frac{3}{4}$  inch pipe is visible lying on the ground. This pipe was traced southeastward to the location of buried metal with dimensions 8 by 10 feet. The buried metal could not be scanned with ground penetrating radar because this area is a depression filled with at least 6" of water. Twenty one feet southwest of the northeast corner of the slab an unknown buried pipe was marked on the ground (see dashed pink line in figure below). Along this pink line an area of buried metal with dimensions 10 feet by 4 feet was detected. It is possible the buried metal could be associated with an underground storage tank. Radar indicates that the buried metal is approximately 2 feet deep. The last area of buried metal is 6 feet wide by 30 feet long. The ground penetrating radar scans over this area are not clear enough to define what is the buried metal.



## CONCLUSIONS

Three buried metal anomalies were detected from the geophysical investigation. One of them located on the northeast edge of the concrete slab is connected to a ¾ inch pipe. This area could not be scanned with ground penetrating radar to confirm if it is a UST because it was covered with at least 6 inches of water. A second anomaly was found 21 feet south of the northeast corner. Radar scans and metal detection suggest it is either a large pipe or a possible UST buried about 2 feet deep. The third anomalous area is 6 wide by 30 feet long. Radar scans over this area did not provide insight into what type of metal was buried there.

### **Recommendations**

The anomalies can best be identified by careful excavation in the areas indicated.

### **Limitations**

The subsurface geology, object size and composition, burial depth, above ground metallic cultural features, affect the size and shape of geophysical anomalies and, which may impede their detection. Geophysical anomalies may not represent unique solutions. Apparently similar anomalies may be created by different subsurface phenomena creating “false positives”.

The limits of discernment of this survey are the detection of objects within five feet of metal fences, buildings, vehicles and other identified objects.

Report Prepared By:

A handwritten signature in cursive script, appearing to read "Pierre Armand".

Pierre S. Armand RGP 1021

# NON-HAZARDOUS WASTE TRANSPORT FORM

## GENERATOR

Name: \_\_\_\_\_  
Address: 15690 Hwy 89  
Crescent Mills, CA  
Phone: 916.637.8341

## CUSTOMER

Name: DOULOS ENVIRONMENTAL  
Address: P.O. BOX 2559  
ORANGEVALE, CA  
Phone: 916 990 0333

## DESCRIPTION

Description of Material : Soil Cuttings

Volume/Weight: 525 Units: pounds Container(s): drums

Generator/Authorized Agent : Hal Hansen Hal Hansen 4/6/17  
Print Sign Date

## TRANSPORTER

Name: DOULOS ENVIRONMENTAL  
Address: P.O. BOX 2559  
ORANGEVALE, CA  
Phone: 916 990 0333

Job No: Project #SAC147K  
Truck ID: \_\_\_\_\_  
Driver: [Signature] 4/6/17  
Sign Date

## DISPOSAL FACILITY

Name: KIEFER LANDFILL FACILITY  
Address: \_\_\_\_\_  
SACRAMENTO, CA

Quantity: 525  
Units: pounds  
Disposal Method: \_\_\_\_\_

# NON-HAZARDOUS WATER TRANSPORT FORM

## GENERATOR

Name: \_\_\_\_\_  
Address: 15690 Hwy 89  
Crescent Mills, CA  
Phone: 916-637-8341

## CUSTOMER

Name: Doulos Environmental, Inc.  
Address: P.O. Box 2559  
Orangevale, CA 95662  
Phone: 916-990-0333

## DESCRIPTION

Description of Water : \_\_\_\_\_ purge water

Volume/Weight: 100 Units: gallons Container(s): poly tank

This non-hazardous waste water is monitoring well purge water, auger rinsate, sampling equipment rinsate, tank rinsate, combination thereof, or as described above. Described water may contain dissolved hydrocarbons. I certify that the above named material has been properly described and classified according to applicable regulations, and possesses no characteristics that would require its handling as hazardous waste.

Generator/Authorized Agent : Hal Hansen Hal Hansen 4/6/17  
Print Sign Date

## TRANSPORTER

Name: Doulos Environmental Job No: GeoSyntec, Crescent Mills #SAC147K  
Address: P.O. Box 2559 Pick-up Date: \_\_\_\_\_  
Orangevale, CA 95662 Truck ID: \_\_\_\_\_  
Phone: 916-990-0333 Driver: [Signature] 4/6/17  
Sign Date

## DISPOSAL FACILITY

Name: Inviro-tec Disposal Quantity: 100  
Address: 2480 Athens Way Units: gallons  
Lincoln, CA Disposal Method: \_\_\_\_\_  
Received by: INVIRATEC Invirotec 4/6/17  
Print Sign Date