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By Alameda County Environmental Health 2:08 pm, Nov 01, 2016



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October 26, 2016

Ms. Kit Soo
Alameda County Health Care Services
Environmental Health Services
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

**Subject: RO0000289
PROJECT CLOSEOUT REPORT, BIOBARRIER INSTALLATION
OWENS-BROCKWAY GLASS CONTAINER FACILITY.
3600 ALAMEDA AVENUE, OAKLAND, CALIFORNIA.**

Dear Ms. Soo:

Owens-Brockway Glass Container Corporation is pleased to submit the attached Project Closeout Report for the Biobarrier Installation at the above site.

I declare under penalty of perjury that the information and recommendations contained in the attached report are true and correct to the best of my knowledge.

If you need further information, feel free to call me at (567) 336-8682.

Sincerely,

Mark Tussing.
Manager, Environmental Affairs

October 26, 2016

Ms. Kit Soo
County of Alameda Health Care Services Agency
Environmental Health Department
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: RO0289
TRANSMITTAL OF PROJECT CLOSEOUT REPORT BIOBARRIER
INSTALLATION, OWENS-BROCKWAY GLASS CONTAINER FACILITY,
OAKLAND, CALIFORNIA.

Dear Ms. Soo:

CKG Environmental, Inc. (CKG) is pleased to transmit this project closeout report describing the installation of the biobarrier at the closed Owens-Brockway Glass Container facility at 3600 Alameda Avenue in Oakland, California. The biobarrier was installed to provide a groundwater treatment trench to reduce petroleum hydrocarbon concentrations in groundwater as it migrates offsite to the south. The biobarrier was installed in accordance with CKG's *Groundwater Treatment Biobarrier Design*, dated August 13, 2014 and approved in a September 4, 2014 letter from the Alameda County Department of Environmental Health (ACDEH).

SUMMARY

CKG subcontracted with Sierra West Consultants Inc. to design and oversee construction of the biobarrier. The wells were installed in December 2015 with trenches installed in February 2016 followed by piping and electrical connections through May 2016. Initial startup was on July 20, 2016.

After some initial issues with the equipment producing too much heat and requiring a heat exchange system being installed, the biobarrier has been operating continuously since start up. Air flow rates to each well have been optimized and weekly inspections occur to assure smooth operation of the system

The first post biobarrier groundwater monitoring event is scheduled for November 10, 2016 and will continue with quarterly events as specified in the design. A summary of biobarrier performance will be included in the quarterly monitoring report.

LIMITATIONS

CKG performed the scope of work in a manner consistent with the standards of care and skill normally exercised by members of the profession practicing under similar conditions in the geographic vicinity and at the time the services were performed. No warranty or guarantee expressed or implied is part of the services offered in this report.

If you need further information or would like more details regarding this report please feel free to call me at (707) 967-8080.

Sincerely,
CKG ENVIRONMENTAL, INC.



Christina J. Kennedy
Principal



Attachment Sierra West Consultants, October 18, 2016, Final Construction Closeout Report, Biobarrier Groundwater Treatment Project.



Final Construction Closeout Report

**Biobarrier Groundwater
Treatment Project
October 2016**



**Owens-Brockway Glass
Container Corporation
3600 Alameda Ave
Oakland, California**



Submitted to:

**CKG Environmental, Inc.
October 18 2016**

Submitted by:



**SIERRA WEST
CONSULTANTS, INC.**

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1.0 Introduction

Sierra West Consultants, Inc. (Sierra West) is pleased to provide this construction closeout report for the Owens-Brockway Biobarrier Groundwater Treatment Project. This section provides a brief project description, identifies the project team, includes project related permits, and outlines the project activities. **Section 2** of this report summarizes the main construction milestones for the project. As-built drawings are included in **Appendix 1**. Project team members' contact info, permits, daily construction observation reports, laboratory analytical reports, boring logs and well DWR reports, well development field forms, well survey report, photographs, and disposal documentation are also included in the Appendices.

1.1 Project Description

The project site is the former Owens-Brockway Glass Container Corporation at 3600 Alameda Ave., Oakland, CA (Site). Property redevelopment is anticipated after existing structures are removed and the environmental cleanup is completed to acceptable levels.

The primary constituents of concern (CoCs) are total petroleum hydrocarbons (TPHs) in soil and shallow groundwater. The TPHs are primarily heavy-end hydrocarbons from aged fuel oils. The primary objective of the air injection wells is to remove TPH compounds from the surrounding soil and groundwater, and create a biobarrier to prevent the downgradient migration of the compounds from the Site.

The system includes three monitoring wells (MW), 20 air injection wells (IW), air supply and instrumentation and controls conduits to each well, and a cargo shed to house an air compressor, automated control panel, and appurtenant equipment. Project activities were conducted in accordance with the *Revised Corrective Action Plan-Targeted Excavations and Groundwater Treatment Trench*, dated January 17, 2014, and *Invitation to Bid and Project Documents for Groundwater Treatment Biobarrier Project*, dated October, 2015

1.2 Project Team

Owens-Brockway Glass Container Corporation (Owens-Brockway) is the project Owner and CKG Environmental, Inc. (CKG) is the lead environmental consultant and project manager. Sierra West is the remediation design engineer and provided construction management support to CKG. Engineering/Remediation Resource Group (ERRG) provided construction services. Additional support services were provided by: Direct Traffic Control, Inc. for traffic control services, Enprobe Environmental Direct Push & Drilling Services, Inc. (Enprobe) for monitoring well drilling and installation, Cascade Drilling L.P. (Cascade) for injection well drilling and installation, Calcon Systems, Inc. (Calcon) for electrical wiring and cargo shed installation, PG&E for main power supply connection services, Subtronic Corporation (Subtronic) for utility locates, Rockridge Geotechnical for compaction tests, Testing Engineers Inc. for concrete tests (Testing Engineers), McCampbell Analytical, Inc. for soil and groundwater testing, Bay Area Concrete Recycling for concrete and asphalt recycling, and Kettleman Hill Landfill for soil disposal. Contact information is included in **Appendix 2**.

1.3 Permits

Encroachment, obstruction, excavation, building, and electrical permits were obtained from the City of Oakland prior to beginning drilling and construction activities. For the installation of the cargo shed, a recycling plan, created online through Green Halo Systems, Inc. was also submitted to the City of Oakland. Well drilling permits were obtained from Alameda County for the monitoring wells and air injection wells. Copies of the permits are included in **Appendix 3**.

1.4 Schedule

Pre-construction investigation activities began on August 2015. The monitoring wells and air injection wells were installed in December 2015. Construction activities began in February 2016 and were completed in March 2016. PG&E completed the electrical power supply design in April 2016 and the installation has not been scheduled. Final inspections and start-up activities were conducted following the PG&E electrical connection. The table below provides a summary of general milestone completion dates.

Table 1: Schedule of Milestone Project Activities

Milestone	Completion Date
Pre-Construction Investigation	August 26, 2015
Monitoring Well Drilling	December 8, 2015
Air Injection Well Drilling	December 12, 2015
Trenching	February 12, 2016
Well Vaults Installation	February 16, 2016
Conduit Installation	February 19, 2016
Backfill and Landscaping	February 25, 2016
Cargo Shed Placement	March 4, 2016
Electrical Connection by PG&E	July 14, 2016
Final Inspection	July 18, 2016
Initial Startup	July 20, 2016

TBD = To Be Determined

2. Scope of Work

Field activities for pre-construction investigation and major construction milestones are presented below. Analytical testing results and other results are also included. Daily construction observation reports are included in **Appendix 4**.

2.1 Pre-Construction Investigation

On August 24 through August 26, 2015, Sierra West collected soil samples and soil lithology data from 6 soil borings (B-42 through B-47). B-42 was located near the former subsurface brick-lined oil bunker (near MW-2R), and was intended to assess the vertical extents of impacts in that area. B-43 through B-47 were located along the southern boundary of the property, and were located along the proposed biobarrier air injection well transect. Soil lithology data collected from B-43 through B-47 were used to help finalize the design of the biobarrier air injection wells.

Subtronic performed utility locates along the extents of the biobarrier, prior to well drilling activities. The borings were drilled by Enprobe Environmental Direct Push & Drilling Services (Enprobe), a California licensed drilling contractor (C-57 license No. 777007). The upper five feet of each boring was advanced using 2-inch diameter hand auger equipment. The remainder of each boring was then advanced using dual-tube direct push Geoprobe™ equipment with a 2-1/8-inch outer core barrel diameter, and inner core liners having a diameter of approximately 1-3/4 inches. Soil cores were recovered in acetate liners with approximate 5-foot lengths. Each boring was advanced to a total depth of 50 feet below ground surface (bgs) to assess the vertical extent of impacts in the former asphalt refinery area. Grab groundwater samples were collected from the borings, and were analyzed by McCampbell Analytical for TPHg, TPHd, and TPHmo by USEPA Method 8015. The laboratory report for the groundwater samples is included in **Appendix 5**. Boring logs are included in **Appendix 6**. Following their completion, each boring was

backfilled with neat cement grout and completed at the surface with concrete. The table below provides a summary of the highest constituent concentrations detected from each boring.

Table 2: Pre-Construction Investigation Groundwater Constituent Concentration Summary

Boring ID	Units	TPH-Gasoline	TPH-Diesel	TPH-Motor Oil
B-42	µg/L	16,000	990,000	550,000
B-43	µg/L	140	560	320
B-44	µg/L	760	2,300	660
B-45	µg/L	17,000	890,000	660,000
B-46	µg/L	150	1,300	1,000
B-47	µg/L	ND	1,100	3,400

µg/L = microgram per liter
 ND = Non-detect.

The soil lithology and constituent concentration information obtained from the soil borings were used by the project team to develop a geologic cross-section along the proposed biobarrier alignment (**Appendix 7**). The cross-section was used to define the most efficient placement of air injection wells and injection screen intervals.

2.2 Monitoring Well and Air Injection Well Installations

On September 10 and 11, 2015, three monitoring wells, MW-2R, MW-3R, and MW-21, were installed by Enprobe. MW-2R was over-drilled and reinstalled on December 8, 2015 to modify the screen interval. MW-2R and MW-3R were installed as replacement wells for MW-2 and MW-3 respectively. MW-21 was installed in the sidewalk across the street on Alameda Avenue. Direct Traffic Control provided pedestrian safety and traffic control while installing MW-21.

2.2.1 Well Drilling and Construction

The upper five feet of each boring was advanced using 2-inch diameter hand auger equipment. The remainder of each boring was then drilled using truck mounted hollow stem auger drilling equipment and 8-inch diameter augers. The table below summarizes the well characteristics. Locations of the three wells are shown on Sheet C1, **Appendix 1**. Copies of the California Department of Water Resources (DWR) reports and boring and well construction logs are included in **Appendix 6**.

Table 3: Monitoring Well Characteristics

Well ID	Total Depth (ft)	Screen Interval (ft. bgs)
MW-2R	23	18 to 23
MW-3R	22	17 to 22
MW-21	30	15 to 30

December 7 through December 12, 2015, 20 air injection wells were installed by Cascade. The location of the wells is shown in Sheet C1, **Appendix 1**. Copies of DWR reports and boring and well construction logs are included in **Appendix 6**.

The upper five feet of each boring was advanced using 2-inch diameter hand auger and air-knife equipment. The remainder of each boring was then advanced using 8-inch diameter hollow stem auger equipment. Each well was constructed using 2-inch diameter Schedule 40 PVC and injection screens were constructed using 3 feet of 0.020-inch machine slotted PVC. The top of the wells were completed

approximately one to two feet bgs, and prior to leaving the site, the surface of each borehole was temporarily covered with steel plates.

On December 12, 2015, while drilling IW-2B, the hollow stem auger struck the top of a concrete storm drain approximately 5 feet bgs. The auger was immediately removed and the borehole was backfilled with the original soil material. The City of Oakland Public Works Department was notified, and Sierra West, with CKG, updated the Site plan drawings to show the approximate location of the storm drain. The storm drain was repaired on February 11, 2016, during trenching activities. Additional details of the repair activities are provided in Section 2.3.

2.2.2 Well Development

The monitoring and air injection wells were developed by surging over the length of the screened interval and purging groundwater from the well using a bailer and centrifugal pump. Approximately 10 to 20 gallons, or 10 casing volumes, were removed from each well. In some cases, such as MW-2R, additional casing volumes were purged to reduce the turbidity of extracted groundwater to the extent practical. Copies of the well development field forms are included in **Appendix 8**.

2.2.3 Well Survey

Kier and Wright Civil Engineers and Surveyors, Inc. surveyed the monitoring and air injection wells, and the corners of the cargo shed. The latitude, longitude, and top-of-casing measurements were based on the California State Coordinate System, Zone II (NAD83). Surveying will be consistent with GeoTracker requirements. An updated Site plan drawing is included in **Appendix 1**.

2.3 Trenching and Well Vault Installation

On February 1, 2016, Subtronic located buried utilities in the vicinity of the proposed trenching area. The utilities of concern were a water pipeline near IW-8 and an electrical conduit between IW-11 and IW-12. ERRG began trenching activities on February 1, 2016, and continued through February 12, 2016.

The asphalt and concrete paved areas were saw-cut and removed. In most areas, the asphalt and/or concrete thickness was approximately 10 inches. Removed asphalt and concrete materials were separated on site and later recycled at Bay Area Concrete Recycling.

A backhoe was used to excavate the trench to the dimensions shown on Sheet C3, **Appendix 1**. The following areas were hand excavated to avoid hitting buried utilities:

- Trench area under property fence between IW-5 and IW-6A
- Trench area between IW-7 and IW-8
- Trench area between IW-11 and IW-12
- Trench area near IW-13

The water pipeline and electrical conduit were not encountered while excavating the trench. It is likely that the underground utilities are located deeper than the bottom of the trench.

At the end of each day, ERRG protected the trenched areas inside the property by using delineators and caution tape. The trenched areas in the landscaped outside of the Owens-Brockway property were protected by a temporary fence that was locked at the end of each day.

ERRG installed the well vaults on February 4, 2016, and continued through February 16, 2016. Three holes were drilled through the bottom of each well vault to provide drainage. The well vaults were set on top of a four to six-inch layer of gravel, as shown on Sheet C3 in **Appendix 1**.

On February 11, 2016, ERRG repaired the storm drain that was damaged while drilling IW-2B (See Section 2.2.1). A rectangular area was excavated around IW-2B to between four to five feet bgs, with sloped sidewalls, to expose the storm drain. The damaged portion was a drilled hole approximately nine inches in diameter and 25 inches deep (approximate thickness of storm drain cement wall). A wooden plug was placed at the bottom of the hole and rebar was drilled into sides of the hole. The hole was then filled with cement. For added protection, a steel plate was bolted to the surface of the storm drain. The excavated area was then backfilled with the original soil. The soil was compacted using a jumping-jack compactor (wacker) in 1-foot lifts.

The City of Oakland was notified of the repairs and the inspector in charge requested that pictures be taken to provide proof that the storm drain has been repaired. After the repair work was completed, pictures were sent to the inspector via email. Pictures are included in **Appendix 9**.

2.4 Conduit and Instrumentation Installation, and Pressure Tests

ERRG began installing the air supply and instrumentation and controls conduits along the trench and through the well vaults on February 5, 2016, and continued through February 19, 2016. High-density polyethylene (HDPE) pipe was used for the air supply conduit and Schedule 80 PVC pipe was used for the instrumentation and controls conduit. From IW-1A to IW-5 (landscaped area), 2-inch PVC piping was used, and from IW-6A to IW-17 (paved areas), 3-inch PVC piping was used. The pipe and conduits were placed on approximately one to two inches of sand bedding, and backfilled with sand to within 8 inches below the original grade.

Initially, ERRG used brass compression fittings to transition from the 2-inch HDPE air supply conduit to the 0.5-inch galvanized piping inside the well vaults (Sheet C3, **Appendix 1**). On February 10, 2016, ERRG performed a pressure test and several compression fittings slipped and became disconnected from the HDPE air supply piping. Sierra West, with ERRG and CKG, decided to forego the compression fittings and use welded HDPE fittings (See **Appendix 9** for pictures). On February 23, 2016, ERRG completed installation of the piping, conduits and fittings in the well vaults, and a successful pressure test was conducted for approximately 30 minutes at 76 psi.

2.5 Cargo Shed Installation

On February 16, 2016 through March 4, 2016, ERRG constructed the cargo shed foundation and installed the cargo shed at the Site (Sheet C2 and C3, **Appendix 1**). ERRG compacted imported aggregate base (AB) fill material to create a solid foundation for the concrete slab. To verify proper compaction, Rockridge Geotechnical performed compaction tests at two points at the surface of the compacted AB material. Both tests showed 98% compaction, which exceeded the 95% compaction requirement.

Prior to pouring the concrete for the foundation slab, the City of Oakland building inspector visited the site and approved the conduit layout coming up into the slab and the foundation forms and rebar layout. The inspector requested that ERRG install a 20-foot ufer (for electrical grounding purposes) and take pictures of it prior to the pour. On February 23, 2016, ERRG installed the ufer and poured approximately 3.5 cubic yards of concrete to construct the foundation slab. Testing Engineers performed a slump test, observed the concrete pour, and collected 5 concrete cylinders for tests. The concrete cylinders were left on Site to cure and were picked up the next day. The 28-day concrete break test result was 4,610 pounds per square inch (psi). Concrete test results are included in **Appendix 10**. The concrete pad surface was completed with a broom finish.

On March 4, 2016, the cargo shed arrived at the Site and ERRG set the shed onto the pad. The corners of the building were secured to the concrete pad using anchor bolts (Sheet C3, **Appendix 1**).

2.6 Trench Backfilling and Landscaping

ERRG began backfilling the excavated areas on February 17, 2016, and continued through February 25, 2016. Backfilling in the trenched areas and around the well vaults was completed as shown on Sheet C3, **Appendix 1**. The AB surface was sloped away from the well vault lids, as shown on the drawings, to help divert stormwater away from the well vaults to the extent practical.

In the landscaped area outside of the property (IW-1A through IW-5), the existing topsoil was replaced to the extent practical. Creeping red fescue seed was evenly spread out in the surrounding area, and then covered with approximately one to two inches of clean imported topsoil. A copy of the seed product tag is included in **Appendix 4**. For added security, tamper proof bolts were installed on well vaults IW-1A through IW-5 and the IW-4 pullbox.

The old fill material around the cargo shed, pullbox, and IW-6A through IW-7 was graded and compacted. One to two inches of gravel was placed and compacted around the cargo shed, pull box, and IW-6A through IW-7.

2.7 Electrical Wiring and PG&E Power Drop

On March 2, 2016 through March 16, 2016, Calcon connected the wiring for the instrumentation and controls equipment inside each well vault to the main control panel at the cargo shed. Calcon also installed a weatherhead on the cargo shed for the PG&E power drop connection. On March 9, 2016, an electrical inspector from the City of Oakland inspected and approved the weatherhead and electrical panel connections. A green sticker was placed on the meter box and PG&E was notified of City approval.

PG&E completed the power drop and electrical connection to the cargo shed container on July 14, 2016. Two power poles were installed: one outside the Owens-Brockway property along Alameda Ave, and another pole inside the property, approximately 120 feet away from the cargo shed container. Locations of the two power poles are shown on Sheet C1, **Appendix 1**. A copy of PG&E's construction drawing that includes a design plan and construction notes is included in **Appendix 11**.

3. Final Inspection

On March 8, 2016, Sierra West and ERRG conducted a preliminary inspection and created a punch-list for ERRG to complete prior to the final inspection and initial startup. The items on the punch-list are as follows:

- Add more AB material to areas around the well vaults and along the trench that have settled due to vehicle traffic. Ensure that the AB material slopes away from the well vaults to the extent practical.
- Soil in the landscaped area should also be sloped away from the well vaults.
- If the seeding in the landscaped area has not started to grow, ERRG should plant more seed and consider installing a temporary fence around the landscaped area to keep out pedestrian traffic.

ERRG completed the punch-list items on July 18, 2016 to the satisfaction of Owens-Brockway, CKG and Sierra West. A final inspection was conducted, completion of punch-list items was confirmed, and the system was cleared for startup.

4. Initial Startup and Heat Exchanger Installation

On July 19, 2016 through July 20, 2016, Sierra West and Calcon conducted an initial startup of the system. The objective of the startup was to assess the maximum flow rate to each well, while monitoring the change in groundwater elevation at nearby monitoring wells. Each air injection well was operated independently, while running the air compressor at the highest pressure achievable. The air supply flow rates and pressures at the compressor and air injection wells were monitored and recorded (**Appendix 11**).

The startup results indicate that several wells share similar characteristics in terms of flow rate and pressure. Sierra West used the results to create well groupings to maximize the efficiency of the system. During the startup tests, injecting air into wells 1B, 2A, 5, and 6A caused groundwater to rise to the top of the well casing. This is an indication that flowrate to these wells should be limited, or throttled using the manual ball valves in each well vault. Well groupings for current, normal, operations are also included in **Appendix 11**.

During the startup test, it was observed that the inline flowmeter at the outlet side of the compressor would regularly display an error message. After troubleshooting the flowmeter, it was determined that the compressor was causing a temperature rise in the air that was too high for the flowmeter. Therefore, Sierra West and Calcon decided to install an air-heat exchanger immediately after the compressor outlet, prior to the flowmeter. While Calcon was acquiring the heat exchanger, the system operated with the flowmeter electrical wiring disconnected.

On August 16, 2016, Calcon installed the heat exchanger (Sheet C2, **Appendix 1**). Photos are included in **Appendix 9**. The heat exchanger reduced the discharge air temperature from approximately 160+ °F to 80 °F. The flowmeter was reconnected and resumed normal operation.

5. Waste Characterization and Disposal

Approximately 220 cubic yards of soil were generated during well drilling, trenching, and cargo shed foundation construction activities. Sierra West collected an 8-point composite soil sample to profile the excavated material. The sample was sent to McCampbell Analytical, Inc. in Pittsburg, California, and was analyzed for the following compounds:

- Total petroleum hydrocarbons as gasoline, diesel, and motor oil (TPHg, TPHd, TPHmo) by the U.S. Environmental Protection Agency (EPA) Method 8015;
- Volatile organic compounds (VOCs) by EPA Method 8260;
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021;
- Methyl tertiary butyl ether (MTBE) by EPA Method; and
- CAM 17 metals by EPA Method 6020.

Initial lab analytical results showed a total lead concentration of 210 milligrams per kilogram (mg/kg), which is above the Toxicity Characteristic Leaching Procedure (TCLP) screening limit of 100 mg/kg for non-hazardous waste. As a result, a Soluble Threshold Limit Concentration (STLC) and TCLP test were conducted. Results indicated an STLC of 6 milligrams per liter (mg/L) and a TCLP concentration of 0.2 mg/L. Based on the TCLP results, the excavated material was classified as non-Resource Conservation and Recovery Act (RCRA) hazardous waste and disposed of at the Kettleman Hills Landfill Facility in Kettleman City, California. Laboratory results are included in **Appendix 5**. A copy of the disposal tickets is included in **Appendix 13**.

Approximately 15 cubic yards each of asphalt and concrete were taken to Bay Area Concrete Recycling in Oakland, California. A copy of the recycling tickets is included in **Appendix 13**.

General construction debris was disposed of on Site in large trash bins, provided by Owens-Brockway.

6. Daily Recordkeeping and Reporting

Sierra West kept a daily report of construction activities at the site. Information provided in these reports includes the site's weather conditions during the day, the personnel and visitors on site, main equipment used, as well as description of construction activities. Weekly project progress reports with pictures were emailed to CKG. The daily reports are provided in **Appendix 4**. Relevant pictures of construction activities are provided in **Appendix 9**.

Appendix 1: As-Built Drawings

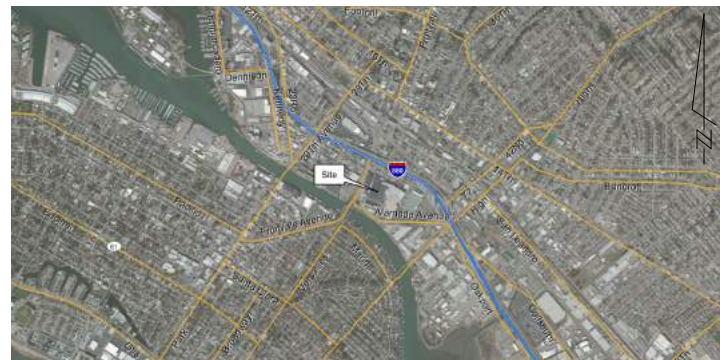
BIOBARRIER GROUNDWATER TREATMENT PROJECT

May 2016

1 2

ENVIRONMENTAL REMEDIATION FOR OWENS-BROCKWAY GLASS CONTAINER CORPORATION 3600 ALAMEDA AVENUE, OAKLAND, CALIFORNIA

VICINITY MAP



DRAWING INDEX

SHEET NO.	TITLE	PAGE NO.
G1	COVER SHEET (TITLE MAPS DRAWING INDEX CONTACTS)	1
C1	AIR INJECTION SYSTEM LAYOUT	
C2	AIR SUPPLY SHED PLAN SECTION	
C3	CIVIL DETAILS	
E01	SYMBOLS ONE-LINE AND LOAD CALCULATIONS	
E02	TITLE BLOCK INFORMATION	
E11	ELECTRICAL SITE PLAN	
E12	PLAN-COMPRESSOR SHED PANEL SCHEDULES	

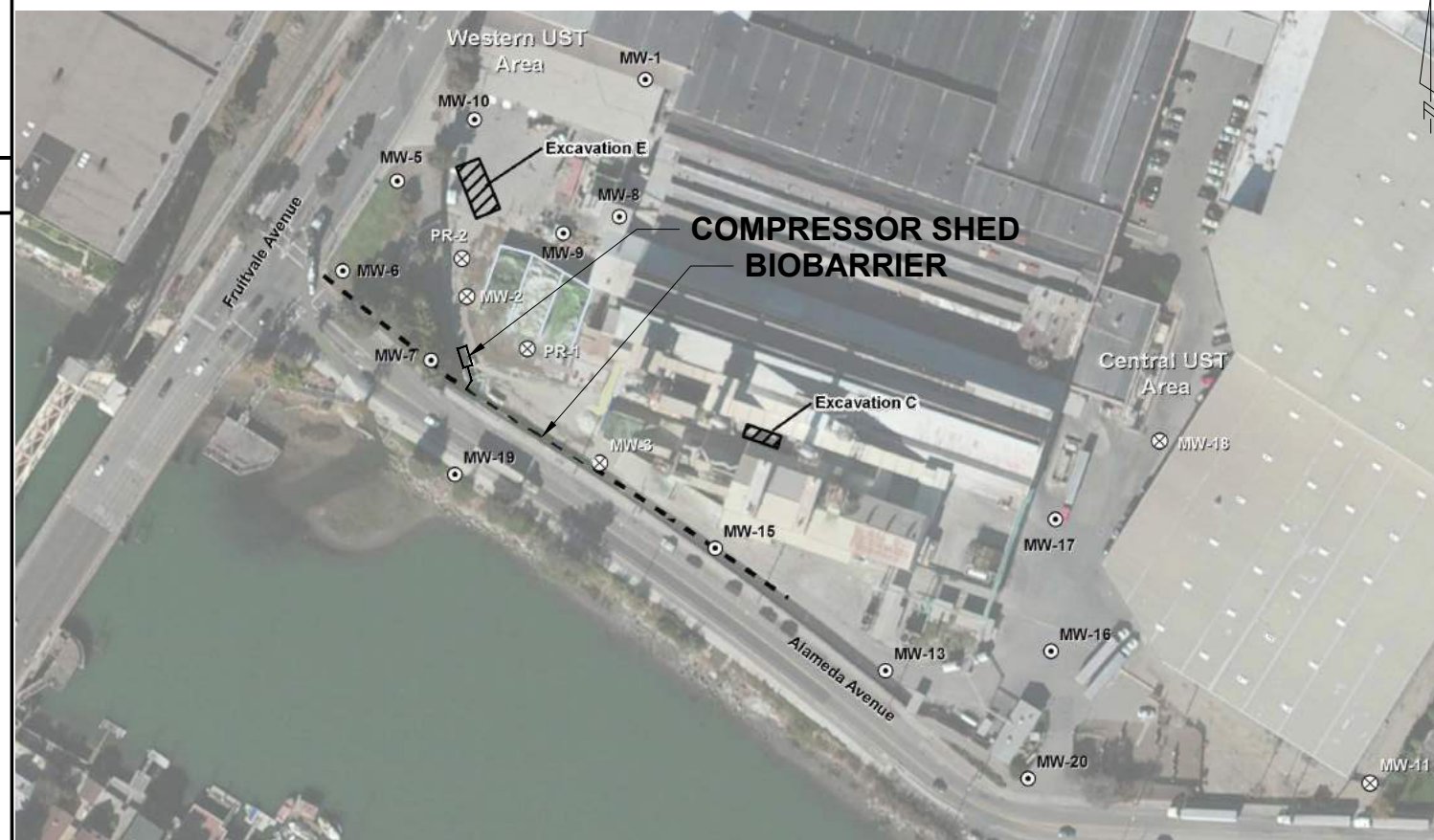
GENERAL NOTES

- SCOPE OF WORK:** REVISE PIPING, TRENCHING, AND RESURFACING DESIGN DUE TO ELECTRICAL AND RESURFACING MODIFICATIONS. SUPPLY AND INSTALL AIR SUPPLY COMPRESSOR IN CARGO CONTAINER SHED, BURIED DISTRIBUTION PIPING TO 20 AIR INJECTION WELLS, WELLHEAD COMPLETIONS INCLUDING INSTRUMENTATION AND CONTROLS, ELECTRICAL POWER SUPPLY, AND APPURTENANT ITEMS TO COMPLETE THE GROUNDWATER TREATMENT PROJECT.
- CONTRACTOR SHALL PERFORM ALL WORK IN CONNECTION WITH, AND INCIDENTAL TO, THE PROPER AND COMPLETE EXECUTION OF THE WORK REQUIRED BY THESE DRAWINGS AND ASSOCIATED SPECIFICATIONS.
- CONTRACTOR SHALL BE FAMILIAR WITH ALL BUILDING CODES, REGULATIONS AND LOCAL ORDINANCES HAVING JURISDICTION OVER THIS PROJECT AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH ANY WORK AFFECTED BY THE DISCREPANCY.
- ALL DIMENSIONS SHOWN ON DRAWINGS SHALL BE VERIFIED BY CONTRACTOR AND IF THERE ARE DISCREPANCIES, CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO PROCEEDING WITH ANY WORK AFFECTED BY THE DISCREPANCY.
- DIMENSION TAKES PRECEDENCE OVER SCALE.
- ANY DEVIATIONS FROM DRAWINGS OR SPECIFICATIONS SHALL REQUIRE ENGINEERS APPROVAL PRIOR TO CONSTRUCTION.
- CONTRACTOR TO COORDINATE SUBCONTRACTORS TO ENSURE THAT ALL WORK INDICATED IN THESE CONSTRUCTION DOCUMENTS IS PERFORMED.
- LOCATIONS OF EXISTING UTILITIES AND STRUCTURES ARE FROM BEST INFORMATION AVAILABLE. EXACT LOCATIONS AND COMPLETENESS ARE NOT GUARANTEED.
- CONTRACTOR SHALL CONTACT UNDERGROUND SERVICES ALERT (USA) TO LOCATE BURIED UTILITIES AND MARK IN THE FIELD A MINIMUM OF 48 HOURS PRIOR TO BEGINNING EXCAVATION ACTIVITIES. CONTRACTOR SHALL PROVIDE AN INDEPENDENT SUBSURFACE UTILITY LOCATING COMPANY TO LOCATE BURIED UTILITIES IN PROJECT AREAS WITHIN THE FACILITY PROPERTY BOUNDARIES.

LOCATION MAP



SITE MAP



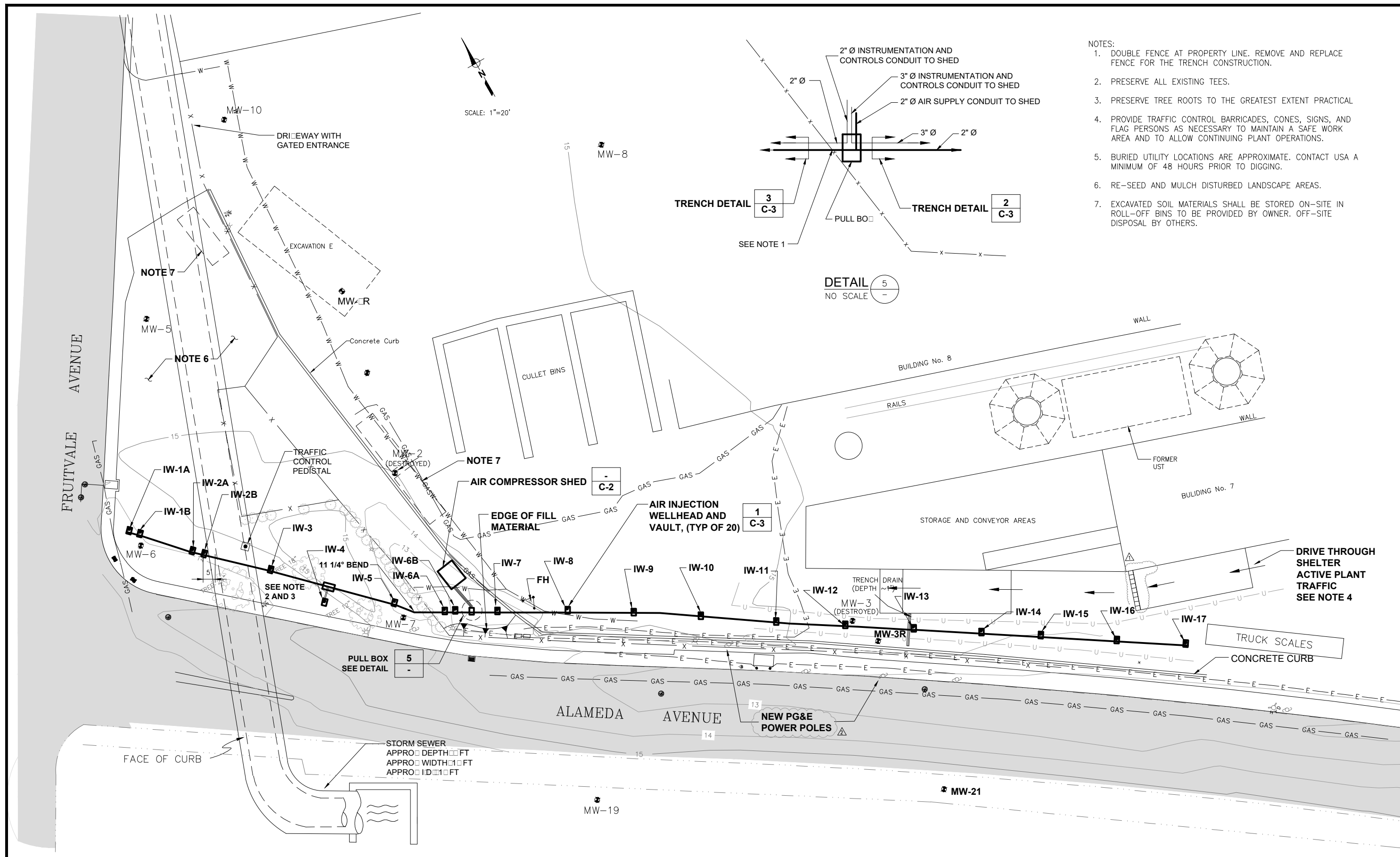
CONTACTS

OWENS-BROCKWAY GLASS CONTAINER CORPORATION	BILL BOSCACCI	(510) 774-6423
CKG ENVIRONMENTAL	CHRIS KENNEDY	(707) 363-5740
SIERRA WEST CONSULTANTS	JEFF BENSCH	(916) 863-3220
CHASE ELECTRICAL ENGINEERING	DAVID CHASE	(916) 344-4878

SHEET NO:
G1

1

NO.	DATE	REVISIONS	BY	CHK
	10/14/2016	As-built drawings.		
	9/15/2015	Revisions due to electrical and resurfacing modifications.		



- NOTES:
1. DOUBLE FENCE AT PROPERTY LINE. REMOVE AND REPLACE FENCE FOR THE TRENCH CONSTRUCTION.
 2. PRESERVE ALL EXISTING TEES.
 3. PRESERVE TREE ROOTS TO THE GREATEST EXTENT PRACTICAL
 4. PROVIDE TRAFFIC CONTROL BARRICADES, CONES, SIGNS, AND FLAG PERSONS AS NECESSARY TO MAINTAIN A SAFE WORK AREA AND TO ALLOW CONTINUING PLANT OPERATIONS.
 5. BURIED UTILITY LOCATIONS ARE APPROXIMATE. CONTACT USA A MINIMUM OF 48 HOURS PRIOR TO DIGGING.
 6. RE-SEED AND MULCH DISTURBED LANDSCAPE AREAS.
 7. EXCAVATED SOIL MATERIALS SHALL BE STORED ON-SITE IN ROLL-OFF BINS TO BE PROVIDED BY OWNER. OFF-SITE DISPOSAL BY OTHERS.

NO.	DATE	REVISIONS	BY	CHK
10/14/16		As-built drawings.		
9/15/15		Revisions due to electrical and resurfacing modifications		

DRAWN: MAH	PROJECT NO:
ENGINEER: JB	SCALE: 1"=20'
CHECKED: JB	APPROVED:
DATE: 4/30/14	DATE:

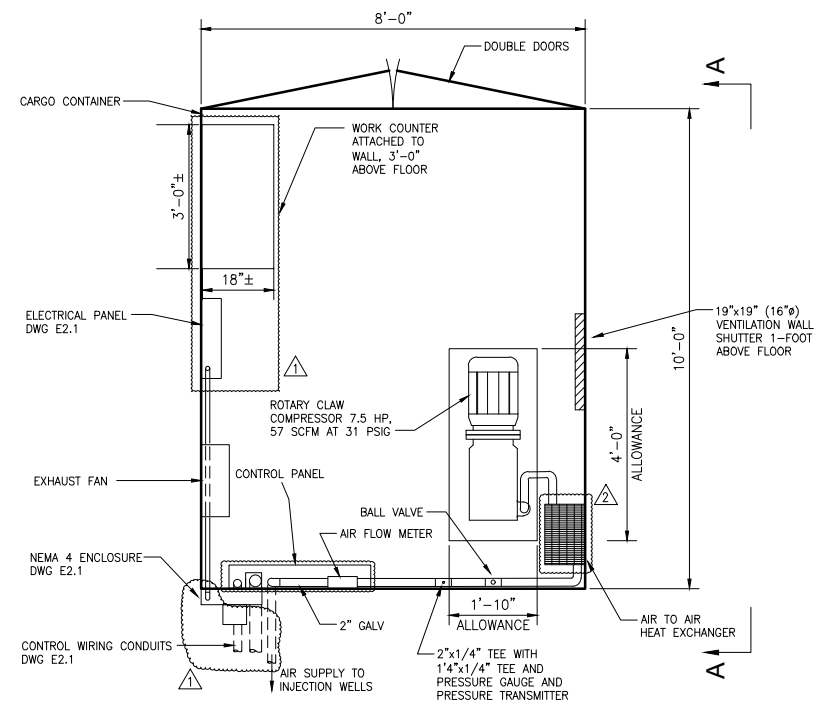
WARNING
 0 1"
 AT FULL SCALE
 (IF BAR IS NOT 1" - SCALE ACCORDINGLY)

SIERRA WEST
 CONSULTANTS, INC.
 4227 Sunrise Boulevard, Suite 220
 Fair Oaks, California 95628
 Ph: (916) 863-3220 Fax: (916) 863-3225

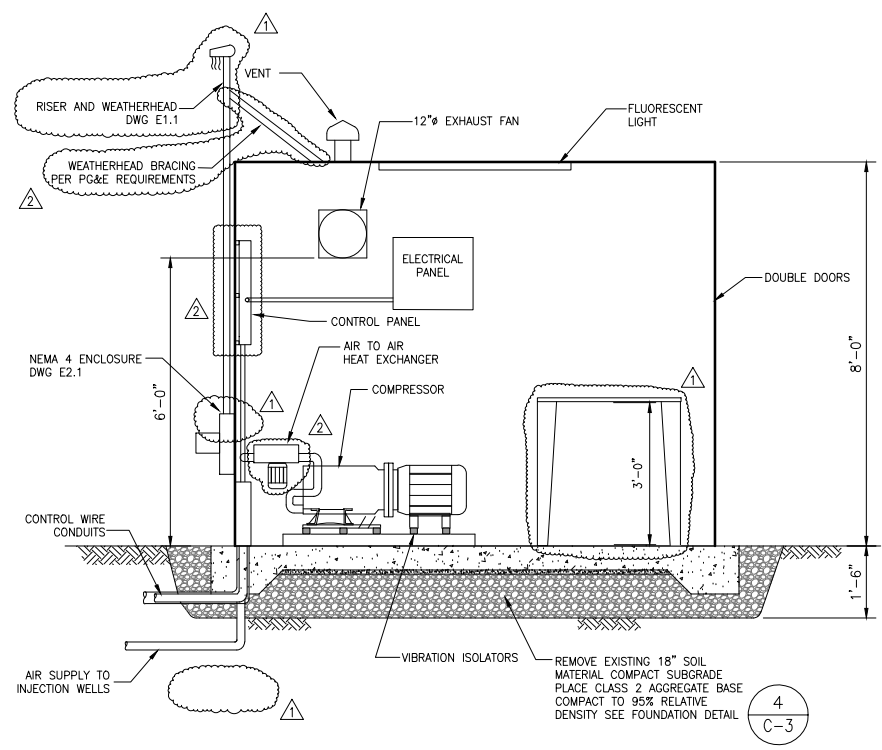


OWENS-BROCKWAY GLASS CONTAINER FACILITY
 BIOBARRIER GROUNDWATER TREATMENT PROJECT
AIR INJECTION SYSTEM LAYOUT

SHEET NO:
 C1
 8



AIR SUPPLY SHED PLAN
SCALE: 1/2"=1'-0"



SECTION A-A
SCALE: 1/2"=1'-0"

NO.	DATE	REVISIONS	BY	CHK
10/14/16		As-built drawings.		
9/15/15		Revisions due to electrical and resurfacing modifications		

DRAWN:	MAH	PROJECT NO:	
ENGINEER:	JB	SCALE:	AS NOTED
CHECKED:	JB	APPROVED:	
DATE:	4/30/14	DATE:	

WARNING
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AT FULL SCALE
(IF BAR IS NOT 1" - SCALE ACCORDINGLY)

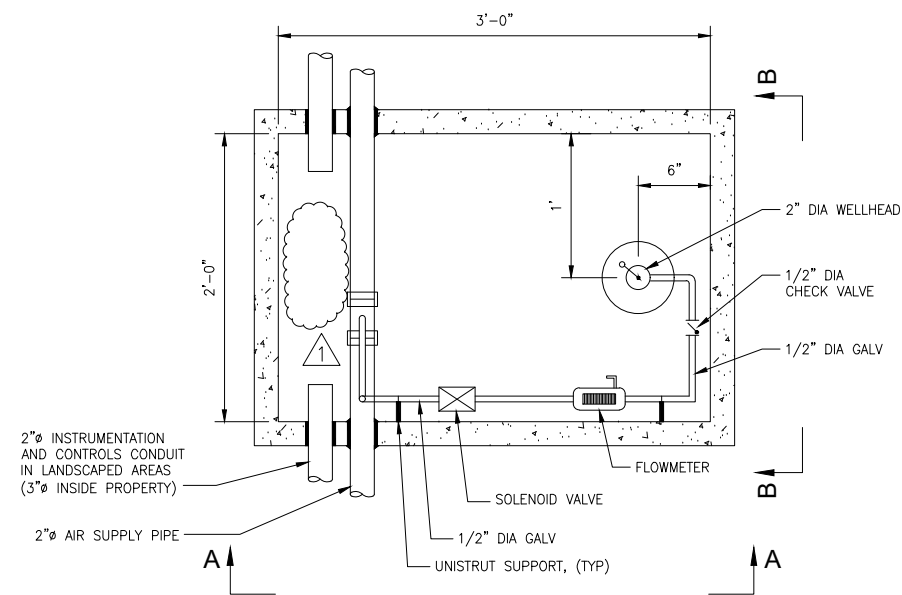
SIERRA WEST
CONSULTANTS, INC.
4227 Sunrise Boulevard, Suite 220
Fair Oaks, California 95628
Ph: (916) 863-3220 Fax: (916) 863-3225



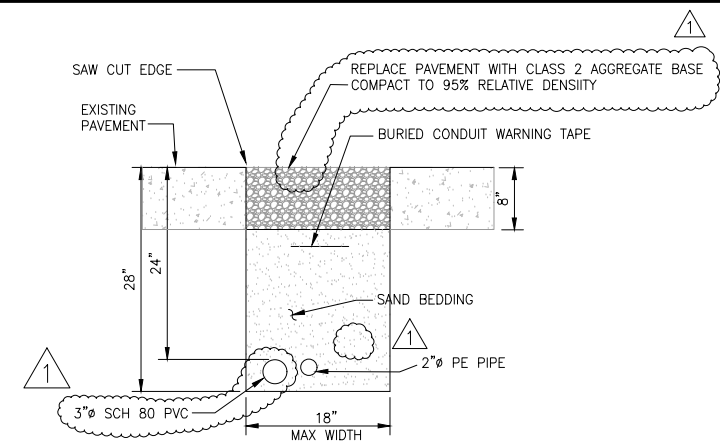
OWENS-BROCKWAY GLASS CONTAINER FACILITY
BIOBARRIER GROUNDWATER TREATMENT PROJECT

**AIR SUPPLY SHED
PLAN SECTION**

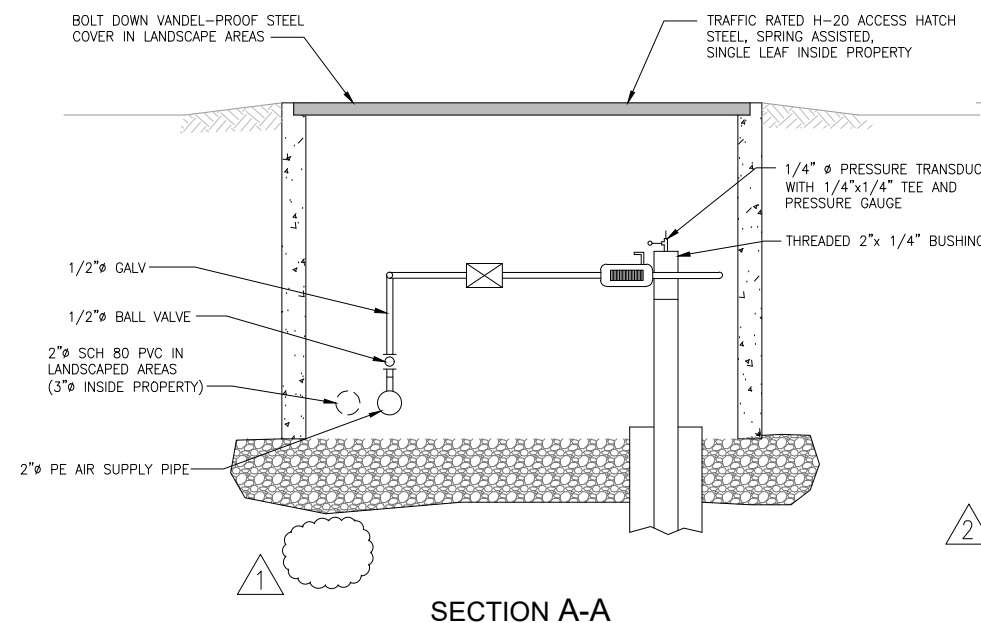
SHEET NO:
C2
8



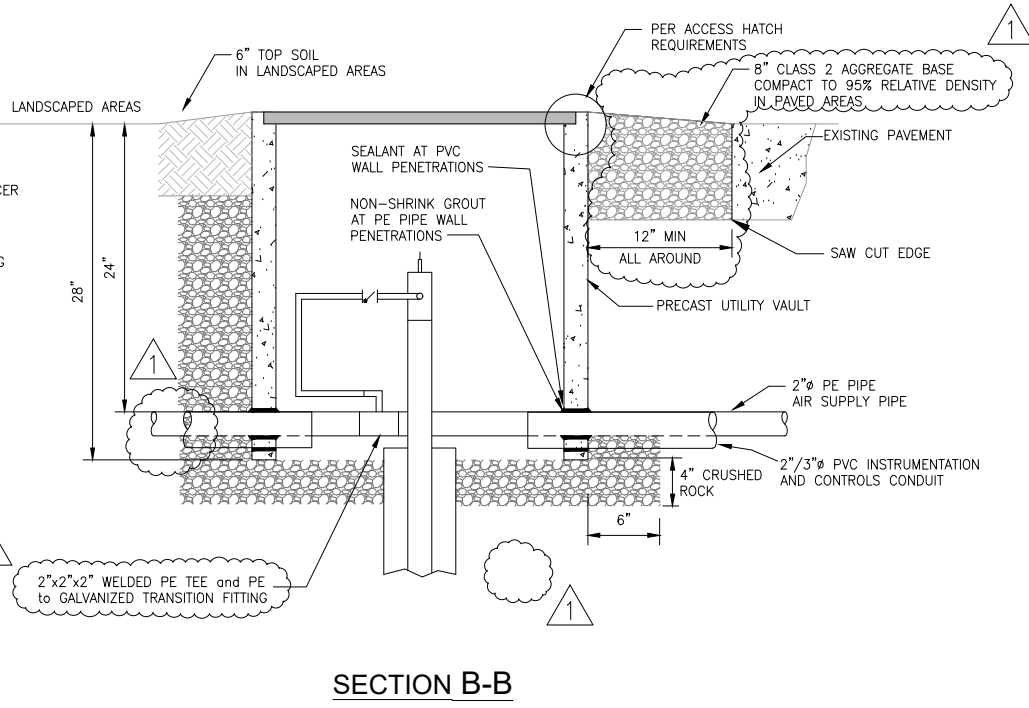
PLAN



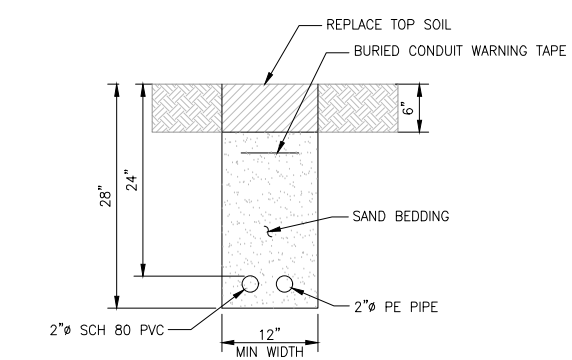
TRENCH DETAIL-INSIDE PROPERTY
SCALE 1"=1'-0"



SECTION A-A

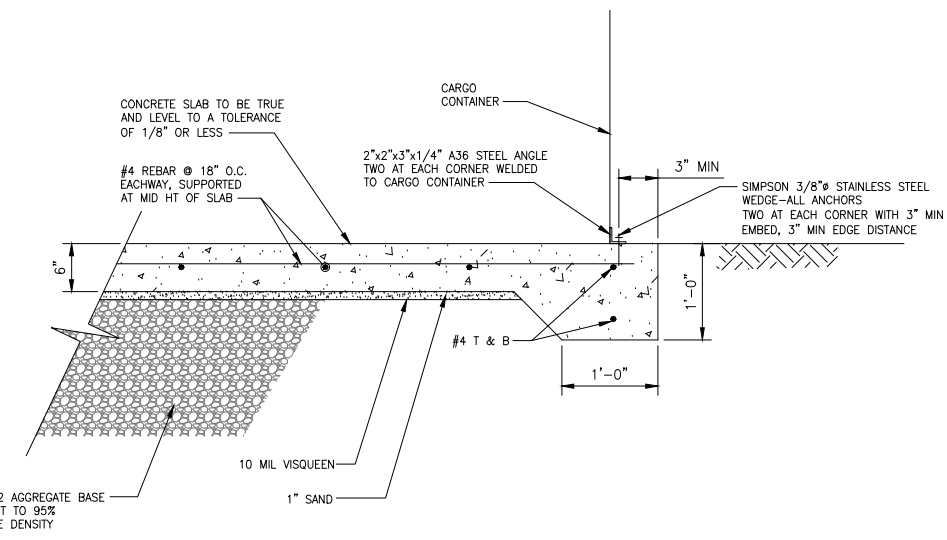


SECTION B-B



TRENCH DETAIL-LANDSCAPED AREAS
SCALE 1"=1'-0"

AIR INJECTION WELLHEAD COMPLETION DETAIL
SCALE 1-1/2"=1'-0"



FOUNDATION SLAB DETAIL
SCALE 1"=1'-0"

NO.	DATE	REVISIONS	BY	CHK
10/14/16		As-built drawings.		
9/15/15		Revisions due to electrical and resurfacing modifications		

DRAWN:	MAH	PROJECT NO:	
ENGINEER:	JB	SCALE:	AS NOTED
CHECKED:	JB	APPROVED:	
DATE:	4/30/14	DATE:	

WARNING
0 1"
AT FULL SCALE
(IF BAR IS NOT 1" - SCALE
ACCORDINGLY)

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CONSULTANTS, INC.
4227 Sunrise Boulevard, Suite 220
Fair Oaks, California 95628
Ph: (916) 863-3220 Fax: (916) 863-3225

CKG Environmental, Inc.



OWENS-BROCKWAY GLASS CONTAINER FACILITY
BIOBARRIER GROUNDWATER TREATMENT PROJECT
CIVIL DETAILS

SHEET NO:
C-3
8

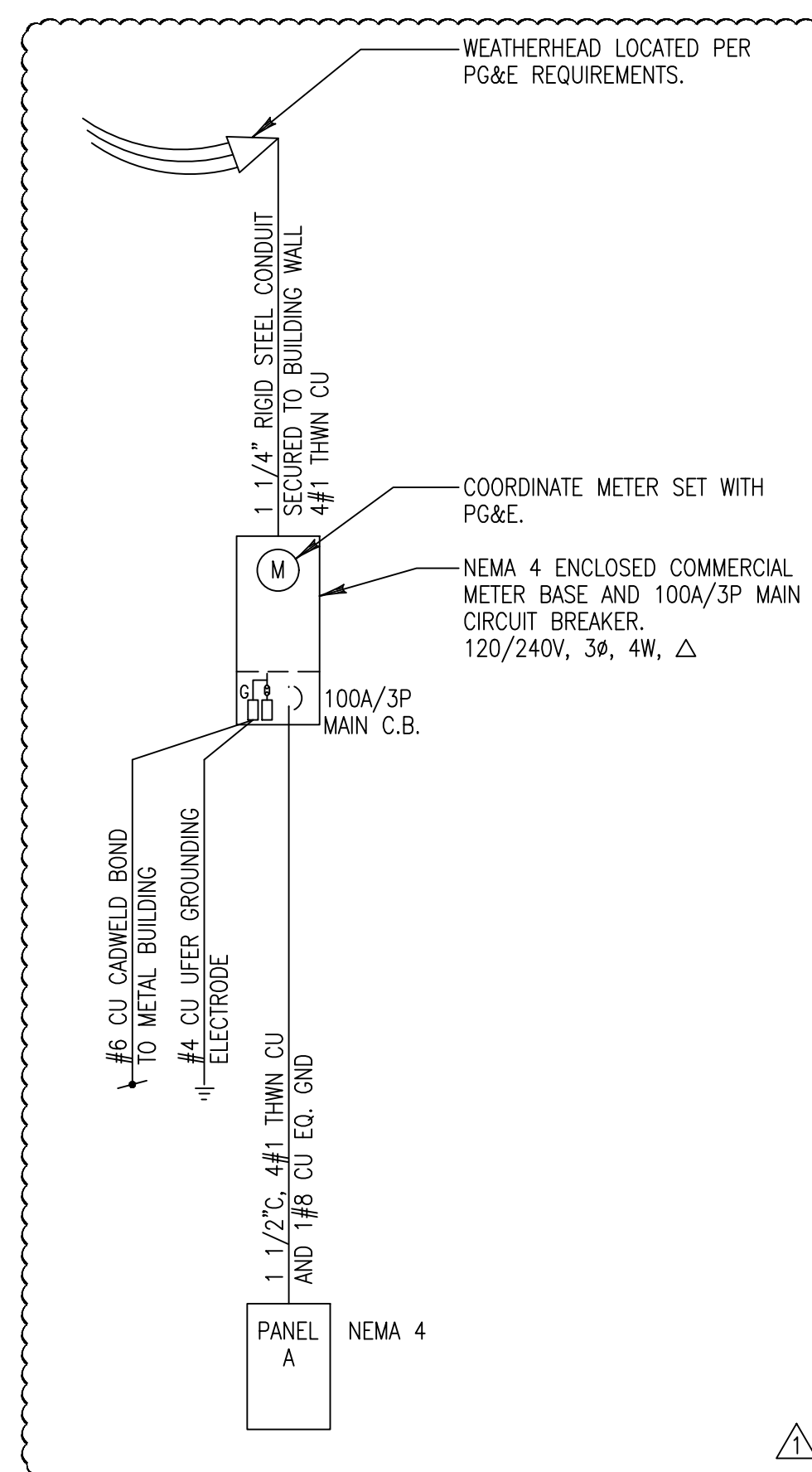
LOAD CALCULATIONS

120/240V LOAD- PANEL A:		1ø	3ø
LIGHTING FIXTURE:	55W x 125% =	68.8 W	
VENTILATION FAN:	165W x 125% =	206.3 W	
RECEPTACLES:	(2) x 180W x 100% =	360.0 W	
CONTROL PANEL:	850W x 125% =	1,062.5 W	
COMPRESSOR MOTOR:			13,300.0 W
25% LARGEST MOTOR:			3,325.0 W
TOTAL (KVA)		1,696.8 W	16,625.0 W
AMPERES:		7.1 A	40.0 A
MINIMUM SERVICE AMPACITY:			7.1 A
			47.1 A

PROVIDE 100A, 120/240V, 3ø, 4W Δ SERVICE

ONE-LINE DIAGRAM

NO SCALE



ELECTRICAL SYMBOLS

SYMBOL	DESCRIPTION
○	FLUORESCENT LIGHTING FIXTURE- SUSPENDED OR SURFACE MOUNTED
⊕	DUPLEX RECEPTACLE OUTLET 20A, 125V, +15" TO BOTTOM OF BOX (B.O.B.)
⊙	JUNCTION BOX
\$	SINGLE POLE TOGGLE SWITCH, 20A, 120-277V AT +48" CL OF TOGGLE
\$⊙	SUBSCRIPT DENOTES OUTLET OR FIXTURE CONTROLLED @ +48" CL OF TOGGLE
▨	MAIN SWITCHBOARD
▩	LIGHTING OR DISTRIBUTION PANELBOARD
▭	TERMINAL CABINET
⊞	SAFETY SWITCH - HP RATED - FUSED - NON-FUSED
⊙	MOTOR - M P & S
⊙	EXHAUST FAN - M P & S
⊙	MECHANICAL EQUIPMENT I.D. TAG - M P & S
⊙	DUCT TYPE SMOKE DETECTOR, COORDINATE WITH MP&S.
---	CIRCUIT CONCEALED IN CEILING OR WALL, EXPOSED IN SERVICE AREAS
---	CIRCUIT CONCEALED IN FLOOR OR UNDERGROUND
---	HOMERUN TO PANELBOARD
---	DENOTES # OF #12 WIRES, NO MARKS= 2#12, 1/2"C.
---	INDICATES FLEX CONDUIT
B.O.B.	BOTTOM OF J-BOX
C	CONDUIT
CL	CENTER LINE
EM	EMERGENCY BATTERY BACKUP
G	GROUND
GF/GFCI	GROUND FAULT CIRCUIT INTERRUPTER
MP&S	SEE MECHANICAL PLANS & SPECIFICATIONS
TTB	TELEPHONE TERMINAL BOARD
MSB	MAIN SWITCHBOARD
NL	NIGHT LIGHT - UNSWITCHED
PNL	PANELBOARD
(E)	EXISTING
(N)	NEW
(R)	EXISTING TO BE REMOVED OR RELOCATED
UON	UNLESS OTHERWISE NOTED
MTC	EMPTY CONDUIT WITH 1#12 PULL WIRE
WP	WEATHERPROOF - WHILE IN USE IN WET LOCATIONS WHERE APPLIED TO RECEPTACLES

CHASE
ELECTRICAL
ENGINEERING

5710 GARFIELD AVE. SUITE C
SACRAMENTO, CA. 95841
(916) 344-4878

NO.	DATE	REVISIONS	BY	CHK
10/14/16		AS-BUILT DRAWINGS		
10/5/15		REVISED TO ACCEPT PG&E SERVICE	DMC/SDB	DMC

DRAWN:	SDB	PROJECT NO:	2143258
ENGINEER:	DMC	SCALE:	AS NOTED
CHECKED:	DMC	APPROVED:	
DATE:	09/19/14	DATE:	

WARNING
0 1"
AT FULL SCALE
(IF BAR IS NOT 1" - SCALE ACCORDINGLY)

SIERRA WEST
CONSULTANTS, INC.
4227 Sunrise Boulevard, Suite 220
Fair Oaks, California 95628
Ph: (916) 863-3220 Fax: (916) 863-3225

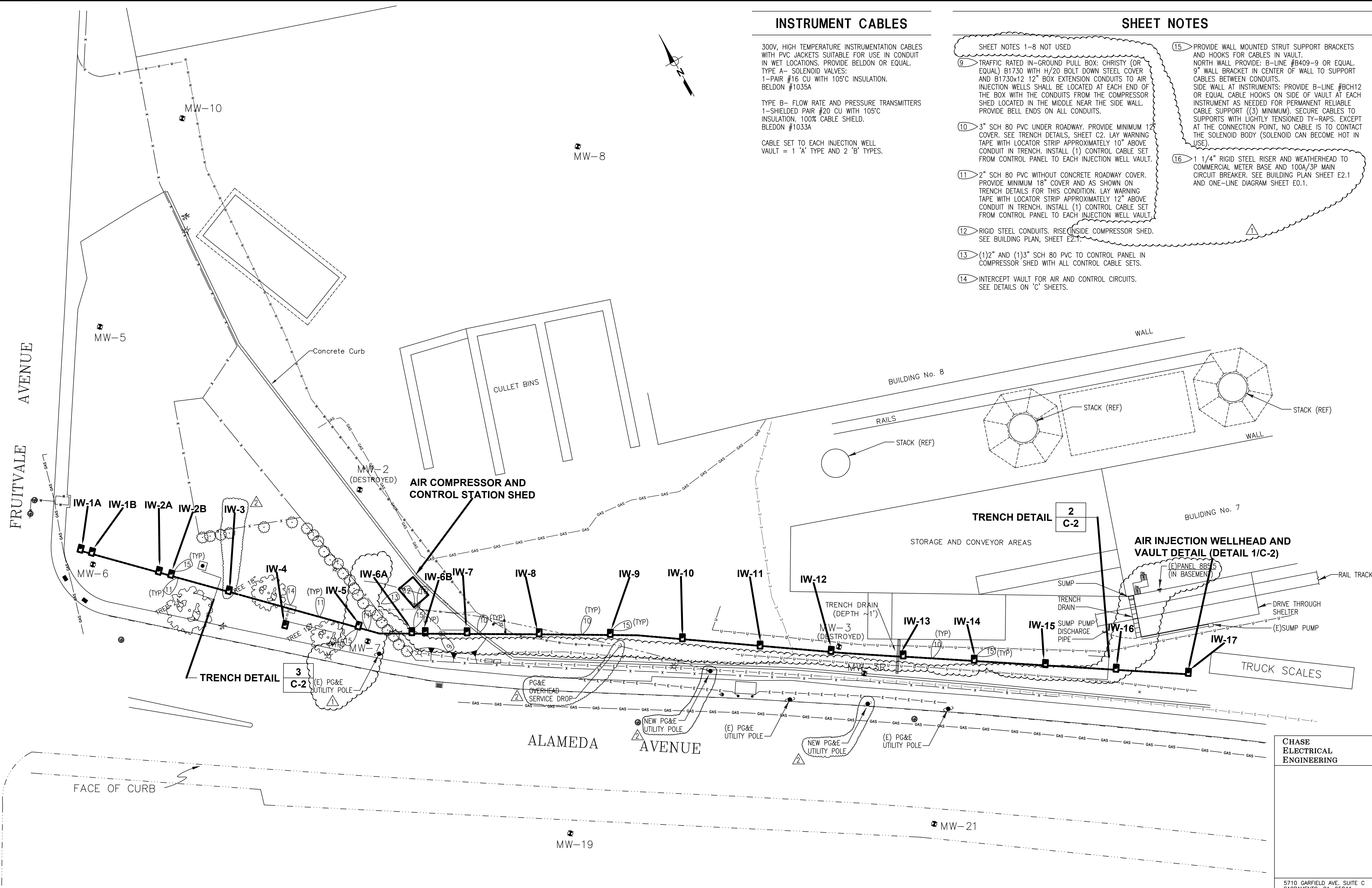
CKG Environmental, Inc.



