## Louis Badertscher, 5625 N. Highway 66, Kingman, AZ 86401

May 18, 2015

Mr. Keith Nowell ACEHCSA 1131 Harbor Bay Parkway Alameda, Ca 94502-6540

### RECEIVED

By Alameda County Environmental Health 11:05 am, May 29, 201

Subject: Monitoring Well Decommissioning Report, 3600 MacArthur Blvd., Oakland, Ca, Fuel Leak Case RO280

Dear Mr. Nowell:

Attached please find a copy of my May 18, 2015 monitoring well destruction report prepared by my consultant Ground Zone Environmental Services, LLC. I declare, under penalty of perjury, that the information and/or recommendations contained in the attached report is true and correct to the best of my knowledge.

Sincerely,

dutilen

Property Owner



May 18, 2015

Louis Badertscher 5625 N. Highway 66 Kingman, Arizona 86401

Re: Decommissioned Monitoring Wells MW-1, MW-2 and MW-3, 3600 MacArthur Blvd, Oakland, California

Project No.160.A.01:

Dear Mr. Badertscher:

Ground Zone Environmental Services, LLC (Ground Zone) is pleased to present this report describing the decommissioning of the three shallow (14 feet deep) 2-inch diameter groundwater monitoring wells at the above referenced property. The decommissioning of the monitoring wells was directed by Alameda County Environmental Health Services Agency in a letter dated April 6, 2015. **Figure 1** shows the decommissioned monitoring well locations.

### **Scope of Work**

The wells were decommissioned on May 14, 2015. Decommissioning of the wells required the following steps:

- Step 1: Add 2-inch diameter, 18-inch long PVC adapter casing to the well head and insert 1-inch diameter PVC tremie pipe into the well and begin grouting through the tremie pipe. Remove the displaced groundwater from the well using a shop vacuum. Stop grouting when the groundwater has been displaced and cement residue appears;
- Step 2: Remove tremie pipe and add pressure head to well. Pressurize well holding steady for 5 minutes at a pressure of 30 pound per square inch;
- Step 3: Remove pressure head and top of grout, if needed; and,
- Step 4: Remove well vault and backfill well boring with concrete.

**Figure 2** provides photographs of the steps taken during the decommissioning of the monitoring wells. All remaining investigation, remediation and well destruction derived wastes have been removed from the Site and properly disposed of.

The wells were decommissioned by Vapor Tech, a C57 Licensed driller, under the supervision of Ground Zone. The decommissioned monitoring wells were also inspected by Alameda County Public Works Agency (ACPWA). Prior to decommissioning, a permit contained in **Attachment A**, was obtained from ACPWA and Underground Services Alert was notified of the activities approximately one week in advance. Copies of the Well Completion/Well Decommissioned Report is provided in **Attachment B** along with copies of boring logs and well details for the former monitoring wells.

If you have any question regarding this report feel free to give me a call.



Sincerely,

Ven Brathwaite

Sam Brathwaite, PG, CEG, CHg Ground Zone Environmental Services, LLC

Attachments

Figure 1 – Well Location Figure 2 – Steps used to Decommission Wells Attachment A – Well Permit Attachment B – Well Decommissioned Report



