

February 27, 2017

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By Alameda County Environmental Health 3:19 pm, Feb 28, 2017

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

**Subject: RO0000289
WORK PLAN TO COMPLETE A LIMITED SOIL AND GROUNDWATER
ASSESSMENT, OIL/WATER SEPARATOR,
OWENS-BROCKWAY GLASS CONTAINER FACILITY.
3600 ALAMEDA AVENUE, OAKLAND, CALIFORNIA.**

Dear Ms. Soo:

Owens-Brockway Glass Container Corporation is pleased to submit the attached Work Plan to Complete a Limited Soil and Groundwater Assessment for the above site.

I declare under penalty of perjury that the information and/or recommendations contained in the attached work plan 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,
Regional EHS Manager

February 25, 2017

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
WORK PLAN TO COMPLETE A LIMITED SOIL AND GROUNDWATER ASSESSMENT, OIL/WATER SEPARATOR, OWENS-BROCKWAY GLASS CONTAINER FACILITY, OAKLAND, CALIFORNIA.

Dear Ms. Soo:

CKG Environmental, Inc. (CKG) is pleased to provide this work plan to install four soil borings in the vicinity of the oil water separator at the closed Owens-Brockway Glass Container, Inc. facility at 3600 Alameda Avenue in Oakland California, (Plate 1). These borings are being installed to assess the magnitude of potential soil and groundwater impacts by volatile organic constituents (VOCs) at the oil water separator. The potential for VOCs in the subsurface was recognized as a result of a soil vapor investigation which is still in progress.

SUMMARY OF VOC DATA OBJECTIVE

CKG has conducted a soil vapor survey in accordance with CKG's *Revised Work Plan to Complete a Soil Vapor Investigation, dated October 13, 2016* and approved in an email from the ACDEH on November 16, 2016. To date the soil vapor probes have been installed and sampled and a report is being prepared. An initial review of the data indicates that there are VOCs above the Tier 1 Environmental Screening Level (ESL), for Subslab/Soil Gas; established by the San Francisco Bay Regional Water Quality Control Board, dated February 29, 2016. Elevated VOCs were detected at soil vapor locations SV-45, SV-44, SV35, SV12-, SV24, and SV-40 as summarized on Plate 2 and below:

SV-45 – This vapor probe was located at the northwest property boundary to assess for potential upgradient offsite sources of constituents of concern. The vapor probe also was located at that location because a plating shop had been located across Fruitvale Avenue in the past. Chloroform was detected in the soil vapor sample at $93 \mu\text{g}/\text{m}^3$ which is above the ESL of $62 \mu\text{g}/\text{m}^3$. This confirms a relatively minor impact from the off-site source and CKG is not recommending further assessment at this time.

SV-44 – This vapor probe was located at the northeast property boundary to assess the potential that VOCs may be present due to the former operation of a drycleaner across 37th Avenue to the east. Tetrachloroethene was detected at $870 \mu\text{g}/\text{m}^3$ which is above the ESL of $240 \mu\text{g}/\text{m}^3$. This confirms a relatively minor impact from the off-site source and CKG is not recommending further assessment at this time.

SV-35 – This vapor probe is located adjacent to one of two yeoman tanks within the warehouse area of the plant. Benzene was detected at $670 \mu\text{g}/\text{m}^3$ which is above the ESL of $48 \mu\text{g}/\text{m}^3$. In 2015 CKG installed soil borings around the yeoman tank (B-65I, B-65J, B65K, and B-65L) as shown on plate two. Benzene data from soil samples collected at these borings was all below the reporting limit of 0.005 mg/kg. Although there may be detectable benzene in soil closer to the yeoman tank, CKG is not recommending further assessment at this time.

SV-12 and SV-24 – These vapor probes are located near each other and at the location of documented petroleum hydrocarbon impacts inside the plant. Benzene was detected at $54 \mu\text{g}/\text{m}^3$ which is above the ESL of $48 \mu\text{g}/\text{m}^3$. Chloroform was detected at $920 \mu\text{g}/\text{m}^3$ which is above the ESL of $62 \mu\text{g}/\text{m}^3$. CKG is not recommending additional investigation at this time because there is soil data available at and near those vapor probes.

SV-40 – This probe was installed adjacent to the oil water separator to assess the potential that the oil water separator may have been a source of VOCs because it receives drainage from the entire plant via pumping from the basement. VOCs were detected as follows:

- trichloroethene was detected at $610 \mu\text{g}/\text{m}^3$ which exceeds the ESL of $240 \mu\text{g}/\text{m}^3$;
- 1,1- dichloroethane was detected at $1600 \mu\text{g}/\text{m}^3$ which exceeds the ESL of $880 \mu\text{g}/\text{m}^3$;
- vinyl chloride was detected at $2900 \mu\text{g}/\text{m}^3$ which exceeds the ESL of $4.7 \mu\text{g}/\text{m}^3$; and
- benzene was detected at $69 \mu\text{g}/\text{m}^3$ which exceeds the ESL of $48 \mu\text{g}/\text{m}^3$

There is no soil or groundwater data in the near vicinity of the oil water separator. For this reason, CKG would like to complete a limited soil investigation in the area to assess the potential for VOC impacts to soil and groundwater. The following work plan describes the proposed scope of work.