OWENS-BROCKWAY GLASS CONTAINER FACILITY
BIOBARRIER GROUNDWATER TREATMENT PROJECT

ELECTRICAL SYMBOLS ONE-LINE DIAGRAM AND LOAD CALCULATIONS

SHEET NO:
E0.1
5
8



INSTRUMENT CABLES

300V, HIGH TEMPERATURE INSTRUMENTATION CABLES WITH PVC JACKETS SUITABLE FOR USE IN CONDUIT IN WET LOCATIONS. PROVIDE BELDON OR EQUAL. TYPE A- SOLENOID VALVES: 1-PAIR #16 CU WITH 105°C INSULATION. BELDON #1035A

TYPE B- FLOW RATE AND PRESSURE TRANSMITTERS 1-SHIELDED PAIR #20 CU WITH 105°C INSULATION. 100% CABLE SHIELD. BELDON #1035A

CABLE SET TO EACH INJECTION WELL VAULT = 1 'A' TYPE AND 2 'B' TYPES.

SHEET NOTES

- SHEET NOTES 1-8 NOT USED
- (9) TRAFFIC RATED IN-GROUND PULL BOX: CHRISTY (OR EQUAL) B1730X12 12" BOX EXTENSION CONDUITS TO AIR INJECTION WELLS SHALL BE LOCATED AT EACH END OF THE BOX WITH THE CONDUITS FROM THE COMPRESSOR SHED LOCATED IN THE MIDDLE NEAR THE SIDE WALL. PROVIDE BELL ENDS ON ALL CONDUITS.
 - (10) 3" SCH 80 PVC UNDER ROADWAY. PROVIDE MINIMUM 12" COVER. SEE TRENCH DETAILS, SHEET C-2. LAY WARNING TAPE WITH LOCATOR STRIP APPROXIMATELY 10" ABOVE CONDUIT IN TRENCH. INSTALL (1) CONTROL CABLE SET FROM CONTROL PANEL TO EACH INJECTION WELL VAULT.
 - (11) 2" SCH 80 PVC WITHOUT CONCRETE ROADWAY COVER. PROVIDE MINIMUM 18" COVER AND AS SHOWN ON TRENCH DETAILS FOR THIS CONDITION. LAY WARNING TAPE WITH LOCATOR STRIP APPROXIMATELY 12" ABOVE CONDUIT IN TRENCH. INSTALL (1) CONTROL CABLE SET FROM CONTROL PANEL TO EACH INJECTION WELL VAULT.
 - (12) RIGID STEEL CONDUITS. RISE INSIDE COMPRESSOR SHED. SEE BUILDING PLAN, SHEET E2.1
 - (13) (1)2" AND (1)3" SCH 80 PVC TO CONTROL PANEL IN COMPRESSOR SHED WITH ALL CONTROL CABLE SETS.
 - (14) INTERCEPT VAULT FOR AIR AND CONTROL CIRCUITS. SEE DETAILS ON 'C' SHEETS.
 - (15) PROVIDE WALL MOUNTED STRUT SUPPORT BRACKETS AND HOOKS FOR CABLES IN VAULT. NORTH WALL PROVIDE: B-LINE #B409-9 OR EQUAL 9" WALL BRACKET IN CENTER OF WALL TO SUPPORT CABLES BETWEEN CONDUITS. SIDE WALL AT INSTRUMENTS: PROVIDE B-LINE #BCH12 OR EQUAL CABLE HOOKS ON SIDE OF VAULT AT EACH INSTRUMENT AS NEEDED FOR PERMANENT RELIABLE CABLE SUPPORT ((3) MINIMUM). SECURE CABLES TO SUPPORTS WITH LIGHTLY TENSIONED TY-RAPS. EXCEPT AT THE CONNECTION POINT, NO CABLE IS TO CONTACT THE SOLENOID BODY (SOLENOID CAN BECOME HOT IN USE).
 - (16) 1 1/4" RIGID STEEL RISER AND WEATHERHEAD TO COMMERCIAL METER BASE AND 100A/3P MAIN CIRCUIT BREAKER. SEE BUILDING PLAN SHEET E2.1 AND ONE-LINE DIAGRAM SHEET E0.1.

CHASE ELECTRICAL ENGINEERING

5710 GARFIELD AVE. SUITE C
SACRAMENTO, CA. 95841
(916) 344-4878

NO.	DATE	REVISIONS	BY	CHK	DRAWN: SDB	PROJECT NO: 2143258	WARNING 0 1" AT FULL SCALE (IF BAR IS NOT 1" - SCALE ACCORDINGLY)	 4227 Sunrise Boulevard, Suite 220 Fair Oaks, California 95628 Ph: (916) 863-3220 Fax: (916) 863-3225			OWENS-BROCKWAY GLASS CONTAINER FACILITY BIOBARRIER GROUNDWATER TREATMENT PROJECT	SHEET NO: E1.1
					CHECKED: DMC	APPROVED:						7
											ELECTRICAL SITE PLAN	8

PANEL SCHEDULES

PANEL: A		VOLTAGE: 120/240V		BUS: 125 AMPERES (FED AT 100A)				
TYPE: PANELBOARD		3 PHASE 4 WIRE		MOUNT: SURFACE, NEMA 4				
LOAD	KVA	C.B.	No.	S / N	No.	C.B.	KVA	LOAD
LIGHTING	15/1	1	2	20/1	0.4	RECEPTACLES		
SPACE	-	PFB	3	4	PFB	-	SPACE	
SPARE	20/1	5	6	20/1	1.1	CONTROL PANEL		
SPACE		PFB	7	8	20/1	0.2	FAN	
			9	10	PFB	-	SPACE	
			11	12	20/1	-	SPACE	
			13	14	20/1	-	SPACE	
			15	16	PFB	-	SPACE	
			17	18	20/1	-	SPACE	
			19	20	60			
			22	22	13.3	AIR COMPRESSOR		
			23	24	3	12HP MAX, 7 1/2HP NOM.		

KVA: SEE LOAD CALCULATION, SHEET E0.1.

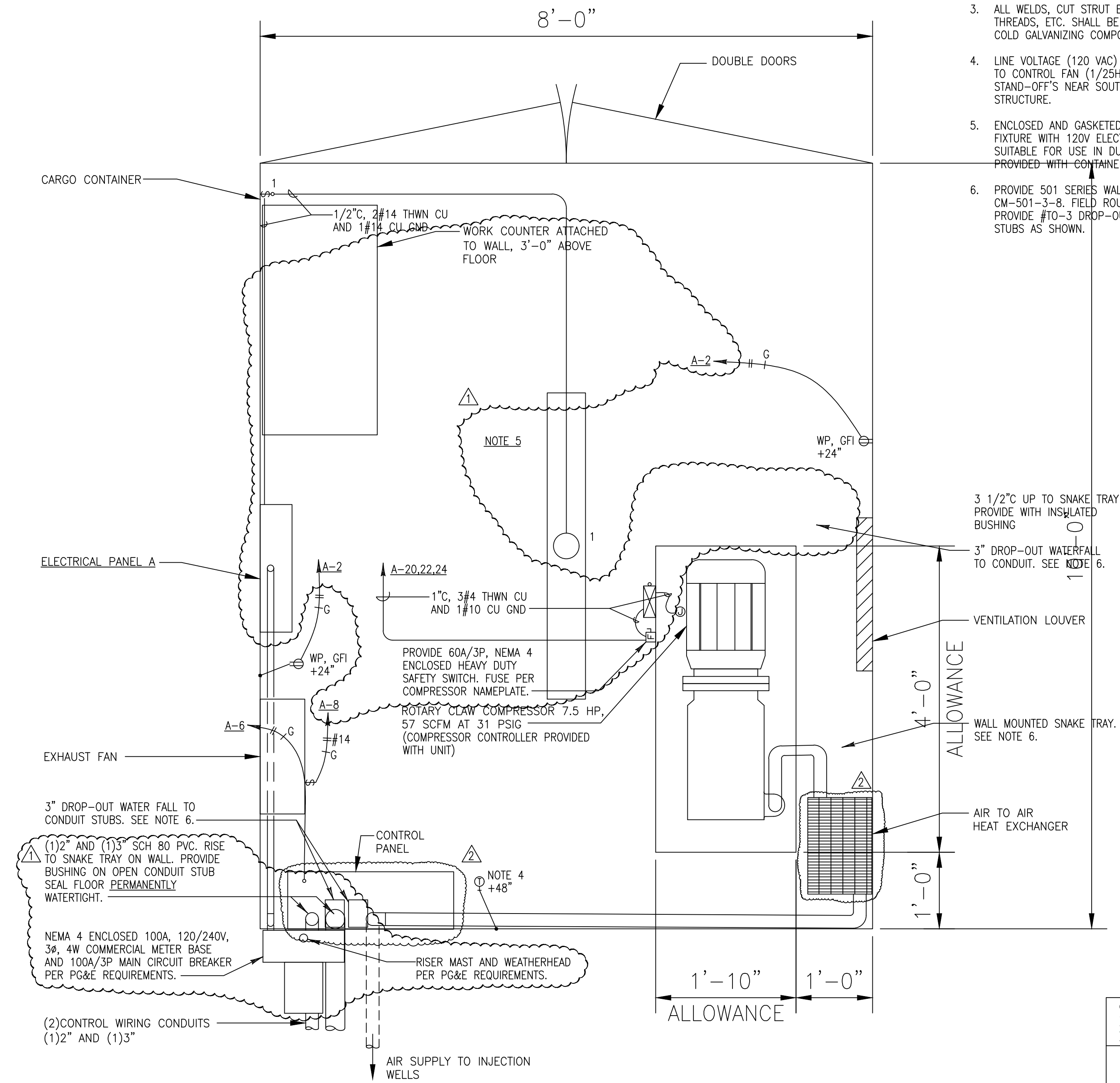
PROVIDE SQ-D TYPE "NF" OR EQUAL WITH BOLT-ON CIRCUIT BREAKERS AND NEMA 4 ENCLOSURE.

PROVIDE LABELS PER NEC 110.16

PROVIDE WITH EQUIPMENT GROUND BUS

COMPRESSOR SHED NOTES

- CONDUIT WITHIN THE COMPRESSOR SHED SHALL BE EMT OR RSC AS APPROPRIATE. EMT CONNECTORS AND COUPLINGS SHALL BE STEEL COMPRESSION TYPE. MAKE FINAL CONNECTION TO COMPRESSOR WITH WP FLEXIBLE STEEL CONDUIT.
- PROVIDE STRUT SUPPORT AS NECESSARY TO MOUNT ALL EQUIPMENT. WELD TO "CONTAINER" STRUCTURE.
- ALL WELDS, CUT STRUT ENDS, EXPOSED CUT THREADS, ETC. SHALL BE COATED WITH ZRC BRAND COLD GALVANIZING COMPOUND OR EQUAL.
- LINE VOLTAGE (120 VAC) THERMOSTAT HP RATED TO CONTROL FAN (1/25HP). MOUNT ON INSULATED STAND-OFF'S NEAR SOUTH END OF "CONTAINER" STRUCTURE.
- ENCLOSED AND GASKETED 2-LAMP (T8) FLUORESCENT FIXTURE WITH 120V ELECTRONIC BALLAST (.88BF) SUITABLE FOR USE IN DUSTY ENVIRONMENT. FIXTURE PROVIDED WITH CONTAINER.
- PROVIDE 501 SERIES WALL MOUNTED SNAKE TRAY CM-501-3-8. FIELD ROUTE TO AVOID OBSTRUCTIONS. PROVIDE #10-3 DROP-OUT WATER FALLS TO CONDUIT STUBS AS SHOWN.



ELECTRICAL PLAN- COMPRESSOR SHED

SCALE: 1" = 1'-0"

CHASE
ELECTRICAL
ENGINEERING

5710 GARFIELD AVE. SUITE C
SACRAMENTO, CA. 95841
(916) 344-4878

NO.	DATE	REVISIONS	BY	CHK
10/14/16		AS-BUILT DRAWINGS		
10/5/15		REVISED TO ACCEPT PG&E SERVICE	DMC/SDB	DMC

DRAWN:	SDB	PROJECT NO:	2143258
ENGINEER:	DMC	SCALE:	1" = 1'-0"
CHECKED:	DMC	APPROVED:	
DATE:	09/19/14	DATE:	

WARNING
0 1"
AT FULL SCALE
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SIERRA WEST
CONSULTANTS, INC.
4227 Sunrise Boulevard, Suite 220
Fair Oaks, California 95628
Ph: (916) 863-3220 Fax: (916) 863-3225

CKG Environmental, Inc.

REGISTERED PROFESSIONAL ELECTRICAL ENGINEER
JEFFREY C. BECKHA
NO. 43803
Exp. 6-30-13
CIVIL
STATE OF CALIFORNIA

OWENS-BROCKWAY GLASS CONTAINER FACILITY
BIOBARRIER GROUNDWATER TREATMENT PROJECT
ELECTRICAL PLAN- COMPRESSOR SHED
PANEL SCHEDULES

SHEET NO:
E2.1
8
8

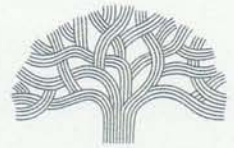
Appendix 2: Project Team Contact Info

Project Team Contacts List

1. Owens-Brockway
O: (567) 336-5000
2. Christina Kennedy
CKG Environmental, Inc.
O: (707) 967-8080
M: (707) 363-5740
3. Jeffrey C. Bensch, P.E.
Sierra West Consultants, Inc.
O: (916) 863-3220
M: (916) 207-5706\
4. Mike Babst
Engineering/Remediation Resource Group
O: (415) 395-9974
M: (925) 639-1267
5. Enprobe Environmental Direct Push & Drilling Services, Inc.
O: (530) 693-0219
6. Cascade Drilling L.P.
O: (510) 478-0858
7. Calcon Systems, Inc.
O: (925) 277-0665
8. Carla Kendall
Pacific Gas and Electric Company
O: (510) 437-2133
M: (510) 385-6228
9. Rockridge Geotechnical
O: (510) 420-5738
10. Testing Engineers, Inc.
O: (510) 504-4183
11. McCampbell Analytical, Inc.
O: (925) 252-9262

Appendix 3: Permits

CITY OF OAKLAND



DALZIEL BUILDING • 250 FRANK H. OGAWA PLAZA, SUITE 2340 • OAKLAND, CALIFORNIA 94612-2031

Community and Economic Development Agency
Building Services Division

(510) 238-3381
FAX (510) 238-2959
TDD (510) 238-3254

March 4, 2015

Owens Brockway Glass Container, Inc.
c/o Yousuf Kaleem, Staff Engineer, **Sierra-West Consultants, Inc.**
One Michael Owens Way
Perrysburg, Ohio 43551-2999

RE: 3600 Alameda Avenue, ENMI14167, indenture agreement

Dear property owner:

The indenture agreement to allow installation of one monitoring well MW-21 on Alameda Ave and injection wells IW-1A, -2A, -1B, -2B at intersection of Fruitvale and Alameda Ave. Also include two existing monitoring wells MW-6 on Fruitvale Ave side and MW-19 on Alameda Ave side which may have been permitted under ENMI03008 is enclosed. Before the agreement becomes effective, the person(s) having the legal authority to do so, must sign and properly notarize this original document with a legible notary acknowledgement slip, and then return the document to this office to the attention of Chris Bacina for recordation with the County of Alameda.

There are fees due in the amount of \$438.35. Please arrange to pay the amount as soon as possible. See invoice on reverse side.

If you have any questions, please call Chris Bacina at 510-238-3759.

Sincerely,

David Harlan
Engineering Manager
Planning and Building Department

Enclosure

The enclosed agreement alone does not allow work to be done which requires inspection. Be certain to obtain any/all required permits before beginning work.

No Fee Document Pursuant To Government Code Section 6103

recording requested by:

CITY OF OAKLAND

when recorded mail to:

City of Oakland
P&BD - Engineering Services
Dalziel Administration Building
250 Ogawa Plaza - 2nd Floor
Oakland, CA 94612
Attn: City Engineer

----- space above for City of Oakland's use only -----

INDENTURE AGREEMENT



Address 3600 Alameda Avenue

permit no. ENMI 14167

parcel no. 033 -2250-011-04

authorities Municipal Code Section 12.08.080

description Allow installation of one monitoring well MW-21 on Alameda Ave and injection wells IW-1A, -2A, -1B, -2B at intersection of Fruitvale and Alameda Ave. Also include two existing monitoring wells MW-6 on Fruitvale Ave side and MW-19 on Alameda Ave side which may have been permitted under ENMI03008.

RECITAL

The owner subscribed below of fee simple interest in the property referenced above and described in Exhibit B attached hereto, is hereby granted, for an indeterminate period of time, the revocable permit referenced above allowing the temporary encroachment described above and delineated in Exhibit C, attached hereto, and limiting the use, exercise, and operation of the encroachment with the requirements and restrictions set forth in Exhibit A, attached hereto, and the associated permit. The owner agrees by and between themselves to be bound by the general and special conditions in Exhibit A and to comply with these conditions faithfully and fully at all times. The conditions of this agreement and associated permit shall equally bind all agents, heirs, successors, and assigns of the owner.

ACKNOWLEDGEMENT OF PROPERTY OWNER

(Notarization of signature required)

Owens-Brockway Glass Container Inc., a Delaware corporation

Signature

WLBascacci

Owens-Brockway Glass Container Inc.

William Leonard Bascacci II

Print Name

Bill Bascacci

Date

Mar. 5, 2015 ^{WLB}

Title

EHS Director

ATTACHMENTS

Exhibit A - Conditions of encroachment

Exhibit C - Limits of encroachment

Exhibit B - Description of privately owned parcel

CITY OF OAKLAND

a municipal corporation

by

date

DEBORAH SANDERCOCK

City Engineer

DAVID HARLAN

Engineering Manager

Planning and Building Department

EXHIBIT A

Conditions for an Encroachment in the Public Right-of-Way

address 3600 Alameda Avenue

parcel no. 033 -2250-011-04

permittee OWENS-BROCKWAY GLASS CONTAINER INC.

permit no. ENMI 14167

• **General conditions of the encroachment**

1. This agreement may be voided and the associated permit for an encroachment may be revoked at any time and for any reason, at the sole discretion of the City Administrator or his or her designee, or the associated permit may be suspended at any time, at the sole discretion of the City Engineer, upon failure of the permittee to comply fully and continuously with each and all of the general and special conditions set forth herein and in the associated permit.
2. The property owner and permittee hereby disclaim any right, title, or interest in or to any portion of the public right-of-way, including the sidewalk and street, and agree that the encroachment is granted for indeterminate period of time and that the use and occupancy by the permittee of the public right-of-way is temporary and does not constitute an abandonment, whether expressed or implied, by the City of Oakland of any of its rights associated with the statutory and customary purpose and use of and operations in the public right-of-way.
3. The permittee agrees to indemnify and save harmless the City of Oakland, its officers, agents, employees, and volunteers, and each of them, from any suits, claims, or actions brought by any person or persons, corporations, or other entities for on account of any bodily injury, disease, or illness, including death, damage to property, real or personal, or damages of any nature, however caused, and regardless of responsibility for negligence, arising in any manner out of the construction of or installation of a private improvement itself or sustained as result of its construction or installation or resulting from the permittee's failure to maintain, repair, remove and/or reconstruct the private improvement.
4. The permittee shall maintain fully in force and effect at all times that the encroachment occupies the public right-of-way good and sufficient public liability insurance in a face amount not less than \$300,000.00 for each occurrence, and property damage insurance in a face amount not less than \$50,000.00 for each occurrence, both including contractual liability, insuring the City of Oakland, its officers, agents, employees, and volunteers against any and all claims arising out of the existence of the encroachment in the public right-of-way, as respects liabilities assume under this permit, and that a certificate of such insurance and subsequent notices of the renewal thereof, shall be filed with the City Engineer of the City of Oakland, and that such certificate shall state that the insurance coverage shall not be canceled or be permitted to lapse without thirty calendar (30) days written notice to the City Engineer. The permittee also agree that the City of Oakland may review the type and amount of insurance required of the permittee annually and may require the permittee to increase the amount of and/or change the type of insurance coverage required.
5. The permittee shall be solely and fully liable and responsible for the repair, replacement, removal, reconstruction, and maintenance of any portion or all of the private improvements constructed or installed in the public right-of-way, whether by the cause, neglect, or negligence of the permittee or others and for the associated costs and expenses necessary to restore or remove the encroachment to the satisfaction of the City Engineer and shall not allow the encroachment to become a blight or a menace or a hazard to the health and safety of the general public.
6. The permittee acknowledge and agree that the encroachment is out of the ordinary and does not

comply with City of Oakland standard installations. The permittee further acknowledge and agree that the City of Oakland and public utility agencies will periodically conduct work in the public right-of-way, including excavation, trenching, and relocation of its facilities, all of which may damage the encroachment. Permittee further acknowledge and agree that the City and public utility agencies take no responsibility for repair or replacement of the encroachment which may be damaged by the City or its contractors or public utility agencies or their contractors. Permittee further acknowledge and agree that upon notification by and to the satisfaction of the City Engineer, permittee shall immediately repair, replace, or remove, at the sole expense of the permittee, all damages to the encroachment that are directly or indirectly attributable to work by the City or its contractors or public utility agencies or their contractors.

7. Permittee shall remain liable for and shall immediately reimburse the City of Oakland for all costs, fee assessments, penalties, and accruing interest associated with the City's notification and subsequent abatement action for required maintenance, repairs, or removal, whether in whole or in part, of the encroachment or of damaged City infrastructure made necessary by the failure, whether direct or indirect, of the permittee to monitor the encroachment effectively and accomplish preventative, remedial, or restorative work expeditiously. The City reserves the unqualified right to collect all monies unpaid through any combination of available statutory remedies, including recordation of Prospective Liens and Priority Liens/ Special Assessments with the Alameda County Recorder, inclusion of non-reimbursed amounts by the Alameda County Assessor with the annual assessment of the general levy, and awards of judgments by a court of competent jurisdiction.
8. Upon revocation of the encroachment permit, permittee shall immediately, completely, and permanently remove the encroachment from the public right-of-way and restore the public right-of-way to its original conditions existing before the construction or installation of the encroachment, to the satisfaction of the City Engineer and all at the sole expense of the permittee.
9. This agreement and the associated permit for an encroachment shall become effective upon filing of this agreement with the Alameda County Recorder for recordation as an encumbrance of the property and its title.

• **Special conditions of the encroachment**

10. That said permittee shall obtain excavation permit(s) prior to construction and separate excavation permit(s) prior to the removal of the monitoring wells.
11. That said permittee shall provide to the City of Oakland an AS BUILT plan showing the actual location of the monitoring wells and the results of all data collected from the monitoring wells.
12. That said permittee shall remove the monitoring wells and repair any damage to the street area in accordance with City standards two (2) years after construction or as soon as monitoring is complete.
13. That said permittee shall notify the Planning and Building Department, Engineering Services Division after the monitoring wells are removed and the street area restored to initiate the procedure to rescind the minor encroachment permit.
14. That the monitoring wells' cover installed within the sidewalk area shall have a skid-proof surface.
15. That the monitoring wells' casting and cover shall be iron and shall meet H-20 load rating. The cover shall be secured with a minimum of two stainless steel bolts. Bolts and cover shall be mounted flush with the surrounding surface. For sidewalk installations, a pre-cast concrete utility box and non-skid cover may be needed in conjunction with the bolted cast iron cover with City

approval.

16. That said permittee acknowledges that the City makes no representations or warranties as to the conditions beneath said encroachment. By accepting this revocable permit, permittee agrees that it will use the encroachment area at its own risk, is responsible for the proper coordination of its activities with all other permittee, underground utilities, contractors, or workmen operating, within the encroachment area and for the safety of itself and any of its personnel in connection with its entry under this revocable permit.
17. That said permittee acknowledges that the City is unaware of the existence of any hazardous substances beneath the encroachment area, and permittee hereby waives and fully releases and forever discharges the City and its officers, directors, employees, agents, servants, representatives, assigns and successors from any and all claims, demands, liabilities, damages, actions, causes of action, penalties, fines, liens, judgments, costs, or expenses whatsoever (including, without limitation, attorneys' fees and costs), whether direct or indirect, known or unknown, foreseen or unforeseen, that may arise out of or in any way connected with the physical condition or required remediation of the excavation area of any law or regulation applicable thereto, including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 U.S.C. Sections 9601 et seq.), the Resource Conservation and Recovery Act of 1976 (42 U.S.C. Section 466 et seq.), the Safe Drinking Water Act (14 U.S.C. Sections 1401, 1450), the Hazardous Waste Control Law (California Health and Safety Code Sections 25100 et seq.), the Porter-Cologne Water Quality Control Act (California Health and Safety Code Section 13000 et seq.), the Hazardous Substance Account Act (California Health and Safety Code Sections 253000 et seq.), and the Safe Drinking Water and Toxic Enforcement Act (California Health and Safety Code Section 25249.5 et seq.).
18. That said permittee further acknowledges that it understands and agrees that it hereby expressly waives all rights and benefits which it now has or in the future may have, under and by virtue of the terms of California Civil Code Section 1542, which reads as follows: "A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM MUST HAVE MATERIALLY AFFECTED HIS SETTLEMENT WITH THE DEBTOR."
19. That said permittee recognizes that by waiving the provisions of this section, permittee will not be able to make any claims for damages that may exist, and to which, if known, would materially affect its decision to agree to these encroachment terms and conditions, regardless of whether permittee's lack of knowledge is the result of ignorance, oversight, error, negligence, or any other cause.
20. (a) That said permittee, by the acceptance of this revocable permit, agrees and promises to indemnify, defend, and hold harmless the City of Oakland, its officers, agents, and employees, to the maximum extent permitted by law, from any and all claims, demands, liabilities damages, actions, causes of action, penalties, fines, liens, judgments, costs, or expenses whatsoever (including, without limitation, attorneys' fees and costs; collectively referred to as "claims", whether direct or indirect, known or unknown, foreseen or unforeseen, to the extent that such claims were either (1) caused by the permittee, its agents, employees, contractors or representatives, or, (2) in the case of environmental contamination, the claim is a result of environmental contamination that emanates or emanated from 3600 Alameda Avenue, Oakland, California site, or was otherwise caused by the permittee, its agents, employees, contractors or representatives.

(b) That, if any contamination is discovered below or in the immediate vicinity of the encroachment, and the contaminants found are of the type used, housed, stored, processed or sold on or from 3600 Alameda Avenue, Oakland, California site, such shall amount to a rebuttable presumption that the contamination below, or in the immediate vicinity of, the encroachment was caused by the permittee, its agents, employees, contractors or representatives.

(c) That said permittee shall comply with all applicable federal, state, county and local laws, rules, and regulations governing the installation, maintenance, operation and abatement of the encroachment.

21. That said Minor Encroachment Permit and Agreement shall take effect when all the conditions hereinabove set forth shall have been complied with to the satisfaction of the City Engineer, and shall become null and void upon the failure of the permittee to comply with all conditions.
22. That said permittee understands that a rescission of this agreement will be needed to complete this agreement at some future date when monitoring is completed and wells are removed. Additional permitting will be required.
23. That said Indenture Agreement alone does not allow work to be done which requires inspection. Permittee to obtain any and all required permits before beginning work.
24. The City, at its sole discretion and at future date not yet determined, may impose additional and continuing fees as prescribed in the Master Fee Schedule for use and occupancy of the public right-of-way.

EXHIBIT B

Description of the Private Property Abutting the Encroachment

address 3600 Alameda Avenue
deed no. 2001-325929

parcel no. 033-2250-011-04
recorded August 30, 2001

CITY OF OAKLAND

PARCEL 1.

LOTS 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 28 IN SUBDIVISION G OF "FRUITVALE TERMINAL TRACT, BROOKLYN TOWNSHIP, ALAMEDA COUNTY", PER MAP FILED DECEMBER 7, 1895, IN BOOK 15 OF MAPS, PAGE 41.

PARCEL 2:

LOTS 12, 13, 18, SUBDIVISION F OF "FRUITVALE TERMINAL TRACT, BROOKLYN TOWNSHIP, ALAMEDA COUNTY", PER MAP FILED DECEMBER 7, 1895, IN BOOK 15 OF MAPS, PAGE 41.

PARCEL 3:

LOTS 11, 12, 13, 14, 15, 16, 23, 24 OF "ELMWOOD PARK, FRUITVALE, ALAMEDA COUNTY", PER MAP FILED JULY 23, 1906, IN BOOK 21 OF MAPS, PAGE 42.

PARCEL 4:

THE SOUTHWESTERN TWENTY-FIVE FEET OF LOT NUMBERED 2 AND THE NORTHEASTERN TWENTY-FIVE FEET OF LOT NUMBERED 3, BOTH MEASUREMENTS ON 36TH AVENUE, IN BLOCK NUMBERED 728, AS SAID LOTS AND BLOCK ARE DELINEATED AND SO DESIGNATED UPON THAT CERTAIN MAP ENTITLED, "C. C. CLAY'S SUBDIVISION OF BLOCK NO. 772 AND FRACTIONAL BLOCKS 728, 734, 747, 751, 752, 753, 754 AND 776 OF THE LEVY AND LANE TRACT AT FRUIT VALE, BROOKLYN TOWNSHIP, ALAMEDA CO., CAL., MARCH 1889" - FILED MARCH 11, 1889, IN BOOK 11 OF MAPS, AT PAGE 59, IN THE OFFICE OF THE COUNTY RECORDER OF ALAMEDA COUNTY.

PARCEL 5.

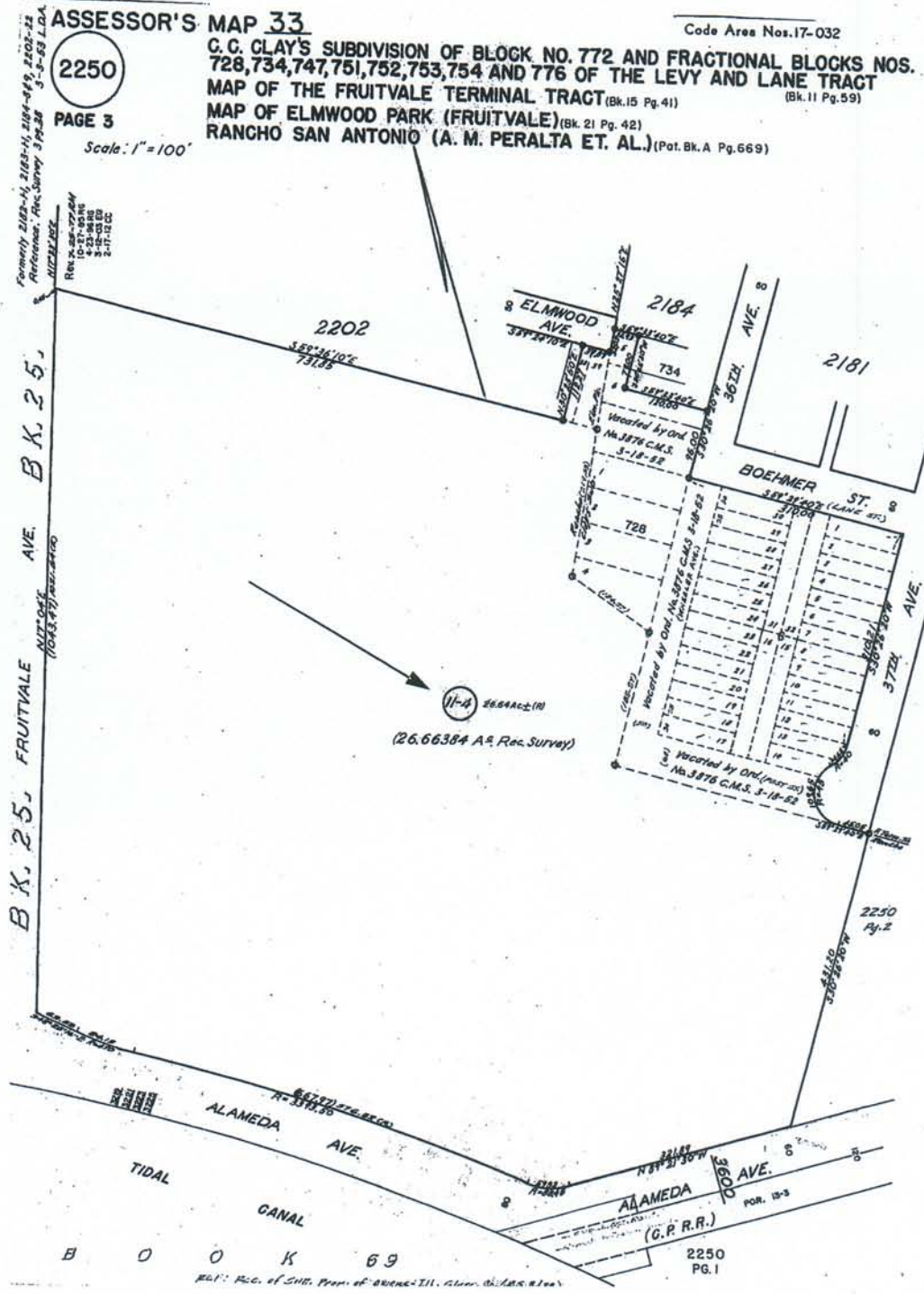
BEGINNING AT A POINT ON THE NORTHWESTERN LINE OF 36TH AVENUE, FORMERLY LANE STREET, AS SAID AVENUE IS SHOWN ON THE MAP HEREIN REFERRED TO, DISTANT THEREON NORTHEASTERLY 147 FEET FROM THE INTERSECTION THEREOF WITH THE NORTHEASTERN LINE OF BOEHMER STREET, FORMERLY LANE STREET, AS SAID STREET NOW EXISTS; THENCE NORTHEASTERLY ALONG SAID LINE OF 36TH AVENUE, 34 FEET; THENCE AT RIGHT ANGLES NORTHWESTERLY 120 FEET; THENCE AT RIGHT ANGLES SOUTHWESTERLY 34 FEET, THENCE AT RIGHT ANGLES EASTERLY 120 FEET TO THE POINT OF BEGINNING.

BEING PORTIONS OF LOTS 3 AND 4 IN BLOCK 734, AS SAID LOTS AND BLOCK ARE SHOWN ON THE MAP OF "C. C. CLAY'S SUBDIVISION OF BLOCK 772 AND FRACTIONAL BLOCKS NOS. 728, 734, 747, 751, 752, 753, 754 AND 776 OF THE LEVY AND LANE TRACT, AT FRUITVALE, BROOKLYN TOWNSHIP", ETC., FILED MARCH 11, 1889, IN BOOK 11 OF MAPS, PAGE 59, IN THE OFFICE OF THE COUNTY RECORDER OF ALAMEDA COUNTY.

Legal description continues through from Parcel 5, above, to Parcel 36.

A more legible copy is available at the Office of the City Engineer,
City of Oakland, 250 Frank Ogawa Plaza, 2nd floor.

EXHIBIT B (continued)



A more legible copy is available at the Office of the City Engineer,
 City of Oakland, 250 Frank Ogawa Plaza, 2nd floor.

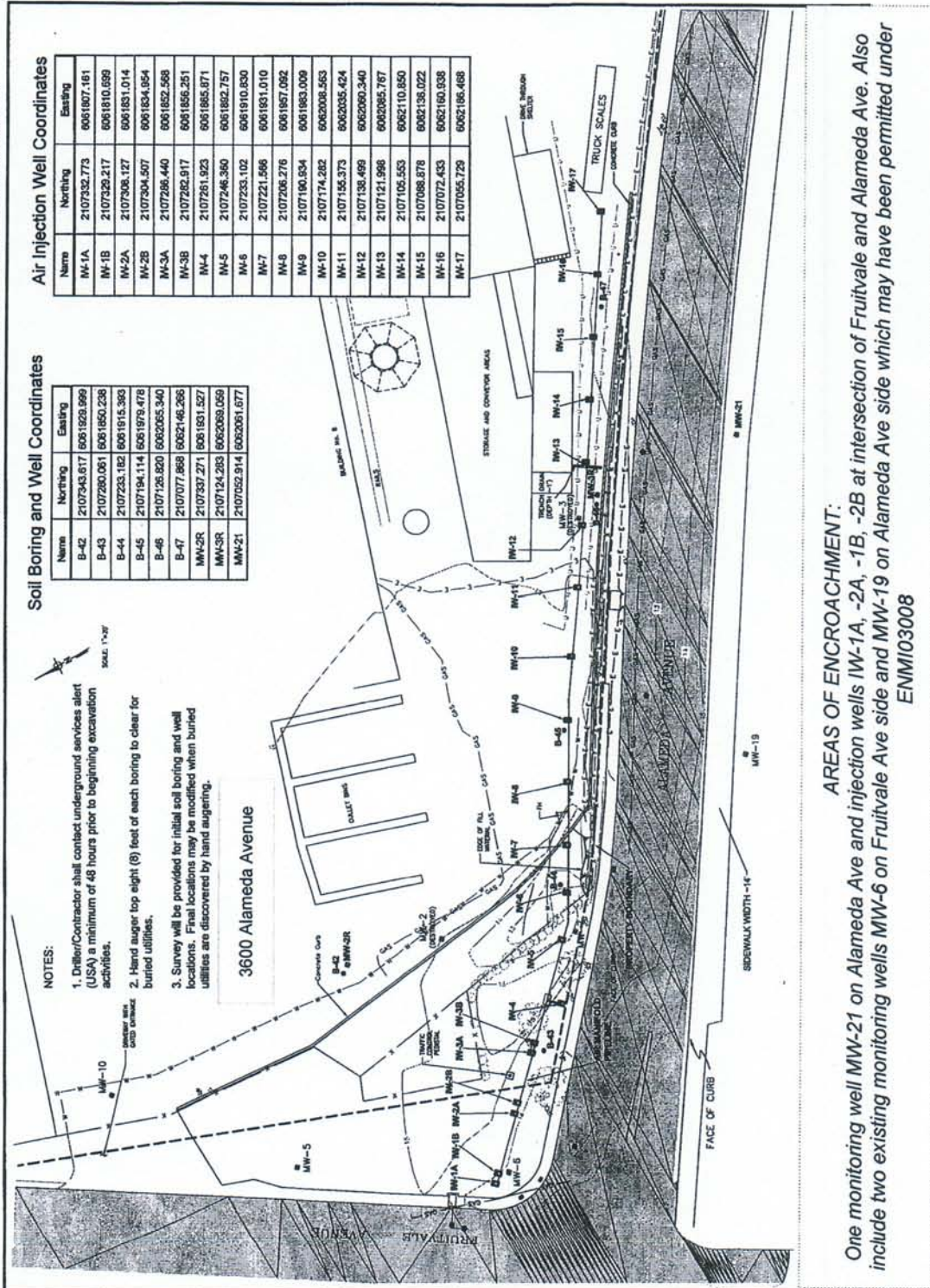
EXHIBIT C

Limits Of The Encroachment In The Public Right-Of-Way

address 2700 23rd Avenue

parcel no. 026 -0793-031-00

A more legible copy is available at the Office of the City Engineer, City of Oakland, 250 Frank Ogawa Plaza, 2nd floor.



CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE § 1189

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of ALAMEDA)

On 5th MARCH 2015 before me, MURSHAD BOBBY KHAN NOTARY PUBLIC
Date Here Insert Name and Title of the Officer

personally appeared WILLIAM LEONARD BOSCACCI II
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Signature _____
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: INDEBTURE AGREEMENT Document Date: 5th MARCH 2015
Number of Pages: 8 - EIGHT Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: WILLIAM LEONARD BOSCACCI II Signer's Name: _____
 Corporate Officer — Title(s): _____ Corporate Officer — Title(s): _____
 Partner — Limited General Partner — Limited General
 Individual Attorney in Fact Individual Attorney in Fact
 Trustee Guardian or Conservator Trustee Guardian or Conservator
 Other: _____ Other: _____
Signer Is Representing: _____ Signer Is Representing: _____

JOB SITE



CITY OF OAKLAND

250 FRANK H. OGAWA PLAZA ▪ 2ND FLOOR ▪ OAKLAND, CA 94612

Planning and Building Department
www.oaklandnet.com

PH: 510-238-3891
FAX: 510-238-2263
TDD: 510-238-3254

Permit No: OB1500845 Obstruction Filed Date: 8/24/2015
Job Site: 3600 ALAMEDA AVE Schedule Inspection by calling: 510-238-3444

Parcel No: 033 225001104

District: *Block 50' sidewalk as described on reverse.*

Project Description: Excavate & install five monitoring wells: MW-21; and injection wells IW-1A, -2A, -1B, -2B at intersection of Fruitvale and Alameda Ave. on Alameda Ave; see site plan.

Permit valid 90 days.

Contact: Yousuf Kaleem; (408) 239-9659.

Separate Obstruction permit required to reserve/block parking lane.

Set up PWA PRE-CON prior to start work: 510-238-3651.

Background: Petition to allow one monitoring well MW-21 on Alameda Ave and injection wells IW-1A, -2A, -1B, -2B at intersection of Fruitvale and Alameda Ave. Also include two existing monitoring wells MW-6 on Fruitvale Ave side, MW-19 on Alameda Ave side which may have been permitted under ENMI03008.

Related Permits: X1500468 OB1500222

	Name	Applicant	Address	Phone	License #
Owner:	OWENS BROCKWAY GLASS CONTAINER INC		ONE MICHAEL OWENS WAY PERRYSBURG, OH		
Contractor- Employee:	SIERRA WEST CONSULTANTS INC	X	4227 SUNRISE BLVD SUITE 220 FAIR OAKS, CA	(916) 863-3220	863096

PERMIT DETAILS: Building/Public Use/Activity/Obstructions

Work Information

Start Date: 09/14/2015 Obstruction Permit Type: Short Term (Max 14 Days)
End Date: 09/14/2015 Number of Meters (Metered Area):
Length Of Obstruction (Unmetered Area): 50

TOTAL FEES TO BE PAID AT FILING: \$119.34

Application Fee	\$70.00	Records Management Fee	\$9.88	Short Term Permits	\$34.00
Technology Enhancement Fee	\$5.46				

Plans Checked By _____ Date _____ Permit Issued By *[Signature]* Date *8-24*
Finalized By _____ Date _____



CITY OF OAKLAND

250 FRANK H. OGAWA PLAZA ▪ 2ND FLOOR ▪ OAKLAND, CA 94612

Planning and Building Department
www.oaklandnet.com

PH: 510-238-3891
FAX: 510-238-2263
TDD: 510-238-3254

Sept 14

Permit No: OB1500222 **Obstruction** **Filed Date:** 3/5/2015
Job Site: 3600 ALAMEDA AVE **Schedule Inspection by calling:** 510-238-3444
Parcel No: 033 225001104
District:

Project Description: Block 50' sidewalk for monitoring well MW-21 on Alameda Ave; see site plan.
Contact: Yousuf Kaleem; (408) 239-9659.
Set up PWA PRE-CON prior to start work: 510-238-3651.
Background: Petition to allow one monitoring well MW-21 on Alameda Ave and injection wells IW-1A, -2A, -1B, -2B at intersection of Fruitvale and Alameda Ave. Also include two existing monitoring wells MW-6 on Fruitvale Ave side, MW-19 on Alameda Ave side which may have been permitted under ENMIO3008.

Related Permits: X1500468

	<u>Name</u>	<u>Applicant</u>	<u>Address</u>	<u>Phone</u>	<u>License #</u>
Owner:	OWENS BROCKWAY GLASS CONTAINER INC		ONE MICHAEL OWENS WAY PERRYSBURG, OH		
Contractor- Employee:	SIERRA WEST CONSULTANTS INC	X	4227 SUNRISE BLVD SUITE 220 FAIR OAKS, CA	(916) 863-3220	863096

PERMIT DETAILS: Building/Public Use/Activity/Obstructions			
Work Information			
Start Date: 04/06/2015	Obstruction Permit Type:	Short Term (Max 14 Days)	
End Date: 04/06/2015	Number of Meters (Metered Area):		
	Length Of Obstruction (Unmetered Area):	50	

TOTAL FEES TO BE PAID AT FILING: \$121.06			
Application Fee	\$71.00	Records Management Fee	\$10.02 Short Term Permits \$34.50
Technology Enhancement Fee	\$5.54		

Plans Checked By _____ Date _____ Permit Issued By Date 3.5
Finalized By _____ Date _____



CITY OF OAKLAND

JOB SITE

250 FRANK H. OGAWA PLAZA ▪ 2ND FLOOR ▪ OAKLAND, CA 94612

Planning and Building Department
www.oaklandnet.com

PH: 510-238-3891
FAX: 510-238-2263
TDD: 510-238-3254

Permit No: X1500468 **Excavation**
Job Site: 3600 ALAMEDA AVE
Parcel No: 033 225001104
District:

Filed Date: 3/5/2015

Schedule Inspection by calling: 510-238-3444

Project Description: Excavate & install five monitoring wells: MW-21; and injection wells IW-1A, -2A, -1B, -2B at intersection of Fruitvale and Alameda Ave. on Alameda Ave; see site plan.
Permit valid 90 days.
Contact: Yousuf Kaleem; (408) 239-9659.
Separate Obstruction permit required to reserve/block parking lane.
Set up PWA PRE-CON prior to start work: 510-238-3651.
Background: Petition to allow one monitoring well MW-21 on Alameda Ave and injection wells IW-1A, -2A, -1B, -2B at intersection of Fruitvale and Alameda Ave. Also include two existing monitoring wells MW-6 on Fruitvale Ave side, MW-19 on Alameda Ave side which may have been permitted under ENMI03008.

Related Permits: ENMI14167 OB1500222

	<u>Name</u>	<u>Applicant</u>	<u>Address</u>	<u>Phone</u>	<u>License #</u>
Owner:	OWENS BROCKWAY GLASS CONTAINER INC		ONE MICHAEL OWENS WAY PERRYSBURG, OH		
Contractor- Employee:	SIERRA WEST CONSULTANTS INC	X	4227 SUNRISE BLVD SUITE 220 FAIR OAKS, CA	(916) 863-3220	863096

PERMIT DETAILS: Building/Public Infrastructure/Excavation/NA

General Information

Excavation Type: Private Party Special Paving Detail Required: Tree Removal Involved:

Date Street Last Resurfaced: Holiday Restriction (Nov 1 - Jan 1):

Worker's Compensation Company Name: Limited Operation Area (7AM-9AM) And (4PM-6PM):

Worker's Compensation Policy #:

Key Dates

Approximate Start Date: _____

Approximate End Date: _____

TOTAL FEES TO BE PAID AT FILING: \$0.00

Plans Checked By _____ Date _____ Permit Issued By REVISION _____ Date 8-24-15

Finalized By _____ Date _____

Permits for which no major inspection has been approved within 180 days shall expire by limitation. No refund more than 180 days after expiration or final.



CITY OF OAKLAND

250 FRANK H. OGAWA PLAZA ▪ 2ND FLOOR ▪ OAKLAND, CA 94612

Planning and Building Department
www.oaklandnet.com

PH: 510-238-3891
FAX: 510-238-2263
TDD: 510-238-3254

Permit No: B1600031 **Non-Residential Building - New** **Filed Date:** 1/5/2016
Job Site: 3600 ALAMEDA AVE **Schedule Inspection by calling:** 510-238-3444
Parcel No: 033 225001104
District:
Project Description: Construct new 8'x10' storage shed as part of a Biobarrier groundwater treatment project for site remediation. The shed will house mechanical/electrical equipment as part of the monitoring wells.
Related Permits: ZW1600007

	<u>Name</u>	<u>Applicant</u>	<u>Address</u>	<u>Phone</u>	<u>License #</u>
Owner:	OWENS BROCKWAY GLASS CONTAINER INC		ONE MICHAEL OWENS WAY PERRYSBURG, OH		
Contractor:	SIERRA WEST CONSULTANTS INC		4227 SUNRISE BLVD SUITE 220 FAIR OAKS, CA	(916) 863-3220	863096
Contractor-Employee:	Yousuf Kaleem	X	4227 SUNRISE BLVD SUITE 220 FAIR OAKS, CA	(916) 863-3220	

PERMIT DETAILS: Building/Non-Residential/Building/New					
General Information					
Green Code Checklist: 0	Sets Of Plans: 3	Report - Soil/Geotech:			
Surveys:	Structural Calculations: 2	Energy Calculations (T24):	2		
Building Information					
Building Use: Miscellaneous Structure	Number Of Stories:	Fire Sprinklers:			
Occupancy Group: U Utility / Miscellaneous Structure	Number Of Units:	Floor Area (sq ft):			
Construction Type: X-X To Be Determined	No. of Bedrooms:	Conditioned Floor Area (sq ft):			
Work Information					
Job Value: \$94,131.00					
Occupied Floor Area (Non-Res)(sq ft):					

TOTAL FEES TO BE PAID AT FILING: \$1,075.78					
Overtime Plan Check and Processing	\$937.50	Records Management Fee	\$89.06	Technology Enhancement Fee	\$49.22

Plans Checked By _____ Date _____ Permit Issued By TJ Date 1-27-16
 Finalized By _____ Date _____

Special Inspections
Special Inspection Comments
 Construction And Demolition Electronic CDSR due prior to final inspection.
 Tracking

FIELD COPY

Permits for which no major inspection has been approved within 180 days shall expire by limitation. No refund more than 180 days after expiration or final.



CITY OF OAKLAND

250 FRANK H. OGAWA PLAZA ▪ 2ND FLOOR ▪ OAKLAND, CA 94612

Planning and Building Department
www.oaklandnet.com

PH: 510-238-3891
FAX: 510-238-2263
TDD: 510-238-3254

Permit No: E1600310 Non-Residential Electrical - New **Filed Date:** 2/1/2016

Job Site: 3600 ALAMEDA AVE **Schedule Inspection by calling:** 510-238-3444

Parcel No: 033 225001104

District:

Project Description: TEMP POWER for new 8'x10' storage shed construction as part of a Biobarrier groundwater treatment project for site remediation. The shed will house mechanical/electrical equipment as part of the monitoring wells.

Related Permits: B1600031

	<u>Name</u>	<u>Applicant</u>	<u>Address</u>	<u>Phone</u>	<u>License #</u>
Owner:	OWENS BROCKWAY GLASS CONTAINER INC		ONE MICHAEL OWENS WAY PERRYSBURG, OH		
Contractor:	CALCON SYSTEMS INC		12919 ALCOSTA BOULEVARD STE 9 SAN RAMON, CA	(925) 277-0665	508284
Contractor-Employee:	Charles Phillips	X	12919 ALCOSTA BOULEVARD STE 9 SAN RAMON, CA	(925) 277-0665	

PERMIT DETAILS:	Building/Non-Residential/Electrical/New		
General Information			
PGE Application Number:	Sets Of Plans:	Title 24 Energy Calc for Electrical Heater:	
Occupancy Group:	Calculations:	Title 24 Energy Calc for Lighting:	
Description of Proposed Work			
SERVICE (TEMP.)	Quantity:	1	
CIRCUIT / FEEDER	Quantity:	1	
MOTORS HP (\$263 max)	Quantity:	1	

TOTAL FEES TO BE PAID AT FILING: \$206.55			
Application Fee	\$70.00	Inspection	\$110.00
Technology Enhancement Fee	\$9.45	Records Management Fee	\$17.10

Plans Checked By _____ Date _____ Permit Issued By R.T. Date 2/1/16

Finalized By _____ Date _____

APPLICANT

COPY



Permit No: E1600310 Parcel No: 033 225001104 Job Site: 3600 ALAMEDA AVE Page 2 of 2

LICENSED CONTRACTOR'S DECLARATION

I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

CONSTRUCTION LENDING AGENCY DECLARATION

I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Section 8172, Civil Code).

Lender's Name _____
Branch Designation _____
Lender's Address _____

WORKERS' COMPENSATION DECLARATION

WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000), IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

I hereby affirm under penalty of perjury one of the following declarations:

I have and will maintain a certificate of consent to self-insure for workers' compensation, issued by the Director of Industrial Relations as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

I certify that, in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that, if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

RRP ACKNOWLEDGMENT

EPA's Lead Renovation, Repair and Painting Rule (RRP Rule) requires that firms performing renovation, repair, and painting projects that disturb lead-based paint in homes, child care facilities and pre-schools built before 1978 have their firm certified by EPA or use certified renovators who are trained by EPA-approved training providers and follow lead-safe work practices. As the contractor preparing to do work on a Pre-1978

building, I have read the explanation of the RRP Rule and will ensure that any paint disturbing work will be done by or supervised by an RRP certified individual(s). Failure to follow this rule may result in enforcement action by the EPA. For additional information on complying with lead safety requirements, contact the Alameda County Healthy Homes Department at (510) 567-8280 or 1-800-253-2372 or visit <http://www.achhd.org>.

HAZARDOUS MATERIALS DECLARATION

I hereby affirm that the intended occupancy WILL WILL NOT use, handle or store any hazardous, or acutely hazardous, materials. (Checking "WILL" acknowledges that Sections 25505, 25533, and 25534 of the Health and Safety Code, as well as filing instructions were made available to you).

I HEREBY CERTIFY THE FOLLOWING: That I have read this document; that the above information is correct; and that I have truthfully affirmed all applicable declarations contained in this document. I agree to comply with all city and county ordinances and state laws relating to building construction, and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection purposes.

I hereby agree to save, defend, indemnify and keep harmless the City of Oakland and its officials, officers, employees, representatives, agents, and volunteers from all actions, claims, demands, litigation, or proceedings, including those for attorneys' fees, against the City in consequence of the granting of this permit or from the use or occupancy of the public right-of-way, public easement, or any sidewalk, street or sub-sidewalk or otherwise by virtue thereof, and will in all things strictly comply with the conditions under which this permit is granted I further certify that I am the owner of the property involved in this permit or that I am fully authorized by the owner to access the property and perform the work authorized by this permit.

Name _____
Signature _____
 Contractor, or Contractor's Agent Date _____

NOTICE: No activities related to the approved work, including storage/use of materials, is allowed within the public right-of-way without an encroachment permit. Dust control measures shall be used throughout all phases of construction.