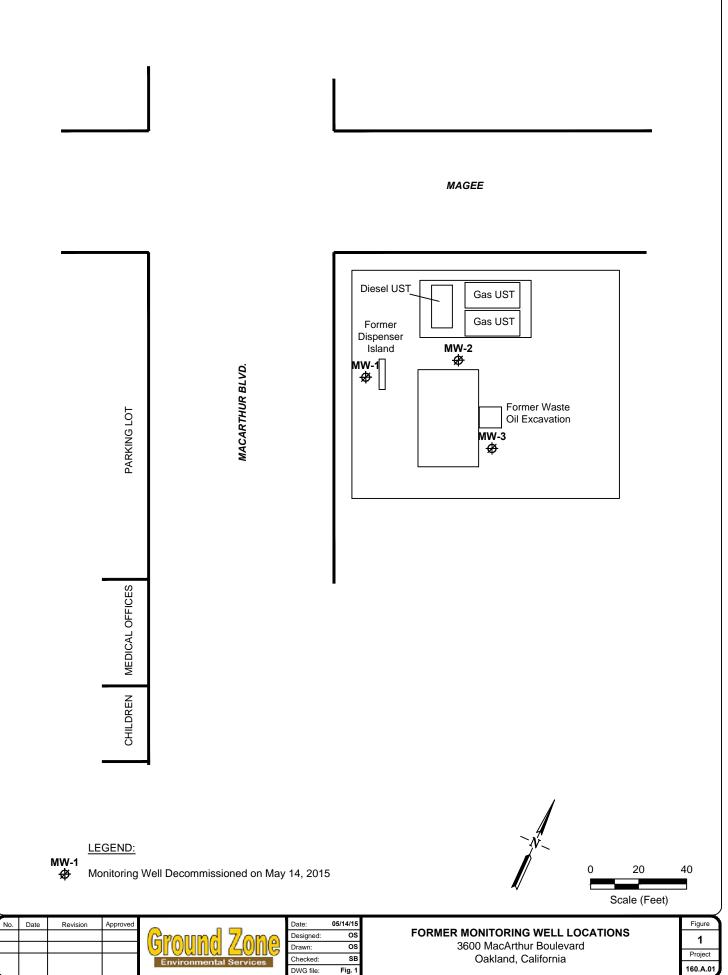
Expires 11/30/2015



Attachments



Figures



:/Work/EnviroCAD/Ground Zone/160/160.A.01/Figure 1 - Well Locatic

| Photo No. 1 - Add PVC adapter to well casing | Photo No. 2 - Insert tremie pipe and begin grouting | Photo No. 3 - Remove displaced groundwater                     |
|--|---|--|
|  |   |  |
| Photo No. 4 - Pressurize grout               | Photo No. 5 - Remove vault box                      | Photo No. 6 - Backfill upper section of borehole with concrete |



PHOTOGRAPHS SHOWING THE VARIOUS STAGES OF WELL DECOMMISSIONING 3600 MacArthur Boulevard Oakland, California

Figure 2 Project 160.A.01



Attachment A Well Permit

#### 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: 05/04/2015 By jamesyPermit Numbers: W2015-0384 to W2015-0386<br/>Permits Valid from 05/14/2015 to 05/14/2015Application Id:1430412212139City of Project Site:OaklandSite Location:3600 MacArthur BI, Oakland, CACompletion Date:05/22/2015Project Start Date:05/22/2015Completion Date:05/22/2015Assigned Inspector:Contact James Yoo at (510) 670-6633 or jamesy@acpwa.orgExtension Start Date:05/14/201505/14/2015Extension End Date: 05/14/2015

| Extension Count: | 1  | Extended By: jamesy        |
|------------------|--|----------------------------|
| Applicant:       | GroundZone - Sam Brathwaite<br>1705 Modoc Ave, Hayward, CA 94542 | <b>Phone:</b> 925-570-7609 |
| Property Owner:  | Louis Bodertscher<br>5625N Hwy66, Kingsman, AZ 86401             | Phone:                     |
| Client:          | ** same as Property Owner **                                     |                            |

|  | Total Due: | \$1191.00                        |
|--|------------|----------------------------------|
| Receipt Number: WR2015-0227<br>Payer Name : GroundZone |            | <u>\$1191.00</u><br>PAID IN FULL |
| -  | -          |                                  |

Work Total: \$1191.00

#### **Works Requesting Permits:**

Well Destruction-Monitoring - 3 Wells Driller: Vapor Tehc - Lic #: 916085 - Method: other

#### Specifications

| Permit #       | Issued Date | Expire Date | Owner Well<br>Id | Hole Diam. | Casing<br>Diam. | Seal Depth | Max. Depth | State Well # | Orig.<br>Permit # | DWR # |
|----------------|-------------|-------------|------------------|------------|-----------------|------------|------------|--------------|-------------------|-------|
| W2015-<br>0384 | 05/04/2015  | 08/20/2015  | MW1              | 0.00 in.   | 2.00 in.        | 4.00 ft    | 15.00 ft   |              |                   |       |
| W2015-<br>0385 | 05/04/2015  | 08/20/2015  | MW2              | 0.00 in.   | 2.00 in.        | 4.00 ft    | 15.00 ft   |              |                   |       |
| W2015-<br>0386 | 05/04/2015  | 08/20/2015  | MW3              | 0.00 in.   | 2.00 in.        | 4.00 ft    | 15.00 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 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 60 days. Include permit number and site map.