Alameda County Public Works Agency - Water Resources Well Permit



Public Works Agency
—Alameda County—

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

Application Approved on: 03/17/2015 By jamesy

Permit Numbers: W2015-0220 to W2015-0223
Permits Valid from 10/07/2015 to 10/07/2015

Application Id: 1425605622951
Site Location: 3600 Alameda Ave, Oakland CA 94601
Project Start Date: 04/06/2015
Assigned Inspector: Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org
Extension Start Date: 10/07/2015
Extension Count: 1

City of Project Site:Oakland

Completion Date:04/10/2015

Extension End Date: 10/07/2015
Extended By: priest

Applicant: Sierra West Consultants Inc. - jeff Bensch
4227 Sunrise Boulevard Suite 220, Fair Oaks, CA 95628
Property Owner: Bill Boscacci Owens Brockway Glass Container
Inc.
3600 Alameda Ave, Oakland, CA 94601
Client: Chris Kennedy
P.O. Box 246, St. Helena, CA 94574
Contact: Yousuf Kaleem

Phone: 916-863-3220

Phone: 510-436-2166

Phone: 707-363-5740

Phone: 916-863-3220
Cell: 408-239-9659

Receipt Number: WR2015-0114 Total Due: \$1456.00
Payer Name : Sierra West Consultants, Inc. Total Amount Paid: \$1456.00
Paid By: CHECK PAID IN FULL

Works Requesting Permits:

Borehole(s) for Investigation-Environmental/Monitorinig Study - 6 Boreholes

Driller: EnProbe - Lic #: 777007 - Method: DP

Work Total: \$265.00

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2015-0220	03/17/2015	07/05/2015	6	1.50 in.	50.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.
2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
3. 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, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
4. 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.
5. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit

Alameda County Public Works Agency - Water Resources Well Permit

application on site shall result in a fine of \$500.00.

6. NOTE:

Under California laws, the owner/operator are responsible for reporting the contamination to the governmental regulatory agencies under Section 25295(a). The owner/operator is liable for civil penalties under Section 25299(a)(4) and criminal penalties under Section 25299(d) for failure to report a leak. The owner/operator is liable for civil penalties under Section 25299(b)(4) for knowing failure to ensure compliance with the law by the operator. These penalty provisions do not apply to a potential buyer.

7. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a 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.

8. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

Well Construction-Monitoring-Monitoring - 3 Wells

Driller: EnProbe - Lic #: 777007 - Method: hstem

Work Total: \$1191.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2015-0221	03/17/2015	07/05/2015	MW-21	8.00 in.	2.00 in.	19.00 ft	30.00 ft
W2015-0222	03/17/2015	07/05/2015	MW-2R	8.00 in.	2.00 in.	19.00 ft	30.00 ft
W2015-0223	03/17/2015	07/05/2015	MW-3R	8.00 in.	2.00 in.	19.00 ft	30.00 ft

Specific Work Permit Conditions

1. 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, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

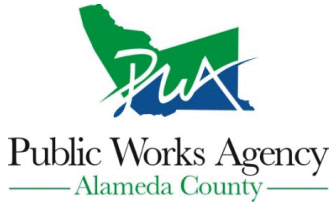
2. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable 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.

3. 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.

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4. 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.
 5. Applicant shall submit the copies of the approved encroachment permit to this office within 10 days.
 6. 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.
 7. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.
 8. Minimum surface seal thickness is two inches of cement grout placed by tremie.
 9. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.
 10. 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.
-

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: 08/27/2015 By jamesy

Permit Numbers: W2015-0813
Permits Valid from 09/14/2015 to 09/18/2015

Application Id: 1440180154995
Site Location: 3600 Alameda Ave

City of Project Site:Oakland

Project Start Date: 09/14/2015
Assigned Inspector: Contact Lindsay Furuyama at (925) 956-2311 or Lfuruyama@groundzonees.com

Completion Date:09/18/2015

Applicant: Sierra West Consultants, Inc - Yousuf Kaleem
4227 Sunrise Boulevard Suite 220, Fair Oaks, CA 95628
Property Owner: Bill Boscacci, Owens Brockway Glass Container

Phone: 916-863-3220

Phone: 510-436-2166

Client: Inc.
3600 Alameda Ave, Oakland, CA 94601
Chris Kennedy
P.O. Box 246, St. Helena, CA 94574

Phone: 707-363-5740

Contact: Yousuf Kaleem

Phone: 916-863-3220
Cell: 408-239-9659

	Total Due:	\$265.00
Receipt Number: WR2015-0429	Total Amount Paid:	\$265.00
Payer Name : Jeffrey C Bensch	Paid By: VISA	PAID IN FULL

Works Requesting Permits:

Remediation Well Construction-Injection - 20 Wells
Driller: EnProbe - Lic #: 777007 - Method: hstem

Work Total: \$265.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2015-0813	08/27/2015	12/13/2015	IW-10	8.00 in.	2.00 in.	10.00 ft	20.00 ft
W2015-0813	08/27/2015	12/13/2015	IW-11	8.00 in.	2.00 in.	10.00 ft	20.00 ft
W2015-0813	08/27/2015	12/13/2015	IW-12	8.00 in.	2.00 in.	10.00 ft	20.00 ft
W2015-0813	08/27/2015	12/13/2015	IW-13	8.00 in.	2.00 in.	10.00 ft	20.00 ft
W2015-0813	08/27/2015	12/13/2015	IW-14	8.00 in.	2.00 in.	10.00 ft	20.00 ft
W2015-0813	08/27/2015	12/13/2015	IW-15	8.00 in.	2.00 in.	10.00 ft	20.00 ft
W2015-0813	08/27/2015	12/13/2015	IW-16	8.00 in.	2.00 in.	10.00 ft	20.00 ft
W2015-0813	08/27/2015	12/13/2015	IW-17	8.00 in.	2.00 in.	10.00 ft	20.00 ft
W2015-0813	08/27/2015	12/13/2015	IW-1A	8.00 in.	2.00 in.	10.00 ft	20.00 ft
W2015-0813	08/27/2015	12/13/2015	IW-1B	8.00 in.	2.00 in.	18.00 ft	28.00 ft
W2015-0813	08/27/2015	12/13/2015	IW-2A	8.00 in.	2.00 in.	10.00 ft	20.00 ft
W2015-0813	08/27/2015	12/13/2015	IW-2B	8.00 in.	2.00 in.	18.00 ft	28.00 ft
W2015-0813	08/27/2015	12/13/2015	IW-3A	8.00 in.	2.00 in.	10.00 ft	20.00 ft

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0813

W2015-0813	08/27/2015	12/13/2015	IW-3B	8.00 in.	2.00 in.	18.00 ft	28.00 ft
W2015-0813	08/27/2015	12/13/2015	IW-4	8.00 in.	2.00 in.	10.00 ft	20.00 ft
W2015-0813	08/27/2015	12/13/2015	IW-5	8.00 in.	2.00 in.	10.00 ft	20.00 ft
W2015-0813	08/27/2015	12/13/2015	IW-6	8.00 in.	2.00 in.	10.00 ft	20.00 ft
W2015-0813	08/27/2015	12/13/2015	IW-7	8.00 in.	2.00 in.	10.00 ft	20.00 ft
W2015-0813	08/27/2015	12/13/2015	IW-8	8.00 in.	2.00 in.	10.00 ft	20.00 ft
W2015-0813	08/27/2015	12/13/2015	IW-9	8.00 in.	2.00 in.	10.00 ft	20.00 ft

Specific Work Permit Conditions

1. 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, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
2. 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.
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.
4. Applicant shall submit the copies of the approved encroachment permit to this office within 10 days.
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. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.
7. Minimum seal depth (Neat Cement Seal) is 2 feet below ground surface (BGS).
8. Minimum surface seal thickness is two inches of cement grout placed by tremie.
9. 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.
10. 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

Alameda County Public Works Agency - Water Resources Well Permit

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.

11. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a 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.

Appendix 4: Daily Construction Observation Reports



SIERRA WEST CONSULTANTS

DAILY TAILGATE SAFETY MEETING

Site Name: Owens-Brackway

Date: 2/1/16

Project: Groundwater BioBarrier

Presented By: Yasmit K.

Topics / Information Reviewed:

- | | | |
|--|---|--|
| <input type="checkbox"/> Daily Work Scope | <input type="checkbox"/> First Aid Kit Location | <input type="checkbox"/> Personal Protective Equipment |
| <input type="checkbox"/> Emergency Response | <input type="checkbox"/> Fire Extinguisher Location | <input type="checkbox"/> Slips Trips & Falls |
| <input type="checkbox"/> Site Evacuation Meeting Point | <input type="checkbox"/> Eye Wash Station Location | <input type="checkbox"/> Open Pits and Excavations |
| <input type="checkbox"/> HASP Location | <input type="checkbox"/> Decontamination Procedures | <input type="checkbox"/> Heat and Cold Stress |
| <input type="checkbox"/> Directions to Hospital | <input type="checkbox"/> Noise Hazards | <input type="checkbox"/> Pinch Points |
| <input type="checkbox"/> MSDS's | <input type="checkbox"/> Orderly Site Housekeeping | <input type="checkbox"/> Overhead and Subsurface Utilities |
| <input type="checkbox"/> Permits and Compliance | <input type="checkbox"/> Traffic Control | <input type="checkbox"/> Site Security |
| <input type="checkbox"/> Stop Work Authority | <input type="checkbox"/> Vehicle Safety | <input type="checkbox"/> Biological Hazards |
| <input type="checkbox"/> Buddy System | <input type="checkbox"/> Backing Up and Spotters | <input type="checkbox"/> Allergies and Medical Conditions |
| <input type="checkbox"/> Site Hazards | <input type="checkbox"/> Securing Loads / Cargo | <input type="checkbox"/> Dust and Vapor Control |

Chemicals of Concern at the Site:

Specific Precautions for Today's Activities:

Name	Signature	Company
Mike Babst		ERRG
Steve P. Jensen		ERRG
Steven Hoefl		ERRG
ORSAE CHAUZ		ERRG
Israel Chavez		ERRG
Romin Prue		CA West
Bethany Draeger		Subtronic Corp

Conduct a Daily Tailgate Safety Meeting prior to each day's site activities. Follow up on any noted items.

DAILY OBSERVATION FORM

Project: Groundwater Bio barrier

Owner: Owens Brockway

Engineer: Sierra West

Date: 2/1/16

Contractor: ERRG

Page: _____ of _____

Day: Mon

Weather: Sunny

Temp: _____

Conditions: _____

On-Site Observer: Yousuf Kaleem

Arrival: 7:00

Departure: 3:30

Visitors:

Work Force: Personnel, Company

Comments

<u>Beth, Subtronics</u>	
<u>ERRG, 6 man crew</u>	
<u>Cal West Concrete Cutting Inc - 1 man crew</u>	
<u>Sierra West, Jeff/Yousuf</u>	

Equipment:

<u>Sawcutter for concrete</u>
<u>249D CAT w/drill attachment</u>
<u>35D John Deere</u>

Activities

<u>7-7:15 AM: Met with Whims and ERRG</u>
<u>7:15-7:45: H3S meeting</u>
<u>B Marked out trench line & began sawcutting</u>
<u>Subtronics arrived on-site @ 8:40 AM</u>
<u>Constructed 6' x 5' wooden frame (+1' for ABS material on sides) for each well vault. Used frame to mark out vaults for sawcutting</u>
<u>Water line/Electric line hugs curb, then crosses trenched area towards building</u>
<u>Water approx 2' deep</u>
<u>Electric approx 2.5-3' deep</u>
<u>Subtronics finished @ 11:00 AM</u>
<u>Hand dug trench near PIV down to approx 30". Did not hit water line.</u>
<u>Began site cleanup @ 1:45</u>
<u>Calcon visited site around 2:30 PM just to scope site</u>

FIELD SAFETY BRIEFING ATTENDANCE SHEET

Site Name: Owens-Brockway

Date: 2/2/16

Project: Groundwater Biobarrier

Presented By: Yousuf K

Topics / Information Reviewed:

- | | | |
|---|---|--|
| <input checked="" type="checkbox"/> Daily Work Scope
<input type="checkbox"/> Emergency Response
<input type="checkbox"/> HASP Location
<input type="checkbox"/> Directions to Hospital
<input checked="" type="checkbox"/> Stop Work Authority
<input checked="" type="checkbox"/> Buddy System
<input checked="" type="checkbox"/> Site Hazards
<input type="checkbox"/>
<input type="checkbox"/> | <input type="checkbox"/> First Aid Kit Location
<input type="checkbox"/> Fire Extinguisher Location
<input type="checkbox"/> Eye Wash Station Location
<input type="checkbox"/> Noise Hazards
<input checked="" type="checkbox"/> Orderly Site Housekeeping
<input checked="" type="checkbox"/> Traffic Control
<input checked="" type="checkbox"/> Vehicle Safety
<input checked="" type="checkbox"/> Backing Up and Spotters
<input type="checkbox"/>
<input type="checkbox"/> | <input checked="" type="checkbox"/> Personal Protective Equipment
<input checked="" type="checkbox"/> Slips Trips & Falls
<input checked="" type="checkbox"/> Heat and Cold Stress
<input checked="" type="checkbox"/> Site Security
<input checked="" type="checkbox"/> Biological Hazards
<input type="checkbox"/> Allergies and Medical Conditions
<input checked="" type="checkbox"/> Dust and Vapor Control
<input type="checkbox"/>
<input type="checkbox"/> |
|---|---|--|

Chemicals of Concern at the Site:

Specific Precautions for Today's Activities: Raining, Excavation Precautions

Name	Signature	Company
Steven Hoelt	<i>[Signature]</i>	ERRG
Mike Babst	<i>[Signature]</i>	ERRG
Stuart Dodge	<i>[Signature]</i>	ERRG
Israel Chavar	<i>[Signature]</i>	ERRG
Christie Clark	<i>[Signature]</i>	ERRG

Conduct a Daily Tailgate Safety Meeting prior to each day's site activities. Follow up on any noted items.
 On Day #1 – Review Health and Safety Plan and have each person sign-off confirming their understanding of the plan.

DAILY OBSERVATION FORM

Project: Groundwater Biobarrier

Owner: Owens-Brockway

Engineer: Sierra West

Date: 2/2/16

Contractor: ERRG

Page: _____ of _____

Day: Tue

Weather: Cloudy/Rainy Temp: _____

Conditions: Rainy/Slippery

On-Site Observer: Yousuf Kabeem

Arrival: 7:00

Departure: 3:15

Visitors:

Work Force: Personnel, Company

Comments

Personnel, Company	Comments
<u>ERRG - 5 man crew</u>	

Equipment:

<u>Backhoe 249 D Cat</u>
<u>350 John Deere</u>

Activities

<u>7:00 Arrived on-site</u>
<u>Began tearing up asphalt near IW-17 area</u>
<u>Backfill material (sand) on-site</u>
<u>Back gate is open. Waiting on new soil Bin</u>
<u>soil bin arrived, ready to excavate trench</u>
<u>PE/PVC pipe arrived on site</u>
<u>Concrete/Asphalt area: 240' length x 20" width x 28" depth avg 10" of asphalt/concrete</u>
<u>Vaults area: 5' x 6' x 37" deep approx 10" of asphalt/concrete</u>
<u>Approx 12" of PVC from IW-17 broke during trenching</u>
<u>Conduit (most likely water) 12' 5" from IW-16 (to the right) if facing</u>
<u>street) 19" to top of pipe, 29" to to bottom. Will run pipe</u>
<u>underneath.</u>

FIELD OBSERVATIONS



Project:	Date: 2/2/16	M	T	W	T	F	S	S
Client:	Location:							
Observer:	Weather:							

Description:

collected 4-point comp sample for 12th bin (55' feet of trenching from IW-12)
Trenched up to IW-15

Gravel bedding loads: 4 one load approx 23 tons
As load: 2
Gravel load: 3



SIERRA WEST CONSULTANTS

DAILY TAILGATE SAFETY MEETING

Site Name: Owens-Brockway

Date: 2/3/16

Project: Groundwater Bis barrier

Presented By: Yousuf K

Topics / Information Reviewed:

- | | | |
|--|---|--|
| <input type="checkbox"/> Daily Work Scope | <input type="checkbox"/> First Aid Kit Location | <input type="checkbox"/> Personal Protective Equipment |
| <input type="checkbox"/> Emergency Response | <input type="checkbox"/> Fire Extinguisher Location | <input type="checkbox"/> Slips Trips & Falls |
| <input type="checkbox"/> Site Evacuation Meeting Point | <input type="checkbox"/> Eye Wash Station Location | <input type="checkbox"/> Open Pits and Excavations |
| <input type="checkbox"/> HASP Location | <input type="checkbox"/> Decontamination Procedures | <input type="checkbox"/> Heat and Cold Stress |
| <input type="checkbox"/> Directions to Hospital | <input type="checkbox"/> Noise Hazards | <input type="checkbox"/> Pinch Points |
| <input type="checkbox"/> MSDS's | <input type="checkbox"/> Orderly Site Housekeeping | <input type="checkbox"/> Overhead and Subsurface Utilities |
| <input type="checkbox"/> Permits and Compliance | <input type="checkbox"/> Traffic Control | <input type="checkbox"/> Site Security |
| <input type="checkbox"/> Stop Work Authority | <input type="checkbox"/> Vehicle Safety | <input type="checkbox"/> Biological Hazards |
| <input type="checkbox"/> Buddy System | <input type="checkbox"/> Backing Up and Spotters | <input type="checkbox"/> Allergies and Medical Conditions |
| <input type="checkbox"/> Site Hazards | <input type="checkbox"/> Securing Loads / Cargo | <input type="checkbox"/> Dust and Vapor Control |

Chemicals of Concern at the Site:

Specific Precautions for Today's Activities:

Name	Signature	Company
S. Dodgeon		ERRG
F. LOZA		ERRG
O Chavez		ERRG
Israel Chavez		ERRG
Mike Babst		ERRG

Conduct a Daily Tailgate Safety Meeting prior to each day's site activities. Follow up on any noted items.

DAILY OBSERVATION FORM

Project: B Groundwater Rebarrier

Owner: Owens-Brachway

Engineer: Sierra West

Date: 2/3/16

Contractor: ERRG

Page: 1 of 1

Day: wed Weather: _____ Temp: _____ Conditions: Clear

On-Site Observer: Yousuf Kaleem Arrival: 6:45 AM Departure: 3:30

Visitors:

Work Force: Personnel, Company	Comments
<u>ERRG - 6 man crew</u>	

Equipment:

<u>Rotchammer to drill through vault boxes</u>

Activities

<u>6:45 - 7 AM: Safety Meeting</u>
<u>Soil starting to smell past IW-15</u>
<u>Started laying down sand and gravel</u>
<u>Vaults and traffic rated lids arrived on site. Pedestrian lids will arrive next week</u>
<u>Collected samples from two bins (4-point samples) and carriers picked up @ 12:45</u>
<u>Fencing arrived on site. Installed fence in landscaped area</u>
<u>Began drilling and knocking out holes in sidewalls and bottom of well vault boxes</u>
<u>Trenched under trench drain next to IW-15. Did not break drain</u>
<u>6" x 9.5" knockouts on each side of well vault for conduits</u>

FIELD SAFETY BRIEFING ATTENDANCE SHEET

Site Name: Owens-Brockway

Date: 2/4/16

Project: Biobarrier Groundwater Treatment

Presented By: Yousuf K.

Topics / Information Reviewed:

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Daily Work Scope | <input type="checkbox"/> First Aid Kit Location | <input checked="" type="checkbox"/> Personal Protective Equipment |
| <input type="checkbox"/> Emergency Response | <input type="checkbox"/> Fire Extinguisher Location | <input checked="" type="checkbox"/> Slips Trips & Falls |
| <input type="checkbox"/> HASP Location | <input type="checkbox"/> Eye Wash Station Location | <input type="checkbox"/> Heat and Cold Stress |
| <input type="checkbox"/> Directions to Hospital | <input type="checkbox"/> Noise Hazards | <input checked="" type="checkbox"/> Site Security |
| <input checked="" type="checkbox"/> Stop Work Authority | <input checked="" type="checkbox"/> Orderly Site Housekeeping | <input type="checkbox"/> Biological Hazards |
| <input checked="" type="checkbox"/> Buddy System | <input checked="" type="checkbox"/> Traffic Control | <input type="checkbox"/> Allergies and Medical Conditions |
| <input checked="" type="checkbox"/> Site Hazards | <input checked="" type="checkbox"/> Vehicle Safety | <input checked="" type="checkbox"/> Dust and Vapor Control |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> Backing Up and Spotters | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Chemicals of Concern at the Site:

Specific Precautions for Today's Activities: Eye protection when drilling through vaults

Name	Signature	Company
<u>Susan D'Agua</u>	<u>[Signature]</u>	<u>ERRG</u>
<u>CFS/22 [Signature]</u>	<u>[Signature]</u>	<u>ERRG</u>
<u>Israel Chavez</u>	<u>[Signature]</u>	<u>ERRG</u>
<u>Fernando Loza</u>	<u>[Signature]</u>	<u>ERRG</u>
<u>Mike Bubst</u>	<u>[Signature]</u>	<u>ERRG</u>
<u>Steven Hoefl</u>	<u>[Signature]</u>	<u>ERRG</u>

Conduct a Daily Tailgate Safety Meeting prior to each day's site activities. Follow up on any noted items.
On Day #1 - Review Health and Safety Plan and have each person sign-off confirming their understanding of the plan.

DAILY OBSERVATION FORM

Project: Biobarrier Groundwater Treatment

Owner: Owens-Brockway

Engineer: Sierra West

Date: 2/4/16

Contractor: ERRG

Page: _____ of _____

Day: Thur

Weather: _____

Temp: 45°-60°F

Conditions: _____

On-Site Observer: Yousuf Kaleem

Arrival: 6:30

Departure: _____

Visitors:


Work Force: Personnel, Company

Comments

Personnel, Company	Comments
<u>ERRG - 6 man crew</u>	

Equipment:

Activities

Began drilling	
6:45-7:00 AM safety meeting	
began chipping excess grout from injection wells prior to placing vaults	
Crew split, some drilling through vaults, others placing vaults.	
Takes just a few minutes to place vaults, takes longer to make sure everything is level.	
	Drilled in this pattern @ the bottom of each well vault to allow drainage if ever needed.
Shave from waste management is OK with a profile from just 1 km	
Began assembling fittings inside of vault (starting from tee fitting).	-will add union
Did not assemble fittings inside vault, just separately on the side	

Project:	Date: 2/24/16	M	T	W	T	F	S	S
Client:	Location:							
Observer:	Weather:							

Description:

Did not find conduits between IW-11 & IW-12. Did find 7" diameter metal object buried 25.5" below grade. did not dig out due to potential connection to water or electric line. 24' from IW-12 & 6' from IW-11

Today's Progress:

Trenched to IW-10

Placed vents to IW-12

sold out PE tubing to allow it to uncool

ripped up concrete to IW-9



FIELD SAFETY BRIEFING ATTENDANCE SHEET

Site Name: Owens-Brockway

Date: 2/5/16

Project: Groundwater Biobarriers

Presented By: Yousuf Kaleem

Topics / Information Reviewed:

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> Daily Work Scope | <input type="checkbox"/> First Aid Kit Location | <input type="checkbox"/> Personal Protective Equipment |
| <input type="checkbox"/> Emergency Response | <input type="checkbox"/> Fire Extinguisher Location | <input type="checkbox"/> Slips Trips & Falls |
| <input type="checkbox"/> HASP Location | <input type="checkbox"/> Eye Wash Station Location | <input type="checkbox"/> Heat and Cold Stress |
| <input type="checkbox"/> Directions to Hospital | <input type="checkbox"/> Noise Hazards | <input type="checkbox"/> Site Security |
| <input type="checkbox"/> Stop Work Authority | <input type="checkbox"/> Orderly Site Housekeeping | <input type="checkbox"/> Biological Hazards |
| <input type="checkbox"/> Buddy System | <input type="checkbox"/> Traffic Control | <input type="checkbox"/> Allergies and Medical Conditions |
| <input type="checkbox"/> Site Hazards | <input type="checkbox"/> Vehicle Safety | <input type="checkbox"/> Dust and Vapor Control |
| <input type="checkbox"/> | <input type="checkbox"/> Backing Up and Spotters | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Chemicals of Concern at the Site:

Specific Precautions for Today's Activities:

Name	Signature	Company
Mike Babst		ERRG
Steven Hoett		ERRG
B. Luhrs		ERRG
ALBERTO MEL ENRIQUE		ERRG
OSCAR MORALES		ERRG
Israel Chavez		ERRG

Conduct a Daily Tailgate Safety Meeting prior to each day's site activities. Follow up on any noted items.
On Day #1 – Review Health and Safety Plan and have each person sign-off confirming their understanding of the plan.

DAILY OBSERVATION FORM

Project: Groundwater Barrier

Owner: Owens Brakway

Engineer: Sierra West

Date: 2/5/18

Contractor: ERRG

Page: _____ of _____

Day: Fri Weather: _____ Temp: _____ Conditions: _____

On-Site Observer: Yousuf Kabeem

Arrival: 7:00 AM

Departure: 3:30 PM

Visitors:

Work Force: Personnel, Company

Comments

Personnel, Company	Comments
<u>ERRG - 6 man crew</u>	

Equipment:

Activities

<u>Share's email (WM rep) spickett.enviroserv@gmail.com</u>	
<u>Grouted up old clay pipe location is 4' from IW-15, between IW-15 & IW-16</u>	
<u>clay pipe was roughly 25" dia</u>	
<u>cut down weird cast iron stump near IW-11 & IW-12 that was found yesterday while trenching. cut down to 28" dia so pipe will run @ proper depth.</u>	
<u>Progress: Vaults in to IW-8, PVC pipe to IW-12</u>	

FIELD SAFETY BRIEFING ATTENDANCE SHEET

Site Name: Owens-Brackway

Date: 2/8/16

Project: Groundwater Bioremediation

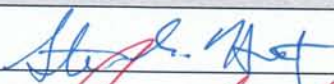


Presented By: Yousuf Kaleem

Topics / Information Reviewed:

- | | | |
|--|---|--|
| <input checked="" type="checkbox"/> Daily Work Scope
<input type="checkbox"/> Emergency Response
<input type="checkbox"/> HASP Location
<input type="checkbox"/> Directions to Hospital
<input type="checkbox"/> Stop Work Authority
<input type="checkbox"/> Buddy System
<input type="checkbox"/> Site Hazards
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<input type="checkbox"/> | <input type="checkbox"/> First Aid Kit Location
<input type="checkbox"/> Fire Extinguisher Location
<input type="checkbox"/> Eye Wash Station Location
<input type="checkbox"/> Noise Hazards
<input type="checkbox"/> Orderly Site Housekeeping
<input type="checkbox"/> Traffic Control
<input type="checkbox"/> Vehicle Safety
<input type="checkbox"/> Backing Up and Spotters
<input type="checkbox"/>
<input type="checkbox"/> | <input checked="" type="checkbox"/> Personal Protective Equipment
<input checked="" type="checkbox"/> Slips Trips & Falls
<input type="checkbox"/> Heat and Cold Stress
<input type="checkbox"/> Site Security
<input type="checkbox"/> Biological Hazards
<input type="checkbox"/> Allergies and Medical Conditions
<input type="checkbox"/> Dust and Vapor Control
<input type="checkbox"/>
<input type="checkbox"/> |
|--|---|--|

Chemicals of Concern at the Site:

Specific Precautions for Today's Activities:

Name	Signature	Company
Steven Hoelt		ERRG
Israel Chavaz		ERRG
Osor Chavaz		ERRG

Conduct a Daily Tailgate Safety Meeting prior to each day's site activities. Follow up on any noted items.
 On Day #1 – Review Health and Safety Plan and have each person sign-off confirming their understanding of the plan.

DAILY OBSERVATION FORM

Project: Groundwater Biobarrier

Owner: Owens Broadway

Engineer: Sierra West

Date: 2/8/16

Contractor: ERRG

Page: _____ of _____

Day: Mon

Weather: _____

Temp: _____

Conditions: _____

On-Site Observer: Yusuf Kuloon

Arrival: 6:45

Departure: 3:00

Visitors:

Work Force: Personnel, Company

Comments

Work Force: Personnel, Company	Comments
<u>ERRG - 3 man crew</u>	

Equipment:

Activities

<u>stave on site as overnight today</u>
<u>Plan is to just catch up on plumbing</u>
<u>Progress: Worked on inside fixtures. Laid out PE and PVC pipe all the way to fill area. (IW-8)</u>
<u>Fitting had to be redone a few times to assure proper fitting.</u>
<u>Left site early to pickup compaction jumping jack.</u>



FIELD SAFETY BRIEFING ATTENDANCE SHEET

Site Name: Owens-Brookway

Date: 2-9-16

Project: Biobarrier

Presented By: Yousuf K

Topics / Information Reviewed:

- | | | |
|---|---|---|
| <input type="checkbox"/> Daily Work Scope | <input type="checkbox"/> First Aid Kit Location | <input type="checkbox"/> Personal Protective Equipment |
| <input type="checkbox"/> Emergency Response | <input type="checkbox"/> Fire Extinguisher Location | <input type="checkbox"/> Slips Trips & Falls |
| <input type="checkbox"/> HASP Location | <input type="checkbox"/> Eye Wash Station Location | <input type="checkbox"/> Heat and Cold Stress |
| <input type="checkbox"/> Directions to Hospital | <input type="checkbox"/> Noise Hazards | <input type="checkbox"/> Site Security |
| <input type="checkbox"/> Stop Work Authority | <input type="checkbox"/> Orderly Site Housekeeping | <input type="checkbox"/> Biological Hazards |
| <input type="checkbox"/> Buddy System | <input type="checkbox"/> Traffic Control | <input type="checkbox"/> Allergies and Medical Conditions |
| <input type="checkbox"/> Site Hazards | <input type="checkbox"/> Vehicle Safety | <input type="checkbox"/> Dust and Vapor Control |
| <input type="checkbox"/> | <input type="checkbox"/> Backing Up and Spotters | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Chemicals of Concern at the Site:

Specific Precautions for Today's Activities:

Name	Signature	Company
<u>Osse Alvarez</u>	<u>[Signature]</u>	<u>ERRC</u>
<u>Steve Ridge</u>	<u>[Signature]</u>	<u>ERRC</u>
<u>Steven Hoelt</u>	<u>[Signature]</u>	<u>ERRC</u>
<u>Fernando Loza</u>	<u>[Signature]</u>	<u>ERRC</u>
<u>Israel Chavez</u>	<u>[Signature]</u>	<u>ERRC</u>

Conduct a Daily Tailgate Safety Meeting prior to each day's site activities. Follow up on any noted items.
On Day #1 – Review Health and Safety Plan and have each person sign-off confirming their understanding of the plan.

DAILY OBSERVATION FORM

Project: Groundwater Biobarrier

Owner: Owens-Brockway

Engineer: Sierra West

Date: 2-9-16

Contractor: ERRG

Page: _____ of _____

Day: Tue

Weather: _____

Temp: _____

Conditions: _____

On-Site Observer: Younis Kaboom

Arrival: 6:50

Departure: _____

Visitors:

Work Force:

Personnel, Company

Comments

Personnel, Company	Comments
<u>ERRG - 5 man crew</u>	

Equipment:

<u>Backhoe and scraper attachment for grading container area</u>

Activities

<u>Storm Drain reply most likely on thur or friday this week.</u>
<u>Contact: David Lorestar (510) 482-7832 dlorestar@oakland.net.com</u>
<u>Thurs 1:30-3 PM David is in a meeting. Give him a heads up before backfilling hole</u>
<u>Get up stormwater PMP's today. Silt fence along Alameda ave and straw wattles along Fruitvale ave. Fabric and gravel bags @ two storm drains. Grading slopes inward away from streets.</u>
<u>Began grading for concrete pad. Will be 15' away from trench and 11'x9'</u>
<u>Left vm for city of oakland regarding building permit inspection</u>
<u>↳ Conduit needs to be inspected before placing any fill</u>

FIELD OBSERVATIONS



SIERRA WEST
CONSULTANTS, INC.

Project:	Date: 2/9/16	M	T	W	T	F	S	S
Client:	Location:							
Observer:	Weather:							

Description:

begin trenching in back-fill area. Bin came @ 2pm. Was late due to broken winch. Will have another bin tomorrow by 6:30 AM

Concrete footing @ fence line 3' deep. Will have to core through.

FIELD SAFETY BRIEFING ATTENDANCE SHEET

Site Name: Owens Brookway

Date: 2/10/16

Project: Groundwater Biobarrier

Presented By: Yousuf Kaleem

Topics / Information Reviewed:

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> Daily Work Scope | <input type="checkbox"/> First Aid Kit Location | <input type="checkbox"/> Personal Protective Equipment |
| <input type="checkbox"/> Emergency Response | <input type="checkbox"/> Fire Extinguisher Location | <input type="checkbox"/> Slips Trips & Falls |
| <input type="checkbox"/> HASP Location | <input type="checkbox"/> Eye Wash Station Location | <input type="checkbox"/> Heat and Cold Stress |
| <input type="checkbox"/> Directions to Hospital | <input type="checkbox"/> Noise Hazards | <input type="checkbox"/> Site Security |
| <input type="checkbox"/> Stop Work Authority | <input type="checkbox"/> Orderly Site Housekeeping | <input type="checkbox"/> Biological Hazards |
| <input type="checkbox"/> Buddy System | <input type="checkbox"/> Traffic Control | <input type="checkbox"/> Allergies and Medical Conditions |
| <input type="checkbox"/> Site Hazards | <input type="checkbox"/> Vehicle Safety | <input type="checkbox"/> Dust and Vapor Control |
| <input type="checkbox"/> | <input type="checkbox"/> Backing Up and Spotters | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Chemicals of Concern at the Site:

Specific Precautions for Today's Activities:

Name	Signature	Company
Orlando Chavez	[Signature]	ERRG
Orlando Chavez	[Signature]	ERRG
Steven Hoelt	[Signature]	ERRG
Fernando Lopez	[Signature]	ERRG
Stan Dodge	[Signature]	ERRG

Conduct a Daily Tailgate Safety Meeting prior to each day's site activities. Follow up on any noted items.
On Day #1 – Review Health and Safety Plan and have each person sign-off confirming their understanding of the plan.

DAILY OBSERVATION FORM

Project: Groundwater Biobarrier

Owner: Owens-Brockway

Engineer: Sierra West

Date: 2/10/16

Contractor: ERRG

Page: _____ of _____

Day: _____ Weather: _____ Temp: _____ Conditions: _____

On-Site Observer: _____ Arrival: _____ Departure: _____

Visitors:

Work Force: Personnel, Company	Comments
<u>ERRG - 5 man crew</u>	

Equipment:

<u>Laser level for trenching in fill area</u>

Activities

<u>cshields@rockridgegeo.com Craig</u>
<u>pnwildvine@rockridgegeo.com Pete</u>
<u>Completed fittings to Iw-8 and pressure tested. @ >50 psi, compression fittings are slipping and PE pipe slips out.</u>
<u>Contacted Mueller for recommendations. Steve is working on quote for welded PE tees.</u>
<u>Trenched fill area placed vaults and pullbox. Trench to building is 36" deep. Grading will be done later. Vaults @ 37" deep and trench is 29" deep. Grade is taken from top of curb @ fill area. So everything will be slightly higher. Curb height avg: 5.5"</u>
<u>Used 9 bins so far.</u>

FIELD SAFETY BRIEFING ATTENDANCE SHEET

Site Name: _____

Date: 2/11/16

Project: _____

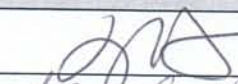
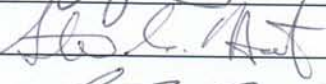


Presented By: _____

Topics / Information Reviewed:

- | | | |
|---|---|--|
| <input type="checkbox"/> Daily Work Scope
<input type="checkbox"/> Emergency Response
<input type="checkbox"/> HASP Location
<input type="checkbox"/> Directions to Hospital
<input type="checkbox"/> Stop Work Authority
<input type="checkbox"/> Buddy System
<input type="checkbox"/> Site Hazards
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<input type="checkbox"/> | <input type="checkbox"/> First Aid Kit Location
<input type="checkbox"/> Fire Extinguisher Location
<input type="checkbox"/> Eye Wash Station Location
<input type="checkbox"/> Noise Hazards
<input type="checkbox"/> Orderly Site Housekeeping
<input type="checkbox"/> Traffic Control
<input type="checkbox"/> Vehicle Safety
<input type="checkbox"/> Backing Up and Spotters
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<input type="checkbox"/> | <input type="checkbox"/> Personal Protective Equipment
<input type="checkbox"/> Slips Trips & Falls
<input type="checkbox"/> Heat and Cold Stress
<input type="checkbox"/> Site Security
<input type="checkbox"/> Biological Hazards
<input type="checkbox"/> Allergies and Medical Conditions
<input type="checkbox"/> Dust and Vapor Control
<input type="checkbox"/>
<input type="checkbox"/> |
|---|---|--|

Chemicals of Concern at the Site: _____

Specific Precautions for Today's Activities: _____

Name	Signature	Company
Steven D. Jagan		TRRG
Steven Hoelt		ERRG
OSAC PHASE		ERRG
F. LOZS		ERRG

Conduct a Daily Tailgate Safety Meeting prior to each day's site activities. Follow up on any noted items.
 On Day #1 – Review Health and Safety Plan and have each person sign-off confirming their understanding of the plan.

DAILY OBSERVATION FORM

Project: Groundwater Biobarrier

Owner: 251 Owens-Brackway

Engineer: Sierra West

Date: 2/11/16

Contractor: ERRG

Page: _____ of _____

Day: Thur

Weather: _____

Temp: _____

Conditions: _____

On-Site Observer: _____

Arrival: _____

Departure: _____

Visitors:

Dave, Building Inspector

Work Force:

Personnel, Company

Comments

Work Force:	Personnel, Company	Comments
<u>ERRG - 4 man crew</u>		

Equipment:

Jumpier compactor

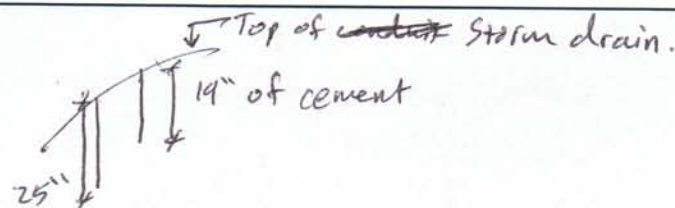
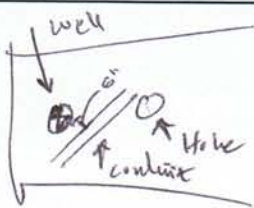
Activities

David (Building Inspector) will be on-site between 11-1 PM (Jason)
David Longstead (Storm Drain) said to take pics @ 3' and

11:45 Am Building inspector checked out layout of conduits to cargo
containers and gave approval to continue.

Repaired storm drain. Found traffic control conduit 4' deep and
6" away from well.

9" diam hole in cement. Hole is approx 5" below grade.
Repaired by drilling holes inside annulus of hole, and placing rebar. Tied
rebar with wire. Placed wooden plug @ bottom of hole and poured
cement. Covered patch with steel plate. Bolted plate to surface of
storm drain. Backfilled and compacted.



Project:	Date: 2/11/16	M	T	W	T	F	S	S
Client:	Location:							
Observer:	Weather:							

Description:

Twisted part of PVC for traffic control conduit.
Cut PVC and replaced w/ 3" pipe PVC pipe. placed wire through pipe by cutting a slit through PVC. Then used pipe clamps to seal.

Graded outside area to prepare for trenching.
Began trenching outside in landscaped area.
4'4" from curb, there is a 1" metal pipe (probably abandoned) 5" dgs.

DAILY OBSERVATION FORM

Project: Groundwater Biobarrier

Owner: Owens-Brockway

Engineer: Sierra West

Date: 2-12-16

Contractor: ERRC

Page: 1 of 2

Day: Fri Weather: _____ Temp: _____ Conditions: _____

On-Site Observer: _____ Arrival: _____ Departure: _____

Visitors:

<u>Jeff Sierra West</u>
<u>Adam Rockridge Geotechnical</u>

Work Force: Personnel, Company	Comments

Equipment:

Activities

<u>Stewm Dodson</u>	}
<u>Israel Chavez</u>	
<u>Steven Hoelt</u>	
<u>Fernando Loza</u>	
<u>ERRC crew</u>	
<u>We want all lids slightly above grade</u>	
<u>Found an irrigation (?) PVC pipe 2" bgs. 1.5" diam, angled slightly</u>	
<u>Plan Drawing</u>	
<u>2" bgs, 2 metal conduits. Possibly from traffic control pedestal?</u>	
<u>10.5' from IW-3 along trench.</u>	



Geotech took a look @ base of foundation. Did not test, but said old fill material looked soft and wet. Scraped before leaving site to let it aerate.

DAILY OBSERVATION FORM

Project: Groundwater Biobarrier Owner: Owens - Brockway
Engineer: Siem West Date: 2/16/16
Contractor: ERRG Page: 1 of 2
Day: Tue Weather: _____ Temp: _____ Conditions: _____

On-Site Observer: _____ Arrival: _____ Departure: _____

Visitors:

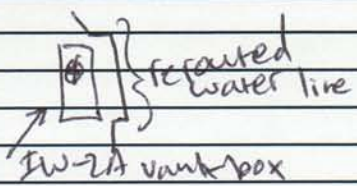
Katie, Rockridge Geo

Work Force:	Personnel, Company	Comments
<u>ERRG - 5 man crew</u>		

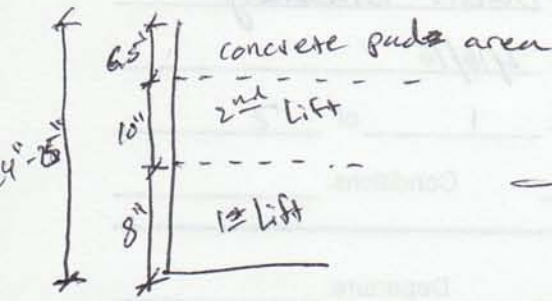
Equipment:

Jumping Jack for compaction
Heat fusion device for fusing pipes

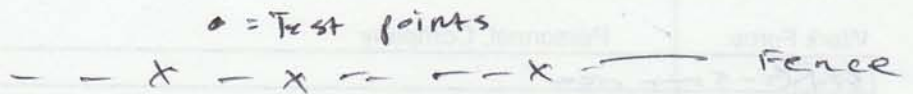
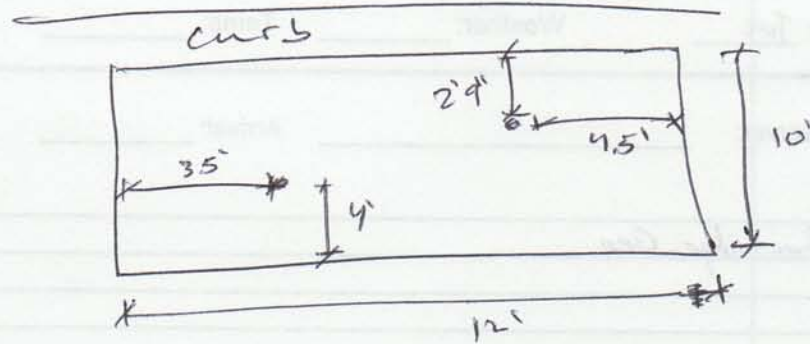
Activities

Note: Monday was day-off
ERRG went to Sacramento to pickup IW-4 pullbox
Placed remaining wells and pullbox
cut and resealed 5' 2" section of water line (PVC pipe) next to IW-2A

IW-2A vank box
Katie tested base fill material: 88% compaction, 4% above optimal moisture
Avg depth of foundation: 2'
Trench depth to foundation: 3'

Flip page please
↳



Katie tested ABS fill.
98% compaction



New IPS PE fittings and pipe arrived.

Began welding tees and assembling fittings inside IW-1A/IB.

For info please

DAILY OBSERVATION FORM

Project: Groundwater Biobarrier Owner: Owens-Brockway
 Engineer: Sierra West Date: 2/17/16
 Contractor: ERRG Page: 1 of 2
 Day: Wed Weather: _____ Temp: _____ Conditions: Very Windy

On-Site Observer: Yousuf Kabeem Arrival: 7:00 Departure: 3:30

Visitors:

Calcon

Work Force: Personnel, Company	Comments
ERRG - 5 man crew	

Equipment:

Activities

Calcon came to check out instrumentation to see how they need to wire everything.						
<table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">TCLC ^{mg/kg}</td> <td style="text-align: center;">STLL ^{mg/kg}</td> <td style="text-align: center;">TCLP ^{mg/L}</td> </tr> <tr> <td style="text-align: center;">Lead: 1000</td> <td style="text-align: center;">5</td> <td style="text-align: center;">5</td> </tr> </table>	TCLC ^{mg/kg}	STLL ^{mg/kg}	TCLP ^{mg/L}	Lead: 1000	5	5
TCLC ^{mg/kg}	STLL ^{mg/kg}	TCLP ^{mg/L}				
Lead: 1000	5	5				
Lab Analytical Report Info: WO: 1602126 (877) 252-9262						
IDs: PT1437-87						
PT3617-55						
Sent email to lab requesting 1 STLL test with 1-day TAT.						
Placed plastic sheeting over cargo foundation for rain protection. Placed straw wattles around AB and gravel stockpiles.						
Broke asphalt and concrete into smaller pieces						

FIELD OBSERVATIONS



Project:	Date: 2/17/16	M	T	W	T	F	S	S
Client:	Location:							
Observer:	Weather:							

Description:

Continued welding PE pipe and building fittings inside well vault.
Went from IW-1A to IW-5.
Backfilled trench and vault areas up to IW-4.
Some excavated soil was discarded in bin.
Will use 45° bends for elevation drop @ fence property line.



FIELD SAFETY BRIEFING ATTENDANCE SHEET

Site Name: Owens-Brockway

Date: 2/18/16

Project: Groundwater Biobarrier

Presented By: _____

Topics / Information Reviewed:

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> Daily Work Scope | <input type="checkbox"/> First Aid Kit Location | <input type="checkbox"/> Personal Protective Equipment |
| <input type="checkbox"/> Emergency Response | <input type="checkbox"/> Fire Extinguisher Location | <input type="checkbox"/> Slips Trips & Falls |
| <input type="checkbox"/> HASP Location | <input type="checkbox"/> Eye Wash Station Location | <input type="checkbox"/> Heat and Cold Stress |
| <input type="checkbox"/> Directions to Hospital | <input type="checkbox"/> Noise Hazards | <input type="checkbox"/> Site Security |
| <input type="checkbox"/> Stop Work Authority | <input type="checkbox"/> Orderly Site Housekeeping | <input type="checkbox"/> Biological Hazards |
| <input type="checkbox"/> Buddy System | <input type="checkbox"/> Traffic Control | <input type="checkbox"/> Allergies and Medical Conditions |
| <input type="checkbox"/> Site Hazards | <input type="checkbox"/> Vehicle Safety | <input type="checkbox"/> Dust and Vapor Control |
| <input type="checkbox"/> | <input type="checkbox"/> Backing Up and Spotters | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Chemicals of Concern at the Site: Total Petroleum Hydrocarbons, Free Product in some locations.
Dust and vehicle emissions when working inside buildings.

Specific Precautions for Today's Activities:

Name	Signature	Company
S. Dulgan		ERRC
F. Lora		ERRC
Israel Chavez		ERRC
OSCAR CHAVEZ		ERRC

Conduct a Daily Tailgate Safety Meeting prior to each day's site activities. Follow up on any noted items.
On Day #1 – Review Health and Safety Plan and have each person sign-off confirming their understanding of the plan.

CONSTRUCTION OBSERVATION REPORT

Project: Groundwater Biobarrier

Owner: Owens-Brockway

Engineer: Sierra West

Date: 2/18/16

Contractor: ERRG

Page: _____ of _____

Day: Thur

Weather: _____

Temp: _____

Conditions: _____

On-Site Observer: Yousuf Kabeem

Arrival: 6:45

Departure: _____

Visitors:

<u>Bill Boscarci</u>

Work Force: Personnel, Company

Personnel, Company	Comments
<u>ERRG - 4 man crew</u>	

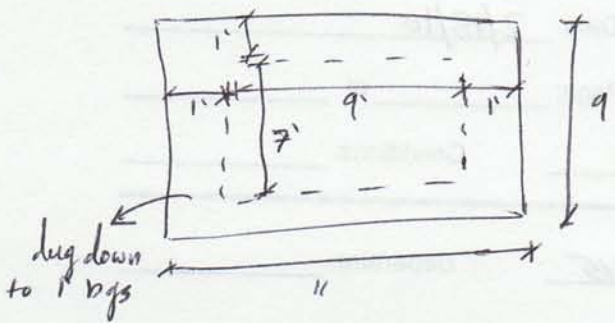
Equipment:

Activities

<u>Rained overnight. Foundation area was well protected with plastic sheeting.</u>
<u>Setup building inspection for Tuesday @ 9 AM</u>
<u>3" thick doobies.</u>
<u>Completed welding PE pipe and fittings up to IW-10</u>
<u>Completed building form and setting rebar for building foundation. Will create as built drawing on Friday or Monday.</u>
<u>Cut PE conduit to height. Cut so that PE pipe will stick out 1' above concrete pad</u>



CONSTRUCTION OBSERVATION REPORT



Found existing foundation was not heavily reinforced. Existing
 formwork was removed and replaced with new formwork. The
 formwork was braced and supported with 2x4s. The
 concrete was poured in two lifts. The first lift was 4 feet
 thick and the second lift was 5 feet thick. The total
 thickness of the foundation is 9 feet. The foundation was
 finished with a smooth surface. The foundation was
 inspected and found to be satisfactory.

FIELD SAFETY BRIEFING ATTENDANCE SHEET

Site Name: Owens-Brockway

Date: 2/19/16

Project: Groundwater Biobarrier

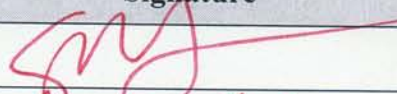
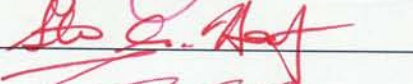
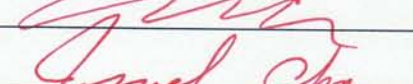
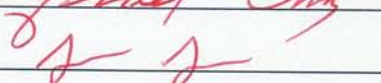
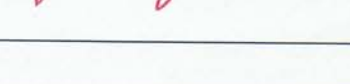
Presented By: _____

Topics / Information Reviewed:

- | | | |
|---|---|---|
| <input type="checkbox"/> Daily Work Scope | <input type="checkbox"/> First Aid Kit Location | <input type="checkbox"/> Personal Protective Equipment |
| <input type="checkbox"/> Emergency Response | <input type="checkbox"/> Fire Extinguisher Location | <input type="checkbox"/> Slips Trips & Falls |
| <input type="checkbox"/> HASP Location | <input type="checkbox"/> Eye Wash Station Location | <input type="checkbox"/> Heat and Cold Stress |
| <input type="checkbox"/> Directions to Hospital | <input type="checkbox"/> Noise Hazards | <input type="checkbox"/> Site Security |
| <input type="checkbox"/> Stop Work Authority | <input type="checkbox"/> Orderly Site Housekeeping | <input type="checkbox"/> Biological Hazards |
| <input type="checkbox"/> Buddy System | <input type="checkbox"/> Traffic Control | <input type="checkbox"/> Allergies and Medical Conditions |
| <input type="checkbox"/> Site Hazards | <input type="checkbox"/> Vehicle Safety | <input type="checkbox"/> Dust and Vapor Control |
| <input type="checkbox"/> | <input type="checkbox"/> Backing Up and Spotters | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Chemicals of Concern at the Site: Total Petroleum Hydrocarbons, Free Product in some locations.
Dust and vehicle emissions when working inside buildings.

Specific Precautions for Today's Activities:

Name	Signature	Company
S. Pudge		BRACH
Steven Hoelt		ERRG
O. P. HAVAZ		FERRG
I. Chavez		ERRG
T. LOZA		ERRG

Conduct a Daily Tailgate Safety Meeting prior to each day's site activities. Follow up on any noted items.
On Day #1 – Review Health and Safety Plan and have each person sign-off confirming their understanding of the plan.

CONSTRUCTION OBSERVATION REPORT

Project: Groundwater Bio barrier

Owner: Owens-Brockway

Engineer: Sierra West

Date: 2/19/16

Contractor: ERRG

Page: _____ of _____

Day: Fri Weather: _____ Temp: _____ Conditions: _____

On-Site Observer: Yousuf Kaleem Arrival: 7:00 Departure: 3:30

Visitors:

Work Force:	Personnel, Company	Comments
	<u>ERRG - 5 mmn crew</u>	

Equipment:

Activities

<u>Central Concrete - Oakland</u>
<u>HQ in SJ. 408-293-6272, 866-404-1000 ext 6</u>
<u>Rescheduled inspection for Monday for building foundation form</u>
<u>Chris will schedule w/ Test America for concrete cylinders and slump test on Tue</u>
<u>All welds and vault fittings are completed. Unistrut still needs to be installed</u>
<u>Begin cutting down fill material around IW 6A - IW-7.</u>
<u>Entire trench area has been backfilled w/sand except for area</u>
<u>around IW-5. Soil is too wet to backfill so ERRG will wait for it to dry</u>
<u>out.</u>
<u>Gravel has been placed around vault boxes up to IW-10.</u>
<u>ERRG will order more gravel and AB material.</u>





FIELD SAFETY BRIEFING ATTENDANCE SHEET

Site Name: Owens-Brockway

Date: 2/22/16

Project: Groundwater Biobarrier

Presented By: Yousuf Kabeem

Topics / Information Reviewed:

- | | | |
|---|---|---|
| <input type="checkbox"/> Daily Work Scope | <input type="checkbox"/> First Aid Kit Location | <input type="checkbox"/> Personal Protective Equipment |
| <input type="checkbox"/> Emergency Response | <input type="checkbox"/> Fire Extinguisher Location | <input type="checkbox"/> Slips Trips & Falls |
| <input type="checkbox"/> HASP Location | <input type="checkbox"/> Eye Wash Station Location | <input type="checkbox"/> Heat and Cold Stress |
| <input type="checkbox"/> Directions to Hospital | <input type="checkbox"/> Noise Hazards | <input type="checkbox"/> Site Security |
| <input type="checkbox"/> Stop Work Authority | <input type="checkbox"/> Orderly Site Housekeeping | <input type="checkbox"/> Biological Hazards |
| <input type="checkbox"/> Buddy System | <input type="checkbox"/> Traffic Control | <input type="checkbox"/> Allergies and Medical Conditions |
| <input type="checkbox"/> Site Hazards | <input type="checkbox"/> Vehicle Safety | <input type="checkbox"/> Dust and Vapor Control |
| <input type="checkbox"/> | <input type="checkbox"/> Backing Up and Spotters | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Chemicals of Concern at the Site: Total Petroleum Hydrocarbons, Free Product in some locations.
Dust and vehicle emissions when working inside buildings.

Specific Precautions for Today's Activities:

Name	Signature	Company
T. LOZA		ERRC
JOSE MELGONZA		ERRC
O. CHAVEZ		ERRC
Israel Chavez		ERRC
Stam D-Igen		ERRC

Conduct a Daily Tailgate Safety Meeting prior to each day's site activities. Follow up on any noted items.
On Day #1 - Review Health and Safety Plan and have each person sign-off confirming their understanding of the plan.

CONSTRUCTION OBSERVATION REPORT

Project: Groundwater Biobarriers

Owner: Owens-Brockway

Engineer: Sierra West

Date: 2/22/16

Contractor: ERRG

Page: 1 of 2

Day: Mon

Weather: _____

Temp: _____

Conditions: _____

On-Site Observer: Yousuf Kabeer

Arrival: _____

Departure: _____

Visitors:

Work Force: Personnel, Company

Comments

Personnel, Company	Comments
<u>ERRG - 5 man crew</u>	

Equipment:

<u>Jumping Jack</u>	

Activities

<u>8:45 AM pressure test @ 80 psi</u>	<u>@ 9:00 AM 57 psi</u>
<u>2w-1A - leak @ 2"-1/2" bushing</u>	<u>(Gravel loads: 1 due to leak (2 AB loads: 1 leaks))</u>
<u>-1B - good</u>	<u>-12 good</u>
<u>-2A - "</u>	<u>-13 good</u>
<u>-2B "</u>	<u>-44 ✓</u>
<u>-3 "</u>	<u>-15 ✓</u>
<u>-4 " - pullbox OK ✓</u>	<u>-16 ✓</u>
<u>-5 "</u>	<u>-17 ✓</u>
<u>-6 "</u>	
<u>-7 "</u>	<u>Leak Test: 12:20 PM @ 80 PSI</u>
<u>-8 "</u>	<u>12:35 PM @ 70 PSI</u>
<u>-9 leak @ bushing</u>	<u>1A, 2B, 9, 10 leaking. All leaks @ bushing (2"-1/2")</u>
<u>-10 good</u>	<u>↳ brass</u>
<u>-11 good</u>	



SIERRA WEST
CONSULTANTS, INC.

FIELD OBSERVATIONS



1/ of 2

Project:	Date: 2/22/16	M	T	W	T	F	S	S
Client:	Location:							
Observer:	Weather:							

Description:

Loaded up concrete separately for hauling. Did not mix with asphalt. Loaded up asphalt and hauled offsite.

Compacted sand slightly to 8" bgs then compacted AB. AB went down @ least 1" during compaction. Added more AB and re-compactd.

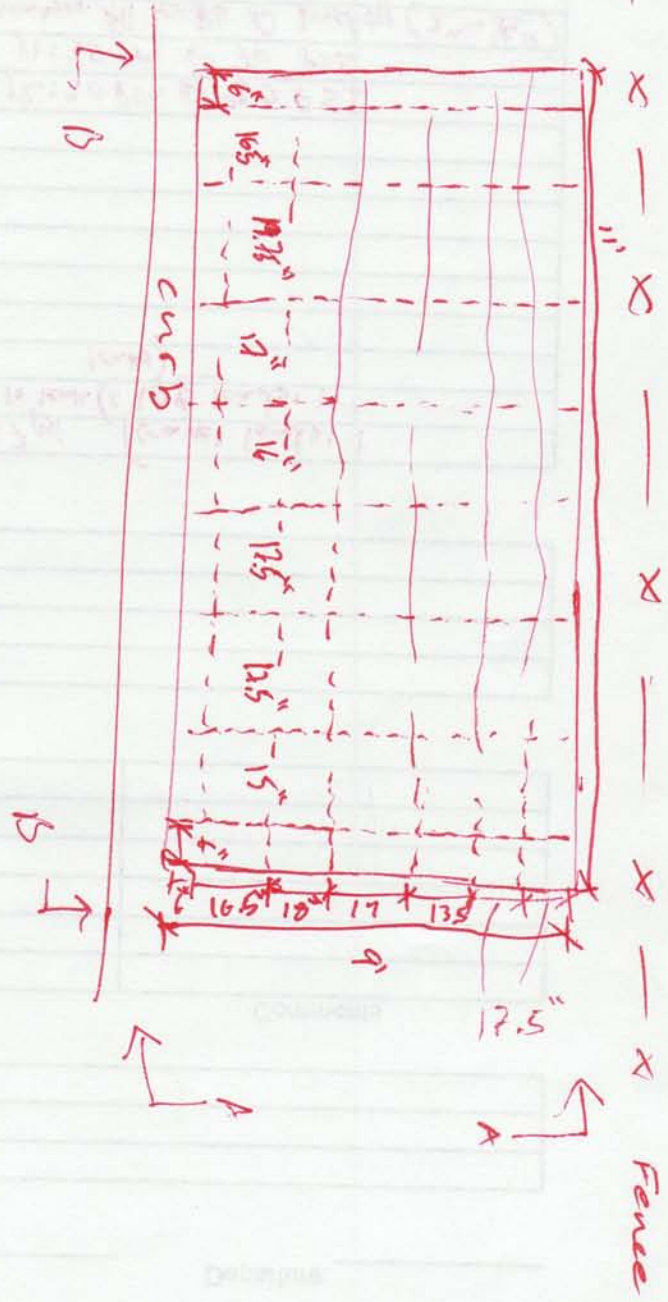
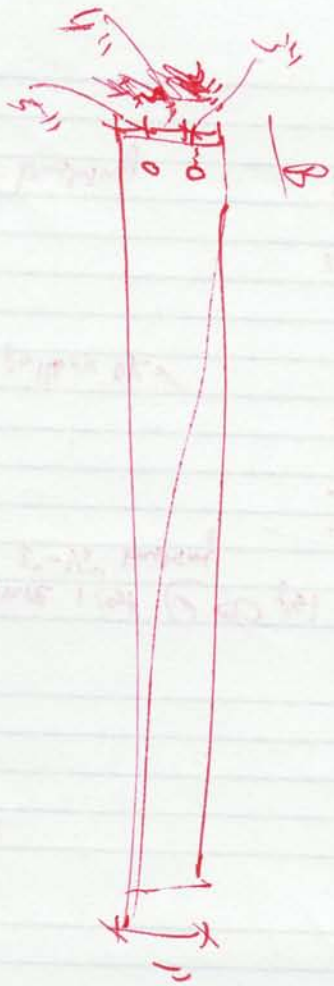
Began to grout inside well walls included iron hook areas @ bottom.

Building inspector (Dave) approved forms and rebar but wanted us to add 20' ufer. ERRG will install tomorrow morning prior to pour. ~~Dave does not need inspection~~ Dave just wants me to take and keep pics of Ufer install.

Spoke w/ Erica from Testing Engineers and scheduled concrete tests for tomorrow @ 10 AM.

Rest of the lads arrived (pedestrian loading)

Topsoil: 1 load



CONSTRUCTION OBSERVATION REPORT

Project: Groundwater Biobarrier

Owner: Owens-Brockway

Engineer: Sierra West

Date: 2/23/16

Contractor: ERKG

Page: 1 of 2

Day: Tue Weather: _____ Temp: _____ Conditions: _____

On-Site Observer: _____ Arrival: _____ Departure: _____

Visitors:

<u>Glenn, Testing Engineers</u>

Work Force: Personnel, Company	Comments
<u>ERKG-</u>	

Equipment:

Activities

<p><u>Cargo Shed Foundation: Installed 20' 1/2" dia, took pictures concrete slump: 4"</u></p> <p><u>took 5 test cylinders and left on site. Will pickup tomorrow.</u></p> <p><u>Signed paperwork if needed during building inspection</u></p> <p><u>Finished concrete work w/2 contraction joints. Brown Finish</u></p> <p><u>Repaired curb. (2 locations, 1 along trench)</u></p>
<p><u>Pressure Test: 12:05 PM 76 PSI → 71 PSI @ 12:26 PM. No visible leaks or hissing noises. ✓ Replaced previously leaking bushings w/galvanized bushings instead of brass.</u></p>
<p><u>Began setting concrete vaults inside property. Pull box from shed container was 3 inches lower, so ERKG built a concrete riser to bring lid to proper elev. One lid is not spring assisted. Will order a new one.</u></p> <p><u>Lids move a bit when opened, so ERKG will bolt down lids to concrete vault.</u></p>



FIELD OBSERVATIONS



SIERRA WEST
CONSULTANTS, INC.

2 of 2

Project:	Date: 2/23/16	M	T	W	T	F	S	S
Client:	Location:							
Observer:	Weather:							

Description:

Disposal: Needs to go to Kettleman. Do not need TCLP.
11 bins total, approx 4 have soil that is clean for sure.
Chris is OK with sending all to Kettleman.

FIELD SAFETY BRIEFING ATTENDANCE SHEET

Site Name: Owens-Brockway

Date: 2/24/16

Project: Groundwater Biobarrier

Presented By: Yousuf Kabeem

Topics / Information Reviewed:

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> Daily Work Scope
<input type="checkbox"/> Emergency Response
<input checked="" type="checkbox"/> HASP Location
<input type="checkbox"/> Directions to Hospital
<input type="checkbox"/> Stop Work Authority
<input type="checkbox"/> Buddy System
<input checked="" type="checkbox"/> Site Hazards
<input type="checkbox"/>
<input type="checkbox"/> | <input type="checkbox"/> First Aid Kit Location
<input type="checkbox"/> Fire Extinguisher Location
<input type="checkbox"/> Eye Wash Station Location
<input type="checkbox"/> Noise Hazards
<input type="checkbox"/> Orderly Site Housekeeping
<input type="checkbox"/> Traffic Control
<input type="checkbox"/> Vehicle Safety
<input type="checkbox"/> Backing Up and Spotters
<input type="checkbox"/>
<input type="checkbox"/> | <input type="checkbox"/> Personal Protective Equipment
<input checked="" type="checkbox"/> Slips Trips & Falls
<input checked="" type="checkbox"/> Heat and Cold Stress
<input checked="" type="checkbox"/> Site Security
<input type="checkbox"/> Biological Hazards
<input type="checkbox"/> Allergies and Medical Conditions
<input type="checkbox"/> Dust and Vapor Control
<input type="checkbox"/>
<input type="checkbox"/> |
|--|---|---|

Chemicals of Concern at the Site: Total Petroleum Hydrocarbons, Free Product in some locations.
Dust and vehicle emissions when working inside buildings.

Specific Precautions for Today's Activities:

Name	Signature	Company
OSOR CHAVEZ	[Signature]	ERRC
Steven Hoelt	[Signature]	ERRC
S. Puj	[Signature]	ERRC
José MEJGARA	[Signature]	ERRC
Israel Chavez	[Signature]	ERRC

Conduct a Daily Tailgate Safety Meeting prior to each day's site activities. Follow up on any noted items.
On Day #1 – Review Health and Safety Plan and have each person sign-off confirming their understanding of the plan.

CONSTRUCTION OBSERVATION REPORT

Project: Groundwater Biobarrier

Owner: Owens-Brockway

Engineer: Sierra West

Date: 2/24/16

Contractor: ERRG

Page: 1 of 1

Day: Wed

Weather: _____

Temp: _____

Conditions: _____

On-Site Observer: _____

Arrival: _____

Departure: _____

Visitors:

<u>Chris LKG</u>
<u>Mark Tussing</u>

Work Force: Personnel, Company

Personnel, Company	Comments
<u>ERRG - 10 man crew</u>	

Equipment:

<u>Electric welder</u>

Activities

<u>Vault boxes and Lanscaping: welded washers to inside lip (long side) of lids and drilled in 6" bolts to keep lids from moving.</u>
<u>Added gromt around lids to provide seal and further reinforcement.</u>
<u>Site Evened out existing soil in lanscaped area and added a few patches of sand to areas that were abnormally low. spread out red fescue seed and covered with approx 1"-2" of clean imported topsoil. Only did approx 1/3 of lanscaped area. Will cover rest tomorrow.</u>
<u>Completed unistrut installation in all vault boxes except 3.</u>
<u>Chris and Mark Tussing visited site. Requested tamper proof bolts. ERRG ordered hex bolts with special submerdriver.</u>
<u>Concrete pad looks good! No cracks. Periodically sprayed with water to allow proper curing. Testing Engineers came to pick up concrete cylinders sometime after lunch.</u>



CONSTRUCTION OBSERVATION REPORT

Project: Groundwater Biobarrier

Owner: Owens-Brockway

Engineer: Sierra West

Date: 2-25-16

Contractor: ERRG

Page: _____ of _____

Day: Thurs Weather: _____ Temp: _____ Conditions: _____

On-Site Observer: Yousuf Kaleem Arrival: _____ Departure: _____

Visitors:

<u>Wim</u>
<u>Mark Tussing</u>

Work Force:	Personnel, Company	Comments
	<u>ERRG</u>	

Equipment:

<u>Jack-Jumping Jack</u>
<u>Rake</u>

Activities

<u>Completed AB compaction all the way to surface. Maintained at least a 1/2" elevation difference between vault lid and existing surface. Sloped AB material away from lids as best as possible.</u>
<u>Spread extra gravel around concrete pad area to minimize mud tracking.</u>
<u>In the landscaped area, seeding is complete. Approx 1"-2" of topsoil was added and graded. Lids are left at least 1" above existing grade.</u>
<u>Wim checked out the resurfacing progress and was pleased with everything.</u>
<u>Calton will come next week. ERRG will clean and demobilize tomorrow.</u>





533 Hawthorne Place, Livermore, CA 94550 (925) 373-4417

SPECIES: Creeping Red Fescue

JOB: ERRG

NOTES:

Lot # MF15-069

PURITY

98.57 Pure Seed
Uncertified Boreal

GERM HARD TOTAL

91 0 91

CROP: 0.00 INERT: 1.43 WEED: 0.00 No Noxious Weed in CA
NET WT: 10.0 Lbs SELL BY: 2/18/17 TESTED: 11/15 Origin OR

CONSTRUCTION OBSERVATION REPORT

Project: Groundwater Biobarrier

Owner: Owens-Brockway

Engineer: Sierra West

Date: 3/2/16

Contractor: ERRG/Calum

Page: _____ of _____

Day: wed

Weather: _____

Temp: _____

Conditions: _____

On-Site Observer: _____

Arrival: 6:50

Departure: 4:00 PM

Visitors:

Work Force: Personnel, Company

Comments

Work Force: Personnel, Company	Comments
<u>ERRG - Super Steve and Steve</u>	
<u>Calum - 2 man crew</u>	

Equipment:

<u>Step bit to drill holes in splice boxes</u>

Activities

<u>Calum arrived on site @ 7:45 AM</u>
<u>Held tailgate meeting</u>
<u>Pulled wires for IW-11 - IW-17 and IW-7 and IW-8. Ran out of wire. New rolls arrive on Friday.</u>
<u>Planned and installed weather boxes inside weather vaults IW-8 - IW-17.</u>
<u>Laptop was low on battery, forgot charger :C</u>



SIERRA WEST
CONSULTANTS, INC.

FIELD SAFETY BRIEFING ATTENDANCE SHEET

Site Name: Owens-Brockway

Date: 3/3/16

Project: Groundwater Biobarrier

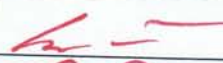


Presented By: Yousuf Kabeen

Topics / Information Reviewed:

- | | | |
|---|---|--|
| <input type="checkbox"/> Daily Work Scope
<input type="checkbox"/> Emergency Response
<input type="checkbox"/> HASP Location
<input type="checkbox"/> Directions to Hospital
<input type="checkbox"/> Stop Work Authority
<input type="checkbox"/> Buddy System
<input type="checkbox"/> Site Hazards
<input type="checkbox"/>
<input type="checkbox"/> | <input type="checkbox"/> First Aid Kit Location
<input type="checkbox"/> Fire Extinguisher Location
<input type="checkbox"/> Eye Wash Station Location
<input type="checkbox"/> Noise Hazards
<input type="checkbox"/> Orderly Site Housekeeping
<input type="checkbox"/> Traffic Control
<input type="checkbox"/> Vehicle Safety
<input type="checkbox"/> Backing Up and Spotters
<input type="checkbox"/>
<input type="checkbox"/> | <input type="checkbox"/> Personal Protective Equipment
<input type="checkbox"/> Slips Trips & Falls
<input type="checkbox"/> Heat and Cold Stress
<input type="checkbox"/> Site Security
<input type="checkbox"/> Biological Hazards
<input type="checkbox"/> Allergies and Medical Conditions
<input type="checkbox"/> Dust and Vapor Control
<input type="checkbox"/>
<input type="checkbox"/> |
|---|---|--|

Chemicals of Concern at the Site: Total Petroleum Hydrocarbons, Free Product in some locations. Dust and vehicle emissions when working inside buildings.

Specific Precautions for Today's Activities:

Name	Signature	Company
ESSEL MAGAT		CALCON
S. Pudge		EMG
Charles Phillips		Calcon

Conduct a Daily Tailgate Safety Meeting prior to each day's site activities. Follow up on any noted items.
 On Day #1 – Review Health and Safety Plan and have each person sign-off confirming their understanding of the plan.

SIERRA WEST CONSULTANTS, INC. 3/3/16

CONSTRUCTION OBSERVATION REPORT

Project: Groundwater Biobarrier

Owner: Owens - Brockway

Engineer: Sierra West

Date: 3/3/16

Contractor: ERRG/Calcon

Page: _____ of _____

Day: Thur

Weather: Slight Rain Temp: _____

Conditions: _____

On-Site Observer: Yousuf Kaleem

Arrival: 6:45

Departure: 12:00

Visitors:

Work Force: Personnel, Company

Comments

Work Force: Personnel, Company	Comments
<u>Calcon - 2 man crew</u>	
<u>ERRG - Super Steve</u>	

Equipment:

Activities

<p><u>The container will have no ramp. Agreed between Calcon, ERRG, & Sierra West. Left a message with Dave (building inspector) to find out what exactly he wants to inspect.</u></p> <p><u>Electrical inspection needs to happen after power drop pge installs power drop.</u></p> <p><u>Progress for today: installed boxes in outside well boxes and separated wires inside well vault boxes. Called it a day @ 12 PM because there was no more wire. Wire will be shipped tomorrow.</u></p>



SIERRA WEST
CONSULTANTS, INC.

FIELD SAFETY BRIEFING ATTENDANCE SHEET

Site Name: Owens-Brockway

Date: 3/4/16

Project: Groundwater Biobarrier

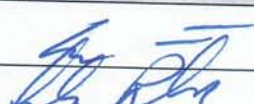
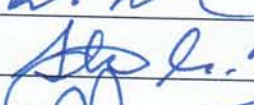
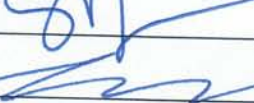
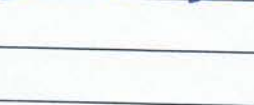
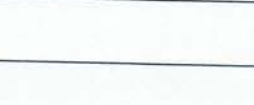
Presented By: Yousuf Kaleem

Topics / Information Reviewed:

- | | | |
|---|--|--|
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<input type="checkbox"/> HASP Location
<input type="checkbox"/> Directions to Hospital
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<input type="checkbox"/> Fire Extinguisher Location
<input type="checkbox"/> Eye Wash Station Location
<input type="checkbox"/> Noise Hazards
<input checked="" type="checkbox"/> Orderly Site Housekeeping
<input type="checkbox"/> Traffic Control
<input checked="" type="checkbox"/> Vehicle Safety
<input checked="" type="checkbox"/> Backing Up and Spotters
<input type="checkbox"/>
<input type="checkbox"/> | <input checked="" type="checkbox"/> Personal Protective Equipment
<input checked="" type="checkbox"/> Slips Trips & Falls
<input checked="" type="checkbox"/> Heat and Cold Stress
<input checked="" type="checkbox"/> Site Security
<input type="checkbox"/> Biological Hazards
<input type="checkbox"/> Allergies and Medical Conditions
<input type="checkbox"/> Dust and Vapor Control
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/> |
|---|--|--|

Chemicals of Concern at the Site: Total Petroleum Hydrocarbons, Free Product in some locations. Dust and vehicle emissions when working inside buildings.

Specific Precautions for Today's Activities: Lifting Cargo Container

Name	Signature	Company
ESSEL MAGAT		CALCON
Charles Phillips		Calcon
Steven Hoeft		ERRG
L. Duda		ERAN
ESSEL ORRIVER		ERCB

Conduct a Daily Tailgate Safety Meeting prior to each day's site activities. Follow up on any noted items.
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CONSTRUCTION OBSERVATION REPORT

Project: Groundwater Biobarrier

Owner: Owens-Brockway

Engineer: Sierra West

Date: 3/4/16

Contractor: ERRG/Calcon

Page: _____ of _____

Day: Fri

Weather: Rain

Temp: _____

Conditions: Rain

On-Site Observer: Yousuf Kaleem

Arrival: 7:15

Departure: 5:30

Visitors:

<u>Traci, PGE</u>

Work Force: Personnel, Company

	Comments
<u>ERRG - 2 man crew</u>	
<u>Calcon - 2 man crew</u>	

Equipment:

<u>Forklift to raise and set cargo container</u>

Activities

<u>Traci visited site to look @ potential power drop locations</u>
<u>Building arrived @ around 1:15 pm. Set building and maintained minimum 3" from edge of concrete pad.</u>
<u>Bolted down @ corners, 2 corner side bolts on each corner corner. Sanded and grinded off excess bolt thread.</u>
<u>Built wooden form and placed below container floor where conduit opening was. Grouted floor flush with surface.</u>
<u>Set inspections for Tuesday @ 10-12 pm. Hopefully inspector will come @ this time.</u>
<u>Calcon ran out of wire again. One vault box outside property has not been wired. Weatherhead was installed and connected.</u>



SIERRA WEST
CONSULTANTS, INC.

Appendix 5: Laboratory Analytical Reports



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1508935

Report Created for: Sierra West Consultants, Inc.
4227 Sunrise Blvd., Ste. 220
Fair Oaks, CA 95628

Project Contact: Jeff Bensch
Project P.O.:
Project Name: Owen's Brockway

Project Received: 08/26/2015

Analytical Report reviewed & approved for release on 09/02/2015 by:

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: Sierra West Consultants, Inc.
Project: Owen's Brockway
WorkOrder: 1508935

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Glossary of Terms & Qualifier Definitions

Client: Sierra West Consultants, Inc.
Project: Owen's Brockway
WorkOrder: 1508935

Analytical Qualifiers

b	analyte detected in the associated Method Blank and in the sample
b1	aqueous sample that contains greater than ~1 vol. % sediment
b6	lighter than water immiscible sheen/product is present
d1	weakly modified or unmodified gasoline is significant
d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
d9	no recognizable pattern
e2	diesel range compounds are significant; no recognizable pattern
e3	aged diesel is significant
e4	gasoline range compounds are significant.
e7	oil range compounds are significant
e8	kerosene/kerosene range/jet fuel range
e11/e4	stoddard solvent/mineral spirit (?); and/or gasoline range compounds are significant.



Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 8/26/15 21:15
Date Prepared: 8/31/15-9/1/15
Project: Owen's Brockway

WorkOrder: 1508935
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-42-GW-21'	1508935-001A	Water	08/24/2015 15:50	GC19	109640

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	2200	250	5	08/31/2015 13:15
MTBE	---	25	5	08/31/2015 13:15
Benzene	---	2.5	5	08/31/2015 13:15
Toluene	---	2.5	5	08/31/2015 13:15
Ethylbenzene	---	2.5	5	08/31/2015 13:15
Xylenes	---	2.5	5	08/31/2015 13:15

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	96	70-130	08/31/2015 13:15

Analyst(s): CA

Analytical Comments: d7,d9,b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-42-GW-41'	1508935-002A	Water	08/24/2015 16:50	GC19	109640

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	16,000	1000	20	08/31/2015 13:46
MTBE	---	100	20	08/31/2015 13:46
Benzene	---	10	20	08/31/2015 13:46
Toluene	---	10	20	08/31/2015 13:46
Ethylbenzene	---	10	20	08/31/2015 13:46
Xylenes	---	10	20	08/31/2015 13:46

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	117	70-130	08/31/2015 13:46

Analyst(s): CA

Analytical Comments: d1,b1

(Cont.)



Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 8/26/15 21:15
Date Prepared: 8/31/15-9/1/15
Project: Owen's Brockway

WorkOrder: 1508935
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-43-GW-20'	1508935-003A	Water	08/24/2015 11:30	GC19	109640

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	140	50	1	09/01/2015 02:37
MTBE	---	5.0	1	09/01/2015 02:37
Benzene	---	0.50	1	09/01/2015 02:37
Toluene	---	0.50	1	09/01/2015 02:37
Ethylbenzene	---	0.50	1	09/01/2015 02:37
Xylenes	---	0.50	1	09/01/2015 02:37

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	86	70-130	09/01/2015 02:37

Analyst(s): CA

Analytical Comments: d7,b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-44-GW-20'	1508935-004A	Water	08/26/2015 08:45	GC19	109640

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	760	50	1	09/01/2015 03:07
MTBE	---	5.0	1	09/01/2015 03:07
Benzene	---	0.50	1	09/01/2015 03:07
Toluene	---	0.50	1	09/01/2015 03:07
Ethylbenzene	---	0.50	1	09/01/2015 03:07
Xylenes	---	0.50	1	09/01/2015 03:07

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	81	70-130	09/01/2015 03:07

Analyst(s): CA

Analytical Comments: d7,b1

(Cont.)



Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 8/26/15 21:15
Date Prepared: 8/31/15-9/1/15
Project: Owen's Brockway

WorkOrder: 1508935
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-44-GW-35'	1508935-005A	Water	08/26/2015 09:40	GC19	109640

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	09/01/2015 04:37
MTBE	---	5.0	1	09/01/2015 04:37
Benzene	---	0.50	1	09/01/2015 04:37
Toluene	---	0.50	1	09/01/2015 04:37
Ethylbenzene	---	0.50	1	09/01/2015 04:37
Xylenes	---	0.50	1	09/01/2015 04:37

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	89	70-130	09/01/2015 04:37

Analyst(s): CA

Analytical Comments: b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-45-GW-18'	1508935-006A	Water	08/25/2015 10:20	GC19	109640

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	17,000	250	5	09/01/2015 00:37
MTBE	---	25	5	09/01/2015 00:37
Benzene	---	2.5	5	09/01/2015 00:37
Toluene	---	2.5	5	09/01/2015 00:37
Ethylbenzene	---	2.5	5	09/01/2015 00:37
Xylenes	---	2.5	5	09/01/2015 00:37

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	99	70-130	09/01/2015 00:37

Analyst(s): CA

Analytical Comments: d7,d9,b1

(Cont.)



Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 8/26/15 21:15
Date Prepared: 8/31/15-9/1/15
Project: Owen's Brockway

WorkOrder: 1508935
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
G-46-GW-18'	1508935-007A	Water	08/25/2015 12:50	GC19	109640

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	150	50	1	09/01/2015 01:37
MTBE	---	5.0	1	09/01/2015 01:37
Benzene	---	0.50	1	09/01/2015 01:37
Toluene	---	0.50	1	09/01/2015 01:37
Ethylbenzene	---	0.50	1	09/01/2015 01:37
Xylenes	---	0.50	1	09/01/2015 01:37

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	83	70-130	09/01/2015 01:37

Analyst(s): CA

Analytical Comments: d7,b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-46-GW-32'	1508935-008A	Water	08/25/2015 14:00	GC19	109640

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	09/01/2015 02:07
MTBE	---	5.0	1	09/01/2015 02:07
Benzene	---	0.50	1	09/01/2015 02:07
Toluene	---	0.50	1	09/01/2015 02:07
Ethylbenzene	---	0.50	1	09/01/2015 02:07
Xylenes	---	0.50	1	09/01/2015 02:07

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	89	70-130	09/01/2015 02:07

Analyst(s): CA

Analytical Comments: b1

(Cont.)



Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 8/26/15 21:15
Date Prepared: 8/31/15-9/1/15
Project: Owen's Brockway

WorkOrder: 1508935
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-47-GW-18'	1508935-009A	Water	08/26/2015 12:30	GC19	109640

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	08/31/2015 05:29
MTBE	---	5.0	1	08/31/2015 05:29
Benzene	---	0.50	1	08/31/2015 05:29
Toluene	---	0.50	1	08/31/2015 05:29
Ethylbenzene	---	0.50	1	08/31/2015 05:29
Xylenes	---	0.50	1	08/31/2015 05:29

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	91	70-130	08/31/2015 05:29

Analyst(s): IA

Analytical Comments: b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-47-GW-33'	1508935-010A	Water	08/26/2015 13:15	GC19	109640

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	08/31/2015 06:28
MTBE	---	5.0	1	08/31/2015 06:28
Benzene	---	0.50	1	08/31/2015 06:28
Toluene	---	0.50	1	08/31/2015 06:28
Ethylbenzene	---	0.50	1	08/31/2015 06:28
Xylenes	---	0.50	1	08/31/2015 06:28

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	94	70-130	08/31/2015 06:28

Analyst(s): IA

Analytical Comments: b1



Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 8/26/15 21:15
Date Prepared: 8/26/15
Project: Owen's Brockway

WorkOrder: 1508935
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-42-GW-21'	1508935-001A	Water	08/24/2015 15:50	GC31A	109521

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	840,000	25,000	100	08/28/2015 00:47
TPH-Motor Oil (C18-C36)	550,000	120,000	100	08/28/2015 00:47
Surrogates	REC (%)	Limits		
C9	90	70-130		08/28/2015 00:47
Analyst(s): TK		Analytical Comments: e4,e7,e2,b6,b1		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-42-GW-41'	1508935-002A	Water	08/24/2015 16:50	GC31A	109521

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	990,000	12,000	50	08/27/2015 19:57
TPH-Motor Oil (C18-C36)	510,000	62,000	50	08/27/2015 19:57
Surrogates	REC (%)	Limits		
C9	97	70-130		08/27/2015 19:57
Analyst(s): TK		Analytical Comments: e4,e7,e2,b6,b1		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-43-GW-20'	1508935-003A	Water	08/24/2015 11:30	GC11B	109521

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	560	50	1	08/27/2015 19:41
TPH-Motor Oil (C18-C36)	320	250	1	08/27/2015 19:41
Surrogates	REC (%)	Limits		
C9	111	70-130		08/27/2015 19:41
Analyst(s): TK		Analytical Comments: e3,e8,b1		

(Cont.)



Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 8/26/15 21:15
Date Prepared: 8/26/15
Project: Owen's Brockway

WorkOrder: 1508935
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-44-GW-20'	1508935-004A	Water	08/26/2015 08:45	GC11B	109521

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	2300	50	1	08/27/2015 17:22
TPH-Motor Oil (C18-C36)	660	250	1	08/27/2015 17:22
Surrogates	REC (%)	Limits		
C9	112	70-130		08/27/2015 17:22

Analyst(s): TK Analytical Comments: e11/e4,e2,b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-44-GW-35'	1508935-005A	Water	08/26/2015 09:40	GC9a	109521

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	360	50	1	08/27/2015 14:04
TPH-Motor Oil (C18-C36)	360	250	1	08/27/2015 14:04
Surrogates	REC (%)	Limits		
C9	107	70-130		08/27/2015 14:04

Analyst(s): TK Analytical Comments: e3,e8,e7,b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-45-GW-18'	1508935-006A	Water	08/25/2015 10:20	GC31A	109521

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	890,000	25,000	100	08/27/2015 22:23
TPH-Motor Oil (C18-C36)	660,000	120,000	100	08/27/2015 22:23
Surrogates	REC (%)	Limits		
C9	92	70-130		08/27/2015 22:23

Analyst(s): TK Analytical Comments: e4,e7,e2,b6,b1

(Cont.)



Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 8/26/15 21:15
Date Prepared: 8/26/15
Project: Owen's Brockway

WorkOrder: 1508935
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
G-46-GW-18'	1508935-007A	Water	08/25/2015 12:50	GC11A	109521

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	1300	50	1	08/31/2015 13:34
TPH-Motor Oil (C18-C36)	1000	250	1	08/31/2015 13:34
Surrogates	REC (%)	Limits		
C9	121	70-130		08/31/2015 13:34

Analyst(s): TK Analytical Comments: e3,e8,b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-46-GW-32'	1508935-008A	Water	08/25/2015 14:00	GC9a	109521

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	220	50	1	08/27/2015 16:00
TPH-Motor Oil (C18-C36)	290	250	1	08/27/2015 16:00
Surrogates	REC (%)	Limits		
C9	102	70-130		08/27/2015 16:00

Analyst(s): TK Analytical Comments: e3,e8,e7,b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-47-GW-18'	1508935-009A	Water	08/26/2015 12:30	GC6B	109521

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	350	50	1	08/28/2015 18:46
TPH-Motor Oil (C18-C36)	320	250	1	08/28/2015 18:46
Surrogates	REC (%)	Limits		
C9	108	70-130		08/28/2015 18:46

Analyst(s): TK Analytical Comments: e3,b1

(Cont.)



Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 8/26/15 21:15
Date Prepared: 8/26/15
Project: Owen's Brockway

WorkOrder: 1508935
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-47-GW-33'	1508935-010A	Water	08/26/2015 13:15	GC11A	109521

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	1100	50	1	08/28/2015 09:53
TPH-Motor Oil (C18-C36)	3400	250	1	08/28/2015 09:53

Surrogates	REC (%)	Limits	Date Analyzed
C9	113	70-130	08/28/2015 09:53

Analyst(s): TK

Analytical Comments: e7,e2,b1



Quality Control Report

Client: Sierra West Consultants, Inc.
Date Prepared: 8/30/15
Date Analyzed: 8/30/15
Instrument: GC19
Matrix: Water
Project: Owen's Brockway

WorkOrder: 1508935
BatchID: 109640
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L
Sample ID: MB/LCS-109640
 1508935-001AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	51.6	40	60	-	86	70-130
MTBE	ND	10.9	5.0	10	-	109	70-130
Benzene	ND	11.6	0.50	10	-	116	70-130
Toluene	ND	11.6	0.50	10	-	116	70-130
Ethylbenzene	ND	11.8	0.50	10	-	118	70-130
Xylenes	ND	38.1	0.50	30	-	127	70-130

Surrogate Recovery

aaa-TFT	8.91	8.90		10	89	89	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	NR	NR		530	NR	NR	-	NR	
MTBE	NR	NR		ND<25	NR	NR	-	NR	
Benzene	NR	NR		ND<2.5	NR	NR	-	NR	
Toluene	NR	NR		ND<2.5	NR	NR	-	NR	
Ethylbenzene	NR	NR		ND<2.5	NR	NR	-	NR	
Xylenes	NR	NR		7.9	NR	NR	-	NR	

Surrogate Recovery

aaa-TFT	NR	NR			NR	NR	-	NR	
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Quality Control Report

Client: Sierra West Consultants, Inc.
Date Prepared: 8/26/15
Date Analyzed: 8/27/15
Instrument: GC11B, GC2A
Matrix: Water
Project: Owen's Brockway

WorkOrder: 1508935
BatchID: 109521
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L
Sample ID: MB/LCS-109521

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	1030	50	1000	-	103	61-157
TPH-Motor Oil (C18-C36)	ND	-	250	-	-	-	-
Surrogate Recovery							
C9	679	623		625	109	100	65-122

1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262



CHAIN-OF-CUSTODY RECORD

WorkOrder: 1508935

ClientCode: SWFO

WaterTrax
 WriteOn
 EDF
 Excel
 EQUIS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:
 Jeff Bensch
 Sierra West Consultants, Inc.
 4227 Sunrise Blvd., Ste. 220
 Fair Oaks, CA 95628
 (916) 863-3220 FAX: (916) 863-3225

Email: jbensch@sierra-west.net
 cc/3rd Party: ckennedy@geologist.com;
 PO:
 ProjectNo: Owen's Brockway

Bill to:
 Accounts Payable
 CKG Environmental
 808 Zinfindel Lane
 St. Helena, CA 94574

Requested TAT: 5 days;

Date Received: 08/26/2015
Date Printed: 08/26/2015

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1508935-001	B-42-GW-21'	Water	8/24/2015 15:50	<input type="checkbox"/>	A	A											
1508935-002	B-42-GW-41'	Water	8/24/2015 16:50	<input type="checkbox"/>	A	A											
1508935-003	B-43-GW-20'	Water	8/24/2015 11:30	<input type="checkbox"/>	A	A											
1508935-004	B-44-GW-20'	Water	8/26/2015 8:45	<input type="checkbox"/>	A	A											
1508935-005	B-44-GW-35'	Water	8/26/2015 9:40	<input type="checkbox"/>	A	A											
1508935-006	B-45-GW-18'	Water	8/25/2015 10:20	<input type="checkbox"/>	A	A											
1508935-007	G-46-GW-18'	Water	8/25/2015 12:50	<input type="checkbox"/>	A	A											
1508935-008	B-46-GW-32'	Water	8/25/2015 14:00	<input type="checkbox"/>	A	A											
1508935-009	B-47-GW-18'	Water	8/26/2015 12:30	<input type="checkbox"/>	A	A											
1508935-010	B-47-GW-33'	Water	8/26/2015 13:15	<input type="checkbox"/>	A	A											

Test Legend:

1	G-MBTX_W	2	TPH(DMO)_W	3		4	
5		6		7		8	
9		10		11		12	

The following SamplIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A contain testgroup.

Prepared by: Jena Alfaro

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: SIERRA WEST CONSULTANTS, INC.

QC Level: LEVEL 2

Work Order: 1508935

Project: Owen's Brockway

Client Contact: Jeff Bensch

Date Received: 8/26/2015

Comments:

Contact's Email: jbensch@sierra-west.net

WaterTrax
 WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1508935-001A	B-42-GW-21'	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	8/24/2015 15:50	5 days	25%+	<input type="checkbox"/>	
1508935-002A	B-42-GW-41'	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	8/24/2015 16:50	5 days	25%+	<input type="checkbox"/>	
1508935-003A	B-43-GW-20'	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	8/24/2015 11:30	5 days	5%+	<input type="checkbox"/>	
1508935-004A	B-44-GW-20'	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	8/26/2015 8:45	5 days	10%+	<input type="checkbox"/>	
1508935-005A	B-44-GW-35'	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	8/26/2015 9:40	5 days	10%+	<input type="checkbox"/>	
1508935-006A	B-45-GW-18'	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	8/25/2015 10:20	5 days	10%+	<input type="checkbox"/>	
1508935-007A	G-46-GW-18'	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	8/25/2015 12:50	5 days	10%+	<input type="checkbox"/>	
1508935-008A	B-46-GW-32'	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	8/25/2015 14:00	5 days	10%+	<input type="checkbox"/>	
1508935-009A	B-47-GW-18'	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	8/26/2015 12:30	5 days	10%+	<input type="checkbox"/>	
1508935-010A	B-47-GW-33'	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl & 2-aVOA	<input type="checkbox"/>	8/26/2015 13:15	5 days	25%+	<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).
 - MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



Sample Receipt Checklist

Client Name: **Sierra West Consultants, Inc.** Date and Time Received: **8/26/2015 9:15:09 PM**
 Project Name: **Owen's Brockway** LogIn Reviewed by: **Jena Alfaro**
 WorkOrder No: **1508935** Matrix: Water Carrier: Client Drop-In

Chain of Custody (COC) Information

Chain of custody present? Yes No
 Chain of custody signed when relinquished and received? Yes No
 Chain of custody agrees with sample labels? Yes No
 Sample IDs noted by Client on COC? Yes No
 Date and Time of collection noted by Client on COC? Yes No
 Sampler's name noted on COC? Yes No

Sample Receipt Information

Custody seals intact on shipping container/cooler? Yes No NA
 Shipping container/cooler in good condition? Yes No
 Samples in proper containers/bottles? Yes No
 Sample containers intact? Yes No
 Sufficient sample volume for indicated test? Yes No

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No
 Sample/Temp Blank temperature Temp: 1°C NA
 Water - VOA vials have zero headspace / no bubbles? Yes No NA
 Sample labels checked for correct preservation? Yes No
 pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes No NA
 Samples Received on Ice? Yes No

(Ice Type: WET ICE)

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522? Yes No NA
 Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? Yes No NA

* NOTE: If the "No" box is checked, see comments below.

 Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1602126 **Amended:** 02/17/2016

Report Created for: Sierra West Consultants, Inc.

4227 Sunrise Blvd., Ste. 220
Fair Oaks, CA 95628

Project Contact: Jeff Bensch

Project P.O.:

Project Name: Biobarrier Groundwater Treatment

Project Received: 02/03/2016

Analytical Report reviewed & approved for release on 02/05/2016 by:

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: Sierra West Consultants, Inc.
Project: Biobarrier Groundwater Treatment
WorkOrder: 1602126

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Analytical Qualifiers

d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant



Glossary of Terms & Qualifier Definitions

Client: Sierra West Consultants, Inc.
Project: Biobarrier Groundwater Treatment
WorkOrder: 1602126

Quality Control Qualifiers

F1 MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validated the prep batch.
F2 LCS recovery for this compound is outside of acceptance limits.
F8 MS/MSD recovery and/or RPD was out of acceptance criteria; PDS validated the prep batch. If PDS recovery was out of acceptance criteria, DLT validated the prep batch.



Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 2/3/16 15:48
Date Prepared: 2/3/16
Project: Biobarrier Groundwater Treatment

WorkOrder: 1602126
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PT3617-55	1602126-001A	Soil	02/02/2016 14:15	GC10	116151
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	02/04/2016 09:12	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	02/04/2016 09:12	
Benzene	ND	0.0050	1	02/04/2016 09:12	
Bromobenzene	ND	0.0050	1	02/04/2016 09:12	
Bromochloromethane	ND	0.0050	1	02/04/2016 09:12	
Bromodichloromethane	ND	0.0050	1	02/04/2016 09:12	
Bromoform	ND	0.0050	1	02/04/2016 09:12	
Bromomethane	ND	0.0050	1	02/04/2016 09:12	
2-Butanone (MEK)	ND	0.020	1	02/04/2016 09:12	
t-Butyl alcohol (TBA)	ND	0.050	1	02/04/2016 09:12	
n-Butyl benzene	ND	0.0050	1	02/04/2016 09:12	
sec-Butyl benzene	ND	0.0050	1	02/04/2016 09:12	
tert-Butyl benzene	ND	0.0050	1	02/04/2016 09:12	
Carbon Disulfide	ND	0.0050	1	02/04/2016 09:12	
Carbon Tetrachloride	ND	0.0050	1	02/04/2016 09:12	
Chlorobenzene	ND	0.0050	1	02/04/2016 09:12	
Chloroethane	ND	0.0050	1	02/04/2016 09:12	
Chloroform	ND	0.0050	1	02/04/2016 09:12	
Chloromethane	ND	0.0050	1	02/04/2016 09:12	
2-Chlorotoluene	ND	0.0050	1	02/04/2016 09:12	
4-Chlorotoluene	ND	0.0050	1	02/04/2016 09:12	
Dibromochloromethane	ND	0.0050	1	02/04/2016 09:12	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	02/04/2016 09:12	
1,2-Dibromoethane (EDB)	ND	0.0040	1	02/04/2016 09:12	
Dibromomethane	ND	0.0050	1	02/04/2016 09:12	
1,2-Dichlorobenzene	ND	0.0050	1	02/04/2016 09:12	
1,3-Dichlorobenzene	ND	0.0050	1	02/04/2016 09:12	
1,4-Dichlorobenzene	ND	0.0050	1	02/04/2016 09:12	
Dichlorodifluoromethane	ND	0.0050	1	02/04/2016 09:12	
1,1-Dichloroethane	ND	0.0050	1	02/04/2016 09:12	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	02/04/2016 09:12	
1,1-Dichloroethene	ND	0.0050	1	02/04/2016 09:12	
cis-1,2-Dichloroethene	ND	0.0050	1	02/04/2016 09:12	
trans-1,2-Dichloroethene	ND	0.0050	1	02/04/2016 09:12	
1,2-Dichloropropane	ND	0.0050	1	02/04/2016 09:12	
1,3-Dichloropropane	ND	0.0050	1	02/04/2016 09:12	
2,2-Dichloropropane	ND	0.0050	1	02/04/2016 09:12	

(Cont.)



Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 2/3/16 15:48
Date Prepared: 2/3/16
Project: Biobarrier Groundwater Treatment

WorkOrder: 1602126
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PT3617-55	1602126-001A	Soil	02/02/2016 14:15	GC10	116151

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	02/04/2016 09:12
cis-1,3-Dichloropropene	ND	0.0050	1	02/04/2016 09:12
trans-1,3-Dichloropropene	ND	0.0050	1	02/04/2016 09:12
Diisopropyl ether (DIPE)	ND	0.0050	1	02/04/2016 09:12
Ethylbenzene	ND	0.0050	1	02/04/2016 09:12
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	02/04/2016 09:12
Freon 113	ND	0.0050	1	02/04/2016 09:12
Hexachlorobutadiene	ND	0.0050	1	02/04/2016 09:12
Hexachloroethane	ND	0.0050	1	02/04/2016 09:12
2-Hexanone	ND	0.0050	1	02/04/2016 09:12
Isopropylbenzene	ND	0.0050	1	02/04/2016 09:12
4-Isopropyl toluene	ND	0.0050	1	02/04/2016 09:12
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	02/04/2016 09:12
Methylene chloride	ND	0.0050	1	02/04/2016 09:12
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	02/04/2016 09:12
Naphthalene	0.018	0.0050	1	02/04/2016 09:12
n-Propyl benzene	ND	0.0050	1	02/04/2016 09:12
Styrene	ND	0.0050	1	02/04/2016 09:12
1,1,1,2-Tetrachloroethane	ND	0.0050	1	02/04/2016 09:12
1,1,2,2-Tetrachloroethane	ND	0.0050	1	02/04/2016 09:12
Tetrachloroethene	ND	0.0050	1	02/04/2016 09:12
Toluene	ND	0.0050	1	02/04/2016 09:12
1,2,3-Trichlorobenzene	ND	0.0050	1	02/04/2016 09:12
1,2,4-Trichlorobenzene	ND	0.0050	1	02/04/2016 09:12
1,1,1-Trichloroethane	ND	0.0050	1	02/04/2016 09:12
1,1,2-Trichloroethane	ND	0.0050	1	02/04/2016 09:12
Trichloroethene	ND	0.0050	1	02/04/2016 09:12
Trichlorofluoromethane	ND	0.0050	1	02/04/2016 09:12
1,2,3-Trichloropropane	ND	0.0050	1	02/04/2016 09:12
1,2,4-Trimethylbenzene	ND	0.0050	1	02/04/2016 09:12
1,3,5-Trimethylbenzene	ND	0.0050	1	02/04/2016 09:12
Vinyl Chloride	ND	0.0050	1	02/04/2016 09:12
Xylenes, Total	ND	0.0050	1	02/04/2016 09:12

(Cont.)



Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 2/3/16 15:48
Date Prepared: 2/3/16
Project: Biobarrier Groundwater Treatment

WorkOrder: 1602126
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PT3617-55	1602126-001A	Soil	02/02/2016 14:15	GC10	116151

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	106	70-130		02/04/2016 09:12
Toluene-d8	125	70-130		02/04/2016 09:12
4-BFB	96	70-130		02/04/2016 09:12
Benzene-d6	106	60-140		02/04/2016 09:12
Ethylbenzene-d10	119	60-140		02/04/2016 09:12
1,2-DCB-d4	93	60-140		02/04/2016 09:12

Analyst(s): KF



Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 2/3/16 15:48
Date Prepared: 2/3/16
Project: Biobarrier Groundwater Treatment

WorkOrder: 1602126
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PT1437-87	1602126-002A	Soil	02/03/2016 17:40	GC10	116151

Analytes	Result	RL	DF	Date Analyzed
Acetone	0.11	0.10	1	02/04/2016 09:52
tert-Amyl methyl ether (TAME)	ND	0.0050	1	02/04/2016 09:52
Benzene	ND	0.0050	1	02/04/2016 09:52
Bromobenzene	ND	0.0050	1	02/04/2016 09:52
Bromochloromethane	ND	0.0050	1	02/04/2016 09:52
Bromodichloromethane	ND	0.0050	1	02/04/2016 09:52
Bromoform	ND	0.0050	1	02/04/2016 09:52
Bromomethane	ND	0.0050	1	02/04/2016 09:52
2-Butanone (MEK)	ND	0.020	1	02/04/2016 09:52
t-Butyl alcohol (TBA)	ND	0.050	1	02/04/2016 09:52
n-Butyl benzene	ND	0.0050	1	02/04/2016 09:52
sec-Butyl benzene	ND	0.0050	1	02/04/2016 09:52
tert-Butyl benzene	ND	0.0050	1	02/04/2016 09:52
Carbon Disulfide	ND	0.0050	1	02/04/2016 09:52
Carbon Tetrachloride	ND	0.0050	1	02/04/2016 09:52
Chlorobenzene	ND	0.0050	1	02/04/2016 09:52
Chloroethane	ND	0.0050	1	02/04/2016 09:52
Chloroform	ND	0.0050	1	02/04/2016 09:52
Chloromethane	ND	0.0050	1	02/04/2016 09:52
2-Chlorotoluene	ND	0.0050	1	02/04/2016 09:52
4-Chlorotoluene	ND	0.0050	1	02/04/2016 09:52
Dibromochloromethane	ND	0.0050	1	02/04/2016 09:52
1,2-Dibromo-3-chloropropane	ND	0.0040	1	02/04/2016 09:52
1,2-Dibromoethane (EDB)	ND	0.0040	1	02/04/2016 09:52
Dibromomethane	ND	0.0050	1	02/04/2016 09:52
1,2-Dichlorobenzene	ND	0.0050	1	02/04/2016 09:52
1,3-Dichlorobenzene	ND	0.0050	1	02/04/2016 09:52
1,4-Dichlorobenzene	ND	0.0050	1	02/04/2016 09:52
Dichlorodifluoromethane	ND	0.0050	1	02/04/2016 09:52
1,1-Dichloroethane	ND	0.0050	1	02/04/2016 09:52
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	02/04/2016 09:52
1,1-Dichloroethene	ND	0.0050	1	02/04/2016 09:52
cis-1,2-Dichloroethene	ND	0.0050	1	02/04/2016 09:52
trans-1,2-Dichloroethene	ND	0.0050	1	02/04/2016 09:52
1,2-Dichloropropane	ND	0.0050	1	02/04/2016 09:52
1,3-Dichloropropane	ND	0.0050	1	02/04/2016 09:52
2,2-Dichloropropane	ND	0.0050	1	02/04/2016 09:52

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Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 2/3/16 15:48
Date Prepared: 2/3/16
Project: Biobarrier Groundwater Treatment

WorkOrder: 1602126
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PT1437-87	1602126-002A	Soil	02/03/2016 17:40	GC10	116151
Analytes	Result	RL	DF	Date Analyzed	
1,1-Dichloropropene	ND	0.0050	1	02/04/2016 09:52	
cis-1,3-Dichloropropene	ND	0.0050	1	02/04/2016 09:52	
trans-1,3-Dichloropropene	ND	0.0050	1	02/04/2016 09:52	
Diisopropyl ether (DIPE)	ND	0.0050	1	02/04/2016 09:52	
Ethylbenzene	ND	0.0050	1	02/04/2016 09:52	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	02/04/2016 09:52	
Freon 113	ND	0.0050	1	02/04/2016 09:52	
Hexachlorobutadiene	ND	0.0050	1	02/04/2016 09:52	
Hexachloroethane	ND	0.0050	1	02/04/2016 09:52	
2-Hexanone	ND	0.0050	1	02/04/2016 09:52	
Isopropylbenzene	ND	0.0050	1	02/04/2016 09:52	
4-Isopropyl toluene	ND	0.0050	1	02/04/2016 09:52	
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	02/04/2016 09:52	
Methylene chloride	ND	0.0050	1	02/04/2016 09:52	
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	02/04/2016 09:52	
Naphthalene	ND	0.0050	1	02/04/2016 09:52	
n-Propyl benzene	ND	0.0050	1	02/04/2016 09:52	
Styrene	ND	0.0050	1	02/04/2016 09:52	
1,1,1,2-Tetrachloroethane	ND	0.0050	1	02/04/2016 09:52	
1,1,2,2-Tetrachloroethane	ND	0.0050	1	02/04/2016 09:52	
Tetrachloroethene	ND	0.0050	1	02/04/2016 09:52	
Toluene	ND	0.0050	1	02/04/2016 09:52	
1,2,3-Trichlorobenzene	ND	0.0050	1	02/04/2016 09:52	
1,2,4-Trichlorobenzene	ND	0.0050	1	02/04/2016 09:52	
1,1,1-Trichloroethane	ND	0.0050	1	02/04/2016 09:52	
1,1,2-Trichloroethane	ND	0.0050	1	02/04/2016 09:52	
Trichloroethene	ND	0.0050	1	02/04/2016 09:52	
Trichlorofluoromethane	ND	0.0050	1	02/04/2016 09:52	
1,2,3-Trichloropropane	ND	0.0050	1	02/04/2016 09:52	
1,2,4-Trimethylbenzene	0.0080	0.0050	1	02/04/2016 09:52	
1,3,5-Trimethylbenzene	ND	0.0050	1	02/04/2016 09:52	
Vinyl Chloride	ND	0.0050	1	02/04/2016 09:52	
Xylenes, Total	ND	0.0050	1	02/04/2016 09:52	

(Cont.)



Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 2/3/16 15:48
Date Prepared: 2/3/16
Project: Biobarrier Groundwater Treatment

WorkOrder: 1602126
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PT1437-87	1602126-002A	Soil	02/03/2016 17:40	GC10	116151

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	108	70-130		02/04/2016 09:52
Toluene-d8	125	70-130		02/04/2016 09:52
4-BFB	98	70-130		02/04/2016 09:52
Benzene-d6	110	60-140		02/04/2016 09:52
Ethylbenzene-d10	122	60-140		02/04/2016 09:52
1,2-DCB-d4	94	60-140		02/04/2016 09:52

Analyst(s): KF



Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 2/3/16 15:48
Date Prepared: 2/3/16
Project: Biobarrier Groundwater Treatment

WorkOrder: 1602126
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PT3617-55	1602126-001A	Soil	02/02/2016 14:15	ICP-MS3	116201
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	2.2		0.50	1	02/04/2016 15:36
Arsenic	7.5		0.50	1	02/04/2016 15:36
Barium	200		5.0	1	02/04/2016 15:36
Beryllium	ND		0.50	1	02/04/2016 15:36
Cadmium	0.37		0.25	1	02/04/2016 15:36
Chromium	49		0.50	1	02/04/2016 15:36
Cobalt	8.8		0.50	1	02/04/2016 15:36
Copper	53		0.50	1	02/04/2016 15:36
Lead	210		0.50	1	02/04/2016 15:36
Mercury	0.27		0.050	1	02/04/2016 15:36
Molybdenum	ND		0.50	1	02/04/2016 15:36
Nickel	52		0.50	1	02/04/2016 15:36
Selenium	0.54		0.50	1	02/04/2016 15:36
Silver	ND		0.50	1	02/04/2016 15:36
Thallium	ND		0.50	1	02/04/2016 15:36
Vanadium	34		0.50	1	02/04/2016 15:36
Zinc	230		5.0	1	02/04/2016 15:36
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	100		70-130		02/04/2016 15:36
<u>Analyst(s):</u> DVH					

(Cont.)



Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 2/3/16 15:48
Date Prepared: 2/3/16
Project: Biobarrier Groundwater Treatment

WorkOrder: 1602126
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PT1437-87	1602126-002A	Soil	02/03/2016 17:40	ICP-MS3	116201
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	2.3		0.50	1	02/04/2016 15:55
Arsenic	8.6		0.50	1	02/04/2016 15:55
Barium	220		5.0	1	02/04/2016 15:55
Beryllium	ND		0.50	1	02/04/2016 15:55
Cadmium	0.29		0.25	1	02/04/2016 15:55
Chromium	47		0.50	1	02/04/2016 15:55
Cobalt	9.8		0.50	1	02/04/2016 15:55
Copper	40		0.50	1	02/04/2016 15:55
Lead	120		0.50	1	02/04/2016 15:55
Mercury	0.44		0.050	1	02/04/2016 15:55
Molybdenum	ND		0.50	1	02/04/2016 15:55
Nickel	60		0.50	1	02/04/2016 15:55
Selenium	ND		0.50	1	02/04/2016 15:55
Silver	ND		0.50	1	02/04/2016 15:55
Thallium	ND		0.50	1	02/04/2016 15:55
Vanadium	54		0.50	1	02/04/2016 15:55
Zinc	180		5.0	1	02/04/2016 15:55
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	104		70-130		02/04/2016 15:55
<u>Analyst(s):</u> DVH					



Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 2/3/16 15:48
Date Prepared: 2/3/16
Project: Biobarrier Groundwater Treatment

WorkOrder: 1602126
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PT3617-55	1602126-001A	Soil	02/02/2016 14:15	GC19	116152

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	1.0	1.0	1	02/04/2016 16:58
MTBE	ND	0.050	1	02/04/2016 16:58
Benzene	ND	0.0050	1	02/04/2016 16:58
Toluene	ND	0.0050	1	02/04/2016 16:58
Ethylbenzene	ND	0.0050	1	02/04/2016 16:58
Xylenes	ND	0.015	1	02/04/2016 16:58
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	104	70-130		02/04/2016 16:58

Analyst(s): IA

Analytical Comments: d7

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PT1437-87	1602126-002A	Soil	02/03/2016 17:40	GC19	116152

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	2.9	1.0	1	02/04/2016 17:59
MTBE	ND	0.050	1	02/04/2016 17:59
Benzene	ND	0.0050	1	02/04/2016 17:59
Toluene	ND	0.0050	1	02/04/2016 17:59
Ethylbenzene	ND	0.0050	1	02/04/2016 17:59
Xylenes	0.022	0.015	1	02/04/2016 17:59
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	106	70-130		02/04/2016 17:59

Analyst(s): IA

Analytical Comments: d7



Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 2/3/16 15:48
Date Prepared: 2/3/16
Project: Biobarrier Groundwater Treatment

WorkOrder: 1602126
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PT3617-55	1602126-001A	Soil	02/02/2016 14:15	GC2A	116217
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	100		100	100	02/04/2016 02:34
TPH-Motor Oil (C18-C36)	1500		500	100	02/04/2016 02:34
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	100		70-130		02/04/2016 02:34
<u>Analyst(s):</u> TK			<u>Analytical Comments:</u> e7,e2		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PT1437-87	1602126-002A	Soil	02/03/2016 17:40	GC9b	116217
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	530		100	100	02/04/2016 08:02
TPH-Motor Oil (C18-C36)	2600		500	100	02/04/2016 08:02
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	96		70-130		02/04/2016 08:02
<u>Analyst(s):</u> TK			<u>Analytical Comments:</u> e7,e2		



Quality Control Report

Client: Sierra West Consultants, Inc.
Date Prepared: 2/2/16
Date Analyzed: 2/2/16 - 2/3/16
Instrument: GC16, GC18
Matrix: Soil
Project: Biobarrier Groundwater Treatment

WorkOrder: 1602126
BatchID: 116151
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-116151
 1602093-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0601	0.0050	0.050	-	120, F2	53-116
Benzene	ND	0.0567	0.0050	0.050	-	113	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.242	0.050	0.20	-	121	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0521	0.0050	0.050	-	104	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0540	0.0040	0.050	-	108	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0596	0.0040	0.050	-	119	58-135
1,1-Dichloroethene	ND	0.0512	0.0050	0.050	-	102	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-

(Cont.)



Quality Control Report

Client: Sierra West Consultants, Inc.
Date Prepared: 2/2/16
Date Analyzed: 2/2/16 - 2/3/16
Instrument: GC16, GC18
Matrix: Soil
Project: Biobarrier Groundwater Treatment

WorkOrder: 1602126
BatchID: 116151
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-116151
 1602093-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0605	0.0050	0.050	-	121	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0611	0.0050	0.050	-	122	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0589	0.0050	0.050	-	118	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0509	0.0050	0.050	-	102	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0546	0.0050	0.050	-	109	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

(Cont.)



Quality Control Report

Client: Sierra West Consultants, Inc.
Date Prepared: 2/2/16
Date Analyzed: 2/2/16 - 2/3/16
Instrument: GC16, GC18
Matrix: Soil
Project: Biobarrier Groundwater Treatment

WorkOrder: 1602126
BatchID: 116151
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-116151
 1602093-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.126	0.152		0.12	101	122	70-130
Toluene-d8	0.157	0.133		0.12	125	106	70-130
4-BFB	0.0133	0.0122		0.012	106	98	70-130
Benzene-d6	0.105	0.117		0.10	105	117	60-140
Ethylbenzene-d10	0.115	0.110		0.10	115	110	60-140
1,2-DCB-d4	0.0704	0.104		0.10	70	104	60-140

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0577	0.0562	0.050	ND	115	112	70-130	2.53	20
Benzene	0.0540	0.0529	0.050	ND	108	106	70-130	1.97	20
t-Butyl alcohol (TBA)	0.227	0.228	0.20	ND	114	114	70-130	0	20
Chlorobenzene	0.0504	0.0491	0.050	ND	101	98	70-130	2.63	20
1,2-Dibromoethane (EDB)	0.0517	0.0512	0.050	ND	103	102	70-130	0.899	20
1,2-Dichloroethane (1,2-DCA)	0.0555	0.0545	0.050	ND	111	109	70-130	1.85	20
1,1-Dichloroethene	0.0491	0.0477	0.050	ND	98	95	70-130	2.88	20
Diisopropyl ether (DIPE)	0.0576	0.0565	0.050	ND	115	113	70-130	1.90	20
Ethyl tert-butyl ether (ETBE)	0.0581	0.0572	0.050	ND	116	114	70-130	1.53	20
Methyl-t-butyl ether (MTBE)	0.0551	0.0540	0.050	ND	110	108	70-130	2.05	20
Toluene	0.0488	0.0473	0.050	ND	98	95	70-130	3.04	20
Trichloroethene	0.0519	0.0506	0.050	ND	104	101	70-130	2.41	20
Surrogate Recovery									
Dibromofluoromethane	0.151	0.150	0.12		121	120	70-130	0.666	20
Toluene-d8	0.133	0.134	0.12		107	107	70-130	0	20
4-BFB	0.0123	0.0122	0.012		98	97	70-130	1.09	20
Benzene-d6	0.111	0.110	0.10		111	110	60-140	1.03	20
Ethylbenzene-d10	0.105	0.105	0.10		105	105	60-140	0	20
1,2-DCB-d4	0.0993	0.0981	0.10		99	98	60-140	1.20	20



Quality Control Report

Client: Sierra West Consultants, Inc.	WorkOrder: 1602126
Date Prepared: 2/3/16	BatchID: 116201
Date Analyzed: 2/3/16	Extraction Method: SW3050B
Instrument: ICP-MS2	Analytical Method: SW6020
Matrix: Soil	Unit: mg/Kg
Project: Biobarrier Groundwater Treatment	Sample ID: MB/LCS-116201 1602120-009AMS/MSD 1602120-009APDS

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	50.5	0.50	50	-	101	75-125
Arsenic	ND	51.8	0.50	50	-	104	75-125
Barium	ND	516	5.0	500	-	103	75-125
Beryllium	ND	52.6	0.50	50	-	105	75-125
Cadmium	ND	52.2	0.25	50	-	104	75-125
Chromium	ND	52.4	0.50	50	-	105	75-125
Cobalt	ND	52.5	0.50	50	-	105	75-125
Copper	ND	53.7	0.50	50	-	107	75-125
Lead	ND	51.8	0.50	50	-	104	75-125
Mercury	ND	1.17	0.050	1.25	-	94	75-125
Molybdenum	ND	48.1	0.50	50	-	96	75-125
Nickel	ND	53.0	0.50	50	-	106	75-125
Selenium	ND	53.5	0.50	50	-	107	75-125
Silver	ND	51.1	0.50	50	-	102	75-125
Thallium	ND	49.7	0.50	50	-	99	75-125
Vanadium	ND	52.1	0.50	50	-	104	75-125
Zinc	ND	543	5.0	500	-	109	75-125
Surrogate Recovery							
Terbium	509	514		500	102	103	70-130



Quality Control Report

Client: Sierra West Consultants, Inc.	WorkOrder: 1602126
Date Prepared: 2/3/16	BatchID: 116201
Date Analyzed: 2/3/16	Extraction Method: SW3050B
Instrument: ICP-MS2	Analytical Method: SW6020
Matrix: Soil	Unit: mg/Kg
Project: Biobarrier Groundwater Treatment	Sample ID: MB/LCS-116201 1602120-009AMS/MSD 1602120-009APDS

QC Summary Report for Metals

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	51.0	48.9	50	ND	101	97	75-125	4.19	20
Arsenic	53.6	52.0	50	3.226	101	98	75-125	2.94	20
Barium	667	682	500	168.9	100	103	75-125	2.12	20
Beryllium	53.6	51.2	50	0.5197	106	101	75-125	4.70	20
Cadmium	51.7	49.5	50	ND	103	99	75-125	4.21	20
Chromium	106	108	50	65.76	80	84	75-125	2.06	20
Cobalt	55.4	54.3	50	10.63	90	87	75-125	2.04	20
Copper	68.8	66.5	50	20.56	97	92	75-125	3.53	20
Lead	66.1	65.0	50	18.21	96	94	75-125	1.66	20
Mercury	1.30	1.22	1.25	0.1172	94	89	75-125	5.64	20
Molybdenum	48.8	46.8	50	ND	97	93	75-125	4.18	20
Nickel	113	117	50	90.00	45,F8	55,F8	75-125	4.00	20
Selenium	53.5	50.7	50	ND	107	101	75-125	5.53	20
Silver	50.8	48.7	50	ND	101	97	75-125	4.30	20
Thallium	49.9	47.8	50	ND	100	95	75-125	4.28	20
Vanadium	90.8	89.8	50	42.12	97	95	75-125	1.13	20
Zinc	578	553	500	54.57	105	100	75-125	4.44	20
Surrogate Recovery									
Terbium	521	498	500		104	100	70-130	4.53	20

Analyte	PDS Result	SPK Val	SPKRef Val	PDS %REC	PDS Limits
Nickel	150	50	90.00	119	80-120



Quality Control Report

Client: Sierra West Consultants, Inc.
Date Prepared: 2/2/16
Date Analyzed: 2/3/16
Instrument: GC3
Matrix: Soil
Project: Biobarrier Groundwater Treatment

WorkOrder: 1602126
BatchID: 116152
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-116152
 1602087-001AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.608	0.40	0.60	-	101	70-130
MTBE	ND	0.0850	0.050	0.10	-	85	70-130
Benzene	ND	0.0965	0.0050	0.10	-	97	70-130
Toluene	ND	0.0995	0.0050	0.10	-	100	70-130
Ethylbenzene	ND	0.100	0.0050	0.10	-	100	70-130
Xylenes	ND	0.306	0.015	0.30	-	102	70-130

Surrogate Recovery

2-Fluorotoluene	0.106	0.102		0.10	106	102	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.415	0.440	0.60	ND	69,F1	73	70-130	6.00	20
MTBE	0.0692	0.0622	0.10	ND	69,F1	62,F1	70-130	10.6	20
Benzene	0.0575	0.0619	0.10	ND	58,F1	62,F1	70-130	7.36	20
Toluene	0.0685	0.0724	0.10	ND	68,F1	72	70-130	5.54	20
Ethylbenzene	0.0759	0.0802	0.10	ND	74	78	70-130	5.52	20
Xylenes	0.242	0.262	0.30	ND	81	87	70-130	7.89	20

Surrogate Recovery

2-Fluorotoluene	0.0853	0.0895	0.10		85	90	70-130	4.83	20
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Quality Control Report

Client: Sierra West Consultants, Inc.
Date Prepared: 2/3/16
Date Analyzed: 2/4/16
Instrument: GC9a
Matrix: Soil
Project: Biobarrier Groundwater Treatment

WorkOrder: 1602126
BatchID: 116217
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-116217
 1602126-001AMS/MSD

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	41.2	1.0	40	-	103	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	20.4	20.4		25	82	82	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	NR	NR		100	NR	NR	-	NR	
Surrogate Recovery									
C9	NR	NR			NR	NR	-	NR	



1534 Willow Pass Rd
 Pittsburg, CA 94565-1701
 (925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1602126

ClientCode: SWFO

WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:
 Jeff Bensch
 Sierra West Consultants, Inc.
 4227 Sunrise Blvd., Ste. 220
 Fair Oaks, CA 95628
 (916) 863-3220 FAX: (916) 863-3225

Email: jbensch@sierra-west.net
cc/3rd Party: ykaleem@Sierra-West.net;
PO:
ProjectNo: Biobarrier Groundwater Treatment

Bill to:
 Jeff Bensch
 Sierra West Consultants, Inc.
 4227 Sunrise Blvd., Ste. 220
 Fair Oaks, CA 95628

Requested TAT: 2 days;

Date Received: 02/03/2016
Date Logged: 02/03/2016

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1602126-001	PT3617-55	Soil	2/2/2016 14:15	<input type="checkbox"/>	A	A	A	A									
1602126-002	PT1437-87	Soil	2/3/2016 17:40	<input type="checkbox"/>	A	A	A	A									

Test Legend:

1	8260B_S	2	CAM17MS_TTLC_S	3	G-MBTEX_S	4	TPH(DMO)_S
5		6		7		8	
9		10		11		12	

Prepared by: Briana Cutino

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
 Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: SIERRA WEST CONSULTANTS, INC.