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

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. 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.

7. 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.



Attachment B Well Decommissioned Report

# CONFIDENTIAL

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

## REMOVED

| Depth<br>(fbg)                                     | Sample ID Counts Va       |  | Organic<br>Vapor<br>(ppm)                    | Vapor Soil                                       |                        | Description  | Co   | Well<br>nstruction<br>Detail |   |
|--|---------------------------|--|--|--|------------------------|--|--|------------------------------|---|
| - 1<br>- 5<br>- 10<br>- 10<br>- 15<br>- 20<br>- 25 |                           | B2-2.5<br>B2-4.5<br>B2-7<br>B2-10<br>B2-13               | (Hand Auger)                                 | 0<br>7,300<br>767<br>0                           | ML<br>CL<br>CL<br>CL   | Moist, b<br>clayey \$<br>Moist, o<br>Moist, n<br>CLAY<br>Moist, s<br>(5Y 4/4)<br>silty CL<br>Wet, me<br>(10YR 6<br>clayey, s<br>Wet, ve<br>sandy, s<br>Total D | e (5 inches)<br>rownish black (5YR 2/1), slightly<br>SILT<br>live gray (5Y 3/2), clayey SILT<br>noderate olive brown (5Y 4/4), sil<br>tiff to hard, moderate olive brown<br>to light olive gray (5Y 5/2), sand<br>AY with gravel<br>edium dense, pale yellowish brow<br>/2) and grayish yellow (5Y 8/4),<br>silty SAND with gravel<br>ry stiff, light brown (5YR 5/6),<br>silty CLAY<br>epth of Boring = 14 fbg<br>fell Depth = 14 fbg | y,                           | Traffic Box<br>Locking Well Ca<br>Concrete<br>2-Inch-Diameter<br>Schedule 40 PVC<br>Bentonite Chips<br># #2/16 Sand<br>2-Inch-Diameter<br>Schedule 40 PVC<br>(0.010 Screen) |
| OCAT<br>PROJE<br>DRILLII<br>DRILLII                | ION:<br>CTN<br>NGC<br>NGN | Scoote<br>3600 M<br>O: 97-0<br>ONTRA<br>IETHOE<br>ATE: N | ar's Auto I<br>MacArthu<br>187.1<br>ICTOR: 1 | r Blvd., O<br>V&W Drill<br>ch-I.D. Ho<br>4, 1998 | akland, C<br>ing, Inc. |  | LEGEND:<br>fbg           feet below grade<br>ppm          parts per million<br>♥   |                              |   |

# CONFIDENTIAL

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

## REMOVED

| (fbg) Sample ID Counts V  |                         | Organic<br>Vapor<br>(ppm)                     | apor Soil             |  | Description | C                                | Well<br>Construction<br>Detail   |        |   |
|---------------------------|-------------------------|---|-----------------------|--|-------------|----------------------------------|--|--------|---|
| 1                         |                         |   | 5                     |  |             | Asphalt                          | (4 inches)   |        | Traffic Box   |
| - 1                       |                         |   | Ingel                 |  |             |                                  |  |        | Locking Well Ca                                       |
| <b>*</b>                  |                         | B3-2.5  | (Hand Auger)          | 0  | CL          |                                  | oderate yellowish brown<br>/4), silty CLAY with trace sand   | •      | 2-inch-Diameter<br>Schedule 40 PVC<br>Bentonite Chips |
| . 5                       |                         | B3-4.5  |                       | 0  | CL          | Moist, pa<br>with trac           | ale olive (10Y 6/2), silty CLAY<br>e sand and fine gravel  |        |   |
| _                         |                         | 83-7  | 16,30,35              | 313  | GC          | Moist to<br>sand; ma<br>(10Y 4/2 | wet, silty, clayey GRAVEL with<br>atrix predominantly grayish olive<br>)                                     |        | <b>4</b> #2/16 Sand                                   |
| 10                        |                         | B3-10   | 18,14,10              | O  | SM/SC       | Wet, me<br>brown (1<br>gravel    | dium dense, moderate yellowish<br>0YR 5/4), clayey, silty <b>SAND</b> with                                   |        | 2-Inch-Diameter<br>Schedule 40 PVC<br>(0.010 Screen)  |
| _                         |                         | B3-13   | 14,18,20              | 0  | ML          | yellowish                        | wet, very stiff to hard, dark<br>orange (10YR 6/6) to light brown  |        |   |
| _                         |                         |   |                       |  |             | (SYR 5/6<br>gravel               | ), sandy, clayey SILT with trace   |        | Bottom Cap  |
| 15<br><br><br>20          |                         |   |                       |  |             | Total We                         | ali Depth = 14 fbg   | inches |   |
| 25                        |                         |   |                       |  |             |                                  |  |        |   |
| ORING                     | a / wi                  | ELL NU  | MBER: I               | B3 / MW-                                       | 2           |                                  | LEGEND:  |        |   |
| ROJE(<br>RILLIN<br>RILLIN | CT NO<br>IG CO<br>IG MI | 3600 M<br>D: 97-0<br>DNTRA<br>ETHOD<br>ATE: N | CTOR: V<br>: 4.25-inc | Blvd., Oa<br>&W Drilli<br>h-I.D. Ho<br>4, 1998 | ng, Inc.    | A                                | fbg = feet below grade<br>ppm = parts per million<br>▼ = approximate depth to grou<br>measured on November 1 |        |   |