QC Level: LEVEL 2

Work Order: 1602126

Project: Biobarrier Groundwater Treatment

Client Contact: Jeff Bensch

Date Logged: 2/3/2016

Comments:

Contact's Email: jbensch@sierra-west.net

WaterTrax
 WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut		
1602126-001A	PT3617-55	Soil	SW8015B (Diesel & Motor Oil)	4 / (4:1)	4OZ GJ	<input type="checkbox"/>	2/2/2016 14:15	2 days		<input type="checkbox"/>			
			SW8021B/8015Bm (G/MBTEX)			<input type="checkbox"/>						2 days	<input type="checkbox"/>
			SW6020 (CAM 17)			<input type="checkbox"/>						2 days	<input type="checkbox"/>
			SW8260B (VOCs)			<input type="checkbox"/>						2 days	<input type="checkbox"/>
1602126-002A	PT1437-87	Soil	SW8015B (Diesel & Motor Oil)	4 / (4:1)	4OZ GJ	<input type="checkbox"/>	2/3/2016 17:40	2 days		<input type="checkbox"/>			
			SW8021B/8015Bm (G/MBTEX)			<input type="checkbox"/>						2 days	<input type="checkbox"/>
			SW6020 (CAM 17)			<input type="checkbox"/>						2 days	<input type="checkbox"/>
			SW8260B (VOCs)			<input type="checkbox"/>						2 days	<input type="checkbox"/>

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1602126 A

Report Created for: Sierra West Consultants, Inc.

4227 Sunrise Blvd., Ste. 220
Fair Oaks, CA 95628

Project Contact: Jeff Bensch

Project P.O.:

Project Name: Biobarrier Groundwater Treatment

Project Received: 02/03/2016

Analytical Report reviewed & approved for release on 02/22/2016 by:

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: Sierra West Consultants, Inc.
Project: Biobarrier Groundwater Treatment
WorkOrder: 1602126

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Analytical Qualifiers

d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant



Glossary of Terms & Qualifier Definitions

Client: Sierra West Consultants, Inc.
Project: Biobarrier Groundwater Treatment
WorkOrder: 1602126

Quality Control Qualifiers

F1 MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validated the prep batch.
F2 LCS recovery for this compound is outside of acceptance limits.
F8 MS/MSD recovery and/or RPD was out of acceptance criteria; PDS validated the prep batch. If PDS recovery was out of acceptance criteria, DLT validated the prep batch.



Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 2/3/16 15:48
Date Prepared: 2/17/16
Project: Biobarrier Groundwater Treatment

WorkOrder: 1602126
Extraction Method: CA Title 22
Analytical Method: SW6020
Unit: mg/L

STLC Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PT3617-55&PT1437-87	1602126-003A	Soil	02/03/2016	ICP-MS3	116846

Analytes	Result	RL	DF	Date Analyzed
Lead	6.0	0.10	1	02/22/2016 15:44

Analyst(s): BBO



Quality Control Report

Client: Sierra West Consultants, Inc.	WorkOrder: 1602126
Date Prepared: 2/17/16	BatchID: 116846
Date Analyzed: 2/22/16	Extraction Method: CA Title 22
Instrument: ICP-MS3	Analytical Method: SW6020
Matrix: Soil	Unit: mg/L
Project: Biobarrier Groundwater Treatment	Sample ID: MB/LCS-116846

QC Summary Report for Metals (STLC)

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	10.6	0.10	10	-	106	75-125



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1602126 A ClientCode: SWFO

WaterTrax
 WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:
 Jeff Bensch
 Sierra West Consultants, Inc.
 4227 Sunrise Blvd., Ste. 220
 Fair Oaks, CA 95628
 (916) 863-3220 FAX: (916) 863-3225

Email: jbensch@sierra-west.net
cc/3rd Party: ykaleem@Sierra-West.net
PO:
ProjectNo: Gobarrier Groundwater Treatment

Bill to:
 Jeff Bensch
 Sierra West Consultants, Inc.
 4227 Sunrise Blvd., Ste. 220
 Fair Oaks, CA 95628

Requested TAT: 1 day;

Date Received: 02/03/2016
Date Logged: 02/03/2016
Date Add-On: 02/17/2016

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1602126-003	PT3617-55&PT1437-87	Soil	2/3/2016	<input type="checkbox"/>	A												

Test Legend:

1	PBMS_STLC_S	2		3		4	
5		6		7		8	
9		10		11		12	

Project Manager:

Prepared by: Briana Cutino
Add-On Prepared By: Maria Venegas

Comments: Comp of sample 001 & 002 for STLC Pb on Rush TAT 2/17/16.

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
 Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: SIERRA WEST CONSULTANTS, INC.

QC Level: LEVEL 2

Work Order: 1602126

Project: Gobarrier Groundwater Treatment

Client Contact: Jeff Bensch

Date Logged: 2/3/2016

Comments: Comp of sample 001 & 002 for STLC Pb on Rush TAT 2/17/16.

Contact's Email: jbensch@sierra-west.net

Date Add-On: 2/17/2016

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1602126-003A	PT3617-55&PT1437-87	Soil	SW6020 (Lead) (STLC)	8 / (8:1)	4OZ GJ	2/3/2016	1 day*		<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).
 - MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1602126 B

Report Created for: Sierra West Consultants, Inc.

4227 Sunrise Blvd., Ste. 220
Fair Oaks, CA 95628

Project Contact: Jeff Bensch

Project P.O.:

Project Name: Biobarrier Groundwater Treatment

Project Received: 02/03/2016

Analytical Report reviewed & approved for release on 02/29/2016 by:

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: Sierra West Consultants, Inc.
Project: Biobarrier Groundwater Treatment
WorkOrder: 1602126

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Analytical Qualifiers

d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant



Glossary of Terms & Qualifier Definitions

Client: Sierra West Consultants, Inc.
Project: Biobarrier Groundwater Treatment
WorkOrder: 1602126

Quality Control Qualifiers

F1 MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validated the prep batch.
F2 LCS recovery for this compound is outside of acceptance limits.
F8 MS/MSD recovery and/or RPD was out of acceptance criteria; PDS validated the prep batch. If PDS recovery was out of acceptance criteria, DLT validated the prep batch.



Analytical Report

Client: Sierra West Consultants, Inc.
Date Received: 2/3/16 15:48
Date Prepared: 2/26/16
Project: Biobarrier Groundwater Treatment

WorkOrder: 1602126
Extraction Method: SW1311/SW3010
Analytical Method: SW6020
Unit: mg/L

TCLP Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PT3617-55&PT1437-87	1602126-003A	Soil	02/03/2016	ICP-MS2	117309

Analytes	Result	RL	DF	Date Analyzed
Lead	0.20	0.10	1	02/29/2016 12:38

Analyst(s): AC



Quality Control Report

Client: Sierra West Consultants, Inc.
Date Prepared: 2/26/16
Date Analyzed: 2/29/16
Instrument: ICP-MS2
Matrix: Soil
Project: Biobarrier Groundwater Treatment

WorkOrder: 1602126
BatchID: 117309
Extraction Method: SW1311/SW3010
Analytical Method: SW6020
Unit: mg/L
Sample ID: MB/LCS-117309
 1602126-003AMS/MSD

QC Summary Report for Metals (TCLP)

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	10.8	0.10	10	-	108	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	11.0	10.9	10	0.1992	108	107	75-125	1.48	20



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1602126 B ClientCode: SWFO

WaterTrax
 WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:
 Jeff Bensch
 Sierra West Consultants, Inc.
 4227 Sunrise Blvd., Ste. 220
 Fair Oaks, CA 95628
 (916) 863-3220 FAX: (916) 863-3225

Email: jbensch@sierra-west.net
cc/3rd Party: ykaleem@Sierra-West.net
PO:
ProjectNo: Biobarrier Groundwater Treatment

Bill to:
 Jeff Bensch
 Sierra West Consultants, Inc.
 4227 Sunrise Blvd., Ste. 220
 Fair Oaks, CA 95628

Requested TAT: 1 day;

Date Received: 02/03/2016
Date Logged: 02/03/2016
Date Add-On: 02/26/2016

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)													
					1	2	3	4	5	6	7	8	9	10	11	12		
1602126-003	PT3617-55&PT1437-87	Soil	2/3/2016	<input type="checkbox"/>	A													

Test Legend:

1	PBMS_TCLP_S	2		3		4	
5		6		7		8	
9		10		11		12	

Project Manager:

Prepared by: Briana Cutino
Add-On Prepared By: Maria Venegas

Comments: Comp of sample 001 & 002 for STLC Pb on Rush TAT 2/17/16. TCLP Pb added 2/26/16 1day TAT.

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
 Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: SIERRA WEST CONSULTANTS, INC.

QC Level: LEVEL 2

Work Order: 1602126

Project: Biobarrier Groundwater Treatment

Client Contact: Jeff Bensch

Date Logged: 2/3/2016

Comments: Comp of sample 001 & 002 for STLC Pb on Rush TAT 2/17/16.
 TCLP Pb added 2/26/16 1day TAT.

Contact's Email: jbensch@sierra-west.net

Date Add-On: 2/26/2016

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1602126-003A	PT3617-55&PT1437-87	Soil	SW6020 (Lead) (TCLP)	8 / (8:1)	4OZ GJ	2/3/2016	1 day*		<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).
 - MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



McC Campbell Analytical, Inc.

1534 Willow Pass Rd. / Pittsburg, Ca. 94565-1701
 www.mccampbell.com / main@mccampbell.com
 Telephone: (877) 252-9262 / Fax: (925) 252-9269

RUSH

1602120

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH 1 DAY **2 DAY** 3 DAY 5 DAY

GeoTracker EDF PDF EDD Write On (DW) EQus 10 DAY

Effluent Sample Requiring "J" flag UST Clean Up Fund Project ; Claim # _____

Report To: jbensch@sierra-west.net Bill To: ckennedy@geodgist.com
 Company: YKaleem@sierra-west.net
Sierra West Consultants
 Tele: (408) 239-9659 E-Mail: ykaleem@sierra-west.net
 Project #: _____ Project Name: Bobaiet Groundwater
 Project Location: Owens Brookway Purchase Order# Treatment
 Sampler Signature: [Signature]

Analysis Request

SAMPLE ID	Location/ Field Point Name	SAMPLING		# Containers	MATRIX										METHOD PRESERVED			Analysis Request																											
		Date	Time		Ground Water	Waste Water	Drinking Water	Sea Water	Soil	Air	Sludge	Other	HCL	HNO ₃	Other	BTEX & TPH as Gas (8021/8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (1664/5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 505/608/8081 (CI Pesticides)	EPA 608/8082 PCB's; Aroclors / Congeners	EPA 507/8141 (NP Pesticides)	EPA 515/8151 (Acidic CI Herbicides)	EPA 524.2/624/8260 (VOCs)	EPA 525.2/625/8270 (SVOCs)	EPA 8270 SIM/8310 (PAHs/PNAs)	CAM 17 Metals (200.8/6020)***	LUFT 5 Metals (200.8/6020)***	Metals (200.8/6020)***	Lab to Filter sample for Dissolved metals analysis	Notes														
PT3617-55	Bin PT 3617	2/2/16	14:15	4												X	X																X					X	TPH motor oil EPA 8015	X	82606	X	STLC Pb 2/17/16 1 day	X	TCLP Pb 2-26-16 1 DAY
PT1437-87	Bin PT 1437	2/3/16	12:40	4												X	X															X					X	TPH motor oil EPA 8015	X	82606	X	STLC Pb 2/17/16 1 day	X	TCLP Pb 2-26-16 1 DAY	

**MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate \$250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

*** If metals are requested for water samples and the water type is not specified on the chain of custody, then MAI will default to metals by E200.8.

Relinquished By: <u>Yousuf Kaleem</u>	Date: <u>2/3/16</u>	Time: <u>12:40</u>	Received By: <u>[Signature]</u>	COMMENTS: GOOD CONDITION _____ HEAD SPACE ABSENT _____ DECHLORINATED IN LAB _____ APPROPRIATE CONTAINERS _____ PRESERVED IN LAB _____ VOAS O&G METALS OTHER HAZARDOUS: PRESERVATION _____ pH<2 _____
Relinquished By: <u>[Signature]</u>	Date: <u>2/3/16</u>	Time: <u>15:15</u>	Received By: <u>[Signature]</u>	
Relinquished By:	Date:	Time:	Received By:	



Sample Receipt Checklist

Client Name: **Sierra West Consultants, Inc.**
 Project Name: **Biobarrier Groundwater Treatment**
 WorkOrder No: **1602126** Matrix: Soil
 Carrier: Bernie Cummins (MAI Courier)

Date and Time Received: **2/3/2016 15:15**
 Date Logged: **2/3/2016**
 Received by: **Briana Cutino**
 Logged by: **Briana Cutino**

Chain of Custody (COC) Information

Chain of custody present? Yes No
 Chain of custody signed when relinquished and received? Yes No
 Chain of custody agrees with sample labels? Yes No
 Sample IDs noted by Client on COC? Yes No
 Date and Time of collection noted by Client on COC? Yes No
 Sampler's name noted on COC? Yes No

Sample Receipt Information

Custody seals intact on shipping container/cooler? Yes No NA
 Shipping container/cooler in good condition? Yes No
 Samples in proper containers/bottles? Yes No
 Sample containers intact? Yes No
 Sufficient sample volume for indicated test? Yes No

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No
 Sample/Temp Blank temperature Temp: 2°C NA
 Water - VOA vials have zero headspace / no bubbles? Yes No NA
 Sample labels checked for correct preservation? Yes No
 pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes No NA
 Samples Received on Ice? Yes No

(Ice Type: WET ICE)

UCMR3 Samples:


Total Chlorine tested and acceptable upon receipt for EPA 522? Yes No NA
 Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? Yes No NA

* NOTE: If the "No" box is checked, see comments below.

 Comments:

Appendix 6: Boring Logs and Well DWR Reports

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	B-42
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	2-1/8"
DATE STARTED:	24-Aug-15	DRILLER/COMPANY:	Josh Zwenke
DATE COMPLETED:	24-Aug-15		Enprobe C-57 #777007
DRILLING METHOD:	Direct Push, Dual Tube (2-1/8" OD Casing) Continuous Core Samples (1-3/4" diameter)	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)	
0	HAND AUGER		0.2		MLS	CONCRETE	0	
			0.2			SANDY SILT w/GRAVEL: 60% silt, black (10YR 2/1), dry, very stiff, non-plastic. 25% sand, fine- to coarse-grained, sub-angular to sub-rounded. 15% gravel, fine- to coarse-grained with max size of 1-inch.		
			0.4					
			0.9					
5			0.8				5	
			1.0					
			1.5			CL	SILTY CLAY: 80% clay, 20% silt, dark greenish gray (GLE Y1 4/5GY), moist, medium-stiff, low-plasticity. Strong hydrocarbon odor.	7
		Direct Push	100%	179.5				
				248.0				
10		Direct Push	100%	180.0				
			32.7					
			19.2					
			30.7					
			32.8		SC	CLAYEY SAND: 60% sand, dark greenish gray (GLE Y1 4/5GY), moist, dense, fine- to medium-grained, sub-angular to sub-rounded, poorly graded. 40% clay, low-plasticity. Strong hydrocarbon odor.	14	
15	Direct Push	NR	106.8				15	
			37.1					
		70%	28.7					
			38.0					
20	Direct Push	NR	38.2	B-42-GW-21'		 @20.5' to 22.0' - Soil becomes wet. Free product present.	20	
			36.7					
		80%	13.1		CL	CLAY: 100% clay, yellowish brown (10YR 5/4), moist, very stiff, medium plasticity. Moderate hydrocarbon odor.	23	
			26.2		GC		24.5	
25	Direct Push	100%	16.9		SC	CLAYEY GRAVEL w/SAND: 40% gravel, greenish gray (GLE Y1 5/5GY), moist, very dense, fine-grained, sub-angular, with max gravel size of 1/4-inch. 40% sand, fine- to coarse-grained, poorly graded. 25% clay, 10% silt. Moderate hydrocarbon odor.	25	
			27.5				25.5	
			41.7			CLAYEY SAND: 70% sand, very dark greenish gray (GLE Y1 3/10GY), wet, dense, fine- to medium-grained, sub-angular to sub-rounded, poorly graded. 30% clay, low-plasticity. Moderate hydrocarbon odor.	28	
			0.2		MLS			
			0.1			SANDY SILT: 75% silt, yellowish brown (10YR 5/4), moist, medium-stiff, non-plastic. 25% sand, fine-grained, sub-angular, poorly graded. Very slight hydrocarbon odor.	30	
30	Direct Push	NR	47.9		SM	SILTY SAND w/GRAVEL: 55% sand, dark greenish gray (GLE Y1 4/5GY), moist, dense, fine- to coarse-grained, sub-angular, poorly graded. 15% gravel, fine-grained with max size of 1/4-inch. 30% silt, non-plastic.	30	
		80%	3.3		CL	Description on next page.	32	

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	B-42
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	2-1/8"
DATE STARTED:	24-Aug-15	DRILLER/COMPANY:	Josh Zwenke
DATE COMPLETED:	24-Aug-15		Enprobe C-57 #777007
DRILLING METHOD:	Direct Push, Dual Tube (2-1/8" OD Casing) Continuous Core Samples (1-3/4" diameter)	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
33	Direct Push	80%	0.1		CL	CLAY: 90% clay, 10% silt, yellowish brown (10YR 5/4), moist, very stiff. No hydrocarbon odor.	33
35	Direct Push	100%	0.0				35
			0.1				
			0.0				
			3.4				
			2.4				
			0.3				
40	Direct Push	100%	1,023		SM	SILTY SAND w/GRAVEL: 65% sand, very dark greenish gray (GLE Y1 3/10GY), wet, medium-dense, fine- to coarse-grained, sub-angular to sub-rounded, poorly graded. 15% gravel, fine-grained with max size of 1/4-inch. 20% silt, non-plastic. Very strong hydrocarbon odor. Free product present.	40
			1,023	B-42-GW-41'	ML		42'
			261.0				
			415.0				
			412.9				
45	Direct Push	100%	13.1		MLS	SILTY SAND: 60% sand, brown (10YR 5/3), wet, medium-dense, fine- to medium-grained, sub-angular, poorly graded. 30% silt, 10% clay, non-plastic. Moderate hydrocarbon odor.	45
			9.7		CL		47'
			9.7				48'
			17.0				
			3.4			CLAY: 90% clay, 10% silt, greenish gray (GLE Y1 5/5G), moist, stiff, medium-plasticity. Slight hydrocarbon odor.	
50						Geologist Terminated Boring at 50' - Target Depth Achieved - First water bearing zone encountered between 20.5' - 22.0'. Free product present. - Second water bearing zone encountered between 40.5' - 42.0' Soil boring was backfilled with neat cement grout using tremie methods. Surface completed with concrete patch to match surrounding grade.	50
55							55
60							60

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	B-43
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	2-1/8"
DATE STARTED:	24-Aug-15	DRILLER/COMPANY:	Josh Zwenke
DATE COMPLETED:	24-Aug-15		Enprobe C-57 #777007
DRILLING METHOD:	Direct Push, Dual Tube (2-1/8" OD Casing) Continuous Core Samples (1-3/4" diameter)	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)		
0	HAND AUGER		0.0		ML	SILT w/SAND: 85% silt, dark brown (10YR 3/3), dry, medium-stiff, non-plastic. 15% sand, fine-grained, sub-rounded, poorly graded. Tree roots / organics present in shallow soils.	0		
			0.0						
			0.0						
			0.0						
5	Direct Push	NR	0.0		CL	CLAY: 85% clay, 15% silt, very dark brown (10YR 2/2), dry, stiff, low-plasticity.	5		
			0.0						
			0.0						
10	Direct Push	100%	0.0		ML	SILT: 90% clay, light brownish gray (10YR 6/2), dry, medium-stiff, non-plastic. 10% sand, fine-grained, sub-rounded, poorly graded. @10' - Color grades to brown (10YR 5/3) Soil becomes moist. No sand content, 100% silt.			
			0.5						
			14.1						
			14.1						
15	Direct Push	NR	53.6		CLS	SANDY CLAY: 50% clay, 30% silt, grayish brown (10YR 5/2), moist, medium-stiff, medium-plasticity. 20% sand, fine-grained, sub-rounded, poorly graded. Slight hydrocarbon odor.	15		
			48.7						
			130.7						
			196.2						
20	Direct Push	100%	38.6	B-43-GW-20'	SP	POORLY GRADED SAND w/SILT: 65% sand, dark greenish gray (GLE1 4/5GY), moist, medium-dense, fine- to medium-grained, sub-angular to sub-rounded, poorly graded. 25% silt, 10% clay, non-plastic. Moderate hydrocarbon odor.	20		
			8.8						
			0.5						
			0.1						
25	Direct Push	NR	0.0			SANDY CLAY: 50% clay, 30% silt, yellowish brown (10YR 5/4), moist, medium-stiff, medium-plasticity. 20% sand, fine-grained, sub-angular to sub-rounded, poorly graded. No hydrocarbon odor.	25		
			0.0						
			0.1						
30	Direct Push	100%	0.0		GM	SILTY GRAVEL: 40% gravel, dark gray (10YR 4/1), moist, medium-dense, fine-grained, sub-angular, with max size of 1/4-inch. 30% sand, fine- to coarse-grained, poorly graded. 30% silt, non-plastic. No hydrocarbon odor.	30		
			0.0						
			0.0						
			0.0		CL	CLAY: 100% clay, yellowish brown (10YR 5/4), moist, stiff, medium-plasticity. No hydrocarbon odor.			

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	B-43
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	2-1/8"
DATE STARTED:	24-Aug-15	DRILLER/COMPANY:	Josh Zwenke
DATE COMPLETED:	24-Aug-15		Enprobe C-57 #777007
DRILLING METHOD:	Direct Push, Dual Tube (2-1/8" OD Casing) Continuous Core Samples (1-3/4" diameter)	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
33	Direct Push	100%	0.0		CL	Same as above	33
35	Direct Push	100%	0.0				35
40	Direct Push	100%	0.0				40
45	Direct Push	100%	0.0		ML	<p>SILT w/SAND: 65% silt, 10% clay, gray (10YR 6/1), stiff, moist, non-plastic. 15% sand, fine-to coarse-grained. 10% gravel, fine-grained, sub-rounded, with max size of 1/4-inch, poorly graded. No hydrocarbon odor.</p> <p>@46' - no gravel present in soils.</p>	45
					CL	<p>CLAY: 90% clay, 10% silt, grayish brown (10YR 5/2), very stiff, moist, medium-plasticity. No hydrocarbon odor.</p>	
50						<p>Geologist Terminated Boring at 50' - Target Depth Achieved</p> <p>- First water bearing zone encountered between 20.0' - 22.0' - Second water bearing zone encountered between 43.0' - 47.5'</p> <p>Groundwater sample from second water bearing zone was unrecoverable due to drilling equipment becoming stuck in boring.</p>	50
55						<p>Soil boring was backfilled with neat cement grout using tremie methods. Surface completed with concrete patch to match surrounding grade.</p>	55
60							60

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	B-44
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	2-1/8"
DATE STARTED:	26-Aug-15	DRILLER/COMPANY:	Josh Zwenke
DATE COMPLETED:	26-Aug-15		Enprobe C-57 #777007
DRILLING METHOD:	Direct Push, Dual Tube (2-1/8" OD Casing) Continuous Core Samples (1-3/4" diameter)	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)	
0	HAND AUGER ↓		0.0		ML	SILT w/SAND: 85% silt, dark brown (10YR 3/3), dry, medium-stiff, non-plastic. 15% sand, fine-grained, sub-rounded, poorly graded.	0	
			0.0					
				0.0				
				0.0				
5	Direct Push	NR			CL	CLAY w/SAND: 85% clay, very dark gray (10YR 3/1), damp, stiff, medium-plasticity. No hydrocarbon odor. @ 5' to 7' 20% fine- to coarse-grained gravels present in soils.	5	
		40%						
			0.0					
			0.0					
10	Direct Push	NR			ML	SILT: 80% silt, 10% clay, grayish brown (10YR 5/2), medium-stiff, non-plastic. 10% sand, fine-grained, sub-angular. No hydrocarbon odor.	10	
		80%						
			0.0					
			0.0					
15	Direct Push	NR	6.3		SP	POORLY GRADED SAND w/SILT: 85% sand, greenish gray (GLE Y1 5/5GY), moist, medium-dense, fine- to medium-grained, sub-angular, poorly graded. 15% silt, non-plastic. Strong hydrocarbon odor.	15	
		80%		2,342				
			749.4					
			183.6					
20	Direct Push	NR		B-44-GW-20'	MLS	SANDY SILT: 70% silt, olive (5Y 4/3), wet, soft, non-plastic. 30% sand, fine- to medium-grained, sub-angular, poorly graded. Strong hydrocarbon odor.	20	
		70%		52.5				
			4.2					
			89.0		SP	POORLY GRADED SAND: 95% sand, dark greenish gray (GLE Y1 4/10Y), wet, loose, fine- to medium-grained, sub-angular, poorly graded. 5% silt, non-plastic. Strong hydrocarbon odor.	23	
			2.3					
25	Direct Push		6.7				25	
			6.1					
		100%	6.3					
			7.9					
			3.8		CL	CLAY w/SAND: 65% clay, 20% silt, brown (10YR 5/3), moist, stiff, medium-plasticity. 15% sand, fine- to medium-grained, sub-angular to sub-rounded, poorly graded. Moderate hydrocarbon odor.	28.5	
			0.2					
			0.0		SC	CLAYEY SAND: 70% sand, yellowish brown (10YR 5/4), moist, medium-dense, fine- to medium-grained, sub-angular, poorly graded. 30% clay, low-plasticity.	31.5	
30	Direct Push	NR					30	
		80%						
			0.2					
			0.0					
							33	

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	B-44
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	2-1/8"
DATE STARTED:	24-Aug-15	DRILLER/COMPANY:	Josh Zwenke
DATE COMPLETED:	24-Aug-15		Enprobe C-57 #777007
DRILLING METHOD:	Direct Push, Dual Tube (2-1/8" OD Casing) Continuous Core Samples (1-3/4" diameter)	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
33	Direct Push	80%	0.5		SP	POORLY GRADED SAND w/CLAY: 85% sand, dark yellowish brown (10YR 4/4), loose, wet, fine- to medium-grained, sub-angular to sub-rounded, poorly graded. 15% clay, non-plastic. No hydrocarbon odor.	33
35	Direct Push	NR	0.3				35
			11.2				
			1.2		CL	CLAY: 90% clay, 10% silt, yellowish brown (10YR 5/4), moist, stiff, medium-plasticity.	
			0.0				
40	Direct Push	NR	0.0	B-44-GW-41'			40
			0.0				
			0.0		CL	CLAY w/SAND: 55% clay, 30% silt, gray (10YR 6/1), moist, very stiff, low-plasticity. 15% sand, fine- to coarse-grained, sub-angular. No hydrocarbon odor.	
			0.0				
			0.0				
45	Direct Push	100%	0.0		MLS	SANDY SILT w/GRAVEL: 40% silt, 20% clay, grayish brown (10YR 4/2), moist, stiff, low-plasticity. 25% sand, fine- to coarse-grained. 15% gravel, fine-grained, sub-angular to sub-rounded, with max gravel size of 1/4-inch. Poorly graded.	45
			0.0				
			0.0		CL	CLAY: 100% clay, grayish brown (10YR 5/6), moist, very stiff, medium-plasticity.	
			0.0				
50						Geologist Terminated Boring at 50' - Target Depth Achieved - First water bearing zone encountered between 19.5' - 28.5'. Free product present. - Second water bearing zone encountered between 33.0' - 38.0' Soil boring was backfilled with neat cement grout using tremie methods. Surface completed with native soil to match surrounding grade.	50
55							55
60							60

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	B-45
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	2-1/8"
DATE STARTED:	25-Aug-15	DRILLER/COMPANY:	Josh Zwenke
DATE COMPLETED:	25-Aug-15		Enprobe C-57 #777007
DRILLING METHOD:	Direct Push, Dual Tube (2-1/8" OD Casing) Continuous Core Samples (1-3/4" diameter)	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER ↓		0.0			CONCRETE	0
			0.0		ML	SILT w/SAND: 80% silt, very dark grayish brown (10YR 3/2), damp, soft, non-plastic. 15% sand, fine- to coarse-grained, sub-angular to sub-rounded, poorly graded. 5% gravel, fine-grained, with max gravel size of 1/4-inch. No hydrocarbon odor.	
			0.0				
			0.0				
			0.0				
5	Direct Push	NR	0.0				5
		60%	0.0				
		0.0					
10	Direct Push	NR	0.0				10
		40%	0.0		GS	SANDY GRAVEL: 70% gravel, gray (10YR 5/1), moist, dense, fine-grained, sub-angular to sub-rounded, with max gravel size of 1/4-inch. 20% sand, fine- to coarse-grained, poorly graded. 10% silt, non-plastic. No hydrocarbon odor.	13'
15	Direct Push	NR	273.6				15
		80%	63				
			412.4	B-45-GW-18'			
			348.1		SG SM	SILTY SAND: 80% sand, dark greenish gray (GLEY1 4/5GY), moist, medium-dense, fine- to medium-grained, sub-angular to sub-rounded, poorly graded. 20% silt, non-plastic. Strong hydrocarbon odor.	19'
20	Direct Push	NR					20
		60%					
25	Direct Push	NR	2.9				25
		80%					
			18.5		CLS	SANDY CLAY: 80% clay, yellowish brown (10YR 5/4), moist, stiff, medium-plasticity. 20% sand, fine-grained, sub-angular to sub-rounded. Slight hydrocarbon odor.	
			3.4				
			27.5				
			1.4				
30	Direct Push		2.0				30
		100%					
			2.0		CLS	SILTY SAND w/GRAVEL: 65% sand, yellowish brown (10YR 5/4), moist/wet, dense, fine- to coarse-grained, sub-angular to sub-rounded. 15% gravel, fine- to coarse-grained, with max gravel size of 3/4-inch, poorly graded. 20% silt, non-plastic. Very slight hydrocarbon odor.	31'
			1.7				

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	B-45
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	2-1/8"
DATE STARTED:	25-Aug-15	DRILLER/COMPANY:	Josh Zwenke
DATE COMPLETED:	25-Aug-15		Enprobe C-57 #777007
DRILLING METHOD:	Direct Push, Dual Tube (2-1/8" OD Casing) Continuous Core Samples (1-3/4" diameter)	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
33	Direct Push	100%	1.7		CL	CLAY: 100% clay, grayish brown (10YR 5/2), moist, very stiff, medium-plasticity. No hydrocarbon odor.	33
35	Direct Push	100%	1.2 0.3 0.0		CL		38'
40	Direct Push	100%	0.0 0.0 0.0		CLS	SANDY CLAY w/GRAVEL: 65% clay, grayish brown (10YR 5/2), medium-stiff, moist, medium-plasticity. 20% sand, fine- to coarse-grained, sub-angular to sub-rounded, poorly graded. 15% gravel, fine-grained, with max gravel size of 1/4-inch. No hydrocarbon odor.	40
45	Direct Push	100%	0.0 0.0 0.0		CL	CLAY: 100% clay, brown (10YR 5/3), moist, very stiff, medium-plasticity. No hydrocarbon odor.	45
50			0.0 0.0 0.0			Geologist Terminated Boring at 50' - Target Depth Achieved - First water bearing zone encountered between 19.0' - 24.0'. - Saturated soils encountered at 32', however not enough water produced to collect a groundwater sample. Soil boring was backfilled with neat cement grout using tremie methods. Surface completed with native soil to match surrounding grade.	50
55							55
60							60

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	B-46
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	2-1/8"
DATE STARTED:	25-Aug-15	DRILLER/COMPANY:	Josh Zwenke
DATE COMPLETED:	25-Aug-15		Enprobe C-57 #777007
DRILLING METHOD:	Direct Push, Dual Tube (2-1/8" OD Casing) Continuous Core Samples (1-3/4" diameter)	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER		0.0		MLS	ASPHALT AND BASE SANDY SILT: 75% silt, dark grayish brown (10YR 4/2), damp, medium-stiff, non-plastic. 25% sand, fine- to medium-grained, sub-angular to sub-rounded, poorly graded. Slight hydrocarbon odor.	0
			0.0		SP	POORLY GRADED SAND w/GRAVEL: 75% sand, black (10YR 2/1), damp, dense, fine- to medium-grained, sub-angular to sub-rounded, poorly graded. 15% gravel, fine-grained, with max gravel size of 1/4-inch. 10% silt, non-plastic. Moderate hydrocarbon odor.	
			0.0		ML	SILT: 80% silt, 15% clay, very dark gray (10YR 3/1), damp, stiff, low-plasticity. 5% fine-grained sand. Very slight hydrocarbon odor. @7' to 8' - Color grades to greenish gray (GLEY 1 6/5GY).	5
5	Direct Push	100%	2.0				
			0.7				
			0.0				
			0.0				
10	Direct Push	100%	0.0				
			0.0				
			0.0				
			0.0				
			0.0		CL	CLAY: 75% clay, 10% silt, dark grayish brown (10YR 4/2), moist, medium-stiff, medium-plasticity. 10% sand, fine- to coarse-grained, sub-angular. 5% gravel, fine-grained with max gravel size of 1/4-inch. No hydrocarbon odor.	14
15	Direct Push	100%	118.6		SP	POORLY GRADED SAND w/SILT: 85% sand, very dark gray (GLEY1 3/N), moist, medium-dense, fine- to medium-grained, sub-angular to sub-rounded, poorly graded. 15% silt, non-plastic. Moderate hydrocarbon odor.	15
			43.4		ML	SILT: 70% silt, 30% clay, yellowish brown (10YR 5/6), moist, soft, low-plasticity.	15.5
			49	B-46-GW-18'	SP	POORLY GRADED SAND w/SILT: 85% sand, very dark gray (GLEY1 3/N), wet, medium-dense, fine- to medium-grained, sub-angular to sub-rounded, poorly graded. 15% silt, non-plastic. Moderate hydrocarbon odor.	17.5
			0.0				18.5
			0.0		CL	CLAY: 60% clay, 40% silt, grayish brown (10YR 5/2), moist, stiff, low-plasticity.	22
20	Direct Push	100%	0.0				20
			0.0				
			0.0				
			0.0				
			0.0		GM	SILTY GRAVEL w/SAND: 50% gravel, brown (10YR 5/3), wet, medium-dense, fine-grained, sub-angular to sub-rounded, with max gravel size of 1/4-inch. 20% sand, fine- to coarse-grained, poorly graded. 30% silt, non-plastic.	27
25	Direct Push	100%	0.0				25
			0.0				
			0.0				
			0.0				
30	Direct Push	NR	2.0				30
		80%	2.0	B-46-GW-32'			
			1.7		CL		32.5

Continued on page 2

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	B-46
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	2-1/8"
DATE STARTED:	25-Aug-15	DRILLER/COMPANY:	Josh Zwenke
DATE COMPLETED:	25-Aug-15		Enprobe C-57 #777007
DRILLING METHOD:	Direct Push, Dual Tube (2-1/8" OD Casing) Continuous Core Samples (1-3/4" diameter)	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
33	Direct Push	80%	0.0		CL	CLAY: 100% clay, grayish brown (10YR 5/2), moist, medium-stiff, medium-plasticity. No hydrocarbon odor.	33
35	Direct Push	100%	0.0		CLS	SANDY CLAY: 75% clay, brown (10YR 5/3), moist, medium-stiff, medium-plasticity. 25% sand, fine- to medium-grained, sub-angular, poorly graded. No hydrocarbon odor.	35
40	Direct Push	100%	0.0		CLS	SANDY CLAY w/GRAVEL: 55% clay, brown (10YR 5/3), moist, medium-stiff, medium-plasticity. 25% sand, fine- to coarse-grained, sub-angular, poorly graded. 20% gravel, fine-grained, with max gravel size of 1/4-inch. No hydrocarbon odor.	40
45	Direct Push	100%	0.0		CL	CLAY: 80% clay, 20% silt, grayish brown (10YR 5/2), moist, medium-stiff, low-plasticity. @ 47' - density increases to very stiff. Clay content increases to 100%. Plasticity changes to medium.	45
50						Geologist Terminated Boring at 50' - Target Depth Achieved - First water bearing zone encountered between 18.5' - 22.0'. - Second water bearing zone encountered between 27.0' - 32.5' Soil boring was backfilled with neat cement grout using tremie methods. Surface completed with native soil to match surrounding grade.	50
55							55
60							60

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	B-47
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	2-1/8"
DATE STARTED:	26-Aug-15	DRILLER/COMPANY:	Josh Zwenke
DATE COMPLETED:	26-Aug-15		Enprobe C-57 #777007
DRILLING METHOD:	Direct Push, Dual Tube (2-1/8" OD Casing) Continuous Core Samples (1-3/4" diameter)	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER ↓		6.2		MLS	ASPHALT AND BASE SANDY SILT: 70% silt, 10% clay, very dark gray (10YR 3/1), damp, medium-stiff, non-plastic. 20% sand, fine- to medium-grained, sub-angular, poorly graded. Slight hydrocarbon odor.	0
5		Direct Push	0.0		CL	CLAY: 90% clay, 10% silt, brown (10YR 5/3), damp, stiff, medium-plasticity.	5
10			0.0				10
15			Direct Push	100%	0.0	MLS	SANDY SILT: 70% silt, light gray (10YR 7/2), damp, medium-stiff, non-plastic. 30% sand, fine-grained, sub-angular, poorly graded. No hydrocarbon odor.
	0.0				SP	POORLY GRADED SAND: 90% sand, grayish brown (10YR 5/2), moist, medium-dense, fine- to medium-grained, sub-angular, poorly graded. 10% clay, non-plastic. No hydrocarbon odor.	15
20	Direct Push	NR	0.0	B-47-GW-18'	CL SP	CLAY: 90% clay, grayish brown (10YR 5/2), wet, medium-stiff, medium-plasticity. 10% sand, fine-grained, sub-angular. No hydrocarbon odor. POORLY GRADED SAND: 90% sand, grayish brown (10YR 5/2), wet, medium-dense, fine- to medium-grained, sub-angular, poorly graded. 10% clay, non-plastic. No hydrocarbon odor.	20
			0.0				CL
25	Direct Push	NR	0.0		CLS	CLAYEY SAND w/GRAVEL: 50% sand, dark yellowish brown (10YR 4/4), wet, medium-dense, fine- to coarse-grained, sub-angular to sub-rounded, poorly graded. 20% gravel, fine-grained, with max gravel size of 1/4-inch. 30% clay, non-plastic.	25
			0.0	80%			25
30	Direct Push	NR	0.0		CL	CLAY: 75% clay, 15% silt, dark yellowish brown (10YR 4/6), moist, stiff, low-plasticity. 10% sand, fine-grained, sub-angular.	30
			0.0	60%			30

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	B-47
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	2-1/8"
DATE STARTED:	26-Aug-15	DRILLER/COMPANY:	Josh Zwenke
DATE COMPLETED:	26-Aug-15		Enprobe C-57 #777007
DRILLING METHOD:	Direct Push, Dual Tube (2-1/8" OD Casing) Continuous Core Samples (1-3/4" diameter)	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
33	Direct Push	60%	0.0	B-47-GW-33'	SG	GRAVELLY SAND w/CLAY: 60% sand, dark yellowish brown (10YR 4/4), wet, dense, fine- to coarse-grained, sub-angular to sub-rounded, poorly graded. 25% gravel, fine-grained, with max gravel size of 1/4-inch. 15% clay, low-plasticity. 34.5'	33
35	Direct Push	NR	0.0		CLS		SANDY CLAY w/GRAVEL: 50% clay, 10% silt, brown (10YR 4/3), wet, medium-dense, non-plastic. 25% sand, fine- to coarse-grained, sub-angular, poorly graded. 15% gravel, fine-grained, with max gravel size of 1/4-inch. No hydrocarbon odor.
40	Direct Push	60%	0.0		GC CLS	CLAYEY GRAVEL: 60% gravel, yellowish brown (10YR 5/4), wet, medium-dense, fine-grained, sub-angular, with max gravel size of 1/4-inch. 20% sand, fine- to coarse-grained, poorly graded. 20% clay, non- to low-plasticity. 39.5' SANDY CLAY w/GRAVEL: 55% clay, yellowish brown (10YR 5/6), moist, stiff, low-plasticity. 25% sand, fine- to coarse-grained, sub-angular to sub-rounded, poorly graded. 20% gravel, fine-grained, with max gravel size of 1/4-inch. No hydrocarbon odor. 40' CLAY: 100% clay, brown (10YR 5/3), moist, stiff, medium-plasticity. No hydrocarbon odor. 42'	40
45	Direct Push	100%	0.0		CL		45
50	Direct Push	100%	0.0			Geologist Terminated Boring at 50' - Target Depth Achieved - First water bearing zone encountered between 17.5' - 22.0'. - Second water bearing zone encountered between 33.0' - 39.5' Soil boring was backfilled with neat cement grout using tremie methods. Surface completed with native soil to match surrounding grade. 50'	50
55							55
60							60

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	MW-2R
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	10-Sep-15	DRILLER/COMPANY:	Josh Zwenke
DATE COMPLETED:	8-Dec-15		Enprobe C-57 #777007
DRILLING METHOD:	Direct Push, Dual Tube (2-1/8" OD Casing) Continuous Core Samples (1-3/4" diameter)	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER					CONCRETE	0
5	Direct Push	NR			MLS	SANDY SILT w/GRAVEL: 45% silt, dark yellowish brown (10YR 3/4), damp, medium-stiff, non-plastic. 35% sand, fine- to coarse-grained, sub-angular to sub-rounded, poorly graded. 20% gravel, fine- to coarse-grained, with max gravel size of 3/4-inch. No hydrocarbon odor.	5
10	Direct Push	NR			MLS	SANDY SILT: 65% silt, strong brown (7.5YR 4/6), moist, medium-stiff, non-plastic. 35% sand, fine- to medium-grained, sub-angular, poorly graded. Very slight hydrocarbon odor. Fill material from excavation.	10
15	Direct Push	NR			SG	GRAVELLY SAND w/SILT: 50% sand, very dark greenish gray (GLE Y1 3/5GY), wet, dense, fine- to coarse-grained, angular to sub-rounded, poorly graded. 30% gravel, fine- to coarse-grained, with max gravel size of 1/2-inch. 20% silt, non-plastic. Strong hydrocarbon odor.	15
20	Direct Push	NR			ML	SILT w/SAND: 65% silt, 20% clay, greenish gray (GLE Y1 6/10GY), wet, medium-stiff, low-plasticity. 15% sand, fine-grained, sub-angular, poorly graded. Strong hydrocarbon odor.	20
25	Direct Push	NR			CL	CLAY: 90% clay, 10% silt, yellowish brown (10YR 5/4), moist, very stiff, medium-plasticity. Moderate hydrocarbon odor.	25
25	Direct Push	80%			CLS	SANDY CLAY: 65% clay, brown (10YR 4/3), moist, stiff, low-plasticity. 35% sand, fine- to coarse-grained, angular to sub-rounded, poorly graded. Slight hydrocarbon odor.	25
25	Direct Push	80%			ML	SILT w/SAND: 70% silt, 10% clay, yellowish brown (10YR 5/4), moist, medium-stiff, non-plastic. 20% sand, fine- to medium-grained, sub-angular, poorly graded. Very slight hydrocarbon odor.	25
30	Direct Push	100%			CLS	Continued on following page	30

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	MW-2R
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	10-Sep-15	DRILLER/COMPANY:	Josh Zwenke
DATE COMPLETED:	8-Dec-15		Enprobe C-57 #777007
DRILLING METHOD:	Direct Push, Dual Tube (2-1/8" OD Casing) Continuous Core Samples (1-3/4" diameter)	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
33	Direct Push	60%			CLs	SANDY CLAY w/GRAVEL: 50% clay, 10% silt, yellowish brown (10YR 5/6), moist, very stiff, low-plasticity. 25% sand, fine- to coarse-grained, sub-angular to sub-rounded, poorly graded. 15% gravel, fine-grained, with max gravel size of 1/4-inch. No hydrocarbon odor.	33
35	Direct Push	NR			CL		CLAY: 100% clay, grayish brown (10YR 5/2), moist, very stiff, medium-plasticity.
40	Direct Push	60%			SM	SILTY SAND: 65% sand, greenish gray (GLE Y1 6/5GY), wet, medium-dense, fine- to medium-grained, sub-angular, poorly graded. 35% silt, non-plastic. Moderate hydrocarbon odor.	40
45	Direct Push	100%			MLS		SANDY SILT: 75% silt, greenish gray (GLE Y1 6/5GY), wet, medium-stiff, non-plastic. 25% sand, fine- to medium-grained, sub-angular, poorly graded. Slight hydrocarbon odor.
50	Direct Push	100%			CL	CLAY: 100% clay, brown (10YR 5/3), moist, stiff, medium-plasticity. No hydrocarbon odor.	50
55	Direct Push	NR				<p>Geologist Terminated Boring at 60' - Target Depth Achieved</p> <ul style="list-style-type: none"> - First water bearing zone encountered between 17.0' - 23.0'. - Second water bearing zone encountered between 40.0' - 48.0' <p>Pilot boring drilled and continuously cored to 60' using direct push equipment. Boring then backfilled with neat cement grout using tremie methods. Following pilot boring, well was drilled using 8-inch diameter hollow stem augers. Due to improper construction, well was overdrilled and reinstalled on December 8, 2015.</p> <p>Well constructed using 2-inch diameter SCH40 PVC 0.020-inch machine slotted PVC screen placed from 18' to 23'</p> <p>#2/12 sand filter pack placed from 16' to 23' Bentonite transition seal placed from 13' to 16' Neat cement grout placed from 1' to 13' Well completed at surface with traffic-rated bolt-down well box</p>	55
60	Direct Push	30%					60

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	MW-3R
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	11-Sep-15	DRILLER/COMPANY:	Josh Zwenke
DATE COMPLETED:	11-Sep-15		Enprobe C-57 #777007
DRILLING METHOD:	8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER		0.0		MLS	ASPHALT AND BASE SANDY SILT: 75% silt, dark grayish brown (10YR 4/2), damp, medium-stiff, non-plastic. 25% sand, fine- to medium-grained, sub-angular to sub-rounded, poorly graded. Slight hydrocarbon odor.	0
			0.0		SP	POORLY GRADED SAND w/GRAVEL: 75% sand, black (10YR 2/1), damp, dense, fine- to medium-grained, sub-angular to sub-rounded, poorly graded. 15% gravel, fine-grained, with max gravel size of 1/4-inch. 10% silt, non-plastic. Moderate hydrocarbon odor.	
5	Hollow Stem Auger		2.0		ML	SILT: 80% silt, 15% clay, very dark gray (10YR 3/1), damp, stiff, low-plasticity. 5% fine-grained sand. Very slight hydrocarbon odor. @7' to 8' - Color grades to greenish gray (GLEY 1 6/5GY).	5
			0.7				
			0.0				
			0.0				
10			0.0				
			0.0				
			0.0				
			0.0				
			0.0				
			0.0				
15			118.6		CL	CLAY: 75% clay, 10% silt, dark grayish brown (10YR 4/2), moist, medium-stiff, medium-plasticity. 10% sand, fine- to coarse-grained, sub-angular. 5% gravel, fine-grained with max gravel size of 1/4-inch. No hydrocarbon odor.	15
			43.4		SP	POORLY GRADED SAND w/SILT: 85% sand, very dark gray (GLEY1 3/N), moist, medium-dense, fine- to medium-grained, sub-angular to sub-rounded, poorly graded. 15% silt, non-plastic. Moderate hydrocarbon odor.	
			49		ML	SILT: 70% silt, 30% clay, yellowish brown (10YR 5/6), moist, soft, low-plasticity.	
			0.0		SP	POORLY GRADED SAND w/SILT: 85% sand, very dark gray (GLEY1 3/N), wet, medium-dense, fine- to medium-grained, sub-angular to sub-rounded, poorly graded. 15% silt, non-plastic. Moderate hydrocarbon odor.	
20			0.0				20
			0.0				
			0.0				
			0.0				
			0.0				
			0.0				
			0.0				
			0.0				
25						Geologist Terminated 22' - Target Depth Achieved 'Lithology and FID measurements are based off nearby B-46 (~5 feet away)	25
						Well was drilled using 8-inch diameter hollow stem augers. Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 17' to 22'	
						#2/12 sand filter pack placed from 15' to 22' Bentonite transition seal placed from 12' to 15' Neat cement grout placed from 1' to 12'	
						Well completed at surface with traffic-rated bolt-down well box	
30							30

File Original with DWR

State of California Well Completion Report

Refer to Instruction Pamphlet
No. 0288601

DWR Use Only - Do Not Fill In

State Well Number/Site Number

Latitude _____ Longitude _____

APN/TRS/Other

Page 1 of 1

Owner's Well Number MW-3R

Date Work Began 09/11/2015 Date Work Ended 9/11/2015

Local Permit Agency Alameda County PWA

Permit Number W2015-0223 Permit Date 3/17/15

Geologic Log		
Orientation <input checked="" type="radio"/> Vertical <input type="radio"/> Horizontal <input type="radio"/> Angle Specify _____		
Drilling Method <input type="checkbox"/> Hollow Stem Auger <input type="checkbox"/> Drilling Fluid _____		
Depth from Surface		Description
Feet	to Feet	Describe material, grain size, color, etc
		Please see attached geologic log
Total Depth of Boring <u>22</u>		Feet
Total Depth of Completed Well <u>22</u>		Feet

Well Owner

Name Owens Brockway Glass Container, Inc.

Mailing Address One Michael Owens Way

City Perrysburg State OH Zip 43551-2999

Well Location

Address 3600 Alameda Avenue

City Oakland County Alameda

Latitude _____ N Longitude _____ W

Datum _____ Dec. Lat. _____ Dec. Long. _____

APN Book 33 Page 2250 Parcel 11

Township 2S Range 3W Section 7

Location Sketch
(Sketch must be drawn by hand after form is printed.)

North

South

Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

New Well
 Modification/Repair
 Deepen
 Other
 Destroy

Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

Water Supply
 Domestic Public
 Irrigation Industrial

Cathodic Protection
 Dewatering
 Heat Exchange
 Injection
 Monitoring
 Remediation
 Sparging
 Test Well
 Vapor Extraction
 Other

Water Level and Yield of Completed Well

Depth to first water 19 (Feet below surface)

Depth to Static _____

Water Level _____ (Feet) Date Measured _____

Estimated Yield * _____ (GPM) Test Type _____

Test Length _____ (Hours) Total Drawdown _____ (Feet)

*May not be representative of a well's long term yield.

Casings								Annular Material			
Depth from Surface	Borehole Diameter	Type	Material	Wall Thickness	Outside Diameter	Screen Type	Slot Size if Any	Depth from Surface	Fill	Description	
Feet	to Feet	(Inches)		(Inches)	(Inches)		(Inches)	Feet	to Feet		
1	17	8	Blank	PVC Sch. 40	0.154	2.375		1	12	Cement	
17	22	8	Screen	PVC Sch. 80	0.154	2.375	Milled Slots	0.020	12	15	Bentonite
									15	22	Filter Pack
											#2/12 Sand

Attachments

Geologic Log

Well Construction Diagram

Geophysical Log(s)

Soil/Water Chemical Analyses

Other Site Plan

Attach additional information, if it exists.

Certification Statement

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief

Name EnProbe Direct Push & Drilling Services

Person, Firm or Corporation

P.O. Box 6993 Oroville CA 95966

Address City State Zip

Signed _____ Date Signed 10-27-15 C-57 License Number 777-007

C-57 Licensed Water Well Contractor

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	MW-21
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	11-Sep-15	DRILLER/COMPANY:	Josh Zwenke
DATE COMPLETED:	11-Sep-15		Enprobe C-57 #777007
DRILLING METHOD:	8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery (%)	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER				MLS	CONCRETE SANDY SILT: 75% silt, dark grayish brown (10YR 4/2), damp, medium-stiff, non-plastic. 25% sand, fine- to medium-grained, sub-angular to sub-rounded, poorly graded. No hydrocarbon odor.	0
5	Hollow Stem Auger						5
10							10
15							15
20					SP	POORLY GRADED SAND w/SILT: 85% sand, dark grayish brown (10YR 4/2), wet, medium-dense, fine- to medium-grained, sub-angular to sub-rounded, poorly graded. 15% silt, non-plastic. No hydrocarbon odor.	20
25						Geologist Terminated 30' - Target Depth Achieved Lithology based off logged soil cuttings during drilling. Well was drilled using 8-inch diameter hollow stem augers. Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 15' to 30' #2/12 sand filter pack placed from 13' to 30' Bentonite transition seal placed from 10' to 13' Neat cement grout placed from 1' to 10' Well completed at surface with traffic-rated bolt-down well box	25
30							30

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	IW-1A
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	December 10, 2015	DRILLER/COMPANY:	Amador Arroyo
DATE COMPLETED:	December 10, 2015		Cascade Drilling, L.P. C-57 #938110
DRILLING METHOD:	8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Blow Counts	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)	
0	HAND AUGER / AIR KNIFE					Upper 5' cleared for subsurface utilities / obstructions using a hand auger. No soil samples collected between 0-15 feet bgs.	0	
5	Hollow Stem Auger						5	
10							10	
15		9			MLS	SANDY SILT: 60% silt, greenish gray (GLE Y1 5/5GY), moist, medium-stiff, non-plastic. 40% sand, fine- to medium-grained, sub-angular, poorly graded. Slight hydrocarbon odor.	15	
		12			SP			
		16				POORLY GRADED SAND w/SILT: 85% sand, greenish gray (GLE Y 1 5/5GY), wet, medium-dense, fine- to medium-grained, sub-angular, poorly graded. 15% silt, non-plastic. Moderate hydrocarbon odor.		
		9						
		12						
		17						
		7				CLAY: 75% clay, 20% silt, grayish brown (10YR 5/2), moist, medium-stiff, medium-plasticity. 5% fine sand. Very slight hydrocarbon odor.		
		11						
		14						
		14						
20			30			CL		20
			22					
		10						
		20						
		14					22.5	
25						Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 18' to 21' Bentonite backfill placed from 22' to 22.5' #2/12 sand filter pack placed from 17' to 22' Bentonite transition seal placed from 14' to 17' Neat cement grout placed from 2' to 14'	25	
30							30	

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	IW-1B
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	December 10, 2015	DRILLER/COMPANY:	Amador Arroyo
DATE COMPLETED:	December 10, 2015		Cascade Drilling, L.P. C-57 #938110
DRILLING METHOD:	8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Blow Counts	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)	
0	HAND AUGER / AIR KNIFE					Upper 5' cleared for subsurface utilities / obstructions using a hand auger. No soil samples collected between 0-23 feet bgs.	0	
5	Hollow Stem Auger						5	
10							10	
15							15	
20		12 20 24					20	
		1 4 9				CL	CLAY: 75% clay, 20% silt, grayish brown (10YR 5/2), moist, medium-stiff, medium-plasticity. 5% fine sand. Very slight hydrocarbon odor.	23
		1 5 13				SP	POORLY GRADED SAND w/SILT: 90% sand, dark greenish gray (GLE Y1 4/5GY), wet, medium-dense, fine- to coarse-grained, sub-angular to sub-rounded, poorly graded. 10% silt, non-plastic. Moderate hydrocarbon odor.	26'
25		3 10 20				SG	GRAVELLY SAND w/SILT: 65% sand, dark greenish gray (GLE Y1 4/10Y), wet, dense, fine- to coarse-grained, sub-angular to sub-rounded, poorly graded. 20% gravel, fine- to coarse-grained, with max gravel size of 3/4-inches. Moderate hydrocarbon odor.	28.5'
		6 8 19					CLAYEY GRAVEL w/SAND: 50% gravel, dark yellowish brown (10YR 4/6), moist, very dense, sub-angular, fine- to coarse-grained, with max gravel size of 1/2-inch. 20% sand, fine to coarse-grained. 20% clay, 10% silt, non-plastic fines. Very slight hydrocarbon odor.	29'
		6 10 20				GC		
		8 12						
30							Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 18' to 21' #2/12 sand filter pack placed from 24' to 29' Bentonite transition seal placed from 21' to 24' Neat cement grout placed from 2' to 21'	30

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet
No. e0298262

DWR Use Only – Do Not Fill In			
State Well Number/Site Number			
Latitude	N	Longitude	W
APN/TRS/Other			

Page 1 of 1
 Owner's Well Number IW-1B
 Date Work Began 12/10/2015 Date Work Ended 12/10/2015
 Local Permit Agency Alameda County Public Works Agency
 Permit Number W2015-0813 Permit Date 8/27/15

Geologic Log		
Orientation <input checked="" type="radio"/> Vertical <input type="radio"/> Horizontal <input type="radio"/> Angle Specify _____		
Drilling Method <u>Hollow Stem Auger</u> Drilling Fluid _____		
Depth from Surface	Feet	Description
		Describe material, grain size, color, etc
		Please see attached geologic log
Total Depth of Boring <u>29</u> Feet		
Total Depth of Completed Well <u>28</u> Feet		

Well Owner	
Name <u>Owens Brockway Glass Container, Inc.</u>	
Mailing Address <u>One Michael Owens Way</u>	
City <u>Perrysburg</u> State <u>OH</u> Zip <u>43551-2999</u>	
Well Location	
Address <u>3600 Alameda Ave</u>	
City <u>Oakland</u> County <u>Alameda</u>	
Latitude _____ N Longitude _____ W	
Datum _____ Dec. Lat. _____ Dec. Long. _____	
APN Book <u>33</u> Page <u>2250</u> Parcel <u>11</u>	
Township <u>2S</u> Range <u>3W</u> Section <u>7</u>	

Location Sketch	Activity
(Sketch must be drawn by hand after form is printed.)	
North	<input checked="" type="radio"/> New Well <input type="radio"/> Modification/Repair <input type="radio"/> Deepen <input type="radio"/> Other _____ <input type="radio"/> Destroy <small>Describe procedures and materials under "GEOLOGIC LOG"</small>
South	
West	East
South	Planned Uses <input type="radio"/> Water Supply <input type="checkbox"/> Domestic <input type="checkbox"/> Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Industrial <input type="radio"/> Cathodic Protection <input type="radio"/> Dewatering <input type="radio"/> Heat Exchange <input type="radio"/> Injection <input type="radio"/> Monitoring <input type="radio"/> Remediation <input checked="" type="radio"/> Sparging <input type="radio"/> Test Well <input type="radio"/> Vapor Extraction <input type="radio"/> Other _____
<small>Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.</small>	

Water Level and Yield of Completed Well	
Depth to first water _____ (Feet below surface)	Depth to Static _____
Water Level <u>13</u> (Feet)	Date Measured <u>12/14/2015</u>
Estimated Yield * _____ (GPM)	Test Type _____
Test Length _____ (Hours)	Total Drawdown _____ (Feet)
*May not be representative of a well's long term yield.	

Casings									Annular Material			
Depth from Surface	Feet to Feet	Borehole Diameter	Type	Material	Wall Thickness	Outside Diameter	Screen Type	Slot Size if Any	Depth from Surface	Feet to Feet	Fill	Description
1	25	8	Blank	PVC Sch. 40	0.154	2.375			2	21	Cement	
25	28	8	Screen	PVC Sch. 40	0.154	2.375	Milled Slots	0.020	21	24	Bentonite	
									24	29	Filter Pack	#2/12 Sand

Attachments
<input checked="" type="checkbox"/> Geologic Log <input type="checkbox"/> Well Construction Diagram <input type="checkbox"/> Geophysical Log(s) <input type="checkbox"/> Soil/Water Chemical Analyses <input type="checkbox"/> Other _____
<small>Attach additional information, if it exists.</small>

Certification Statement
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief
Name _____
Person, Firm or Corporation
Address _____ City _____ State <u>CA</u> Zip _____
Signed _____
C-57 Licensed Water Well Contractor
Date Signed _____ C-57 License Number _____

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	IW-2A
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	December 10, 2015	DRILLER/COMPANY:	Amador Arroyo
DATE COMPLETED:	December 10, 2015		Cascade Drilling, L.P. C-57 #938110
DRILLING METHOD:	8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Blow Counts	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER / AIR KNIFE					Upper 5' cleared for subsurface utilities / obstructions using a hand auger. No soil samples collected between 0-15 feet bgs.	0
5	Hollow Stem Auger						5
10							10
15		12			MLS	▼ SANDY SILT: 60% silt, greenish gray (GLEY1 5/5GY), moist, medium-stiff, non-plastic. 40% sand, fine- to medium-grained, sub-angular, poorly graded. Moderate hydrocarbon odor.	15
		17			SM		
		20			ML	SILTY SAND: 75% sand, greenish gray (GLEY 1 5/5GY), moist, medium-dense, fine- to medium-grained, sub-angular, poorly graded. 25% silt, non-plastic. Moderate hydrocarbon odor.	19'
		7			SP	SILT: 80% silt, 10% clay, gray (2.5Y 5/1), moist, medium-stiff, non-plastic. 10% sand, fine-grained, sub-angular. Moderate hydrocarbon odor.	
		14			CL	POORLY GRADED SAND w/SILT: 85% sand, greenish gray (GLEY1 5/5GY), wet, medium-dense, fine- to medium-grained, sub-angular. 15% silt, non-plastic. Moderate hydrocarbon odor.	20.5'
		19				CLAY: 80% clay, 20% silt, yellowish brown (10YR 5/4), moist, medium stiff, medium-plasticity. Slight hydrocarbon odor.	
		11					
		16					
20	9						20
	9						
	18						
	6						
	7						
	9						
25						Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 17.5' to 20.5' Bentonite backfill placed from 21.5' to 22.5' #2/12 sand filter pack placed from 16.5' to 21.5' Bentonite transition seal placed from 13.5' to 16.5' Neat cement grout placed from 2' to 13.5'	25
30							30

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0298295

Page 1 of 1

Owner's Well Number IW-2A

Date Work Began 12/10/2015 Date Work Ended 12/10/2015

Local Permit Agency Alameda County Public Works Agency

Permit Number W2015-0813 Permit Date 8/27/15

DWR Use Only - Do Not Fill In			
State Well Number/Site Number _____			
Latitude _____ N _____ W _____		Longitude _____ W _____	
APN/TRS/Other _____			

Geologic Log		
Orientation <input checked="" type="radio"/> Vertical <input type="radio"/> Horizontal <input type="radio"/> Angle Specify _____		
Drilling Method <u>Hollow Stem Auger</u> Drilling Fluid _____		
Depth from Surface	Description	
Feet to Feet	Describe material, grain size, color, etc	
	Please see attached geologic log	
Total Depth of Boring <u>22.5</u> Feet		
Total Depth of Completed Well <u>20.5</u> Feet		

Well Owner	
Name <u>Owens Brockway Glass Container, Inc.</u>	
Mailing Address <u>One Michael Owens Way</u>	
City <u>Perrysburg</u> State <u>OH</u> Zip <u>43551-2999</u>	

Well Location	
Address <u>3600 Alameda Ave</u>	
City <u>Oakland</u> County <u>Alameda</u>	
Latitude _____ N _____ W _____	
Datum _____ Dec. Lat. _____ Dec. Long. _____	
APN Book <u>33</u> Page <u>2250</u> Parcel <u>11</u>	
Township <u>2S</u> Range <u>3W</u> Section <u>7</u>	

Location Sketch	
(Sketch must be drawn by hand after form is printed.)	
North	
West	South
East	
Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.	

Activity	
<input checked="" type="radio"/> New Well <input type="radio"/> Modification/Repair <input type="radio"/> Deepen <input type="radio"/> Other _____ <input type="radio"/> Destroy <small>Describe procedures and materials under "GEOLOGIC LOG"</small>	
Planned Uses	
<input type="radio"/> Water Supply <input type="checkbox"/> Domestic <input type="checkbox"/> Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Industrial <input type="radio"/> Cathodic Protection <input type="radio"/> Dewatering <input type="radio"/> Heat Exchange <input type="radio"/> Injection <input type="radio"/> Monitoring <input type="radio"/> Remediation <input checked="" type="radio"/> Sparging <input type="radio"/> Test Well <input type="radio"/> Vapor Extraction <input type="radio"/> Other _____	

Water Level and Yield of Completed Well	
Depth to first water <u>16</u> (Feet below surface)	
Depth to Static _____	
Water Level <u>11</u> (Feet) Date Measured <u>12/14/2015</u>	
Estimated Yield * _____ (GPM) Test Type _____	
Test Length _____ (Hours) Total Drawdown _____ (Feet)	
*May not be representative of a well's long term yield.	

Casings								
Depth from Surface Feet	Surface Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
1	18	8	Blank	PVC Sch. 40	0.154	2.375		
18	21	8	Screen	PVC Sch. 40	0.154	2.375	Milled Slots	0.020

Annular Material			
Depth from Surface Feet	Surface Feet	Fill	Description
2	14	Cement	
14	17	Bentonite	
17	22	Filter Pack	#2/12 Sand
22	23	Bentonite	

Attachments	
<input checked="" type="checkbox"/> Geologic Log <input type="checkbox"/> Well Construction Diagram <input type="checkbox"/> Geophysical Log(s) <input type="checkbox"/> Soil/Water Chemical Analyses <input type="checkbox"/> Other _____	
<small>Attach additional information, if it exists.</small>	

Certification Statement			
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief			
Name _____			
Person, Firm or Corporation			
Address _____		City _____ State <u>CA</u> Zip _____	
Signed _____		Date Signed _____	
C-57 Licensed Water Well Contractor		C-57 License Number _____	

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	IW-2B
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	December 12, 2015	DRILLER/COMPANY:	Amador Arroyo
DATE COMPLETED:	December 12, 2015		Cascade Drilling, L.P. C-57 #938110
DRILLING METHOD:	8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Blow Counts	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)						
0	HAND AUGER / AIR KNIFE					Upper 8' cleared for subsurface utilities / obstructions using a hand auger. No soil samples collected between 0-20 feet bgs.	0						
5	Hollow Stem Auger						5						
10							10						
15							15						
20		12	SP	POORLY GRADED SAND w/SILT: 90% sand, dark greenish gray (GLE Y1 4/5GY), wet, dense, fine- to medium-grained, sub-angular, poorly graded. 10% silt, non-plastic. Strong hydrocarbon odor.	20'	20							
		20			ML	SILT: 70% silt, 30% clay, yellowish brown (10YR 5/4), wet, stiff, non-plastic. Moderate hydrocarbon odor.	22'	20					
		24					25'	25					
		1	GS	SANDY GRAVEL w/SILT: 60% gravel, 30% sand, very dark greenish gray (GLE Y 1 3/10Y), wet, dense, fine- to coarse-grained, sub-angular to sub-rounded, with max gravel size of 3/4", well graded. 10% silt, non-plastic. Slight hydrocarbon odor.	28.5'	25							
		4				CG	GRAVELLY CLAY: 60% clay, brown (10YR 4/3), moist, very stiff, low-plasticity. 30% gravel, 10% sand, fine- to coarse-grained, sub-angular, with max gravel size of 3/4", poorly graded. Very slight hydrocarbon odor.	30'	25				
		9							Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 26' to 29'	30	25		
		1									#2/12 sand filter pack placed from 25' to 30'	30	25
		5											Bentonite transition seal placed from 22' to 25'
		13	Neat cement grout placed from 2' to 22'	30	25								
		3			30	25							
		10					25						
		20						25					
		6						25					
		8						25					
		19						25					
		6						25					
		10						25					
	20						25						
	8						25						
	12						25						
30							30						

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State of California

Well Completion Report

Refer to Instruction Pamphlet

No. **e0307967**

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Owner's Well Number IW-2B

Date Work Began 12/12/2015

Date Work Ended 12/12/2015

Local Permit Agency Alameda County Public Works Agency

Permit Number W2015-0813

Permit Date 8/27/15

DWR Use Only - Do Not Fill In

State Well Number/Site Number			
Latitude	N	Longitude	W
APN/TRS/Other			

Geologic Log	
Orientation <input type="radio"/> Vertical <input type="radio"/> Horizontal <input type="radio"/> Angle Specify _____ Drilling Method _____ Drilling Fluid _____	
Depth from Surface	Description
Feet to Feet	Describe material, grain size, color, etc
	Please see attached geologic log
Total Depth of Boring <u>30</u>	Feet
Total Depth of Completed Well <u>29</u>	Feet

Well Owner			
Name <u>Owens Brockway Glass Container, Inc.</u>			
Mailing Address <u>One Michael Owens Way</u>			
City <u>Perrysburg</u>	State <u>OH</u>	Zip <u>43551-2999</u>	

Well Location			
Address <u>3600 Alameda Ave</u>			
City <u>Oakland</u>	County <u>Alameda</u>		
Latitude _____	_____ N	Longitude _____	_____ W
Dec. Min. Sec.	Dec. Min. Sec.	Dec. Min. Sec.	Dec. Min. Sec.
Datum _____	Dec. Lat. _____	Dec. Long. _____	
APN Book <u>33</u>	Page <u>2250</u>	Parcel <u>11</u>	
Township <u>2S</u>	Range <u>3W</u>	Section <u>7</u>	

Location Sketch
(Sketch must be drawn by hand after form is printed.)

North

West
East

South

Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity
<input checked="" type="radio"/> New Well
<input type="radio"/> Modification/Repair
<input type="radio"/> Deepen
<input type="radio"/> Other _____
<input type="radio"/> Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses	
<input type="radio"/> Water Supply	<input type="checkbox"/> Domestic <input type="checkbox"/> Public
	<input type="checkbox"/> Irrigation <input type="checkbox"/> Industrial
<input type="radio"/> Cathodic Protection	
<input type="radio"/> Dewatering	
<input type="radio"/> Heat Exchange	
<input checked="" type="radio"/> Injection	
<input type="radio"/> Monitoring	
<input type="radio"/> Remediation	
<input type="radio"/> Sparging	
<input type="radio"/> Test Well	
<input type="radio"/> Vapor Extraction	
<input type="radio"/> Other _____	

Water Level and Yield of Completed Well		
Depth to first water _____	(Feet below surface)	
Depth to Static _____		
Water Level <u>13</u>	(Feet)	Date Measured <u>12/17/2015</u>
Estimated Yield * _____	(GPM)	Test Type _____
Test Length _____	(Hours)	Total Drawdown _____ (Feet)
*May not be representative of a well's long term yield.		

Casings									
Depth from Surface	Borehole Diameter	Type	Material	Wall Thickness	Outside Diameter	Screen Type	Slot Size if Any		
Feet to Feet	(Inches)			(Inches)	(Inches)		(Inches)		
1	26	8	Blank	PVC Sch. 40	0.154	2.375			
26	29	8	Screen	PVC Sch. 40	0.154	2.375	Milled Slots	0.020	

Annular Material		
Depth from Surface	Fill	Description
Feet to Feet		
2	22	Cement
22	25	Bentonite
25	30	Filter Pack #2/12 Sand

Attachments
<input checked="" type="checkbox"/> Geologic Log
<input type="checkbox"/> Well Construction Diagram
<input type="checkbox"/> Geophysical Log(s)
<input type="checkbox"/> Soil/Water Chemical Analyses
<input type="checkbox"/> Other _____

Certification Statement			
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief			
Name _____			
Person, Firm or Corporation	_____	CA	_____
Address	_____	State	Zip
Signed _____	_____	Date Signed _____	C-57 License Number _____
C-57 Licensed Water Well Contractor			

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	IW-3
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	December 8, 2015	DRILLER/COMPANY:	Amador Arroyo
DATE COMPLETED:	December 8, 2015		Cascade Drilling, L.P. C-57 #938110
DRILLING METHOD:	8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Blow Counts	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER / AIR KNIFE					Upper 5' cleared for subsurface utilities / obstructions using a hand auger. SANDY SILT: 70% silt, brown (10 YR 4/3), damp, loose- to medium-stiff, non-plastic. 30% sand, fine- to medium-grained, sub-angular, poorly graded. No hydrocarbon odor. Tree roots in shallow soil.	0
5	Hollow Stem Auger					No soil samples collected from 5-15 feet bgs.	5
10							10
15		15 30 25			ML SP	SILT: 90% silt, light yellowish brown (10YR 6/4), damp, medium-stiff, non-plastic. 10% sand, fine- to medium-grained, sub-angular, poorly graded. Slight hydrocarbon odor.	15
		10 14 12				POORLY GRADED SAND w/SILT: 85% sand, dark greenish gray (GLE Y 1 4/5GY), moist, medium-dense, fine- to coarse-grained, sub-angular to sub-rounded, poorly graded. 15% silt, non-plastic. Strong hydrocarbon odor.	
		12 22 27			SG	GRAVELLY SAND w/SILT: 60% sand, dark greenish gray (GLE Y 1 4/5GY), wet, medium-dense, fine- to coarse-grained, sub-angular to sub-rounded, poorly graded. 25% gravel, fine- to coarse-grained, with 1/2-inch max gravel size. 15% silt, non-plastic. Free product present.	
20		12 22			SP		20
		6 8 10			ML	POORLY GRADED SAND w/SILT: 85% sand, dark greenish gray (GLE Y 1 4/5GY), wet, medium-dense, fine- to coarse-grained, sub-angular to sub-rounded, poorly graded. 15% silt, non-plastic. Strong hydrocarbon odor.	
						SILT: 65% silt, 30% clay, light yellowish brown (10YR 6/4), moist, soft- to medium-stiff, low-plasticity. 5% fine sand, sub-angular. Slight hydrocarbon odor.	
25							25
						Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 17.5' to 20.5'	
						Bentonite backfill placed from 21.5' to 22.5'	
						#2/12 sand filter pack placed from 16.5' to 21.5'	
						Bentonite transition seal placed from 13.5' to 16.5'	
30						Neat cement grout placed from 2' to 13.5'	30

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0308117

Page 1 of 1

Owner's Well Number IW-3

Date Work Began 12/08/2015 Date Work Ended 12/8/2015

Local Permit Agency Alameda County Public Works Agency

Permit Number W2015-0813 Permit Date 8/27/15

DWR Use Only – Do Not Fill In

State Well Number/Site Number													
				N					W				
Latitude						Longitude							
APN/TRS/Other													

Geologic Log		
Orientation <input checked="" type="radio"/> Vertical <input type="radio"/> Horizontal <input type="radio"/> Angle Specify _____		
Drilling Method <u>Hollow Stem Auger</u>		Drilling Fluid _____
Depth from Surface	Description	
Feet to Feet	Describe material, grain size, color, etc	
	Please see attached geologic log	
Total Depth of Boring <u>22.5</u> Feet		
Total Depth of Completed Well <u>20.5</u> Feet		

Well Owner		
Name <u>Owens Brockway Glass Container, Inc.</u>		
Mailing Address <u>One Michael Owens Way</u>		
City <u>Perrysburg</u> State <u>OH</u> Zip <u>43551-2999</u>		

Well Location		
Address <u>3600 Alameda Ave</u>		
City <u>Oakland</u>		County <u>Alameda</u>
Latitude _____ N Longitude _____ W		
Dec. Min. Sec.	Dec. Min. Sec.	Dec. Min. Sec.
Datum _____ Dec. Lat. _____		Dec. Long. _____
APN Book <u>33</u>	Page <u>2250</u>	Parcel <u>11</u>
Township <u>2S</u>	Range <u>3W</u>	Section <u>7</u>

Location Sketch		Activity
(Sketch must be drawn by hand after form is printed.)		<input checked="" type="radio"/> New Well <input type="radio"/> Modification/Repair <input type="radio"/> Deepen <input type="radio"/> Other _____ <input type="radio"/> Destroy <small>Describe procedures and materials under "GEOLOGIC LOG"</small>
North		Planned Uses
<div style="display: flex; justify-content: space-between;"> West East </div>		<input type="radio"/> Water Supply <input type="checkbox"/> Domestic <input type="checkbox"/> Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Industrial <input type="radio"/> Cathodic Protection <input type="radio"/> Dewatering <input type="radio"/> Heat Exchange <input type="radio"/> Injection <input type="radio"/> Monitoring <input type="radio"/> Remediation <input checked="" type="radio"/> Sparging <input type="radio"/> Test Well <input type="radio"/> Vapor Extraction <input type="radio"/> Other _____
		South
Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.		

Water Level and Yield of Completed Well			
Depth to first water <u>19</u> (Feet below surface)			
Depth to Static _____			
Water Level <u>10</u> (Feet)		Date Measured <u>12/15/2015</u>	
Estimated Yield * _____ (GPM)		Test Type _____	
Test Length _____ (Hours)		Total Drawdown _____ (Feet)	
*May not be representative of a well's long term yield.			

Casings								Annular Material			
Depth from Surface Feet to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)	Depth from Surface Feet to Feet	Fill	Description	
1	18	8	Blank	PVC Sch. 40	0.154	2.375		2	14	Cement	
18	21	8	Screen	PVC Sch. 40	0.154	2.375	Milled Slots	0.020	14	17	Bentonite
									17	22	Filter Pack #2/12 Sand
									22	23	Bentonite

Attachments
<input checked="" type="checkbox"/> Geologic Log <input type="checkbox"/> Well Construction Diagram <input type="checkbox"/> Geophysical Log(s) <input type="checkbox"/> Soil/Water Chemical Analyses <input type="checkbox"/> Other _____
Attach additional information, if it exists.

Certification Statement			
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief			
Name _____			
Person, Firm or Corporation			
Address _____		City _____	
		State <u>CA</u>	
		Zip _____	
Signed _____		Date Signed _____	
C-57 Licensed Water Well Contractor		C-57 License Number	

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	IW-4
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	December 9, 2015	DRILLER/COMPANY:	Amador Arroyo
DATE COMPLETED:	December 9, 2015		Cascade Drilling, L.P. C-57 #938110
DRILLING METHOD:	Sampled Using 2-inch Diameter Direct Push Drilled Using 8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER / AIR KNIFE				CL	CLAY w/SAND: 60% clay, 30% silt, black (10YR 2/1), dry, medium-stiff, medium-plasticity. 10% sand, fine-grained, sub-angular. No hydrocarbon odor.	0
5	Direct Push	100%			ML	SILT: 95% silt, light yellowish brown (2.5Y 6/4), damp, medium-stiff, non-plastic. 5% sand, fine-grained, sub-angular. No hydrocarbon odor.	5
10	Direct Push	100%			SP	POORLY GRADED SAND w/SILT: 80% sand, dark greenish gray (GLE Y1 4/5GY), moist, medium-dense, fine- to medium-grained, sub-angular, poorly graded. 20% silt, non-plastic. Moderate hydrocarbon odor.	10
15	Direct Push	100%			ML SP	SILT w/SAND: 90% silt, greenish gray (GLE Y1 4/10Y), moist, medium-stiff, non-plastic. 10% sand, fine-grained, sub-angular. Moderate hydrocarbon odor. POORLY GRADED SAND w/SILT: 90% sand, greenish gray (GLE Y1 5/5GY), wet, medium-dense, fine- to coarse-grained, sub-angular to sub-rounded, poorly graded. 10% silt, non-plastic. Strong hydrocarbon odor.	15
20	Direct Push	100%			CL	CLAY: 65% clay, 35% silt, light yellowish brown (2.5Y 6/4), moist, medium-stiff, medium-plasticity. Moderate hydrocarbon odor.	20
25						Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 17.5' to 20.5' Bentonite backfill placed from 21.5' to 23' #2/12 sand filter pack placed from 16.5' to 21.5' Bentonite transition seal placed from 13.5' to 16.5' Neat cement grout placed from 2' to 13.5'	25
30							30

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0308144

Page 1 of 1

Owner's Well Number IW-4

Date Work Began 12/09/2015 Date Work Ended 12/9/2015

Local Permit Agency Alameda County Public Works Agency

Permit Number W2015-0813 Permit Date 8/27/15

DWR Use Only - Do Not Fill In
State Well Number/Site Number
Latitude Longitude
APN/TRS/Other

Geologic Log
Orientation Vertical Horizontal Angle
Drilling Method Hollow Stem Auger Drilling Fluid

Table with columns: Depth from Surface (Feet to Feet), Description. Content: Please see attached geologic log

Well Owner
Name Owens Brockway Glass Container, Inc.
Mailing Address One Michael Owens Way
City Perrysburg State OH Zip 43551-2999

Well Location
Address 3600 Alameda Ave
City Oakland County Alameda
Latitude Longitude
Datum Dec. Lat. Dec. Long.
APN Book 33 Page 2250 Parcel 11
Township 2S Range 3W Section 7

Location Sketch
(Sketch must be drawn by hand after form is printed.)
North
West
East
South
Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity
New Well
Modification/Repair
Deepen
Other
Destroy
Planned Uses
Water Supply
Domestic Public
Irrigation Industrial
Cathodic Protection
Dewatering
Heat Exchange
Injection
Monitoring
Remediation
Sparging
Test Well
Vapor Extraction
Other

Water Level and Yield of Completed Well
Depth to first water 16 (Feet below surface)
Depth to Static
Water Level 13 (Feet) Date Measured 12/15/2015
Estimated Yield * (GPM) Test Type
Test Length (Hours) Total Drawdown (Feet)
*May not be representative of a well's long term yield.

Casings table with columns: Depth from Surface, Borehole Diameter, Type, Material, Wall Thickness, Outside Diameter, Screen Type, Slot Size. Data: 1-18, 8, Blank, PVC Sch. 40, 0.154, 2.375; 18-21, 8, Screen, PVC Sch. 40, 0.154, 2.375, Milled Slots, 0.020

Annular Material table with columns: Depth from Surface, Fill, Description. Data: 2-14, Cement; 14-17, Bentonite; 17-22, Filter Pack #2/12 Sand; 22-23, Bentonite

Attachments
Geologic Log
Well Construction Diagram
Geophysical Log(s)
Soil/Water Chemical Analyses
Other

Certification Statement
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief
Name
Person, Firm or Corporation
Address City State Zip
Signed
C-57 Licensed Water Well Contractor Date Signed C-57 License Number

Attach additional information, if it exists.

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	IW-5
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	December 9, 2015	DRILLER/COMPANY:	Amador Arroyo
DATE COMPLETED:	December 9, 2015		Cascade Drilling, L.P. C-57 #938110
DRILLING METHOD:	Sampled Using 2-inch Diameter Direct Push Drilled Using 8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Recovery	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER / AIR KNIFE				CL	CLAY w/SAND: 60% clay, 30% silt, black (10YR 2/1), dry, stiff, medium-plasticity. 10% sand, fine-grained, sub-angular. No hydrocarbon odor.	0
5	Direct Push	100%			ML	SILT: 95% silt, light yellowish brown (2.5Y 6/4), damp, medium-stiff, non-plastic. 5% sand, fine-grained, sub-angular. No hydrocarbon odor.	5
10	Direct Push	100%					10
15	Direct Push	100%			SM	SILTY SAND: 65% sand, greenish gray (GLE Y1 5/5GY), moist, medium-dense, fine- to medium-grained, sub-angular, poorly graded. 35% silt, non-plastic. Moderate hydrocarbon odor.	15
					SP	POORLY GRADED SAND w/SILT: 90% sand, greenish gray (GLE Y1 5/5GY), moist, medium-dense, fine- to medium-grained, sub-angular to sub-rounded. 10% silt, non-plastic. Strong hydrocarbon odor.	
					ML	SILT w/SAND: 90% silt, dark greenish gray (GLE Y1 4/10Y), moist, soft, non-plastic. 10% sand, fine-grained. Strong hydrocarbon odor.	
					SP	POORLY GRADED SAND w/SILT: 90% sand, greenish gray (GLE Y1 5/5GY), wet, medium-dense, fine- to coarse-grained, sub-angular to sub-rounded, poorly graded. 10% silt, non-plastic. Strong hydrocarbon odor.	
20	Direct Push	100%			CL	CLAY: 65% clay, 35% silt, light yellowish brown (2.5Y 6/4), moist, medium-stiff, medium-plasticity. Slight hydrocarbon odor.	20
25						Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 17.5' to 20.5' Bentonite backfill placed from 21.5' to 23' #2/12 sand filter pack placed from 16.5' to 21.5' Bentonite transition seal placed from 13.5' to 16.5' Neat cement grout placed from 2' to 13.5'	25
30							30

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	IW-6A
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	December 9, 2015	DRILLER/COMPANY:	Amador Arroyo
DATE COMPLETED:	December 9, 2015		Cascade Drilling, L.P. C-57 #938110
DRILLING METHOD:	8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Blow Counts	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER / AIR KNIFE				ML	SILT w/SAND: 85% silt, dark brown (10YR 3/3), dry, medium-stiff, non-plastic. 15% sand, fine-grained, sub-rounded, poorly graded.	0
5	Hollow Stem Auger				CL	CLAY w/SAND: 85% clay, very dark gray (10YR 3/1), damp, stiff, medium-plasticity. No hydrocarbon odor. @ 5' to 7' 20% fine- to coarse-grained gravels present in soils.	5
10					ML	SILT: 80% silt, 10% clay, grayish brown (10YR 5/2), medium-stiff, non-plastic. 10% sand, fine-grained, sub-angular. No hydrocarbon odor.	10
15					SP	POORLY GRADED SAND w/SILT: 85% sand, greenish gray (GLE Y1 5/5GY), moist, medium-dense, fine- to medium-grained, sub-angular, poorly graded. 15% silt, non-plastic. Strong hydrocarbon odor.	15
20					MLS	SANDY SILT: 70% silt, olive (5Y 4/3), wet, soft, non-plastic. 30% sand, fine- to medium-grained, sub-angular, poorly graded. Strong hydrocarbon odor. Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 17' to 20' #2/12 sand filter pack placed from 15' to 20' Bentonite transition seal placed from 12' to 15' Neat cement grout placed from 2' to 12'	20
25							25
30							30

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	IW-6B
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	December 9, 2015	DRILLER/COMPANY:	Amador Arroyo
DATE COMPLETED:	December 9, 2015		Cascade Drilling, L.P. C-57 #938110
DRILLING METHOD:	8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Blow Counts	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER / AIR KNIFE Hollow Stem Auger				ML	SILT w/SAND: 85% silt, dark brown (10YR 3/3), dry, medium-stiff, non-plastic. 15% sand, fine-grained, sub-rounded, poorly graded.	0
3.5					CL	CLAY w/SAND: 85% clay, very dark gray (10YR 3/1), damp, stiff, medium-plasticity. No hydrocarbon odor.	3.5
5						@ 5' to 7' 20% fine- to coarse-grained gravels present in soils.	5
9					ML	SILT: 80% silt, 10% clay, grayish brown (10YR 5/2), medium-stiff, non-plastic. 10% sand, fine-grained, sub-angular. No hydrocarbon odor.	9
10							10
15							15
17					SP	POORLY GRADED SAND w/SILT: 85% sand, greenish gray (GLE Y1 5/5GY), moist, medium-dense, fine- to medium-grained, sub-angular, poorly graded. 15% silt, non-plastic. Strong hydrocarbon odor.	17
19.5					MLS	SANDY SILT: 70% silt, olive (5Y 4/3), wet, soft, non-plastic. 30% sand, fine- to medium-grained, sub-angular, poorly graded. Strong hydrocarbon odor.	19.5
20							20
23					SP	POORLY GRADED SAND: 95% sand, dark greenish gray (GLE Y1 4/10Y), wet, loose, fine- to medium-grained, sub-angular, poorly graded. 5% silt, non-plastic. Strong hydrocarbon odor.	23
25							25
27						27' - Increasing silt/clay content.	27
28							28
30						Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 24' to 27' #2/12 sand filter pack placed from 23' to 28' Bentonite transition seal placed from 20' to 23' Neat cement grout placed from 2' to 20'	30

File Original with DWR

State of California
Well Completion Report

Refer to Instruction Pamphlet
No. e0308165

Page 1 of 1

Owner's Well Number IW-6B

Date Work Began 12/09/2015 Date Work Ended 12/9/2015

Local Permit Agency Alameda County Public Works Agency

Permit Number W2015-0813 Permit Date 8/27/15

DWR Use Only – Do Not Fill In													
State Well Number/Site Number													
						N							W
Latitude						Longitude							
APN/TRS/Other													

Geologic Log		
Orientation	<input checked="" type="radio"/> Vertical <input type="radio"/> Horizontal <input type="radio"/> Angle Specify _____	
Drilling Method	Hollow Stem Auger Drilling Fluid _____	
Depth from Surface	Description	
Feet to Feet	Describe material, grain size, color, etc	
	Please see attached geologic log	
Total Depth of Boring	<u>28</u>	Feet
Total Depth of Completed Well	<u>27</u>	Feet

Well Owner
Name <u>Owens Brockway Glass Container, Inc.</u>
Mailing Address <u>One Michael Owens Way</u>
City <u>Perrysburg</u> State <u>OH</u> Zip <u>43551-2999</u>

Well Location
Address <u>3600 Alameda Ave</u>
City <u>Oakland</u> County <u>Alameda</u>
Latitude <u> </u> Dec. <u> </u> Min. <u> </u> Sec. N Longitude <u> </u> Dec. <u> </u> Min. <u> </u> Sec. W
Datum <u> </u> Dec. Lat. <u> </u> Dec. Long. <u> </u>
APN Book <u>33</u> Page <u>2250</u> Parcel <u>11</u>
Township <u>2S</u> Range <u>3W</u> Section <u>7</u>

Location Sketch
(Sketch must be drawn by hand after form is printed.)
North
South
<small>Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.</small>

Activity
<input checked="" type="radio"/> New Well <input type="radio"/> Modification/Repair <input type="radio"/> Deepen <input type="radio"/> Other _____ <input type="radio"/> Destroy <small>Describe procedures and materials under "GEOLOGIC LOG"</small>
Planned Uses
<input type="radio"/> Water Supply <input type="checkbox"/> Domestic <input type="checkbox"/> Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Industrial <input type="radio"/> Cathodic Protection <input type="radio"/> Dewatering <input type="radio"/> Heat Exchange <input type="radio"/> Injection <input type="radio"/> Monitoring <input type="radio"/> Remediation <input checked="" type="radio"/> Sparging <input type="radio"/> Test Well <input type="radio"/> Vapor Extraction <input type="radio"/> Other _____

Water Level and Yield of Completed Well
Depth to first water <u>20</u> (Feet below surface)
Depth to Static _____
Water Level <u>15</u> (Feet) Date Measured <u>12/15/2015</u>
Estimated Yield * _____ (GPM) Test Type _____
Test Length _____ (Hours) Total Drawdown _____ (Feet)
*May not be representative of a well's long term yield.

Casings									Annular Material			
Depth from Surface	Borehole Diameter	Type	Material	Wall Thickness	Outside Diameter	Screen Type	Slot Size if Any	Depth from Surface	Fill	Description		
Feet to Feet	(Inches)			(Inches)	(Inches)		(Inches)	Feet to Feet				
1	24	8	Blank	PVC Sch. 40	0.154	2.375		2	20	Cement		
24	27	8	Screen	PVC Sch. 40	0.154	2.375	Milled Slots	0.020	20	23	Bentonite	
									23	28	Filter Pack #2/12 Sand	

Attachments
<input checked="" type="checkbox"/> Geologic Log <input type="checkbox"/> Well Construction Diagram <input type="checkbox"/> Geophysical Log(s) <input type="checkbox"/> Soil/Water Chemical Analyses <input type="checkbox"/> Other _____

Certification Statement
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief
Name _____ <small>Person, Firm or Corporation</small>
Signed _____ <small>C-57 Licensed Water Well Contractor</small>
Address _____ City _____ State <u>CA</u> Zip _____ Date Signed _____ C-57 License Number _____

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	IW-7
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	December 8, 2015	DRILLER/COMPANY:	Amador Arroyo
DATE COMPLETED:	December 8, 2015		Cascade Drilling, L.P. C-57 #938110
DRILLING METHOD:	8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Blow Counts	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER / AIR KNIFE					No soil samples collected between 0-15 feet bgs.	0
5	Hollow Stem Auger						5
10							10
15		4 8 11			MLS SP	<p>SANDY SILT: 60% silt, 10% clay, dark greenish gray (GLEY 1 4/GY), moist, medium-stiff to hard, non-plastic. 30% sand, fine- to medium-grained, sub-angular, poorly graded. Strong hydrocarbon odor.</p> <p>POORLY GRADED SAND w/SILT: 85% sand, dark greenish gray (GLEY 1 4/5GY), moist, medium-dense, fine- to medium-grained, sub-angular, poorly graded, mostly fine sand. 15% silt, non-plastic. Strong hydrocarbon odor.</p>	15
		9 14 21			ML SP	<p>SILT w/Sand: 80% silt, dark greenish gray (GLEY 1 4/10Y), moist, medium-stiff, non-plastic. 20% sand, fine-grained, sub-angular, poorly graded. Strong hydrocarbon odor.</p>	
20		7 14 14 5 5			ML SP ML	<p>SILTY SAND: 65% sand, dark greenish gray (GLEY 1 4/10Y), wet, medium-dense, fine- to course-grained, sub-angular to sub-rounded, poorly graded. 30% silt, non-plastic. 5% gravel, fine-grained, with 1/4-inch max gravel size. Strong hydrocarbon odor.</p> <p>SILT: 60% silt, 30% clay, yellowish brown (10YR 5/4), moist, medium-stiff, low-plasticity. 10% fine sand. Strong hydrocarbon odor.</p>	20
25						<p>Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 17' to 20'</p> <p>#2/12 sand filter pack placed from 16' to 21' Bentonite transition seal placed from 13' to 16' Neat cement grout placed from 2' to 13'</p>	25
30							30

File Original with DWR

Page 1 of 1

Owner's Well Number IW-7

Date Work Began 12/08/2015 Date Work Ended 12/8/2015

Local Permit Agency Alameda County Public Works Agency

Permit Number W2015-0813 Permit Date 8/27/15

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. **e0308166**

DWR Use Only – Do Not Fill In

State Well Number/Site Number

Latitude Longitude

APN/TRS/Other

Geologic Log

Orientation Vertical Horizontal Angle Specify _____

Drilling Method Hollow Stem Auger Drilling Fluid _____

Depth from Surface		Description
Feet	to Feet	Describe material, grain size, color, etc
		Please see attached geologic log
Total Depth of Boring		<u>21</u> Feet
Total Depth of Completed Well		<u>20</u> Feet

Well Owner

Name Owens Brockway Glass Container, Inc.

Mailing Address One Michael Owens Way

City Perrysburg State OH Zip 43551-2999

Well Location

Address 3600 Alameda Ave

City Oakland County Alameda

Latitude _____ N Longitude _____ W

Dec. Min. Sec. Dec. Lat. Dec. Long.

Datum _____

APN Book 33 Page 2250 Parcel 11

Township 2S Range 3W Section 7

Location Sketch
(Sketch must be drawn by hand after form is printed.)

North

West East

South

Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

New Well

Modification/Repair

Deepen

Other _____

Destroy

Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

Water Supply

Domestic Public

Irrigation Industrial

Cathodic Protection

Dewatering

Heat Exchange

Injection

Monitoring

Remediation

Sparging

Test Well

Vapor Extraction

Other _____

Water Level and Yield of Completed Well

Depth to first water 18 (Feet below surface)

Depth to Static _____

Water Level 14 (Feet) Date Measured 12/15/2015

Estimated Yield * _____ (GPM) Test Type _____

Test Length _____ (Hours) Total Drawdown _____ (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
1	17	8	Blank	PVC Sch. 40	0.154	2.375	
17	20	8	Screen	PVC Sch. 40	0.154	2.375	Milled Slots 0.020

Annular Material

Depth from Surface Feet to Feet	Fill	Description
2	13	Cement
13	16	Bentonite
16	21	Filter Pack #2/12 Sand

Attachments

Geologic Log

Well Construction Diagram

Geophysical Log(s)

Soil/Water Chemical Analyses

Other _____

Attach additional information, if it exists.

Certification Statement

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief

Name _____
Person, Firm or Corporation

Address _____ City _____ State CA Zip _____

Signed _____ Date Signed _____
C-57 Licensed Water Well Contractor C-57 License Number

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	IW-8
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	December 8, 2015	DRILLER/COMPANY:	Amador Arroyo
DATE COMPLETED:	December 8, 2015		Cascade Drilling, L.P. C-57 #938110
DRILLING METHOD:	8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Blow Counts	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER / AIR KNIFE					<p>No soil samples collected between 0-15 feet bgs.</p> <p>SILTY SAND: 70% sand, dark greenish gray (GLE Y1 4/5GY), moist, medium-dense, fine- to medium-grained, sub-angular to sub-rounded, poorly graded. 30% silt, non-plastic. Strong hydrocarbon odor.</p> <p>POORLY GRADED SAND w/SILT: 85% sand, dark greenish gray (GLE Y1 4/10Y), moist, medium-dense, fine- to medium-grained, sub-angular, poorly graded. 15% silt, non-plastic. Strong hydrocarbon odor.</p> <p>GRAVELLY SAND w/SILT: 45% sand, 30% gravel, dark greenish gray (GLE Y1 4/10Y), wet, dense, fine- to coarse-grained, sub-angular to sub-rounded, poorly graded, with max gravel size of 3/4-inch. 25% silt, non-plastic. Strong hydrocarbon odor.</p> <p>POORLY GRADED SAND w/SILT: 85% sand, dark greenish gray (GLE Y1 4/10Y), moist, medium-dense, fine- to medium-grained, sub-angular, poorly graded. 15% silt, non-plastic. Strong hydrocarbon odor.</p> <p>SILT: 60% silt, 30% clay, yellowish brown (10YR 5/6), moist, medium-stiff, low-plasticity. 10% sand, fine-grained. Slight hydrocarbon odor.</p> <p>Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 18' to 21'</p> <p>Bentonite backfill placed from 22' to 22.5' #2/12 sand filter pack placed from 17' to 22' Bentonite transition seal placed from 14' to 17' Neat cement grout placed from 2' to 14'</p>	0
5	Hollow Stem Auger						5
10							10
15		4 5 10 14 15 20			SM		15
		5 7 12 14			SP		
20		21 30 7 9 17			SG SP ML		20
25							25
30							30

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	IW-9
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	December 7, 2015	DRILLER/COMPANY:	Amador Arroyo
DATE COMPLETED:	December 7, 2015		Cascade Drilling, L.P. C-57 #938110
DRILLING METHOD:	8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Blow Counts	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER / AIR KNIFE				MLS	1' CONCRETE	0
5	Hollow Stem Auger					No samples collected between 5' and 15' bgs.	5
10							10
15		15 17 19			ML SW	SILT w/SAND: 60% silt, 20% clay, very dark grayish brown (10YR 3/2), moist, medium-stiff, low-plasticity. 20% sand, fine- to coarse-grained, sub-angular. Moderate hydrocarbon odor.	15
20		5 10 10 11 14 18 17 19 21				WELL GRADED SAND: 90% sand, dark greenish gray (GLE Y1 4/5GY), moist, medium-dense, fine- to medium-grained, sub-angular, well graded. 10% silt, non-plastic. Moderate hydrocarbon odor. Coarse grained sands from 18' to 19' Fine- to medium-grained sands from 19' to 21'	20
25	9 10 15			ML	SILT w/SAND: 55% silt, 30% clay, yellowish brown (10YR 5/4), moist, medium-stiff, low-plasticity. 15% sand, fine-grained, sub-angular. Slight hydrocarbon odor.	25	
30						Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 17.5' to 20.5' Bentonite backfill placed from 21.5' to 22.5' #2/12 sand filter pack placed from 16.5' to 21.5' Bentonite transition seal placed from 13.5' to 16.5' Neat cement grout placed from 2' to 13.5'	30

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

Page 1 of 1

Owner's Well Number IW-9

Date Work Began 12/07/2015 Date Work Ended 12/7/2015

Local Permit Agency Alameda County Public Works Agency

Permit Number W2015-0813 Permit Date 8/27/15

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. **e0308169**

DWR Use Only - Do Not Fill In			
State Well Number/Site Number			
Latitude		Longitude	
APN/TRS/Other			

Geologic Log

Orientation Vertical Horizontal Angle Specify _____

Drilling Method Hollow Stem Auger Drilling Fluid _____

Depth from Surface Description
Feet to Feet Describe material, grain size, color, etc

Please see attached geologic log

Well Owner

Name Owens Brockway Glass Container, Inc.

Mailing Address One Michael Owens Way

City Perrysburg State OH Zip 43551-2999

Well Location

Address 3600 Alameda Ave

City Oakland County Alameda

Latitude _____ N Longitude _____ W
Dec. Min. Sec. Dec. Min. Sec.

Datum _____ Dec. Lat. _____ Dec. Long. _____

APN Book 33 Page 2250 Parcel 11

Township 2S Range 3W Section 7

Location Sketch

(Sketch must be drawn by hand after form is printed.)

North

South

West East

Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

- New Well
- Modification/Repair
 - Deepen
 - Other _____
- Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

- Water Supply
 - Domestic Public
 - Irrigation Industrial
- Cathodic Protection
- Dewatering
- Heat Exchange
- Injection
- Monitoring
- Remediation
- Sparging
- Test Well
- Vapor Extraction
- Other _____

Water Level and Yield of Completed Well

Depth to first water 18 (Feet below surface)

Depth to Static _____

Water Level 16 (Feet) Date Measured 12/16/2015

Estimated Yield * _____ (GPM) Test Type _____

Test Length _____ (Hours) Total Drawdown _____ (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
1	18	8	Blank	PVC Sch. 40	0.154	2.375	
18	21	8	Screen	PVC Sch. 40	0.154	2.375	Milled Slots 0.020

Annular Material

Depth from Surface Feet to Feet	Fill	Description
2	14	Cement
14	17	Bentonite
17	22	Filter Pack #2/12 Sand
22	23	Bentonite

Attachments

- Geologic Log
- Well Construction Diagram
- Geophysical Log(s)
- Soil/Water Chemical Analyses
- Other _____

Attach additional information, if it exists.

Certification Statement

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief

Name _____
Person, Firm or Corporation

Address _____ City _____ State CA Zip _____

Signed _____ Date Signed _____

C-57 Licensed Water Well Contractor _____ C-57 License Number _____

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	IW-10
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	December 7, 2015	DRILLER/COMPANY:	Amador Arroyo
DATE COMPLETED:	December 7, 2015		Cascade Drilling, L.P. C-57 #938110
DRILLING METHOD:	8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Blow Counts	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER / AIR KNIFE				MLS	1' CONCRETE	0
5	Hollow Stem Auger					No samples collected between 5' and 15' bgs.	5
10							10
15		10 11 2			ML SP	SILT w/SAND: 60% silt, 20% clay, dark greenish gray (GLE Y1 4/10Y), moist, medium-stiff, low-plasticity. 20% sand, fine- to coarse-grained, sub-angular. Moderate hydrocarbon odor.	15
20		8 9 11 11 30 28 10 11 11			ML	WELL GRADED SAND: 90% sand, dark greenish gray (GLE Y1 4/10YGY), moist, medium-dense, fine- to medium-grained, sub-angular, well graded. 10% silt, non-plastic. Strong hydrocarbon odor.	20
25						Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 17' to 20' #2/12 sand filter pack placed from 16' to 21' Bentonite transition seal placed from 13' to 16' Neat cement grout placed from 2' to 13'	25
30							30

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0308170

Page 1 of 1

Owner's Well Number IW-10

Date Work Began 12/07/2015 Date Work Ended 12/7/2015

Local Permit Agency Alameda County Public Works Agency

Permit Number W2015-0813 Permit Date 8/27/15

DWR Use Only - Do Not Fill In

State Well Number/Site Number	
Latitude	Longitude
APN/TRS/Other	

Geologic Log

Orientation Vertical Horizontal Angle Specify _____

Drilling Method Hollow Stem Auger Drilling Fluid _____

Depth from Surface	Description
Feet to Feet	Describe material, grain size, color, etc
	Please see attached geologic log

Well Owner

Name Owens Brockway Glass Container, Inc.

Mailing Address One Michael Owens Way

City Perrysburg State OH Zip 43551-2999

Well Location

Address 3600 Alameda Ave

City Oakland County Alameda

Latitude _____ N Longitude _____ W
Dec. Min. Sec. Dec. Min. Sec.

Datum _____ Dec. Lat. _____ Dec. Long. _____

APN Book 33 Page 2250 Parcel 11

Township 2S Range 3W Section 7

Location Sketch

(Sketch must be drawn by hand after form is printed.)

North

West East

South

Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

- New Well
- Modification/Repair
 - Deepen
 - Other _____
- Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

- Water Supply
 - Domestic Public
 - Irrigation Industrial
- Cathodic Protection
- Dewatering
- Heat Exchange
- Injection
- Monitoring
- Remediation
- Sparging
- Test Well
- Vapor Extraction
- Other _____

Water Level and Yield of Completed Well

Depth to first water 19 (Feet below surface)

Depth to Static _____

Water Level 16 (Feet) Date Measured 12/16/2015

Estimated Yield * _____ (GPM) Test Type _____

Test Length _____ (Hours) Total Drawdown _____ (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface	Borehole Diameter	Type	Material	Wall Thickness	Outside Diameter	Screen Type	Slot Size if Any
Feet to Feet	(Inches)			(Inches)	(Inches)		(Inches)
1	17	8	Blank	PVC Sch. 40	0.154	2.375	
17	21	8	Screen	PVC Sch. 40	0.154	2.375	Milled Slots 0.020

Annular Material

Depth from Surface	Fill	Description
Feet to Feet		
2	13	Cement
13	16	Bentonite
16	21	Filter Pack #2/12 Sand

Attachments

- Geologic Log
- Well Construction Diagram
- Geophysical Log(s)
- Soil/Water Chemical Analyses
- Other _____

Certification Statement

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief

Name _____
Person, Firm or Corporation

Address _____ City _____ State CA Zip _____

Signed _____ Date Signed _____
C-57 Licensed Water Well Contractor C-57 License Number

Attach additional information, if it exists.

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	IW-11
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	December 7, 2015	DRILLER/COMPANY:	Amador Arroyo
DATE COMPLETED:	December 7, 2015		Cascade Drilling, L.P. C-57 #938110
DRILLING METHOD:	8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Blow Counts	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER / AIR KNIFE				MLS	1' CONCRETE	0
5	Hollow Stem Auger					No samples collected between 5' and 15' bgs.	5
10							10
15		12 30 20			ML SP	<p>SILT w/SAND: 70% silt, 10% clay, dark gray (10YR 4/1), moist, medium-stiff, low-plasticity. 20% sand, fine- to coarse-grained, sub-angular. Strong hydrocarbon odor.</p> <p>POORLY GRADED SAND: 90% sand, dark greenish gray (GLE Y1 4/10Y), moist, medium-dense, fine- to medium-grained, sub-rounded, poorly graded. 10% silt, non-plastic. Strong hydrocarbon odor.</p>	15
20		11 12 12 7 10 12 11 9 11			ML	<p>SANDY SILT: 70% silt, 10% clay, yellowish brown (10YR 5/6), moist, medium-stiff, non-plastic. 20% sand, fine-grained, sub-angular. Moderate hydrocarbon odor.</p>	20
25						<p>Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 16.5' to 19.5'</p> <p>#2/12 sand filter pack placed from 15.5' to 20.5' Bentonite transition seal placed from 12.5' to 15.5' Neat cement grout placed from 2' to 12.5'</p>	25
30							30

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	IW-12
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	December 8, 2015	DRILLER/COMPANY:	Amador Arroyo
DATE COMPLETED:	December 8, 2015		Cascade Drilling, L.P. C-57 #938110
DRILLING METHOD:	8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Blow Counts	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER / AIR KNIFE					Upper 5' cleared for subsurface utilities / obstructions using a hand auger. No soil samples collected between 0-15 feet bgs.	0
5	Hollow Stem Auger						5
10							10
15		8 11 20			MLS	SILT w/SAND: 65% silt, 20% clay, black (10YR 2/1), moist, medium-stiff, low-plasticity. 15% sand, fine- to medium-grained, sub-angular. Moderate hydrocarbon odor.	15
		27 20 20			CL SP	CLAY: 80% clay, 20% silt, yellowish brown (10YR 5/4), wet, medium-stiff, medium-plasticity. Moderate hydrocarbon odor.	17.5
		4 10 10				POORLY GRADED SAND: 90% sand, dark grayish brown (2.5Y 4/2), wet, medium-dense, fine- to medium-grained, sub-angular, poorly graded. 10% silt, non-plastic. Moderate hydrocarbon odor.	20
20		5 10 12					20
		8 10 15			CL	CLAY: 80% clay, 20% silt, grayish brown (10YR 5/2), moist, medium-stiff, medium-plasticity. Moderate hydrocarbon odor.	22.5
25						Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 17.5' to 20.5' Bentonite backfill placed from 21.5' to 22.5' #2/12 sand filter pack placed from 16.5' to 21.5' Bentonite transition seal placed from 13.5' to 16.5' Neat cement grout placed from 2' to 13.5'	25
30							30

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	IW-13
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	December 9, 2015	DRILLER/COMPANY:	Amador Arroyo
DATE COMPLETED:	December 9, 2015		Cascade Drilling, L.P. C-57 #938110
DRILLING METHOD:	8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Blow Counts	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER / AIR KNIFE					Upper 5' cleared for subsurface utilities / obstructions using a hand auger. No soil samples collected between 0-15 feet bgs.	0
5	Hollow Stem Auger						5
10							10
15		11 15 20				ML SP SILT w/SAND: 70% silt, 20% clay, very dark gray (10YR 3/1), moist, soft, low-plasticity. 10% sand, fine- to medium-grained, sub-angular. Slight hydrocarbon odor.	15
		9 9 13				POORLY GRADED SAND w/SILT: 85% sand, dark greenish gray (GLY1 4/5GY), moist, loose, fine- to medium-grained, sub-angular, poorly graded. 15% silt, non-plastic. Moderate hydrocarbon odor.	
		9 11 22				▼ @18' - Soil becomes wet, color grades to grayish brown (10YR 5/2), slight hydrocarbon odor.	
20		9 10 15				ML SILT: 70% silt, 30% clay, yellowish brown (10YR 5/6), moist, medium-stiff, low-plasticity. Very slight hydrocarbon odor.	20
25						Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 16.5' to 19.5'	25
						Bentonite backfill placed from 20.5' to 21' #2/12 sand filter pack placed from 15.5' to 20.5' Bentonite transition seal placed from 12.5' to 15.5' Neat cement grout placed from 2' to 12.5'	
30							30

File Original with DWR

Page 1 of 1

Owner's Well Number IW-13

Date Work Began 12/09/2015 Date Work Ended 12/9/2015

Local Permit Agency Alameda County Public Works Agency

Permit Number W2015-0813 Permit Date 8/27/15

State of California

Well Completion Report

Refer to Instruction Pamphlet
No. **e0308184**

DWR Use Only - Do Not Fill In	
State Well Number/Site Number	
Latitude	Longitude
APN/TRS/Other	

Geologic Log

Orientation Vertical Horizontal Angle Specify _____
Drilling Method Hollow Stem Auger Drilling Fluid _____

Depth from Surface Description
Feet to Feet Describe material, grain size, color, etc

			Please see attached geologic log	

Total Depth of Boring 21 Feet
Total Depth of Completed Well 19.5 Feet

Well Owner

Name Owens Brockway Glass Container, Inc.

Mailing Address One Michael Owens Way

City Perrysburg State OH Zip 43551-2999

Well Location

Address 3600 Alameda Ave

City Oakland County Alameda

Latitude _____ N Longitude _____ W
Dec. Min. Sec. Dec. Min. Sec.

Datum _____ Dec. Lat. _____ Dec. Long. _____

APN Book 33 Page 2250 Parcel 11

Township 2S Range 3W Section 7

Location Sketch

(Sketch must be drawn by hand after form is printed.)

North

South

West

East

Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

- New Well
- Modification/Repair
 - Deepen
 - Other _____
- Destroy

Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

- Water Supply
 - Domestic Public
 - Irrigation Industrial
- Cathodic Protection
- Dewatering
- Heat Exchange
- Injection
- Monitoring
- Remediation
- Sparging
- Test Well
- Vapor Extraction
- Other _____

Water Level and Yield of Completed Well

Depth to first water 18 (Feet below surface)

Depth to Static _____

Water Level 11 (Feet) Date Measured 12/16/2015

Estimated Yield * _____ (GPM) Test Type _____

Test Length _____ (Hours) Total Drawdown _____ (Feet)

*May not be representative of a well's long term yield.

Casings								Annular Material			
Depth from Surface	Borehole Diameter	Type	Material	Wall Thickness	Outside Diameter	Screen Type	Slot Size	Depth from Surface	Fill	Description	
Feet to Feet	(Inches)			(Inches)	(Inches)		if Any (Inches)	Feet to Feet			
1	17	8	Blank	PVC Sch. 40	0.154	2.375		2	13	Cement	
17	20	8	Screen	PVC Sch. 40	0.154	2.375	Milled Slots 0.020	13	16	Bentonite	
								16	21	Filter Pack	#2/12 Sand
								21	21	Bentonite	

Attachments

- Geologic Log
- Well Construction Diagram
- Geophysical Log(s)
- Soil/Water Chemical Analyses
- Other _____

Attach additional information, if it exists.

Certification Statement

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief
Name _____
Person, Firm or Corporation

Address _____ City _____ State CA Zip _____

Signed _____ Date Signed _____
C-57 Licensed Water Well Contractor C-57 License Number

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	IW-14
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	December 10, 2015	DRILLER/COMPANY:	Amador Arroyo
DATE COMPLETED:	December 10, 2015		Cascade Drilling, L.P. C-57 #938110
DRILLING METHOD:	8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Blow Counts	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)	
0	HAND AUGER / AIR KNIFE					Upper 5' cleared for subsurface utilities / obstructions using a hand auger. No soil samples collected between 0-15 feet bgs.	0	
5	Hollow Stem Auger						5	
10							10	
15		3				ML	SILT w/SAND: 50% silt, 40% clay, light olive brown (2.5Y 5/3), moist, stiff, low-plasticity. 10% sand, fine-grained, sub-angular. Slight hydrocarbon odor.	15
		4						
		4						
		4						
		9						
		3						
		5				SP	POORLY GRADED SAND w/SILT: 90% sand, brown (10YR 5/3), wet, medium-dense, fine- to medium-grained, sub-angular, poorly graded. 10% silt, non-plastic. Moderate hydrocarbon odor.	
		8						
		5						
20	6						20	
	14							
	9							
	4							
	9				CL	CLAY: 80% clay, 20% silt, dark yellowish brown (10YR 4/4), moist, medium-stiff, medium-plasticity. Very slight hydrocarbon odor.		
	11							
25						Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 18.5' to 21.5'	25	
						#2/12 sand filter pack placed from 17.5' to 22.5' Bentonite transition seal placed from 14.5' to 17.5' Neat cement grout placed from 2' to 14.5'		
30							30	

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	IW-15
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	December 9, 2015	DRILLER/COMPANY:	Amador Arroyo
DATE COMPLETED:	December 9, 2015		Cascade Drilling, L.P. C-57 #938110
DRILLING METHOD:	8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Blow Counts	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER / AIR KNIFE					Upper 5' cleared for subsurface utilities / obstructions using a hand auger. No soil samples collected between 0-15 feet bgs.	0
5	Hollow Stem Auger						5
10							10
15		11 15 20				ML SP SILT w/SAND: 70% silt, 20% clay, very dark gray (10YR 3/1), moist, soft, low-plasticity. 10% sand, fine- to medium-grained, sub-angular. Slight hydrocarbon odor.	15
		9 9 13				POORLY GRADED SAND w/SILT: 85% sand, grayish brown (10YR 5/2), moist, loose, fine- to coarse-grained, sub-angular to sub-rounded, poorly graded. 15% silt, non-plastic. Moderate hydrocarbon odor.	
		9 11 22				▼ @18' - Soil becomes wet, color grades to brown (10YR 5/3).	
20		9 10 15				ML SILT: 70% silt, 30% clay, yellowish brown (10YR 5/6), moist, medium-stiff, low-plasticity. Slight hydrocarbon odor.	20
25						Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 16.5' to 19.5'	25
						Bentonite backfill placed from 20.5' to 21' #2/12 sand filter pack placed from 15.5' to 20.5' Bentonite transition seal placed from 12.5' to 15.5' Neat cement grout placed from 2' to 12.5'	
30							30

File Original with DWR

Page 1 of 1

Owner's Well Number IW-15

Date Work Began 12/09/2015 Date Work Ended 12/9/2015

Local Permit Agency Alameda County Public Works Agency

Permit Number W2015-0813 Permit Date 8/27/15

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. **e0308187**

DWR Use Only - Do Not Fill In	
State Well Number/Site Number _____	
Latitude _____ N	Longitude _____ W
APN/TRS/Other _____	

Geologic Log

Orientation Vertical Horizontal Angle Specify _____
Drilling Method Hollow Stem Auger Drilling Fluid _____

Depth from Surface Description
Feet to Feet Describe material, grain size, color, etc

		Please see attached geologic log

Total Depth of Boring 21 Feet
Total Depth of Completed Well 19.5 Feet

Well Owner

Name Owens Brockway Glass Container, Inc.
Mailing Address One Michael Owens Way
City Perrysburg State OH Zip 43551-2999

Well Location

Address 3600 Alameda Ave
City Oakland County Alameda
Latitude _____ N Longitude _____ W
Dec. Min. Sec. Dec. Lat. Dec. Long.
Datum _____ Parcel 11
APN Book 33 Page 2250
Township 2S Range 3W Section 7

Location Sketch

(Sketch must be drawn by hand after form is printed.)
North

South
Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

- New Well
- Modification/Repair
 - Deepen
 - Other _____
- Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

- Water Supply
 - Domestic Public
 - Irrigation Industrial
- Cathodic Protection
- Dewatering
- Heat Exchange
- Injection
- Monitoring
- Remediation
- Sparging
- Test Well
- Vapor Extraction
- Other _____

Water Level and Yield of Completed Well

Depth to first water 18 (Feet below surface)
Depth to Static _____
Water Level 13 (Feet) Date Measured 12/16/2015
Estimated Yield * _____ (GPM) Test Type _____
Test Length _____ (Hours) Total Drawdown _____ (Feet)
*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
1	17	8	Blank	PVC Sch. 40	0.154	2.375	
17	20	8	Screen	PVC Sch. 40	0.154	2.375	Milled Slots 0.020

Annular Material

Depth from Surface Feet to Feet	Fill	Description
2	13	Cement
13	16	Bentonite
16	21	Filter Pack #2/12 Sand
21	21	Bentonite

Attachments

- Geologic Log
- Well Construction Diagram
- Geophysical Log(s)
- Soil/Water Chemical Analyses
- Other _____

Attach additional information, if it exists.