# CONFIDENTIAL

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

## REMOVED

| epth<br>fbg)                     |                        | ecovery/<br>ample ID Counts Organic USCS<br>Vapor Soil Description<br>(ppm) Type |   |  | Well<br>Constructior<br>Detail               |   |  |   |                |  |
|----------------------------------|------------------------|--|---|--|--|---|--|---|----------------|--|
| 1                                |                        | 84-2.5<br>84-4.5<br>84-7<br>84-10<br>84-13                                       | (Hand Auger<br>(Hand Auger<br>(Hand Auger<br>(Hand Auger)<br>(Hand Auger))<br>(Hand Auger)<br>(Hand Auger)<br>(Hand Auger)<br>(Hand A | 0<br>0<br>0                                    | SM<br>CL<br>GC<br>SC<br>SC<br>SM/SC<br>SM/SC | Damp, mo<br>(10YR 5/4<br>Moist, mo<br>5/4), silty,<br>amount of<br>(5Y 6/4), s<br>Moist, me<br>brown (10)<br>grained SA<br>Moist, very<br>orange (10)<br>with grave<br>(Rock frac<br>Wet, very<br>(10YR 5/4<br>gravel and<br>amount of<br>Total Dep | D with gravel<br>oderate yellowish brown<br>), silty CLAY with trace sa<br>derate yellowish brown (10<br>clayey GRAVEL with a tra<br>sand and moist, dusky ye<br>sand and moist, dusky ye<br>ility, clayey SAND with gra<br>dium dense, moderate yell<br>YR 5/4), clayey, fine- to co<br>AND with gravel<br>y stiff to hard, dark yellowish<br>y R 6/6), clayey, silty SAN<br>i<br>tured with split spoon?)<br>stiff, moderate yellowish b<br>), sandy, clayey SILT with<br>sandy, silty CLAY with a | YR<br>ace<br>Ilow<br>vel<br>owish<br>arse-<br>sh<br>ID<br>rown<br>trace | 8.25<br>Inches | Traffic Box<br>Locking Well C:<br>Schedule 40 PV<br>Bentonite Chips<br>#2/16 Sand<br>#2/16 Sand<br>2-Inch-Diameter<br>Schedule 40 PV<br>(0.010 Screen)<br>Bottom Cap |
| DCAT<br>ROJE<br>RILLIN<br>RILLIN | ION:<br>CT NC<br>NG CC | Scoote<br>3600 M<br>): 97-0<br>)NTRA<br>ETHOD<br>ATE: N                          | r's Auto F<br>lacArthur<br>187.1<br>CTOR: \<br>: 4.25-ind<br>ovember  | Blvd., O<br>/&W Drill<br>ch-I.D. Ho<br>4, 1998 | akland, C<br>ing, Inc.                       | A p   | EGEND:<br>pg = feet below grade<br>pm = parts per million<br>▼ = approximate depth f<br>measured on Nover  |   |                |  |