Certification Statement

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief
Name _____
Person, Firm or Corporation _____
Address _____ City _____ State CA Zip _____
Signed _____ Date Signed _____
C-57 Licensed Water Well Contractor _____ C-57 License Number _____

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	IW-16
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	December 9, 2015	DRILLER/COMPANY:	Amador Arroyo
DATE COMPLETED:	December 9, 2015		Cascade Drilling, L.P. C-57 #938110
DRILLING METHOD:	8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Blow Counts	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER / AIR KNIFE					Upper 5' cleared for subsurface utilities / obstructions using a hand auger. No soil samples collected between 0-15 feet bgs.	0
5	Hollow Stem Auger						5
10							10
15		11 15 20			ML	SILT w/SAND: 80% silt, very dark gray (10YR 3/1), moist, soft, low-plasticity. 20% sand, fine- to medium-grained, sub-angular. Very slight hydrocarbon odor.	15
		9 9 13			SP	POORLY GRADED SAND w/SILT: 85% sand, grayish brown (10YR 5/2), wet, loose, fine- to medium-grained, sub-angular, poorly graded. 15% silt, non-plastic. Very slight hydrocarbon odor.	17
		9 11 22					20.5'
20		9 10 15			CL	CLAY: 80% clay, 20% silt, grayish brown (10YR 5/2), moist, stiff, medium-plasticity. Very slight hydrocarbon odor.	21'
25						Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 17' to 20' #2/12 sand filter pack placed from 16' to 21' Bentonite transition seal placed from 13' to 16' Neat cement grout placed from 2' to 13'	25
30							30

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. **e0308188**

Page 1 of 1

Owner's Well Number IW-16

Date Work Began 12/09/2015 Date Work Ended 12/9/2015

Local Permit Agency Alameda County Public Works Agency

Permit Number W2015-0813 Permit Date 8/27/15

DWR Use Only – Do Not Fill In	
State Well Number/Site Number	
Latitude	Longitude
APN/TRS/Other	

Geologic Log

Orientation Vertical Horizontal Angle Specify _____

Drilling Method Hollow Stem Auger Drilling Fluid _____

Depth from Surface Description
Feet to Feet Describe material, grain size, color, etc

Please see attached geologic log

Well Owner

Name Owens Brockway Glass Container, Inc.

Mailing Address One Michael Owens Way

City Perrysburg State OH Zip 43551-2999

Well Location

Address 3600 Alameda Ave

City Oakland County Alameda

Latitude _____ N Longitude _____ W
Dec. Min. Sec. Dec. Min. Sec.

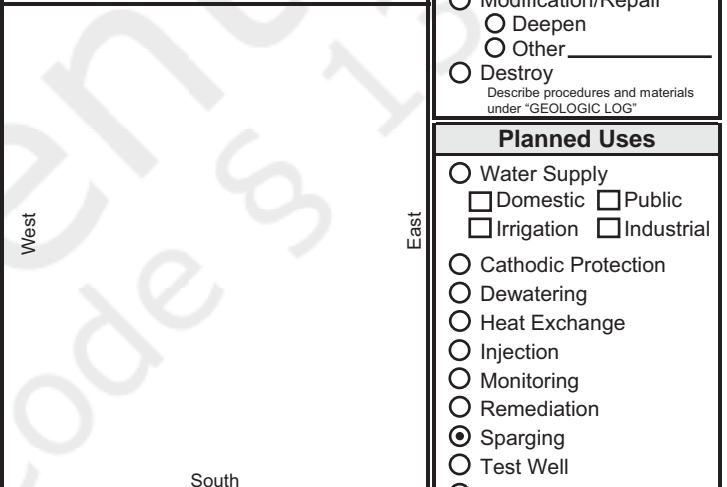
Datum _____ Dec. Lat. _____ Dec. Long. _____

APN Book 33 Page 2250 Parcel 11

Township 2S Range 3W Section 7

Location Sketch

(Sketch must be drawn by hand after form is printed.)
North



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

- New Well
- Modification/Repair
 - Deepen
 - Other _____
- Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

- Water Supply
 - Domestic Public
 - Irrigation Industrial
- Cathodic Protection
- Dewatering
- Heat Exchange
- Injection
- Monitoring
- Remediation
- Sparging
- Test Well
- Vapor Extraction
- Other _____

Water Level and Yield of Completed Well

Depth to first water 19 (Feet below surface)

Depth to Static _____

Water Level 15 (Feet) Date Measured 12/14/2015

Estimated Yield * _____ (GPM) Test Type _____

Test Length _____ (Hours) Total Drawdown _____ (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
1	17	8	Blank	PVC Sch. 40	0.154	2.375	
17	20	8	Screen	PVC Sch. 40	0.154	2.375	Milled Slots 0.020

Annular Material

Depth from Surface Feet to Feet	Fill	Description
2	13	Cement
13	16	Bentonite
16	21	Filter Pack #2/12 Sand

Attachments

- Geologic Log
- Well Construction Diagram
- Geophysical Log(s)
- Soil/Water Chemical Analyses
- Other _____

Certification Statement

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief

Name _____
Person, Firm or Corporation

Address _____ City _____ State CA Zip _____

Signed _____ Date Signed _____
C-57 Licensed Water Well Contractor C-57 License Number _____

Attach additional information, if it exists.

PROJECT NAME:	Owen's Brockway Glass Container Facility	LOG OF BORING:	IW-17
SITE ADDRESS:	3600 Alameda Avenue Oakland, California	BOREHOLE DIAM. (in):	8"
DATE STARTED:	December 9, 2015	DRILLER/COMPANY:	Amador Arroyo
DATE COMPLETED:	December 9, 2015		Cascade Drilling, L.P. C-57 #938110
DRILLING METHOD:	8-inch Diameter Hollow Stem Augers	GEOLOGIST/ENGINEER:	B. Whalen, P.G. #9009 Sierra West Consultants, Inc.

DEPTH (Feet)	Sample Interval	Blow Counts	PID (ppm)	SAMPLE NUMBER	USCS SYMBOL	DESCRIPTION	DEPTH (Feet)
0	HAND AUGER / AIR KNIFE					Upper 5' cleared for subsurface utilities / obstructions using a hand auger. No soil samples collected between 0-15 feet bgs.	0
5	Hollow Stem Auger						5
10							10
15		5 7 13			ML SP	SILT w/SAND: 80% silt, very dark gray (10YR 3/1), moist, soft, low-plasticity. 20% sand, fine- to medium-grained, sub-angular. Very slight hydrocarbon odor.	15
		12 20 20				POORLY GRADED SAND w/SILT: 85% sand, grayish brown (10YR 5/2), wet, loose, fine- to medium-grained, sub-angular, poorly graded. 15% silt, non-plastic. Very slight hydrocarbon odor.	17
		10 12 15					20'
20		8 11 15			CL	CLAY: 80% clay, 20% silt, grayish brown (10YR 5/2), moist, stiff, medium-plasticity. Very slight hydrocarbon odor.	21'
25						Well constructed using 2-inch diameter SCH 40 PVC 0.020-inch machine slotted PVC screen placed from 16.5' to 19.5'	25
						Bentonite backfill placed from 20.5' to 21' #2/12 sand filter pack placed from 15.5' to 20.5' Bentonite transition seal placed from 12.5' to 15.5' Neat cement grout placed from 2' to 12.5'	25
30							30

File Original with DWR

Page 1 of 1

Owner's Well Number IW-17

Date Work Began 12/09/2015 Date Work Ended 12/9/2015

Local Permit Agency Alameda County Public Works Agency

Permit Number W2015-0813 Permit Date 8/27/15

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. **e0308189**

DWR Use Only - Do Not Fill In	
State Well Number/Site Number	
Latitude	Longitude
APN/TRS/Other	

Geologic Log

Orientation Vertical Horizontal Angle Specify _____

Drilling Method Hollow Stem Auger Drilling Fluid _____

Depth from Surface Description
 Feet to Feet Describe material, grain size, color, etc

Please see attached geologic log

Well Owner

Name Owens Brockway Glass Container, Inc.

Mailing Address One Michael Owens Way

City Perrysburg State OH Zip 43551-2999

Well Location

Address 3600 Alameda Ave

City Oakland County Alameda

Latitude _____ N Longitude _____ W
 Dec. Min. Sec. Dec. Min. Sec.

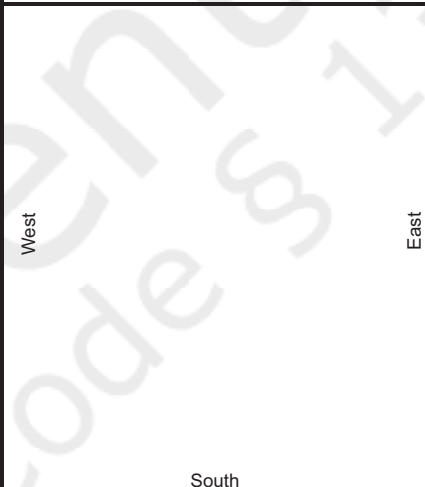
Datum _____ Dec. Lat. _____ Dec. Long. _____

APN Book 33 Page 2250 Parcel 11

Township 2S Range 3W Section 7

Location Sketch

(Sketch must be drawn by hand after form is printed.)
 North



South
 Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

- New Well
- Modification/Repair
 - Deepen
 - Other _____
- Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

- Water Supply
 - Domestic Public
 - Irrigation Industrial
- Cathodic Protection
- Dewatering
- Heat Exchange
- Injection
- Monitoring
- Remediation
- Sparging
- Test Well
- Vapor Extraction
- Other _____

Water Level and Yield of Completed Well

Depth to first water 19 (Feet below surface)

Depth to Static _____

Water Level 11 (Feet) Date Measured 12/14/2015

Estimated Yield * _____ (GPM) Test Type _____

Test Length _____ (Hours) Total Drawdown _____ (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
1	17	8	Blank	PVC Sch. 40	0.154	2.375	
17	20	8	Screen	PVC Sch. 40	0.154	2.375	Milled Slots 0.020

Annular Material

Depth from Surface Feet to Feet	Fill	Description
2	13	Cement
13	16	Bentonite
16	21	Filter Pack #2/12 Sand
21	21	Bentonite

Attachments

- Geologic Log
- Well Construction Diagram
- Geophysical Log(s)
- Soil/Water Chemical Analyses
- Other _____

Certification Statement

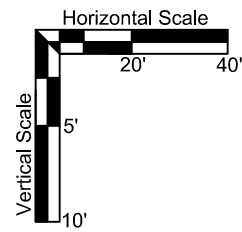
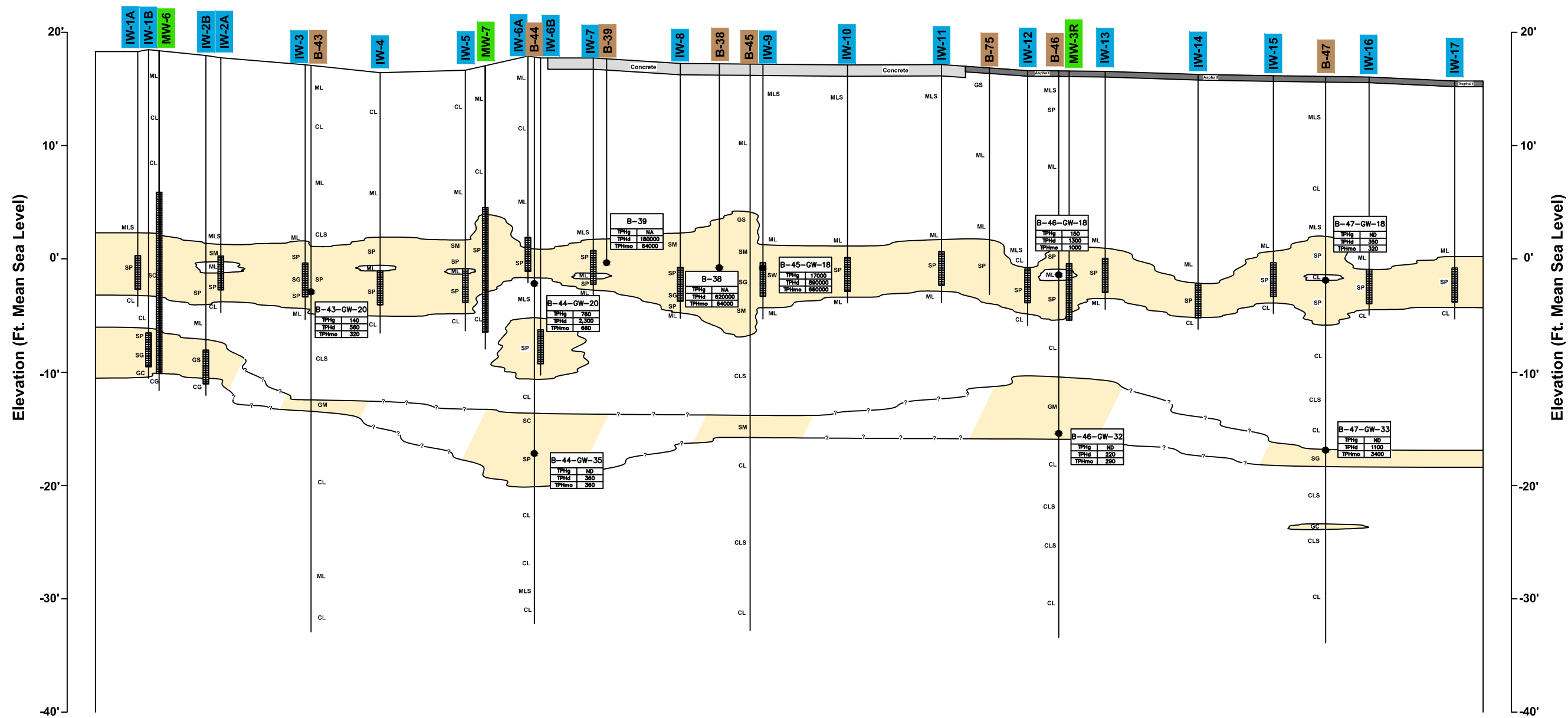
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief
 Name _____
Person, Firm or Corporation

Address _____ City _____ State CA Zip _____

Signed _____ Date Signed _____
C-57 Licensed Water Well Contractor C-57 License Number

Attach additional information, if it exists.

Appendix 7: Biobarrier Cross-Section



Coarse Grained Soils: GC, GM, GS, SC, SG, SM, SP, SW
 Fine Grained Soils: CL, CLS, ML, MLS

Injection Wells
 Injection wells IW-1A through IW-17 were constructed between December 7 and 12, 2015.

Soil borings
 Soil borings B-38 and B-39 drilled on September 4, 2009.
 Soil borings B-43 through B-47 drilled between August 24 and 26, 2016.
 Soil boring B-75 was drilled on December 30, 2015.

Monitoring Wells
 Monitoring well MW-3R was constructed on September 11, 2015.
 Monitoring Wells MW-6 and MW-7 were constructed on September 29 and 30, 1986.

	DRAWN: BW	PROJECT NO:	WARNING 0 1" AT FULL SCALE (IF BAR IS NOT 1" - SCALE ACCORDINGLY)	 SIERRA WEST CONSULTANTS, INC. 4227 Sunrise Boulevard, Suite 220 Fair Oaks, California 95628 Ph: (916) 863-3220 Fax: (916) 863-3225	 CKG Environmental, Inc.		OWENS-BROCKWAY GLASS CONTAINER FACILITY BIOBARRIER GROUNDWATER TREATMENT PROJECT BIOBARRIER CROSS SECTION	SHEET NO:
	ENGINEER: JB	SCALE:						
	CHECKED: JB	APPROVED:						
NO. DATE	REVISIONS	BY	CHK	DATE: 10/10/16	DATE:			

Appendix 8: Well Development Field Forms

Well Development Field Sheet

Site Location: 3600 Alameda Avenue
Oakland, California

Date: 12/17/15

Well ID: MW-2R

Personnel: B. Whalen

Casing Volume Calculation:

Initial Depth to Water: 11.15 Initial Total Depth: 225

Initial Depth to Product (if present): 10.45

Casing Volume = (Total Depth - Depth to water) * 0.16 Casing Volume: 1.9 (gallons)

Surging: Surge over the screened interval for a minimum of 10 minutes

Surging Start Time: 11:36 Surging End Time: 11:46

Purging and Development: After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Bailing Use a bailer to remove any accumulated sediment from the bottom of the well casing. Purge at least the first 3 casing volumes using the bailer. After removing each casing volume by bailing, measure temperature, pH, conductivity, and turbidity.

Bailing Start Time: 11:51 DTW Before Bailing: 10.30 TD Before Bailing: 22.2

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
11:54	1	2.0	17.68	12.01	2.885	>999
11:58	2	4.0	18.34	12.30	3.659	>999
12:05	3	6.0	18.34	12.29	2.986	>999
12:08	4	8.0	18.33	12.29	2.952	>999

Bailing End Time: 12:28 DTW After Bailing: 10.30 TD After Bailing: 22.8

Pumping After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Pumping Start Time: _____ DTW Before Pumping: _____ TD Before Pumping: _____

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)	DTW (ft. below TOC)
12:12	5	10.0	18.61	12.29	2.935	>999	
12:16	6	12.0	18.65	12.29	2.967	>999	
12:19	7	14.0	18.64	12.26	2.872	851	
12:22	8	16.0	18.61	12.29	2.961	966	
12:25	9	18.0	18.64	12.28	2.938	820	
12:28	10	20.0	18.65	12.28	2.919	808	

Pumping End Time: _____ DTW After Pumping: _____ TD After Pumping: _____

Well Development Field Form

Site Location: Owens Brockway

Date: 9/15/16

Personnel: _____

Well ID: MW-2R

Casing Volume = 670

12:30

Time	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Dissolved O ₂ (mg/L)	ORP (mV)	Turbidity (ntu)	DTW (ft. below TOC)	TD (ft. below TOC)
12:30	10 min							12.4	22.8
12:43	2 gal - Boiling	Free Product					>999		
12:48	4 gal	Free Product					>999		
12:55	5.5	23.2	10.83	1.32	9.98	-30	>999		
13:01	8.5	Free Product					>999		
13:03	10.5 - Pumping	12.2 22.2	11.34	2.23	8.3	-104	>999		
13:09	Recalibrating								
13:10	22	23.5	10.73	2.84	6.75	-11	299		
13:15	32	23.5	11.12	2.78	7.25	62	356		
13:21	35	24.0	11.3	2.66	6.22	79	399 624		
13:24	39	23.4	11.64	2.8	6.57	19	399 613		
13:29	47	23.1	11.62	2.76	6.4	-33	607		
13:31	50	23.2	11.6	2.86	6.5	-7	410		
13:33	52 55	22.9	11.64	2.72	9.07	-39	404 399		
14:00								11.8	23

Comments:

Lots of free product/color

Signature: _____

Well Development Field Form

Site Location: Owens-brockway

Date: 9/15/15

Personnel: _____

Well ID: MW-362

Casing Volume = 1.58

Time	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm ²)	Dissolved O ₂ (mg/L)	ORP (mV)	Turbidity (ntu)	DTW (ft. below TOC)	TD (ft. below TOC)
14:00	Surfing 10 min							12.7	22.7
14:10	1- bailings								
14:12	2	23	8.99	0.005	4.72	112	>999		
14:16	5	22.5	8.74	0.005	4.32	110	>999		
14:21	7	20.2	8.21	1.84	10.24	82	486		
14:29	10	20.1	8.11	1.01	10.23	97	601		
14:32	Pumping @ 2.5 gpm	20.5	8.26		10.24	100			
14:32	12.5 going dry	21.5	8.26		14.81	86	589	20.7	22.6
14:40	15.0 Resume pumping	22.1	5.43	1.84	12.02		340		
14:41	Dry								
14:48	17.0	21.2	6.65	1.99	14.46	39	311		
14:49	Dry								
14:56	20.0	20.8	8.58		13.24	32	245		
14:58	22	21.1	6.8		11.03	50	103		
14:59	Dry	20.5	7.24		4.73	78	137		
15:05	24	20.5	7.24		4.73	78	137	19.8	22.9

15:05
15:07

Comments:

Signature: _____

Well Development Field Form

Site Location: Dwens - Brookway

Date: 9-15-15

Personnel: _____

Well ID: MW-21

Casing Volume = 248

Time	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm ²)	Dissolved O ₂ (mg/L) <i>g/l</i>	ORP (mV)	Turbidity (ntu)	DTW (ft. below TOC)	TD (ft. below TOC)
9:35	0							12.7	27.9
10:00	Surge 10 min								
10:04	1 - trailing	21	6.4	0.009	3.01	257	-10.0		
10:16	2.5	20.7	7.77	9.99	2.23	207	>999		
10:49	5.0	21.8	7.85	1.60	8.79	166	>999		
11:00	7.5 - pumping	21.8	7.81	1.63	8.06	166	>999		
11:05	10.0 20.0	21.7	7.82	1.73	12.13	163	>999		
11:07	22.5	21.2	7.65	1.49	11.21	163	>999		
11:10	25.0	21.2	7.65	1.49	9.20	157	>999		
11:17	30.0	20.8	7.52	1.37	8.34	175	8500.0		
11:21	PRy 32.0/Pr								
11:26	33.0	21.2	6.65	1.46		205	839	27.6	
11:31	35.0	20.9	6.47	1.99	9.87	200	204		
11:34	37.0	20.7	6.98	1.88	7.74	192	108		
11:37	29.0 - Stop pump	21.4	6.94	1.86	7.21	181	48		
11:43								23.9	29.3

Comments:

No odor after development

Signature: _____

Well Development Field Sheet

Site Location: 3600 Alameda Avenue
Oakland, California

Date: 12/14/15

Well ID: IW-1A

Personnel: B. Whalen

Casing Volume Calculation:

Initial Depth to Water: 11.87 Initial Total Depth: 20.1

Initial Depth to Product (if present): N/A

Casing Volume = (Total Depth - Depth to water) * 0.16 Casing Volume: 1.32 (gallons)

Surging: Surge over the screened interval for a minimum of 10 minutes

Surging Start Time: 8:57 Surging End Time: 9:10

Purging and Development: After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Bailing: Use a bailer to remove any accumulated sediment from the bottom of the well casing. Purge at least the first 3 casing volumes using the bailer. After removing each casing volume by bailing, measure temperature, pH, conductivity, and turbidity.

Bailing Start Time: 9:20 DTW Before Bailing: 12.25 ^{µS/cm³} TD Before Bailing: 20.1

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm ³)	Turbidity (ntu)
9:29	2	153	14.96	6.27	1.242	574
9:55	4	206	15.94	7.09	1.134	211
10:00	6	459	16.23	7.19	1.054	499
10:05	8	612	16.47	7.22	1.028	564

Bailing End Time: 10:15 DTW After Bailing: 13.55 TD After Bailing: 20.1

Pumping: After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Pumping Start Time: N/A DTW Before Pumping: N/A TD Before Pumping: _____

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm ³)	Turbidity (ntu)	DTW (ft. below TOC)
10:10	10	715	16.25	7.24	1.011	439	

Pumping End Time: _____ DTW After Pumping: _____ TD After Pumping: _____

fill
bailing

Well Development Field Sheet

Site Location: 3600 Alameda Avenue
Oakland, California

Date: 12/14/15

Well ID: IW-1B

Personnel: B. Whalen

Casing Volume Calculation:

Initial Depth to Water: 12.72 Initial Total Depth: 27.1

Initial Depth to Product (if present): N/A

Casing Volume = (Total Depth - Depth to water) * 0.16 Casing Volume: 2.3 (gallons)

Surging: Surge over the screened interval for a minimum of 10 minutes

Surging Start Time: 10:37 Surging End Time: 10:49

Purging and Development: After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Bailing Use a bailer to remove any accumulated sediment from the bottom of the well casing. Purge at least the first 3 casing volumes using the bailer. After removing each casing volume by bailing, measure temperature, pH, conductivity, and turbidity.

Bailing Start Time: 10:55 DTW Before Bailing: 12.75 TD Before Bailing: 27.1

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
11:01	1	2.5	15.90	7.38	1.531	>999
11:04	2	5.0	16.04	7.46	1.433	
11:08	3	7.5	16.03	7.41	1.399	

Bailing End Time: 11:08 DTW After Bailing: _____ TD After Bailing: _____

Pumping After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Pumping Start Time: 11:29 DTW Before Pumping: _____ TD Before Pumping: 27.1

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)	DTW (ft. below TOC)
11:31	4	10.0	16.40	7.32	1.389	539	
11:35	6	15.0	16.30	7.32	1.355	268	
11:38	8	20.0	16.25	7.38	1.332	118	
11:41	10	25.0	16.26	7.29	1.327	127	

Pumping End Time: 11:41 DTW After Pumping: 12.38 TD After Pumping: 27.1

Well Development Field Sheet

Site Location: 3600 Alameda Avenue
Oakland, California

Date: 12/14/15
Personnel: B. Whalen

Well ID: FW-2A

Casing Volume Calculation:

Initial Depth to Water: 11.47 Initial Total Depth: 19.7

Initial Depth to Product (if present): N/A

Casing Volume = (Total Depth - Depth to water) * 0.16 Casing Volume: 1.3 (gallons)

Surging: Surge over the screened interval for a minimum of 10 minutes

Surging Start Time: 1240 Surging End Time: 1250

Purging and Development: After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Bailing: Use a bailer to remove any accumulated sediment from the bottom of the well casing. Purge at least the first 3 casing volumes using the bailer. After removing each casing volume by bailing, measure temperature, pH, conductivity, and turbidity.

Bailing Start Time: 1255 DTW Before Bailing: 11.78 TD Before Bailing: 19.7

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
<u>1258</u>	<u>1</u>	<u>1.5</u>	<u>14.52</u>	<u>7.62</u>	<u>2.014</u>	<u>7999</u>
<u>1303</u>	<u>2</u>	<u>3.0</u>	<u>14.41</u>	<u>7.62</u>	<u>2.669</u>	<u>7999</u>
<u>1349</u>	<u>3</u>	<u>4.5</u>	<u>14.62</u>	<u>7.63</u>	<u>1.942</u>	<u>681</u>
<u>1355</u>	<u>3.5</u>	<u>5.0</u>	<u>14.48</u>	<u>7.61</u>	<u>2.052</u>	<u>134</u>

Bailing End Time: 1355 Dry DTW After Bailing: 17.61 TD After Bailing: 19.7

Pumping: After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Pumping Start Time: _____ DTW Before Pumping: _____ TD Before Pumping: _____

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)	DTW (ft. below TOC)

Pumping End Time: _____ DTW After Pumping: _____ TD After Pumping: _____

Dry at 1310, 20 min

Well Development Field Sheet

Site Location: 3600 Alameda Avenue
Oakland, California

Date: 12/17/15

Well ID: IW-2B

Personnel: B. Whalen

Casing Volume Calculation:

Initial Depth to Water: ~~12.4~~ 12.75 Initial Total Depth: 28.4

Initial Depth to Product (if present): N/A

Casing Volume = (Total Depth - Depth to water) * 0.16 Casing Volume: 262.5 (gallons)

Surging: Surge over the screened interval for a minimum of 10 minutes

Surging Start Time: 7:46 Surging End Time: 7:56

Bail for ~15 min to remove ~3' of sediment before surging

Purging and Development: After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Bailing: Use a bailer to remove any accumulated sediment from the bottom of the well casing. Purge at least the first 3 casing volumes using the bailer. After removing each casing volume by bailing, measure temperature, pH, conductivity, and turbidity.

Bailing Start Time: 8:00 DTW Before Bailing: 28.6 TD Before Bailing: 12.60

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
8:08	1	2.5	13.88	6.56	1.764	>999
8:12	2	5.0	14.56	7.13	1.912	>999
8:17	3	7.5	14.66	7.25	1.934	>999
8:21	4	10.0	14.81	7.32	1.952	>999

Bailing End Time: 8:43 DTW After Bailing: 12.95 TD After Bailing: 28.4

Pumping: After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Pumping Start Time: _____ DTW Before Pumping: _____ TD Before Pumping: _____

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)	DTW (ft. below TOC)
8:25	5	12.5	14.81	7.33	1.962	880	
8:28	6	15.0	14.85	7.32	1.963	746	
8:32	7	17.5	14.58	7.34	1.963	813	
8:36	8	20.0	14.77	7.34	1.960	774	
8:40	9	22.5	14.88	7.36	1.957	738	
8:43	10	25.0	14.85	7.37	1.961	705	

Pumping End Time: _____ DTW After Pumping: _____ TD After Pumping: _____

Casing Volume Calculation:

Well Development Field Sheet

Site Location: 3600 Alameda Avenue
Oakland, California

Date: 12/15/15

Well ID: IW-3

Personnel: B. Whalen

Casing Volume Calculation:

Initial Depth to Water: 10.38 Initial Total Depth: 19.9

Initial Depth to Product (if present): N/A

Casing Volume = (Total Depth - Depth to water) * 0.16 Casing Volume: 1.5 (gallons)

Surging: Surge over the screened interval for a minimum of 10 minutes

Surging Start Time: 8:00 Surging End Time: 8:15

Purging and Development: After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Bailing Use a bailer to remove any accumulated sediment from the bottom of the well casing. Purge at least the first 3 casing volumes using the bailer. After removing each casing volume by bailing, measure temperature, pH, conductivity, and turbidity.

Bailing Start Time: 8:20 DTW Before Bailing: 10.82 TD Before Bailing: 19.9

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
825	1	1.5	13.00	6.47	1.109	236
829	2	3.0	13.60	7.08	1.135	351
832	3	4.5	14.48	7.14	1.133	315
835	4	6.0	14.79	7.19	1.135	381

Bailing End Time: 9:17 DTW After Bailing: 17.43 TD After Bailing: 19.9

Pumping After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Pumping Start Time: _____ DTW Before Pumping: _____ TD Before Pumping: _____

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)	DTW (ft. below TOC)
838	5	7.5	15.03	7.27	1.129	238	
841	6	9.0	14.92	7.31	1.123	291	Dry
908	7	10.5	13.32	7.36	1.116	526	
911	8	12.0	14.35	7.39	1.124	365	
914	9	13.5	14.70	7.39	1.120	342	
917	10	15.0	14.61	7.39	1.123	306	

Pumping End Time: _____ DTW After Pumping: _____ TD After Pumping: _____

Well Development Field Sheet

Site Location: 3500 Alameda Avenue
Oakland, California

Date: 12/15/15

Well ID: IW-4

Personnel: B. Whalen

Casing Volume Calculation:

Initial Depth to Water: 12.84

Initial Total Depth: 20.1

Initial Depth to Product (if present): N/A

Casing Volume = (Total Depth - Depth to water) * 0.15

Casing Volume: 1.2 (gallons)

Surging:

Surge over the screened interval for a minimum of 10 minutes

Surging Start Time: _____

Surging End Time: _____

Purging and Development:

After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Bailing

Use a bailer to remove any accumulated sediment from the bottom of the well casing. Purge at least the first 3 casing volumes using the bailer. After removing each casing volume by bailing, measure temperature, pH, conductivity, and turbidity.

Bailing Start Time: 1030

DTW Before Bailing: 12.84

TD Before Bailing: 20.1

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
1033	1	1.5	16.21	7.44	1.836	7999
1036	2	3.0	16.25	7.59	1.758	721
1039	3	4.5	16.37	7.59	1.528	830
1042	4	6.0	16.51	7.54	1.482	868

Bailing End Time: _____

DTW After Bailing: 18.16

TD After Bailing: 20.5

Pumping

After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Pumping Start Time: _____

DTW Before Pumping: _____

TD Before Pumping: _____

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)	DTW (ft. below TOC)
1045	5	7.5	16.51	7.54	1.524	935	
1048	6	9.0	16.62	7.54	1.540	874	
1051	7	10.5	16.73	7.51	1.534	751	
1054	8	12.0	16.75	7.51	1.511	788	
1057	9	13.5	16.88	7.50	1.497	722	
1100	10	15.0	16.71	7.49	1.532	850	

Pumping End Time: _____

DTW After Pumping: _____

TD After Pumping: _____

Well Development Field Sheet

Site Location: 3500 Alameda Avenue
Oakland, California

Date: 12-21-15

Well ID: IW-4

Personnel: Yousuf K.

Casing Volume Calculation:

Initial Depth to Water: 11

Initial Total Depth: 20

Initial Depth to Product (if present): N/A

Casing Volume = (Total Depth - Depth to water) * 0.16

Casing Volume: 1.44 (gallons)

Surging:

Surge over the screened interval for a minimum of 10 minutes

Surging Start Time: 8:35

Surging End Time: 8:45

Purging and Development:

After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Bailing

Use a bailer to remove any accumulated sediment from the bottom of the well casing. Purge at least the first 3 casing volumes using the bailer. After removing each casing volume by bailing, measure temperature, pH, conductivity, and turbidity.

Bailing Start Time: 9:55

DTW Before Bailing: 11.1

TD Before Bailing: 20

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
10:02	1	1.5	18.9	4.66	1.69	2999
10:07	2	3	17.9	5.06	1.50	2999
10:11	3	4.5	16.5	4.98	0.376	2984

Bailing End Time: _____

DTW After Bailing: _____

TD After Bailing: _____

Pumping

After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Pumping Start Time: _____

DTW Before Pumping: N/A

TD Before Pumping: _____

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)	DTW (ft. below TOC)
1022	4	6	17.17	5.16	1.72	2999	
1035	5	7.5	16.95	5.17	1.43	2999	15.3
1047	6	9	16.35	6.95	1.42	21000	16.1
1059	7	10.5	16.87	7.48	1.11	21000	16.4
1119	8	12	14.75	7.48	1.34	262	15.1
1135	9	13.5	15.46	7.48	1.29	14.6	16.35
1149	10	15	14.25	7.77	1.28	15.0	16.2
1204	11	16.5	17.10	7.45	1.31	14.3	16.3
1217	12	18	16.3	6.95	1.30	14.2	16.5

Pumping End Time: 1217

DTW After Pumping: 16.5

TD After Pumping: 20

All casing volumes were collected via bailing

Well Development Field Sheet

Site Location: 3600 Alameda Avenue
Oakland, California

Date: 12/15/15

Well ID: IW-5

Personnel: B. Whalen

Casing Volume Calculation:

Initial Depth to Water: 12.44 Initial Total Depth: 20.4

Initial Depth to Product (if present): N/A

Casing Volume = (Total Depth - Depth to water) * 0.16 Casing Volume: 1.3 (gallons)

Surging:

Surge over the screened interval for a minimum of 10 minutes

Surging Start Time: _____ Surging End Time: _____

Purging and Development:

After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Bailing

Use a bailer to remove any accumulated sediment from the bottom of the well casing. Purge at least the first 3 casing volumes using the bailer. After removing each casing volume by bailing, measure temperature, pH, conductivity, and turbidity.

Bailing Start Time: 949 DTW Before Bailing: 12.44 TD Before Bailing: 20.4

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
952	1	1.5	15.56	7.29	2.100	>999
955	2	3.0	16.67	7.45	1.843	850
958	3	4.5	17.03	7.47	1.593	721
1001	4	6.0	17.26	7.48	1.691	833

Bailing End Time: 1018 DTW After Bailing: 18.25 TD After Bailing: 20.6

Pumping

After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Pumping Start Time: _____ DTW Before Pumping: _____ TD Before Pumping: _____

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)	DTW (ft. below TOC)
1003	5	7.5	17.15	7.47	1.544	705	
1006	6	9.0	17.33	7.44	1.438	679	
1009	7	10.5	17.27	7.45	1.415	620	
1012	8	12.000	17.24	7.47	1.392	662	
1015	9	13.500	17.08	7.47	1.370	570	
1018	10	15.0	17.00	7.48	1.358	595	

Pumping End Time: _____ DTW After Pumping: _____ TD After Pumping: _____

Well Development Field Sheet

Site Location: 3600 Alameda Avenue
Oakland, California

Date: 12/15/15

Well ID: IW-6A

Personnel: B. Whalen

Casing Volume Calculation:

Initial Depth to Water: 14.13

Initial Total Depth: 19.5

Initial Depth to Product (if present): N/A

Casing Volume = (Total Depth - Depth to water) * 0.15

Casing Volume: 0.9 (gallons)

Surging:

Surge over the screened interval for a minimum of 10 minutes

Surging Start Time: _____

Surging End Time: _____

Purging and Development:

After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Bailing

Use a bailer to remove any accumulated sediment from the bottom of the well casing. Purge at least the first 3 casing volumes using the bailer. After removing each casing volume by bailing, measure temperature, pH, conductivity, and turbidity.

Bailing Start Time: 1333

DTW Before Bailing: 14.13

TD Before Bailing: 19.5

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
1335	1	1	16.76	7.32	1.482	>999
1337	2	2	17.21	7.38	1.514	>999
1339	3	3	17.38	7.43	1.681	>999
1341	4	4	17.53	7.37	1.597	>999

Bailing End Time: 1353

DTW After Bailing: 17.45

TD After Bailing: 19.5

Pumping

After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Pumping Start Time: _____

DTW Before Pumping: _____

TD Before Pumping: _____

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)	DTW (ft. below TOC)
1343	5	5	17.67	7.35	1.581	>999	
1345	6	6	17.69	7.37	1.592	921	
1347	7	7	17.88	7.38	1.573	845	
1349	8	8	17.72	7.38	1.536	849	
1351	9	9	17.69	7.38	1.534	711	
1353	10	10	17.79	7.38	1.542	736	

Pumping End Time: _____

DTW After Pumping: _____

TD After Pumping: _____

Well Development Field Sheet

Site Location: 3600 Alameda Avenue
Oakland, California

Date: 12/15/15

Well ID: IW-6B

Personnel: B. Whalen

Casing Volume Calculation:

Initial Depth to Water: 14.70 Initial Total Depth: 26.7

Initial Depth to Product (if present): N/A

Casing Volume = (Total Depth - Depth to water) * 0.16 Casing Volume: 1.9 (gallons)

Surging: Surge over the screened interval for a minimum of 10 minutes

Surging Start Time: _____ Surging End Time: _____

Purging and Development: After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Bailing: Use a bailer to remove any accumulated sediment from the bottom of the well casing. Purge at least the first 3 casing volumes using the bailer. After removing each casing volume by bailing, measure temperature, pH, conductivity, and turbidity.

Bailing Start Time: 1405 DTW Before Bailing: 14.70 TD Before Bailing: 26.7

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
1409	1	2.0	17.15	8.41	3.110	>999
1413	2	4.0	16.60	8.09	2.909	>999
1427	3	6.0	16.48	7.77	2.579	910
1431	4	8.0	16.24	7.77	2.375	7999

Stop to surge
Bailing End Time: 1530 DTW After Bailing: Dry TD After Bailing: 26.8

Pumping: After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Pumping Start Time: _____ DTW Before Pumping: _____ TD Before Pumping: _____

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)	DTW (ft. below TOC)
1530	5	10.0	16.13	7.52	1.846	816	26.8 <i>Dry</i>

Pumping End Time: _____ DTW After Pumping: _____ TD After Pumping: _____

Development Field Sheet

Site Location: 3600 Alameda Av
Oakland, California

Date: 12/15/15

Well ID: IW-7

Personnel: B. Whalen

Casing Volume Calculation:

Initial Depth to _____

Casing Volume = (_____)

13.97 _____ Initial Total Depth: 20.1

N/A _____

Casing Volume: 1.0 (gallons)

Surging: Surge over the _____

Surging Start Time: 15:55

Surging End Time: 16:05

Purging and Development:

_____ by bailing, the remainder of purging/well development may be performed using a submersible _____ After removing each casing volume by pumping, measure temperature, pH, conductivity,

Bailing: Use a bailer to _____ removing each cu _____

Bailing Start Time: 16:12

_____ the bottom of the well casing. Purge at least the first 3 casing volumes using the bailer. After _____ measure, pH, conductivity, and turbidity.

DTW Before Bailing: 14.46 TD Before Bailing: 19.9

Time	Casing Vols	Gals Removed	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
1614	1	1.0	16.42	7.36	2.038	>999
1616	2	2.0	17.35	7.40	2.159	>999
1618	3	3.0	17.50	7.42	2.142	>999
1621	4	4.0	17.43	7.41	2.236	>999

Bailing End Time: 1435 DTW After Bailing: 18.10 TD After Bailing: 20.1

Pumping: After removing at _____ of ~1 gallon per _____

Pumping Start Time: _____

_____ remainder of purging/well development may be performed using a submersible pump at a flow rate _____ by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

DTW Before Pumping: _____ TD Before Pumping: _____

Time	Casing Volumes Removed	Gallons Removed	Temperature	pH	Conductivity (µS/cm²)	Turbidity (ntu)	DTW (ft. below TOC)
1623	5	5.0	17.21	7.40	2.228	920	
	6	6.0	17.38	7.40	2.246	7999	
	7	7.0	17.52	7.40	2.235	821	
	8	8.0	17.48	7.41	2.204	945	
	9	9.0	17.30	7.41	2.197	>999	
	10	10.0	17.30	7.42	2.182	914	

Pumping End Time: _____ DTW After Pumping: _____ TD After Pumping: _____

Well Development Field Sheet

Site Location: 3600 Alameda Avenue
Oakland, California

Well ID: IW-8

Date: 12/16/15

Personnel: B. Whalen

Casing Volume Calculation:

Initial Depth to Pump: 12.11

Initial Total Depth: 20.2

Casing Volume = (Total Depth - Initial Depth to Pump) x Casing Diameter / 231

Casing Volume: 1.3 (gallons)

Surging:

Surge over the screen: _____

Surging Start Time: 11:45

Surging End Time: 11:55

Purging and Development:

Use a bailer to remove casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of 1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Bailing

Use a bailer to remove casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of 1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Bailing Start Time: 11:58

Bailing End Time: 12:25

Time	Casing Volumes Removed
1201	1
1204	2
1207	3
1210	4

Time	DTW (ft)	Temperature (°C)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
1201	12.75	18.37	7.77	1.718	>999
1204	12.75	18.30	7.74	1.603	7999
1207	12.75	18.13	7.62	1.582	840
1210	12.75	18.25	7.53	1.572	788

Pumping

After removing at least 1 casing volume by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of 1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Pumping Start Time: _____

Pumping End Time: _____

Time	Casing Volumes Removed	DTW (ft. below TOC)
1213	5	7.5
1216	6	9.0
1219	7	10.5
1221	8	12.0
1223	9	13.5
1225	10	15.0

Time	DTW (ft)	Temperature (°C)	pH	Conductivity (µS/cm²)	Turbidity (ntu)	DTW (ft. below TOC)
1213	18.20	7.51	1.586	712		
1216	18.36	7.50	1.587	834		
1219	18.33	7.52	1.589	785		
1221	18.42	7.49	1.594	666		
1223	18.44	7.50	1.616	714		
1225	18.45	7.51	1.612	690		

DTW After Pumping: _____ TD After Pumping: _____

Development Field Sheet

Site Location: 3600 Alameda Av
Oakland, California

Date: 12/16/15

Well ID: IW-9

Personnel: B. Whalen

Casing Volume Calculation:

Initial Depth to:

15.72

Initial Total Depth:

20.5

Casing Volume = (

N/A

Casing Volume:

0.8

(gallons)

Surging:

Surge over the sc

Surging Start Time:

7:27

minutes

Surging End Time:

7:39

Purging and Development:

When purging by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of 1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity,

Bailing

Use a bailer to remove and remove each ca

the bottom of the well casing. Purge at least the first 3 casing volumes using the bailer. After purging, measure temperature, pH, conductivity, and turbidity.

Bailing Start Time:

7:45

DTW Before Bailing:

13.56

TD Before Bailing:

20.5

Time	DTW	Temperature (C)	pH	Conductivity (µS/cm ²)	Turbidity (ntu)
7:47	1	15.65	6.60	1.594	>999
7:49	2	16.68	7.04	1.675	940
7:50	3	17.32	7.14	1.659	>999
7:52	4	17.60	7.23	1.620	>999

Bailing End Time:

DTW After Bailing:

TD After Bailing:

Pumping

After removing at least 1 gallon per minute

the remainder of purging/well development may be performed using a submersible pump at a flow rate of 1 gallon per minute by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Pumping Start Time:

DTW Before Pumping:

18.95

TD Before Pumping:

20.5

Time	Casing Volumes Removed	DTW	pH	Conductivity (µS/cm ²)	Turbidity (ntu)	DTW (ft. below TOC)
7:54	5	5.0	17.90	7.28	1.631	815
7:57	6	6.0	18.01	7.31	1.638	929
7:59	7	7.0	18.05	7.34	1.636	>999
8:01	8	8.0	18.00	7.36	1.642	856
Stop to surge - well dry						
8:18	9	9.0	16.91	7.43	1.680	>999
8:20	10	10.0	17.77	7.46	1.649	746
8:24	12	12.0	17.60	7.46	1.655	680

Pumping End Time:

DTW After Pumping:

TD After Pumping:

Development Field Sheet

Site Location: 3500 Alameda Avenue
Oakland, California

Date: 12/16/15

Well ID: IW-10

Personnel: B. Whalen

Casing Volume Calculation:

Initial Depth to P: _____

Initial Total Depth: 20.1

Casing Volume = (Total Depth - Initial Depth to P) x Casing Area

Casing Volume: 0.7 gallons

Surging:

Surging Start Time: 10:16

Surging End Time: 10:26

Purging and Development:

Use a bailer to remove casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of 1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, and turbidity.

Bailing

Use a bailer to remove casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of 1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, and turbidity.

Bailing Start Time: 10:30

Bailing End Time: 11:20

Time	Volume
1032	1
1034	2
1036	3
1038	4

Volume	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
1.0	16.88	7.73	2.869	>999
2.0	17.61	7.71	2.811	>999
3.0	17.93	7.92	2.664	>999
4.0	17.91	7.88	2.610	>999

Pumping

After removing at least 1 casing volume by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of 1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Pumping Start Time: _____

Pumping End Time: _____

Time	Casing Volumes Removed
1039	5
	Stop to surge
1109	6
1112	7
1114	8
1117	9
1120	10

Time	pH	Conductivity (µS/cm²)	Turbidity (ntu)	DTW (ft. below TOC)
17.40	7.86	2.587	>999	
17.20	7.86	2.521	840	
17.30	7.82	2.510	756	
17.38	7.84	2.485	731	
17.50	7.84	2.511	790	
17.56	7.84	2.525	628	

Initial Total Depth: 20.1

DTW Before Bailing: 15.04

TD Before Bailing: 20.0

DTW After Bailing: 19.22

TD After Bailing: 20.1

DTW Before Pumping: _____

TD Before Pumping: _____

DTW After Pumping: _____

TD After Pumping: _____

Development Field Sheet

Site Location: 3600 Alameda Av.
Oakland, California

Date: 12/16/15

Well ID: IW-11

Personnel: B. Whalen

Casing Volume Calculation:

Initial Depth to _____

Casing Volume = () _____

12.30 Initial Total Depth: 19.6

N/A

Casing Volume: 1.2 (gallons)

Surging: Surge over the screen _____

Surging Start Time: 8:50

Surging End Time: 9:00

Purging and Development:

After _____ times by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of _____ gpm. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Bailing: Use a bailer to remove casing volume by removing each casing volume _____

Bailing Start Time: _____

DTW Before Bailing: 13.50 TD Before Bailing: 19.5

Time
9:06
9:08
9:11
9:14

1 1.5
2 3.0
3 4.5
4 6.0

Time	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
9:06	16.21	8.05	1.953	>999
9:08	17.32	8.29	1.946	>999
9:11	17.36	8.34	1.917	>999
9:14	17.43	8.23	1.923	918

Bailing End Time: 9:46

DTW After Bailing: 18.32 TD After Bailing: 19.6

Pumping: After removing casing volume by pumping _____

Pumping Start Time: _____

DTW Before Pumping: ~~10.00~~ TD Before Pumping: _____

Time	Casing Volume Removed
9:17	5
9:20	6
	Day -
9:36	7
9:40	8
9:43	9
9:46	10

7.5
9.0
Stop to surge
10.5
12.0
13.5
15.0

Time	pH	Conductivity (µS/cm²)	Turbidity (ntu)	DTW (ft. below TOC)
9:17	8.09	1.913	>999	
9:20	7.97	1.871	842	
9:36	7.76	1.722	>999	
9:40	7.74	1.717	865	
9:43	7.73	1.725	712	
9:46	7.68	1.737	771	

Pumping End Time: _____

DTW After Pumping: _____ TD After Pumping: _____

Well Development Field Sheet

Site Location: 3600 Alameda Avenue
Oakland, California

Date: 12/17/15

Well ID: IW-12

Personnel: B. Whalen

Casing Volume Calculation:

Initial Depth to Water: 13.80 Initial Total Depth: 20.7 20.6

Initial Depth to Product (if present): N/A

Casing Volume = (Total Depth - Depth to water) * 0.16 Casing Volume: 1.1 (gallons)

Surging: Surge over the screened interval for a minimum of 10 minutes

Surging Start Time: 9:30 Surging End Time: 9:40

Purging and Development: After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Bailing: Use a bailer to remove any accumulated sediment from the bottom of the well casing. Purge at least the first 3 casing volumes using the bailer. After removing each casing volume by bailing, measure temperature, pH, conductivity, and turbidity.

Bailing Start Time: 9:48 DTW Before Bailing: 13.28 TD Before Bailing: 20.5

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
9:51	1	1.5	15.84	7.62	2.060	854
9:52	2	2.5	17.10	7.68	1.942	7999
9:54	3	3.5	17.35	7.67	1.891	7999
9:55	4	4.5	17.51	7.65	1.781	7999

Bailing End Time: 10:22 DTW After Bailing: 18.61 TD After Bailing: 20.6

Pumping: After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Pumping Start Time: _____ DTW Before Pumping: _____ TD Before Pumping: _____

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)	DTW (ft. below TOC)
9:57	5	5.5	17.50	7.63	1.756	7999	
9:59	6	7.0	17.51	7.61	1.739	7999	
10:16	7	8.0	16.36	7.58	1.745	7999	
10:18	8	9.0	16.75	7.54	1.727	810	
10:20	9	10.0	17.27	7.58	1.614	798	
10:22	10	11.0	17.48	7.61	1.580	740	

Pumping End Time: _____ DTW After Pumping: _____ TD After Pumping: _____

Stop to surge

Well Development Field Sheet

Site Location: 3500 Alameda Avenue
Oakland, California

Date: 12/16/15
Personnel: B. Whalen

Well ID: IW-13

Casing Volume Calculation:

Initial Surface Elevation: 11.22
Initial Depth to Productive Zone: N/A
Initial Total Depth: 20.5 - 19.5

Casing Volume = (Total Depth - Initial Depth) * 0.16
Casing Volume: 1.5 (gallons)

Surging: Surge over the screened interval for a minimum of 10 minutes

Surging Start Time: 14:54
Surging End Time: 15:04

Purging and Development: After removing the first 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, and turbidity.

Bailing: Use a bailer to remove casing volume, removing each casing volume from the bottom of the well casing. Purge at least the first 3 casing volumes using the bailer. After removing each casing volume by bailing, measure temperature, pH, conductivity, and turbidity.

Bailing Start Time: 15:05
DTW Before Bailing: 12.00
TD Before Bailing: 19.63

Time	Casing Volume (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
1507	1	16.45	7.93	1.797	>999
1510	2	17.03	8.41	1.699	>999
1513	3	17.24	8.63	1.578	875
1516	4	17.40	8.60	1.624	>999

Bailing End Time: _____
DTW After Bailing: 16.10
TD After Bailing: 19.6

Pumping: After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Pumping Start Time: _____
DTW Before Pumping: _____
TD Before Pumping: 19.6

Time	Casing Volumes Removed	DTW (ft. below TOC)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
1518	5	7.5	17.40	8.70	1.574	832
1520	6	9.0	17.42	8.64	1.573	690
1522	7	10.5	17.42	8.44	1.580	652
1524	8	12.0	17.55	8.28	1.590	551
1526	9	13.5	17.52	8.20	1.620	492
1529	10	15.0	17.33	8.09	1.631	411

Pumping End Time: _____
DTW After Pumping: _____
TD After Pumping: _____

Well Development Field Sheet

Site Location: 3600 Alameda Avenue
Oakland, California

Date: 12/16/15

Well ID: IW-14

Personnel: B. Whalen

Casing Volume Calculation:

Initial Total Depth: 20.9

Initial Depth to Pump: N/A

Casing Volume = (Total Depth - Initial Depth to Pump) x 7.48 = 1.4 (gallons)

Surging: Surge over the screen for 10 minutes

Surging Start Time: 1320 Surging End Time: 1330

Purging and Development: After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Bailing: Use a bailer to remove casing volume from the bottom of the well casing. Purge at least the first 3 casing volumes using the bailer. After removing each casing volume by bailing, measure temperature, pH, conductivity, and turbidity.

Bailing Start Time: _____ DTW Before Bailing: 12.12 TD Before Bailing: 19.9

Time	Casing Volumes Removed	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
1337	1	16.51	7.64	2.814	>999
1340	2	15.95	7.84	2.678	>999
1343	3	16.19	7.83	2.831	>999
Stop to surge					

Bailing End Time: 1436 DTW After Bailing: 19.89 TD After Bailing: 21.4

Pumping: After removing at least 1 casing volume by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Pumping Start Time: _____ DTW Before Pumping: _____ TD Before Pumping: _____

Time	Casing Volumes Removed	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)	DTW (ft. below TOC)
1400	4	16.46	7.87	2.394	>999	6.0
1402	5	16.91	7.81	2.403	>999	7.5
1405	6	16.85	7.79	2.381	>999	9.0
1408	7	16.96	7.75	2.352	916	10.5
1431	8	16.90	7.65	1.739	631	12.0
1433	9	16.92	7.65	2.023	727	13.5
1436	10	16.88	7.67	2.161	770	15.0

Pumping End Time: _____ DTW After Pumping: _____ TD After Pumping: _____

Well Development Field Sheet

Site Location: 3600 Alameda Avenue
Oakland, California

Date: 12/16/15

Well ID: IW-15

Personnel: B. Whalen

Casing Volume Calculation:

Initial Depth to Water: 13.25 Initial Total Depth: 19.3

Initial Depth to Product (if present): N/A

Casing Volume = (Total Depth - Depth to Water) * 0.16 Casing Volume: 1.0 (gallons)

Surging: Surge over the screened interval for a minimum of 10 minutes

Surging Start Time: 15:43 Surging End Time: 15:53

Purging and Development: After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, and turbidity, and depth to water.

Bailing: Use a bailer to remove any accumulated sediment from the bottom of the well casing. Purge at least the first 3 casing volumes using the bailer. After removing each casing volume by bailing, measure temperature, pH, conductivity, and turbidity.

Bailing Start Time: 15:55 DTW Before Bailing: 12.70 TD Before Bailing: 19.3

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
1556	1	1.0	16.82	7.77	3.057	826
1558	2	2.0	17.21	7.79	2.811	>999
1559	3	3.0	17.50	7.79	2.663	>999
1600	4	4.0	17.50	7.76	2.561	>999

Bailing End Time: 16:22 DTW After Bailing: 17.50 TD After Bailing: 19.3

Pumping: After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Pumping Start Time: _____ DTW Before Pumping: _____ TD Before Pumping: _____

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)	DTW (ft. below TOC)
1602	5	5.0	17.47	7.74	2.476	790	
1603	6	6.0	17.45	7.72	2.502	899	
1605	7	7.0	17.42	7.72	2.516	827	
Stop to surge							
1619	8	8.0	16.52	7.71	2.186	816	
1620	9	9.0	17.41	7.69	2.139	755	
1622	10	10.0	17.56	7.69	2.104	710	

Pumping End Time: _____ DTW After Pumping: _____ TD After Pumping: _____

Well Development Field Sheet

Site Location: 3600 Alameda Avenue
Oakland, California

Date: 12/14/15

Well ID: IW-16

Personnel: B. Whalen

Casing Volume Calculation:

Initial Depth to Water: 15.40 Initial Total Depth: 20.0

Initial Depth to Product (if present): N/A

Casing Volume = (Total Depth - Depth to water) * 0.16 Casing Volume: 0.7 1.2 (gallons)

Surging: Surge over the screened interval for a minimum of 10 minutes

Surging Start Time: 15:37 Surging End Time: 15:47

Purging and Development: After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Bailing Use a bailer to remove any accumulated sediment from the bottom of the well casing. Purge at least the first 3 casing volumes using the bailer. After removing each casing volume by bailing, measure temperature, pH, conductivity, and turbidity.

Bailing Start Time: 1548 DTW Before Bailing: 12.62 TD Before Bailing: 20.0

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
1550	1	1.5	15.74	7.87	4.001	216
1553	2	3.0	16.64	7.74	3.394	148
1556	3	4.5	16.77	7.78	2.967	149
1559	4	6.0	16.68	7.76	3.120	126

Bailing End Time: _____ DTW After Bailing: 17.50 TD After Bailing: 20.0

Pumping After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Pumping Start Time: _____ DTW Before Pumping: _____ TD Before Pumping: _____

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)	DTW (ft. below TOC)
1617	5	7.5	15.50	7.72	2.506	132	
1620	6	9.0	16.57	7.70	2.536	140	
1624	7	10.5	16.58	7.73	2.743	158	

Pumping End Time: _____ DTW After Pumping: _____ TD After Pumping: _____

All data 12/15

Well Development Field Sheet

Site Location: 3600 Alameda Avenue
Oakland, California

Date: 12/14/15

Well ID: IW-17

Personnel: B. Whalen

Casing Volume Calculation:

Initial Depth to Water: 11.22

Initial Total Depth: 19.8

Initial Depth to Product (if present): N/A

Casing Volume = (Total Depth - Depth to water) * 0.16

Casing Volume: 1.4 (gallons)

Surging:

Surge over the screened interval for a minimum of 10 minutes

Surging Start Time: 1435

Surging End Time: 1448

Purging and Development:

After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Bailing

Use a bailer to remove any accumulated sediment from the bottom of the well casing. Purge at least the first 3 casing volumes using the bailer. After removing each casing volume by bailing, measure temperature, pH, conductivity, and turbidity.

Bailing Start Time: 1453

DTW Before Bailing: 12.05

TD Before Bailing: 19.8

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)
14:56	1	1.5	16.53	7.78	5.644	565
14:59	2	3.0	16.55	7.79	4.965	205
15:15	3	4.5	16.70	7.86	4.567	465
15:25	4	6.0	16.55	7.89	4.470	156

Stop at 3:01 for redner
DTW @ 17:55

Bailing End Time: 15:25

DTW After Bailing: Dry 17:55

TD After Bailing: 19.8

Pumping

After removing at least 3 casing volumes by bailing, the remainder of purging/well development may be performed using a submersible pump at a flow rate of ~1 gallon per minute. After removing each casing volume by pumping, measure temperature, pH, conductivity, turbidity, and depth to water.

Pumping Start Time: _____

DTW Before Pumping: _____

TD Before Pumping: _____

Time	Casing Volumes Removed	Volume Removed (gallons)	Temperature (C°)	pH	Conductivity (µS/cm²)	Turbidity (ntu)	DTW (ft. below TOC)

Pumping End Time: _____

DTW After Pumping: _____

TD After Pumping: _____

Appendix 9: Pictures



Figure 1: Concrete and Asphalt Area Marked for Sawcutting

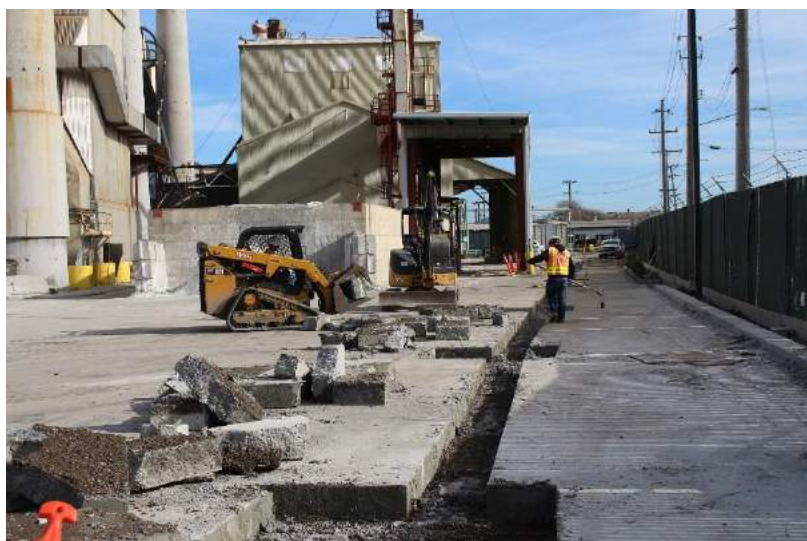


Figure 2: Concrete and Asphalt Area Trenching



Figure 3: Well Vault Placement



Figure 4: Storm Drain Damage



Figure 5: Plugging Storm Drain with Cement



Figure 6: Bolt-Down Steel Plate for Added Protection



Figures 7 and 8: Placing Well Vaults in Landscaped Area



Figure 9: Well Vault Instrumentation



Figure 10: Welded PE Tee with PE to Galvanized Transition Fitting



Figure 11: Cargo Shed Foundation with Ufer Prior to Pouring Concrete Slab



Figure 12: Completed Cargo Shed Foundation



Figure 13: Placing Cargo Shed Onto Concrete Slab Foundation



Figure 14: Cargo Shed Installed with Gravel Landscaping



Figure 15: Backfill and Surface Restoration Completed Inside Property



Figure 16 and 17: Backfill and Landscaping Completed Outside Property



Figure 18: Completed Heat Exchanger Installation



Figure 19 and 20: Heat Exchanger Mounting Position and Connections

Appendix 10: Concrete Test Results

Regular Concrete Compression Test Report

Project No. : 62795	Client : CKG000	Sample No. : 253583 / Page 1 of 1
Project Name: 3600 Alameda Avenue Owens-Brockway Glass Container Oakland, CA Permit # B1600031		Report Date : 03/22/16 Sample Date : 02/23/16 Time Sampled : 1010AM Date Received : 02/24/16 Inspector : G. Wooldridge, TEI

Supplier: Central Concrete
Mix : 161115D4
Ticket No. : 18173261

Specimens Cast (ASTM C-31) : 5
Air Temperature (ASTM C-1064) : 63 deg F
Mixture Temperature (ASTM C-1064) : 70 deg F
Slump (ASTM C-143) : 4 inches

Location:
Slab on grade.

Capping Specimens ___ ASTM C-617 ___ ASTM C-1231

Date Tested	03/01/16	03/22/16	03/22/16	03/22/16	HOLD
ID Number	2A	2B	2C	2D	2E
Mark Sample					
Dimension, Inches					
Diameter	4	4	4	4	
Length	8	8	8	8	
Area, sq. inches	12.57	12.57	12.57	12.57	
Ultimate Load, lbs	43000	58000	59000	58000	
Ultimate Str., psi	3420	4610	4690	4610	
Average, Str., psi				4640	
Age Tested, Days	7	28	28	28	HOLD
Fracture Type	1	1	1	1	
Dry Unit Weight, pcf					
Specified Strength, psi		4000	4000	4000	

SPECIMENS NOT SCHEDULED FOR TESTING WILL BE DISCARDED AFTER 28 DAYS OLD

The Material WAS ___ WAS NOT The Material Tested MET ___ DID NOT MEET THE
 SAMPLED AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE BLDG. DEPT. OR DSA APPROVED DOCUMENTS.
 REQUIREMENTS OF THE BLDG. DEPT. OR DSA APPROVED DOCUMENTS.

Remarks: Samples Tested in General Conformance with ASTM C-39

1 cc. City of Oakland
1 cc. CKG Environmental, Inc.

Reviewed By:

COPY

Robert Green
Concrete Lab Supervisor

The results presented in this report relate only to the item(s) tested.
This report can be reproduced only in its entirety unless written permission from TEI is obtained.



TESTING ENGINEERS, INC.

Date: 2.23.2016 DSA File #: _____ DSA App. #: _____
 Project No.: _____ OSHPD No.: _____
 Project Name: 3600 Alameda Permit/SF App. #: B-16-00031
 Address: 3600 Alameda Ave Tow Code: 107
 City: Oakland Start Time: _____
 Requested by: YOUSIF Hours: _____
 Reported to: YOUSIF of: _____

Reinforcing Steel (180), Concrete (107) and Post-Tensioning Report (144)

Inspected the placement of reinforcing steel; tendons; AB's; HD's; tie downs (180) at the following locations:

Inspected the stressing operations (144) and recorded elongations (on file at TEI office) for the following location(s):

Performed continuous periodic inspection at batch plant (123) operations for materials and checked _____ loads leaving plant.

Performed continuous inspection of the placement of concrete (107); non-shrink grout (168) Concrete Sample Only (147)

Monitored loads arriving at the jobsite for correct mix and proper slump.

Inspected placement operations and vibrating procedures. Performed _____ Unit weight tests, (_____) Performed _____ air entrainment tests (_____) Performed 1 slump test(s) (4, _____, _____, _____) and cast 1 set(s) of compression test specimens (5 ea.)

Sample # 253583, _____, _____, _____, _____, _____, for Concrete Mix # 16115D4

from (supplier) Central, specified strength 4000, air _____%, and slump 4 inches

for concrete placed at Slab on Grade For Cargo Container

Total cubic yards placed: 3 1/2

Final acceptance is pending written approval or corrective action as noted. See attached RFI.

All non-compliance items were brought to the attention of _____ at jobsite.

Notes:

Showup; Stand-by time; Job Cancelled; Re-inspection; Hours: _____

The work was was not inspected in accordance with the Building Department or DSA or OSHPD approved documents.

The work inspected met did not meet the requirements of the Building Department or DSA or OSHPD approved documents, except as noted above.

Material sampling was was not N/A performed in accordance with the Building Department or DSA or OSHPD approved documents.

Drawings: Structural Dated: 9/15/2015 City County DSA Shop

Inspector: Glenn Woolbridge Certification # 5107696 Date: 2.23.2016

Received by: _____ Date: 2.23.2016



Central
Bode
Westside

a U.S. CONCRETE COMPANY

CENTRAL CONCRETE SUPPLY CO., INC.

MAIN OFFICE:
755 Stockton Avenue,
San Jose, CA 95126
1-866-404-1000

TICKET NUMBER



18173261

WARNING: IRRITATION TO THE SKIN AND EYES: Contains Portland Cement. Wear rubber boots and gloves. PROLONGED CONTACT MAY CAUSE BURNS. Avoid contact with eyes and prolonged contact with skin. In case of contact with skin or eyes, flush thoroughly with water. If irritation persists, get medical attention. KEEP CHILDREN AWAY.

CONCRETE IS A PERISHABLE COMMODITY AND BECOMES THE PROPERTY OF THE PURCHASER UPON LEAVING THE PLANT. ANY CHANGES OR CANCELLATION OF ORIGINAL INSTRUCTIONS MUST BE TELEPHONED TO THE OFFICE BEFORE LOADING STARTS.

WE DO NOT GUARANTEE FINISHED RESULTS OBTAINED FROM THIS LOAD OF CONCRETE AS MANY IMPORTANT FACTORS AFFECTING THE ULTIMATE QUALITY OF THE COMPLETED JOB ARE OUT OF OUR CONTROL. We do not warrant that the concrete can be used in any particular environment or soil conditions or that the concrete is fit for any particular use. Selection of the mix design and/or specification of the mix design parameters are solely the responsibility of the Customer, and we assume no liability therefore.

PLEASE NOTE: THIS LOAD OF CONCRETE IS PRODUCED IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR READY MIX CONCRETE ASTM. ANY DE-ICING MATERIALS, IMPROPER FINISHING AND LACK OF CURING WILL CAUSE DAMAGE OR A DECREASE IN STRENGTH.

NOTICE: MY SIGNATURE BELOW INDICATES THAT I HAVE READ THE HEALTH WARNING NOTICE AND SUPPLIER WILL NOT BE RESPONSIBLE FOR ANY DAMAGE CAUSED WHEN DELIVERING INSIDE CURB LINE AND AGREE TO THE TERMS AND CONDITIONS ON REVERSE SIDE. TIME IN EXCESS OF FREE TIME WILL BE CHARGED AT CURRENT DELAY RATE. ALL C.O.D. DELIVERIES MUST BE PAID IN ADVANCE AND LOAD ACCEPTED BY SIGNING THIS DELIVERY TICKET BEFORE POURING.

LOAD RECEIVED BY:

X

PROPERTY DAMAGE RELEASE
(TO BE SIGNED IF DELIVERY TO BE MADE INSIDE CURB LINE)

Dear Customer - The size and weight of this truck could cause damage to the premises and/or adjacent property if this load is placed where you desire. It is our wish to help you in every way that we can, but in order to do this we are requesting that you sign this RELEASE relieving this supplier and its affiliates from any responsibility from damage that may occur to the premises and/or adjacent property, buildings, sidewalks, drive-ways, curbs, etc., due to the delivery of this material, and that you also agree to help the driver remove mud from the wheels of his vehicle so that it will not litter the public street. Further, as additional consideration; the undersigned agrees to indemnify and hold harmless the driver of this truck and this supplier and its affiliates for any and all damage to the premises and/or adjacent property which may be claimed by anyone to have arisen out of delivery of this order.

SIGNED: X

WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

WATER ADDED AT CUSTOMER REQUEST
EXCESSIVE WATER IS DETRIMENTAL TO CONCRETE PERFORMANCE.

X
REQUESTOR'S NAME

SA	FULL LOAD	¾ LOAD	½ LOAD	¼ LOAD
	(GALLONS)	(GALLONS)	(GALLONS)	(GALLONS)

TEST RESULTS

SLUMP CONC. TEMP. AIR%
CYLINDERS TAKEN: YES NO
NAME OF TESTING LAB:

CUSTOMER ERRG - ENGINEERING/REMEDICATION	CUSTOMER CODE 1201892	DELIVERY ADDRESS 3600 ALAMEDA AVE, OAKLAND, CA 601
PROJECT NAME OAKLAND GLASS PLANT, OAKLAND	PROJECT CODE 1366428	
CUSTOMER PO # 20150156	SPECIAL INSTRUCTIONS YS- FRUITVALE	
CUSTOMER JOB ID # 20150156		RETURNED CONCRETE

LOAD QUANTITY	ORDERED QTY	CUMULATIVE QTY	PRODUCT ID	DESCRIPTION	UNIT PRICE	EXTENDED PRICE
3.50 CYD	3.5	3.5	161115D4	20% FA 0.45 w/cm		
3.50 ea	0		EFUEL06	FUEL06 *2006 FUEL SURC		
3.50 ea	0		EENV12	964 *ENVIRONMENTAL		
* YD = CUBIC YARD			930	*SHORTLOAD		

BATCH TIME 9:24	LEAVE PLANT 9:39	ARRIVE JOB 9:50	BEGIN POUR	FINISH POUR	LEAVE JOB	ARRIVE AT PLANT	USAGE CODE	SUB TOTAL
TOTAL WAIT TIME	PREVIOUS TRUCK	LOAD # 1	SLUMP 4	MAP PAGE	TIME DUE ON JOB 9:56	TAX RATE	TAX	
DATE 02/23/16	ORDER # 1129	PLANT 12	TRUCK # 1253	DELIVERY PROFESSIONAL Clarke, Frank	ORDER GRAND TOTAL	TOTAL		
DRUM REV - AT PLANT	DRUM REV - START	DRUM REV - FINISH	DEPUTY WEIGHMASTER Cristian Contreras Weighat2400PeraltaSt, Oakland, CA			WEIGHMASTER CERTIFICATE # 14010620		



14010620

Appendix 11: PG&E Electrical Design Drawing

CONSTRUCTION NOTES

NR16 - NEW OH SERVICE TO 100A 3Ø PANEL FOR MONITORING AIR INJECTION WELLS FOR REMEDIATION.
 PG&E TO INSTALL NEW POLE, OPEN-DELTA BANK & OH 1/0A QPX SERVICE (185').
 APPLICANT TO INSTALL 35'/CL5 CLEARANCE POLE ON PRIVATE PROPERTY.

LOC 1:

- INSTALL 65'/CL3 SOLE-OWNED POLE - SET 9 FEET DEEP 33' E/O DEAD-END JOINT POLE
- TOP POLE AS NECESSARY
- INSTALL 15/15 KVA OPEN-DELTA BANK TX
- INSTALL (3) PT44-H CUTOUTS & (3) 3A T FUSES ON CUTOUT ARM

LOC 2:

- INSTALL 1/0A QPX SERVICE (75')
- ATTACH OH 1/0A QPX SERVICE TO SPOOL ON POLE

LOC 3:

- APPLICANT TO INSTALL 35'/CL5 CLEARANCE POLE - SET 7 FEET DEEP POLE
- PG&E TO INSPECT POLE INSTALLATION & INSTALL CLEVIS FOR SERVICE

LOC 4:

- INSTALL 1/0A QPX SERVICE (110')

LOC 5:

- INSTALL 120/240V 4W 3Ø METER

COORDINATE #	315007146672
PRIMARY VOLTAGE	12KV
SECONDARY VOLTAGE	120/240V
TX SIZE	15/15
KVA 1Ø	10 KVA
KVA 3Ø	12 KVA
% L. F.	100%
TYPE TX.	OD BANK
LOADING DIST.	SC

Underground Service Alert
 Call: TOLL FREE
8 1 1
 TWO WORKING DAYS BEFORE YOU DIG

PG&E GAS CONFLICTS IDENTIFIED FOR THIS PROJECT
 GAS PLATS: Map# 09A-10

PG&E GAS FACILITIES IN CONFLICT WITH EXCAVATION AT LOC(S):
 Loc # None

PG&E GAS FACILITIES IN PROXIMITY WITH EXCAVATION AT LOC(S):
 Loc. # 3

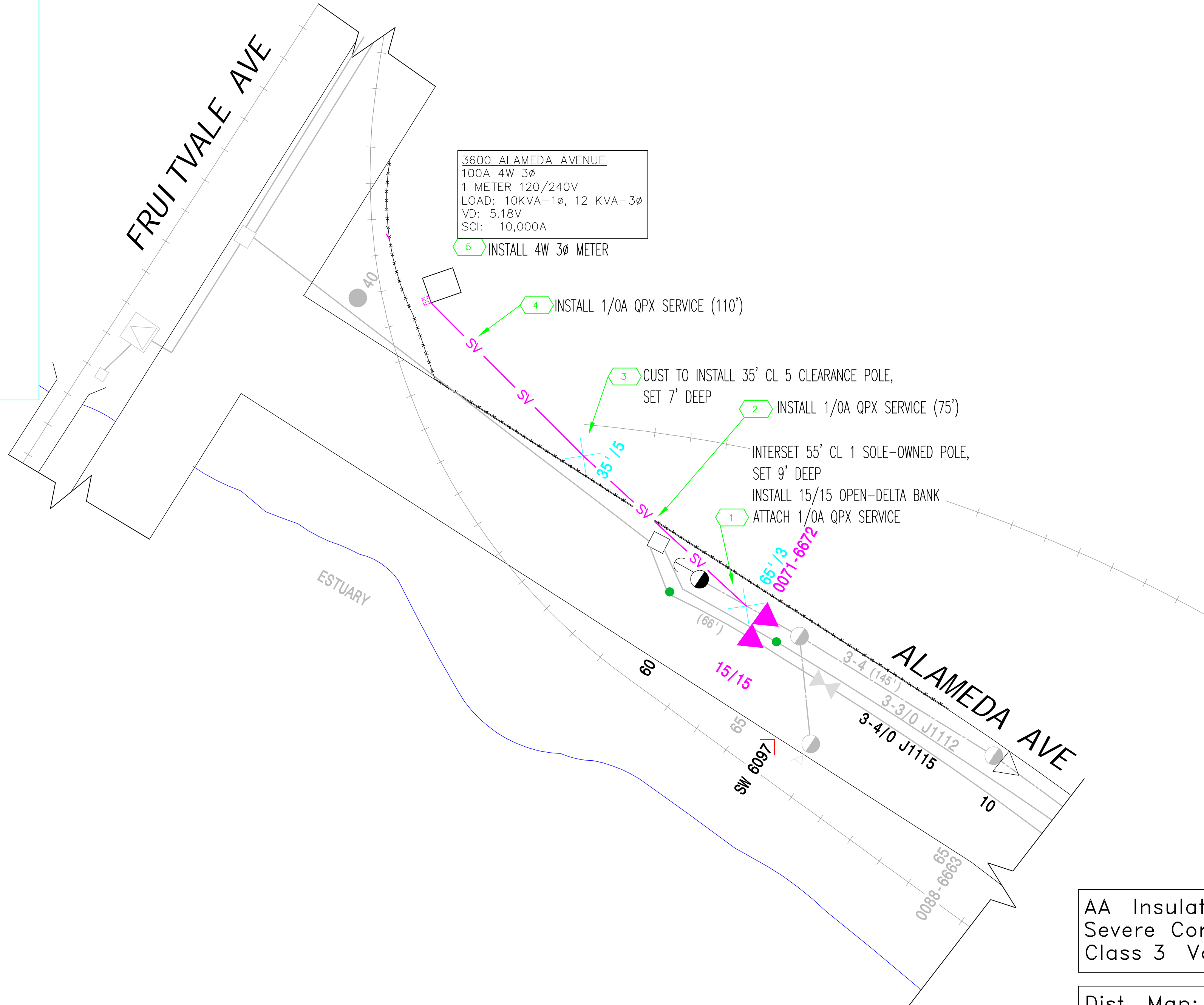
NOTIFIED U.S.A.
 DATE:
 TICKET #
 BY:

ESTIMATOR:
 TRACI ESTELL
 (510) 437-2525

ESTIMATING SUPV:
 WILMER CLARK
 (510) 437-2403

ADE:
 STEVE STOKER
 (510) 437-2057

INSPECTION DESK:
 CALL (510) 437-2088



NEW POLE:
 SET POLE N/S ALAMEDA AVE,
 395' E/O FRUITVALE AVE
 SET 9 FEET DEEP
 65' CLASS 3 SOLE-OWNED POLE
 PG BM = 24,354 FT LBS
 SAFETY FACTOR = 6.08
 NEW POLE # -----

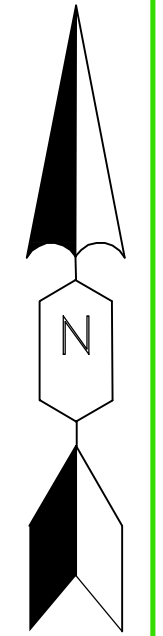
SAFETY PLEDGE

I ALWAYS PUT SAFETY FIRST.
 I LOOK FOR AND ACT TO
 RESOLVE UNSAFE SITUATIONS.
 I HELP AND ENCOURAGE
 OTHERS TO ACT SAFELY.

PG&E

AA Insulation District
 Severe Corrosion
 Class 3 Voltage Area

Dist. Map: G-06-16/G-06-17
 Cir. Map: G-6-C
 Voltage: 12 KV
 Feeder: J1115
 S.S. Device: SW 6097
 ALAMEDA AVE, 387' W/O
 FRUITVALE AVE - #110147726



CO:	SD:	NOTIF.:	110681336
Other:	SHT:	1 OF 2	SHEETS
PM:	31204781	REV.	0

ENGINEERING AND PLANNING DEPT.
 4801 OAKFORD STREET
 OAKLAND, CA 94601
 PHONE #:(510) 437-2144 FAX #:(510) 437-2144
 PACIFIC GAS AND ELECTRIC COMPANY

NO.	DATE	DESCRIPTION	APVD BY

EST: TRACI ESTELL (LEO)
 ADE: STEVE STOKER (SWGS)
 SUPV: WILMER CLARK (WCCC)
 REP: CARLA KENDALL (CA01)
 PLNR: MARIA SILVA (MUSP)
 SCALE: 1"=50'
 DATE: 3/2/2016

OH CONSTRUCTION SKETCH
 NEW POLE, OD BANK & OH QPX SERVICE
 BIOBARRIER GROUNDWATER TREATMENT PROJ.
 3600 ALAMEDA AVE., OAKLAND, CA 94601

REVISIONS

Appendx 12: Startup Summary

STARTUP SUMMARY FORM
 CKG Biobarrier Groundwater Treatment Project
 3600 Alameda Ave, Oakland, CA

Date: 7/20/2016

IW ID	Flow (cfm)	Pressure (psi)	Change in Water Level (ft)	MW ID
1A	15	18	0.2	6
1B	32	18	overflow	6
2A	22	18	overflow	6
2B	30	18	0.35	6
3	16	21	0/0.1	6/7
4	6.2	19	0	7
5	11	16	overflow	7
6A	35	20	overflow	7
6B	10.1	23	3.5	7
7	16	18	0.3	7
8	14.9	11	0	7
9	12.8	10	0	7
10	16.5	7	-0.15	3R
11	4.7	19	-1.1	3R
12	5.5	18	3.1	3R
13	11.1	17	2.7	3R
14	4.3	22	-0.7	17/3R
15	11.4	17	-0.25	17
16	10	18	0.55	17
17	17	16	0.4	17

Current Well Groupings

Group	Well ID
1	1A
	3
	5
	12
	13
2	15
	1B
	4
	8
	10
	11
3	14
	16
	2A
	2B
	6A
	6B
	7
9	
17	


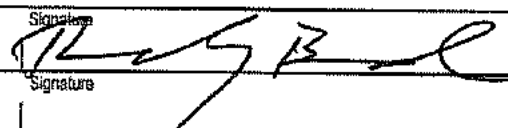
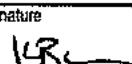
1. The objective of the startup was to assess the maximum flow rate to each well, while monitoring the change in groundwater elevation at nearby monitoring wells.
2. Operated each air injection well independently, while running the air compressor at the highest pressure achievable.
3. The results indicate that several wells share similar characteristics in terms of flow rate and pressure.
4. Wells with similar flow and pressure characteristics were grouped together to maximize the efficiency of the system.
5. Injection wells 1B, 2A, 5, and 6A caused groundwater to rise to the top of the well casing. This is an indication that flowrate to these wells should be limited to avoid discharging contaminated groundwater onto the ground surface.
6. Well groupings shown are current as of 10/14/2016, and are subject to change.

Appendix 13: Disposal Documentation

R-88 WPL6558
105-4EV6212

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

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number CAT000618918	2. Page 1 of 1	3. Emergency Response Phone (800) 368-4778	4. Manifest Tracking Number 015349974 JJK	
5. Generator's Name and Mailing Address OWENS - BROCKWAY GLASS CONTAINER INC - OAKLAND 3600 ALAMEDA AVENUE OAKLAND CA 94601			Generator's Site Address (if different than mailing address) 3600 ALAMEDA AVENUE OAKLAND CA 94601			
Generator's Phone: 510 436-2166						
6. Transporter 1 Company Name Remedial Transportation Services					U.S. EPA ID Number CA2000181566	
7. Transporter 2 Company Name					U.S. EPA ID Number	
8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT 35251 OLD SKYLINE RD. KETTLEMAN CITY CA 93239					U.S. EPA ID Number	
Facility's Phone: (559)366-9711					CAT000648117	
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers		11. Total Quantity
				No.	Type	12. Unit Wt./Vol.
	1.	NON RCRA HAZARDOUS WASTE, SOLID (SOIL, LEAD)		1	CM	20 Y
	2.					
	3.					
4.						
13. Waste Codes 611						
14. Special Handling Instructions and Additional Information 9B11 CA610358 - SOIL PT-2984 ERG#: 9B1. 171 **ER5W.O.#123018 - ECB** 24 HR EMERGENCY CONTACT: ENVIROSERV						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
Generator's/Offero's Printed/Typed Name: AS AGENT FOR GENERATOR SHAUN PICKETT					Signature:  Month Day Year: 13 7 16	
TRANSPORTER	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____					
	17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name: Rodney Beard Signature:  Month Day Year: 13 7 16 Transporter 2 Printed/Typed Name: _____ Signature: _____ Month Day Year: _____					
DESIGNATED FACILITY	18. Discrepancy					
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
	18b. Alternate Facility (or Generator) Manifest Reference Number: _____ U.S. EPA ID Number: _____					
	Facility's Phone: _____					
	18c. Signature of Alternate Facility (or Generator) _____ Month Day Year: _____					
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						
1. H132		2.		3.		4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a						
Printed/Typed Name: Katie Burkett					Signature:  Month Day Year: 10 3 07 16	

TIME _____ DATE _____ WEIGHT (LB) _____ COMMODITY: HAZARDOUS WASTE
 DEPUTY WEIGHMASTER _____
 GROSS: _____
 TARE: _____
 NET: 72800 LB YARDAGE: 20

CHEMICAL WASTE MANAGEMENT, INC.
 WEIGHMASTER weighed at
 35251 Old Skyline Road
 Kentland City, CA
 NO: **302483**
 WEIGHMASTER CERTIFICATE
 THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 6 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

GENERATOR <u>Wemens</u>	MANIFEST <u>0153497745K</u>	PROFILE <u>CA 61035</u>
TRACTOR LICENSE # <u>WJL11570</u>	TRAILER LICENSE NO. <u>4EVL212</u>	RECEIPT # <u>274317</u>

RUC 10-1
 KTS

117
 1-2
 11

BA soil

TRUCK WP49497
7308KL

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved, OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number CAT000619918	2. Page 1 of 1	3. Emergency Response Phone (800) 368-4778	4. Manifest Tracking Number 015349975 JJK		
5. Generator's Name and Mailing Address OWENS - BROCKWAY GLASS CONTAINER INC - OAKLAND 3600 ALAMEDA AVENUE OAKLAND CA 94601 Generator's Phone: 510 436-2166				Generator's Site Address (if different than mailing address) 3600 ALAMEDA AVENUE OAKLAND CA 94601			
6. Transporter 1 Company Name Remedial Transportation Services					U.S. EPA ID Number CAR000181560		
7. Transporter 2 Company Name					U.S. EPA ID Number		
8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT 35251 OLD SKYLINE RD. KETTLEMAN CITY CA 95239 Facility's Phone: (559)386-9711					U.S. EPA ID Number CAT000646117		
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
		No.	Type				
1.	NON RCRA HAZARDOUS WASTE, SOLID (SOIL, LEAD)	1	CM	20	Y	511	
2.							
3.							
4.							
14. Special Handling Instructions and Additional Information 9B11 CA610358 - SOIL PT-4479 ERG#: 9B1. 171 ** ER5 W.O.# 123018 - ECB ** 24 HR EMERGENCY CONTACT: ENVIROSERV							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generators/Offeror's Printed/Typed Name AS AGENT FOR GENERATOR SHANE PICKETT					Signature [Signature]		Month Day Year 3 8 16
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Transporter signature (for exports only): _____ Date leaving U.S.: _____							
17. Transporter Acknowledgment of Receipt of Materials							
Transporter 1 Printed/Typed Name Ismael Flores					Signature [Signature]		Month Day Year 03 08 16
Transporter 2 Printed/Typed Name					Signature		Month Day Year
18. Discrepancy							
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection							
18b. Alternate Facility (or Generator) U.S. EPA ID Number							
Facility's Phone: _____							
18c. Signature of Alternate Facility (or Generator) Month Day Year							
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1. H13Z		2.		3.		4.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a							
Printed/Typed Name Ginger Adams					Signature [Signature]		Month Day Year 3 8 16

GENERATOR
TRANSPORTER INTL
DESIGNATED FACILITY

TIME

DATE

WEIGHT (LB)

COMMODITY: HAZARDOUS WASTE

CHEMICAL WASTE MANAGEMENT, INC
WEIGHMASTER weighed at
35251 Old Skyline Road
Kettleman City, CA

DEPUTY WEIGHMASTER

GROSS:

TARE:

NET: 30100 LB

YARDAGE: 2

NO. 303522

WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

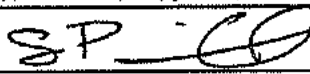
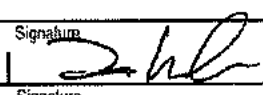
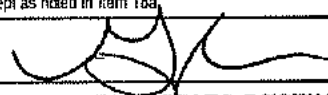
GENERATOR	MANIFEST	PROFILE	
TRACTOR LICENSE #	TRAILER LICENSE NO.	BIN #	RECEIPT #

3/17
36,848
1125
JWA

UP94905 1X95802

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

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number CAT00061891B	2. Page 1 of 1	3. Emergency Response Phone (800) 368-4778	4. Manifest Tracking Number 015349976 JJK			
5. Generator's Name and Mailing Address OWENS - BROCKWAY GLASS CONTAINER INC - OAKLAND 3600 ALAMEDA AVENUE OAKLAND CA 94601			Generator's Site Address (if different than mailing address) 3600 ALAMEDA AVENUE OAKLAND CA 94601					
Generator's Phone: 510 436-2166			U.S. EPA ID Number					
6. Transporter 1 Company Name Remedial Transportation Services			U.S. EPA ID Number CAV000181860					
7. Transporter 2 Company Name			U.S. EPA ID Number					
8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT 33251 OLD SKYLINE RD. KETTLEMAN CITY CA 93239			U.S. EPA ID Number CAT000646117					
Facility's Phone: (559)386-9711								
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
		No.	Type					
	1. NON RCRA HAZARDOUS WASTE, SOLID (SOIL, LEAD)	1	CM	20	Y	611		
	2.							
	3.							
	4.							
14. Special Handling Instructions and Additional Information 9B11 CA610358 - SOIL						ERG#: 9B1. 171 ** ER5 W.O.#123018 - ECB **		
PT-1303						24 HR EMERGENCY CONTACT: ENVIROSERV		
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.								
Generator's/Officer's Printed/Typed Name SHANE PICKETT					Signature 			
					Month	Day	Year	
					3	8	16	
TRANSPORTER	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: _____					
	Transporter signature (for exports only): _____		Date leaving U.S.: _____					
TRANSPORTER	17. Transporter Acknowledgment of Receipt of Materials							
	Transporter 1 Printed/Typed Name Tom Penlow	Signature 				Month	Day	Year
						3	8	16
						Month	Day	Year
DESIGNATED FACILITY	18. Discrepancy							
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection							
	Manifest Reference Number: _____							
18b. Alternate Facility (or Generator)					U.S. EPA ID Number			
Facility's Phone: _____								
18c. Signature of Alternate Facility (or Generator)								
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)								
1. H132		2.		3.		4.		
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a.								
Printed/Typed Name Ginny Adams					Signature 			
					Month	Day	Year	
					3	8	16	

TIME

DATE

WEIGHT (LB)

COMMODITY: HAZARDOUS WASTE

CHEMICAL WASTE MANAGEMENT, INC
WEIGHMASTER weighed at
35241 Old Skyline Road
Kettleman City, CA

DEPUTY WEIGHMASTER

GROSS:

TARE:

NET: 31600 LB

YARDAGE: 2

NO. 303512

WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture

GENERATOR	MANIFEST	PROFILE
TRACTOR LICENSE #	TRAILER LICENSE NO.	BIN #
5	2	1-1
		RECEIPT #
		1-1

7000 4000 ✓
215

3117
303512
1000
2000

288 - WP46550
105 - 4204212

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

Form Approved. OMB No. 2050-003

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number CAT000618918	2. Page 1 of 1	3. Emergency Response Phone (800) 368-4778	4. Manifest Tracking Number 015349977 JJK
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5. Generator's Name and Mailing Address OWENS - BROCKWAY GLASS CONTAINER INC - OAKLAND 3600 ALAMEDA AVENUE OAKLAND CA 94601	Generator's Site Address (if different than mailing address) 3600 ALAMEDA AVENUE OAKLAND CA 94601
---	---

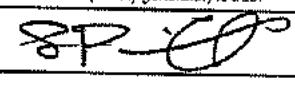
6. Transporter 1 Company Name Remedial Transportation Service	U.S. EPA ID Number CA0002181560
7. Transporter 2 Company Name	U.S. EPA ID Number

8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT 35251 OLD SKYLINE RD. KETTLEMAN CITY CA 93239	U.S. EPA ID Number
Facility's Phone: (559)586-9711	CAT000646117


9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
		No.	Type					
1.	NON RCRA HAZARDOUS WASTE, SOLID (SOIL, LEAD)	1	CM	20	Y	511		
2.								
3.								
4.								

14. Special Handling Instructions and Additional Information 9B11 CA610358 - SOIL	ERG#: 9B1. 171 **ER5 W.O.# 123018 - ECB**
PT-2963	

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offor's Printed/Typed Name SHANE PICKETT	Signature 	Month Day Year 3 8 16
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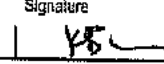
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.	Port of entry/exit: Date leaving U.S.:
--	---

17. Transporter Acknowledgment of Receipt of Materials	Signature	Month Day Year
Transporter 1 Printed/Typed Name Rodney Beard		3 8 16
Transporter 2 Printed/Typed Name	Signature	Month Day Year

18. Discrepancy	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection
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18b. Alternate Facility (or Generator)	Manifest Reference Number:	U.S. EPA ID Number
Facility's Phone:		
18c. Signature of Alternate Facility (or Generator)		Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)	1. H132	2.	3.	4.
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20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a	Signature 	Month Day Year 03 08 16
--	--	-----------------------------------

TIME

DATE

WEIGHT (LB)

COMMODITY: HAZARDOUS WASTE

CHEMICAL WASTE MANAGEMENT, INC.
WEIGHMASTER weighed at
35251 Old Skyline Road
Kettleman City, CA

DEPUTY WEIGHMASTER

GROSS:

TARE:

NET: 15960 LB

YARDAGE:

NO. 303515

WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

GENERATOR	MANIFEST	PROFILE
TRACTOR LICENSE #	TRAILER LICENSE NO.	BIN #
		RECEIPT #

303515

11

2

10

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number CAT000618918	2. Page 1 of 1	3. Emergency Response Phone (800) 368-4778	4. Manifest Tracking Number 015349978 JJK
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5. Generator's Name and Mailing Address OWENS - BROCKWAY GLASS CONTAINER INC - OAKLAND 3600 ALAMEDA AVENUE OAKLAND CA 94601		Generator's Site Address (if different than mailing address) 3600 ALAMEDA AVENUE OAKLAND CA 94601	
Generator's Phone: 510 436-2166			

6. Transporter 1 Company Name Remedial Transportation Services	U.S. EPA ID Number CA0006181560
7. Transporter 2 Company Name	U.S. EPA ID Number

8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT 35251 OLD SKYLINE RD. KETTLEMAN CITY CA 93239		U.S. EPA ID Number CAT000648117
Facility's Phone: (559) 386-9711		


9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
		No.	Type			
1.	NON RCRA HAZARDOUS WASTE, SOLID (SOIL, LEAD)	1	CM	20	Y	611
2.						
3.						
4.						

14. Special Handling Instructions and Additional Information 9B1) CA610358 - SOIL		ERG#: 9B1, 171 ** ER5 W.O.# 123018 - ECB **
PT-2379		24 HR EMERGENCY CONTACT: ENVIROSERV

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offoror's Printed/Typed Name AS AGENT FOR GENERATOR SHANE PICKETT	Signature 	Month 13	Day 18	Year 16
---	---	--------------------	------------------	-------------------

16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.	Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):	

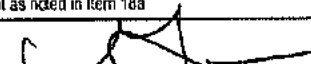
17. Transporter Acknowledgment of Receipt of Materials		Month	Day	Year
Transporter 1 Printed/Typed Name Margarita Saucedo	Signature 	13	18	16
Transporter 2 Printed/Typed Name	Signature			

18. Discrepancy					
18a. Discrepancy Indication Space	<input type="checkbox"/> Quantity	<input type="checkbox"/> Type	<input type="checkbox"/> Residue	<input type="checkbox"/> Partial Rejection	<input type="checkbox"/> Full Rejection
Manifest Reference Number:					

18b. Alternate Facility (or Generator)	U.S. EPA ID Number
Facility's Phone:	

18c. Signature of Alternate Facility (or Generator)	Month	Day	Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)			
1. HBZ	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a		Month	Day	Year
Printed/Typed Name Guy A. Adams	Signature 	13	18	16

TIME

DATE

WEIGHT (LB)

COMMODITY: HAZARDOUS WASTE

CHEMICAL WASTE MANAGEMENT, INC.
WEIGHMASTER weighed at
32251 Old Skyline Road
Kettleman City, CA

DEPUTY WEIGHMASTER

GROSS:

TARE:

NET: _____ LB

YARDAGE: _____

NO. **303546**

WEIGHMASTER CERTIFICATE:

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

GENERATOR	MANIFEST	PROFILE
TRACTOR LICENSE #	TRAILER LICENSE NO.	BIN #
		RECEIPT # 24389

3/17
303546
1325
JVC

R88-046655W
105-4EVL212

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

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number CAT000618918	2. Page 1 of 1	3. Emergency Response Phone (800) 368-4778	4. Manifest Tracking Number 015349979 JJK		
5. Generator's Name and Mailing Address OWENS - BROCKWAY GLASS CONTAINER INC - OAKLAND 3600 ALAMEDA AVENUE OAKLAND CA 94601 Generator's Phone: 510 436-2166				Generator's Site Address (if different than mailing address) 3600 ALAMEDA AVENUE OAKLAND CA 94601			
6. Transporter 1 Company Name Remedial Transportation Services				U.S. EPA ID Number CAR000081560			
7. Transporter 2 Company Name				U.S. EPA ID Number			
8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT 35251 OLD SKYLINE RD. KETTLEMAN CITY CA 93239 Facility's Phone: (559) 365-9711				U.S. EPA ID Number CAT000646117			
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
		No.	Type				
1.	NON RCRA HAZARDOUS WASTE, SOLID (SOIL, LEAD)	1	CM	20	Y	811	
2.							
3.							
4.							
14. Special Handling Instructions and Additional Information 9B11 CA610358 - SOIL PT-1070				ERG#: 9B1. 171 ** ER5 W.O.# 123018 - ECB ** 24 HR EMERGENCY CONTACT: ENVIROSERV			
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offeror's Printed/Typed Name SHANE PICKETT				Signature SP		Month Day Year 03 09 16	
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____							
17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name Rodney Beard Signature Transporter 2 Printed/Typed Name Signature Month Day Year 3 9 16							
18. Discrepancy 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection Manifest Reference Number: _____							
18b. Alternate Facility (or Generator) Facility's Phone: _____				U.S. EPA ID Number			
18c. Signature of Alternate Facility (or Generator)						Month Day Year	
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1. H132		2.		3.		4.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a Printed/Typed Name Katie Burkett Signature Month Day Year 03 09 16							

GENERATOR
TRANSPORTER
DESIGNATED FACILITY

TIME DATE WEIGHT (LB)

COMMODITY: HAZARDOUS WASTE

DEPUTY WEIGHMASTER

CHEMICAL WASTE MANAGEMENT, INC.
WEIGHMASTER, weighed at
35251 Old Skyline Road
Kettleman City, CA

GROSS:

NO. 173923

TARE:

WEIGHMASTER CERTIFICATE

NET 3254 LB

YARDAGE 2

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy as prescribed by Chapter 2 (commencing with Section 12790) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

GENERATOR	MANIFEST	PROBLE
TRACTOR LICENSE #	TRAILER LICENSE NO	BIN #

Handwritten notes and signatures on the right side of the page, including a signature and the number 3107.

LC # TK-WP41126 TL-4JF2134

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number CAT000618918	2. Page 1 of 1	3. Emergency Response Phone (800) 368-4778	4. Manifest Tracking Number 015349980 JJK
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5. Generator's Name and Mailing Address OWENS - BROCKWAY GLASS CONTAINER INC - OAKLAND 3600 ALAMEDA AVENUE OAKLAND CA 94601	Generator's Site Address (if different than mailing address) 3600 ALAMEDA AVENUE OAKLAND CA 94601
Generator's Phone: 510 436-2165	

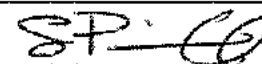
8. Transporter 1 Company Name Remedial Transportation Services	U.S. EPA ID Number CA000181560
7. Transporter 2 Company Name	

8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT 35251 OLD SKYLINE RD. KETTLEMAN CITY CA 93239	U.S. EPA ID Number CAT000646117
Facility's Phone: (559)385-9711	

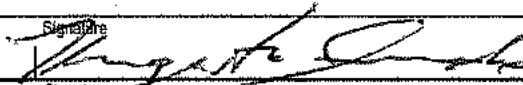
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
		No.	Type				
1.	NON RCRA HAZARDOUS WASTE, SOLID (SOIL, LEAD)	1	CM	20	Y	611	
2.							
3.							
4.							

14. Special Handling Instructions and Additional Information 981) CA610358 - SOIL	ERG#: 981. 171 **ER5 W.O.#12301B - ECB**
PT-1437	24 HR EMERGENCY CONTACT: ENVIROSERV

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generators/Offeror's Printed/Typed Name AS AGENT FOR GENERATOR SHANE PICKETT	Signature 	Month 03	Day 09	Year 16
--	---	--------------------	------------------	-------------------

16. International Shipments	<input type="checkbox"/> Import to U.S.	<input type="checkbox"/> Export from U.S.	Port of entry/exit: _____
Transporter signature (for exports only): _____		Date leaving U.S.: _____	

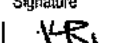
17. Transporter Acknowledgment of Receipt of Materials				
Transporter 1 Printed/Typed Name Margaret Sorensen	Signature 	Month 03	Day 09	Year 16
Transporter 2 Printed/Typed Name		Month	Day	Year

18. Discrepancy				
18a. Discrepancy Indication Space				
<input type="checkbox"/> Quantity	<input type="checkbox"/> Type	<input type="checkbox"/> Residue	<input type="checkbox"/> Partial Rejection	<input type="checkbox"/> Full Rejection
Manifest Reference Number: _____				

18b. Alternate Facility (or Generator)	U.S. EPA ID Number
Facility's Phone: _____	

18c. Signature of Alternate Facility (or Generator)	Month Day Year
---	----------------

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)			
1. H132	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a				
Printed/Typed Name Katie Burkett	Signature 	Month 03	Day 09	Year 16

TIME

DATE

WEIGHT (LB)

COMMODITY: HAZARDOUS WASTE

CHEMICAL WASTE MANAGEMENT, INC.
WEIGHMASTER weighed at
83259 Old Skidway Road
Kettleman City, CA

DEPUTY WEIGHMASTER

GROSS:

NO.

173921

TARE:

WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 17733) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

NET:

LB

YARDAGE

GENERATOR	MANIFEST	PROFILE
TRACTOR LICENSE #	TRAILER LICENSE NO.	BIN #
		RECEIPT #

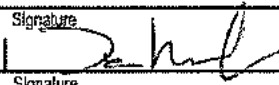
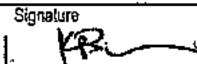
10/12/08

113

VP99905 1Xa5802

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

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number CAT000618918	2. Page 1 of 1	3. Emergency Response Phone (800) 368-4778	4. Manifest Tracking Number 015349981 JJK			
5. Generator's Name and Mailing Address OWENS - BROCKWAY GLASS CONTAINER INC - OAKLAND 3600 ALAMEDA AVENUE OAKLAND CA 94601			Generator's Site Address (if different than mailing address) 3600 ALAMEDA AVENUE OAKLAND CA 94601					
Generator's Phone: 510 436-2165			U.S. EPA ID Number 181 560 CAT00018530					
6. Transporter 1 Company Name Remedial Transportation Services			U.S. EPA ID Number					
7. Transporter 2 Company Name			U.S. EPA ID Number					
8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT 95251 OLD SKYLINE RD. KETTLEMAN CITY CA 95239			U.S. EPA ID Number CAT000848117					
Facility's Phone: (559) 386-9711								
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
		No.	Type					
	1. NON RCRA HAZARDOUS WASTE, SOLID (SOIL, LEAD)	1	CM	20	Y	611		
	2.							
	3.							
	4.							
14. Special Handling Instructions and Additional Information 9811 CA510358 - SOIL ERG#: 981. 171 ** ER5 W.O.# 123018 - ECB ** PT-2474 24 HR EMERGENCY CONTACT: ENVIROSERV								
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.								
Generators/Offeror's Printed/Typed Name AS AGENT FOR GENERATOR SHANE PICKETT					Month	Day	Year	
					03	09	16	
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____								
17. Transporter Acknowledgment of Receipt of Materials								
Transporter 1 Printed/Typed Name Tony Renshaw				Signature 		Month	Day	Year
						3	9	16
Transporter 2 Printed/Typed Name				Signature		Month	Day	Year
18. Discrepancy								
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection								
Manifest Reference Number: _____								
18b. Alternate Facility (or Generator)					U.S. EPA ID Number			
Facility's Phone: _____								
18c. Signature of Alternate Facility (or Generator)					Month	Day	Year	
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)								
1.	2.	3.	4.					
H132								
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a								
Printed/Typed Name Katie Burkett				Signature 		Month	Day	Year
						03	09	16

TIME

DATE

WEIGHT (LB)

COMMODITY: HAZARDOUS WASTE

DEPUTY WEIGHMASTER

CHEMICAL WASTE MANAGEMENT, INC.
WEIGHMASTER weighed at
15251 DM Skyline Road
Kettleman City, CA

GROSS:

NO: 173927

TARE:

NET: 24300 LB

YARDAGE:

WEIGHMASTER CERTIFICATE

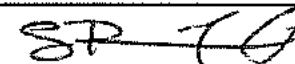
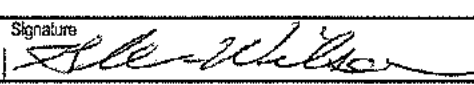

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12760) of Division 6 of the California Business and Professions Code, administered by the Director of Measurement Standards of the California Department of Food and Agriculture.

GENERATOR	MANIFEST	PROFILE
TRACTOR LICENSE #	TRAILER LICENSE NO	BIN # RECEIPT #

253-VP 91597
104-1KA 3805

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

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number CAT000618918		2. Page 1 of 1		3. Emergency Response Phone (800) 368-4778		4. Manifest Tracking Number 015349982 JJK				
		5. Generator's Name and Mailing Address OWENS - BROCKWAY GLASS CONTAINER INC - OAKLAND 3600 ALAMEDA AVENUE OAKLAND CA 94601 Generator's Phone: 510 436-2166						Generator's Site Address (if different than mailing address) 3600 ALAMEDA AVENUE OAKLAND CA 94601				
6. Transporter 1 Company Name Remedial Transportation Service						U.S. EPA ID Number CA R000181560						
7. Transporter 2 Company Name						U.S. EPA ID Number						
8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT 35251 OLD SKYLINE RD. KETTLEMAN CITY CA 93239 Facility's Phone: (559) 386-9711						U.S. EPA ID Number CAT000046117						
GENERATOR	9a. HM		9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) 1. NON RCRA HAZARDOUS WASTE, SOLID (SOIL, LEAD)				10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
							No.	Type				
							1	CM	20	Y	611	
14. Special Handling Instructions and Additional Information 9B11 CA610356 - SOIL PT-2998						ERG#: 9B1. 171 ** ER5 W.O.# 123018 - ECB ** 24 HR EMERGENCY CONTACT: ENVIROSERV						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.												
Generator's/Offeror's Printed/Typed Name SHANE PICKETT						Signature 			Month Day Year 03 09 16			
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____												
17. Transporter Acknowledgment of Receipt of Materials												
Transporter 1 Printed/Typed Name Chen Wilson						Signature 			Month Day Year 3 9 16			
Transporter 2 Printed/Typed Name						Signature			Month Day Year			
18. Discrepancy												
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection												
18b. Alternate Facility (or Generator) _____ U.S. EPA ID Number _____												
18c. Signature of Alternate Facility (or Generator) _____ Month Day Year _____												
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)												
1. H132		2.		3.		4.						
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a												
Printed/Typed Name Katie Burkett						Signature 			Month Day Year 03 09 16			

TIME DATE

WEIGHT (LB)

COMMODITY: HAZARDOUS WASTE

CHEMICAL WASTE MANAGEMENT, INC.
WEIGHMASTER weighed at
15251 Old Skyline Road
Kettleman City, CA

DEPUTY WEIGHMASTER

GROSS:

TARE:

NET: 8020

LB

YARDAGE: 2

NO:

173928

WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12706) of Division 3 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

GENERATOR	MANIFEST	PROFILE
TRACTOR LICENSE #	TRAILER LICENSE NO.	BIN #
		RECEIPT #

117
118
119

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number CAT000618918		2. Page 1 of 1		3. Emergency Response Phone (800) 368-4778		4. Manifest Tracking Number 015349983 JJK						
		5. Generator's Name and Mailing Address OWENS - BROCKWAY GLASS CONTAINER INC - OAKLAND 3600 ALAMEDA AVENUE OAKLAND CA 94501						Generator's Site Address (if different than mailing address) 3600 ALAMEDA AVENUE OAKLAND CA 94501						
6. Transporter 1 Company Name Remedial Transportation Services		U.S. EPA ID Number ACR000181560						7. Transporter 2 Company Name						
8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT 35251 OLD SKYLINE RD. KETTLEMAN CITY CA 93239		U.S. EPA ID Number CAT000646117						Facility's Phone: (559)386-9711						
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))				10. Containers		11. Total Quantity	12. Unit WL/Vol	13. Waste Codes				
		1. NON RCRA HAZARDOUS WASTE, SOLID (SOIL, LEAD)				No.	Type							
		2.												
		3.												
		4.												
14. Special Handling Instructions and Additional Information 9B1) CA610358 - SOIL											ERG#: 9B1. 171 **ER5 W.O.#129016 - ECB**			
PT-3617											24 HR EMERGENCY CONTACT: ENVIROSERV			
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.														
Generator's/Offeror's Printed/Typed Name SHANE PICKETT											Signature <i>[Signature]</i>		Month Day Year 03 09 16	
TRANSPORTER	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____													
	17. Transporter Acknowledgment of Receipt of Materials													
Transporter 1 Printed/Typed Name Ismael Flores											Signature <i>[Signature]</i>		Month Day Year 03 09 16	
Transporter 2 Printed/Typed Name											Signature		Month Day Year	
DESIGNATED FACILITY	18. Discrepancy													
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection													
	18b. Alternate Facility (or Generator) U.S. EPA ID Number													
	Facility's Phone: _____													
18c. Signature of Alternate Facility (or Generator)											Month Day Year			
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)														
1. H132				2.				3.				4.		
20. Designated Facility Owner or Operator. Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a														
Printed/Typed Name Katie Burkett											Signature <i>[Signature]</i>		Month Day Year 03 10 16	

TIME

DATE

WEIGHT (LB)

COMMODITY: HAZARDOUS WASTE

CHEMICAL WASTE MANAGEMENT, INC.
WEIGHMASTER weighed at
23251 Old Skyline Road
Kettleman City, CA

DEPUTY WEIGHMASTER

GROSS:

TARE:

NET:

34160 LB

YARDAGE:

NO:

174083

WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

GENERATOR	MANIFEST	PROFILE
TRACTOR LICENSE #	TRAILER LICENSE NO.	RECEIPT #

3/17

UP99905 1X95802

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

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number CA T000618918	2. Page 1 of 1	3. Emergency Response Phone (800) 368-4778	4. Manifest Tracking Number 015349984 JJK		
5. Generator's Name and Mailing Address OWENS - BROCKWAY GLASS CONTAINER INC - OAKLAND 3600 ALAMEDA AVENUE OAKLAND CA 94601				Generator's Site Address (if different than mailing address) 3600 ALAMEDA AVENUE OAKLAND CA 94601			
Generator's Phone: 510 436-2166							
6. Transporter 1 Company Name Remedial Transportation Service					U.S. EPA ID Number CA9000181560		
7. Transporter 2 Company Name					U.S. EPA ID Number		
8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT 35251 OLD SKYLINE RD. KETTLEMAN CITY CA 95239					U.S. EPA ID Number CAT000640117		
Facility's Phone: (559) 386-9711							
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
		No.	Type				
1.	NON RCRA HAZARDOUS WASTE, SOLID (SOIL, LEAD)	1	CM	20	Y	511	
2.							
3.							
4.							
14. Special Handling Instructions and Additional Information 9B1: CA610358 - SOIL ERG#: 9B1. 171 **ER5 W.O.# 123018 - ECB** PT-2787 24 HR EMERGENCY CONTACT: ENVIROSERV							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable International and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offoror's Printed/Typed Name AS AGENT FOR GENERATOR SHANE PICKETT					Signature 		Month Day Year 03 10 16
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____							
17. Transporter Acknowledgment of Receipt of Materials							
Transporter 1 Printed/Typed Name Tommy Rember					Signature 		Month Day Year 3 10 16
Transporter 2 Printed/Typed Name					Signature		Month Day Year
18. Discrepancy							
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection							
18b. Alternate Facility (or Generator) Manifest Reference Number: _____ U.S. EPA ID Number _____							
18c. Signature of Alternate Facility (or Generator) _____ Month Day Year _____							
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1. H132		2.		3.		4.	
20. Designated Facility Owner or Operator. Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18							
Printed/Typed Name Graw Adams					Signature 		Month Day Year 3 10 16

GENERATOR
TRANSPORTER
DESIGNATED FACILITY

TIME

DATE

WEIGHT (LB)

COMMODITY, HAZARDOUS WASTE

CHEMICAL WASTE MANAGEMENT, INC.
WEIGHMASTER weighed at
35251 Old Skyline Road
Kettleman City, CA

DEPUTY WEIGHMASTER

[Signature]

NO. 174019

GROSS:

TARE:

NET:

32860 LB

YARDAGE:

WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of authority, as prescribed by Chapter 7 (commencing with Section 12705) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

GENERATOR	MANIFEST	PROFILE
TRACTOR LICENSE #	TRAILER LICENSE NO	BOYS
		RECEIPT # 329561

3/17
32860
1002
100



BAY AREA
CONCRETE RECYCLING

BAY AREA CONCRETE RECYCLING

P.O. Box 23424
Oakland, CA 94623

Office: (510) 294-0220
Fax: (510) 380-7447
www.bayareaconcretrecycling.com

No. 50841

- Hayward - Depot Rd.
- Hayward - 24701 Clawiter Rd.
- San Francisco - 1236 Carroll Ave.
- Benicia - 401 W Channel Rd.

Customer Number:	Customer Name: <u>ERRG</u>	Date: <u>2/22/16</u>
------------------	----------------------------	----------------------

Dump Load

Truck Size

Aggregate Sales

<input type="checkbox"/> Concrete	<input type="checkbox"/> Wood & Debris
<input checked="" type="checkbox"/> Asphalt	<input type="checkbox"/> Oversized
<input type="checkbox"/> Brick	<input type="checkbox"/> With Steel
<input type="checkbox"/> Washout	<input type="checkbox"/> Slurry Mix
<input type="checkbox"/> Mixed	
<input type="checkbox"/> _____	

<input type="checkbox"/> Pick up
<input type="checkbox"/> Bobtail
<input type="checkbox"/> 10 Wheel
<input checked="" type="checkbox"/> End Dump
<input type="checkbox"/> Super Dump
<input type="checkbox"/> Semi Bottom
<input type="checkbox"/> DBL Bottom
<input type="checkbox"/> Transfer

<input type="checkbox"/> Concrete Sand
<input type="checkbox"/> Class II AB
<input type="checkbox"/> Class II Permeable
<input type="checkbox"/> 3/4 Drain Rock
<input type="checkbox"/> 3/8 Pea Gravel
<input type="checkbox"/> _____

<input type="checkbox"/> Cash
<input checked="" type="checkbox"/> Charge
<input type="checkbox"/> Credit Card
<input type="checkbox"/> Check # _____

Comments:

Job #/Location: <u>Oakland Ave</u>

Sold By: <u>N. G</u>

Driver: <u>GH</u>

Time: <u>12:50</u>

Truck LIC # <u>9D00305</u>

Carrier Name <u>Butler</u>



BAY AREA
CONCRETE RECYCLING

BAY AREA CONCRETE RECYCLING

P.O. Box 23424
Oakland, CA 94623

Office: (510) 294-0220
Fax: (510) 380-7447
www.bayareaconcretrecycling.com

No. 50821

- Hayward - Depot Rd.
- Hayward - 24701 Clawiter Rd.
- San Francisco - 1236 Carroll Ave.
- Benicia - 401 W Channel Rd.

Customer Number:	Customer Name: <u>ERRG</u>	Date: <u>2/22/16</u>
------------------	----------------------------	----------------------

Dump Load

Truck Size

Aggregate Sales

<input checked="" type="checkbox"/> Concrete	<input type="checkbox"/> Wood & Debris
<input checked="" type="checkbox"/> Asphalt	<input type="checkbox"/> Oversized
<input type="checkbox"/> Brick	<input type="checkbox"/> With Steel
<input type="checkbox"/> Washout	<input type="checkbox"/> Slurry Mix
<input checked="" type="checkbox"/> Mixed	
<input type="checkbox"/> _____	

<input type="checkbox"/> Pick up
<input type="checkbox"/> Bobtail
<input type="checkbox"/> 10 Wheel
<input checked="" type="checkbox"/> End Dump
<input type="checkbox"/> Super Dump
<input type="checkbox"/> Semi Bottom
<input type="checkbox"/> DBL Bottom
<input type="checkbox"/> Transfer

<input type="checkbox"/> Concrete Sand
<input type="checkbox"/> Class II AB
<input type="checkbox"/> Class II Permeable
<input type="checkbox"/> 3/4 Drain Rock
<input type="checkbox"/> 3/8 Pea Gravel
<input type="checkbox"/> _____

<input type="checkbox"/> Cash
<input checked="" type="checkbox"/> Charge
<input type="checkbox"/> Credit Card
<input type="checkbox"/> Check # _____

Comments:

Job #/Location: <u>Oakland Ave</u>

Sold By: <u>N. G</u>

Driver: <u>GH</u>

Time: <u>9:56</u>

Truck LIC # <u>9D00305</u>

Carrier Name <u>Butler</u>