SCOPE OF WORK

CKG plans to utilize a Geoprobe direct push rig to install four soil borings at the locations illustrated on Plate 2. CKG will collect soil and groundwater samples from each location as described below.

Task 1 Geoprobe Boring Installation and Sampling.

CKG will subcontract with Gregg Drilling of Martinez, California to advance the Geoprobe borings and to utilize a Hydropunch sampler to collect grab groundwater samples at each location.

Task 1.1 Prefield Activities

- CKG will prepare a site-specific health and safety plan specifying concerns associated with Geoprobe installation, and identifying the location and route to the nearest emergency medical facility.
- CKG will mark the proposed temporary boring locations, and provide Underground

Service Alert (USA) notification as required by California law.

- CKG will subcontract a private utility locator to clear the proposed temporary soil vapor probe locations.
- CKG will submit and obtain a drilling permit from Alameda County Public Works Agency (ACPWA).

Task 1.2. Install Soil Borings

- CKG will oversee a California C-57 licensed driller to advance Geoprobe borings at four locations as shown on Plate 2. The driller will advance the borings by a combination of hand auger from 0 to 5 feet below grade and a direct push drill rig to approximately 15 feet below grade.

The probe is approximately 1½ inch in diameter. CKG estimates that four holes can be completed in one day. The probe holes will be abandoned with cement grout when completed. Field sampling will be completed in accordance with CKG's standard field protocol as presented in Appendix A.

Task 1.3. Collect and Analyze Soil and Groundwater Samples

CKG will collect soil samples at depths of 5, 10 and 15 feet below grade unless groundwater is encountered above 15 feet as described in Appendix A. A groundwater sample also will be collected at each boring using a Hydropunch sampler as described in Appendix A.

- The samples will be transported under chain-of-custody documentation to a California-certified analytical laboratory to be analyzed for the following:
 - VOCs and benzene, toluene, ethylbenzene and xylenes using USEPA Method 8260B
- CKG will arrange for the characterization and disposal of the investigation-derived waste (IDW) generated by the boring activities. This IDW will be stored on the Site in labeled 55-gallon pending proper offsite disposal.

Task 2 Soil Probe Abandonments

Soil borings will be closed as described in Appendix A and as required by the ACPWA.

Task 3 Reporting

CKG is preparing a report documenting the results of the soil vapor survey. The results of this limited soil and groundwater investigation will be presented as an appendix to that report. The appendix will include the completed field activities, provide boring logs, a map showing boring locations, tabulated data and analytical laboratory reports. The soil and

groundwater results will be evaluated against the RWQCB's Environmental Screening Levels (ESLs) dated February 2016, for residential land use.

LIMITATIONS

CKG will perform 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 will be performed. No warranty or guarantee expressed or implied is part of the services offered in this work plan.

CKG is pleased to prepare this work plan to complete a soil vapor investigation. If you need further information or would like more details regarding this work plan, please feel free to call me at (707) 967-8080.

Sincerely,
CKG ENVIRONMENTAL, INC.



Christina J. Kennedy
Principal



Attachments Plate 1 Site Location Map
Plate 2 Soil Vapor VOC Summary and Proposed Soil Boring Locations

APPENDIX A
CKG ENVIRONMENTAL FIELD PROTOCOL

A-1 FIELD PREPARATION

Before performing work in the field, environmental staff review the scope of work, prepare a health and safety plan, coordinate the work to be done with their supervisor, assemble the necessary sample containers, and check, calibrate and clean equipment to be used in the field. When underground utilities may exist at a site where subsurface soil samples are being collected, USA Underground is contacted with the boring locations and the scheduled date of drilling, or a utility locating firm is employed to check the boring locations. Proper traffic control measures are carried out during roadwork.

A-2 SUBSURFACE SAMPLING

A-2.1 Geoprobe™ Sampling

Subsurface soil samples will be collected from soil borings. Soil borings will be advanced using a truck or track-mounted Geoprobe™ sampler. The Geoprobe™ sampler uses a direct push technology to advance a 1-½ inch sampler into the ground. The 4 foot long sampler is lined with clear acetate tubing to allow for continuous logging. A technician under the direction of a geologist registered with the State of California will log samples.

A-2.2 Equipment Decontamination

To reduce the potential for cross-contamination, samplers and associated equipment will be cleaned with a trisodium phosphate wash and rinsed with distilled water prior to collecting each soil sample.

A-2.3 Soil Sample Collection

The field technician will collect samples for quantitative analysis by cutting a six-inch long length of tubing at selected depths. The ends of the tube will be covered with Teflon and sealed with tight-fitting plastic caps.

After the samples are collected they will be individually labeled. The label will include CKG Environmental's name, job number, the date and time the sample was collected, the employee's name and a unique sample identifier.

A-2.4 Groundwater Sample Collection

The driller will install a Hydropunch™ sampler at the bottom of each boring so that a groundwater sample can be collected. The Hydropunch™ sampler consists of a 1-½ inch diameter PVC screen with a stainless-steel tip on the end. The sampler is pushed approximately two feet beyond the bottom of the hole and water is allowed to fill it.

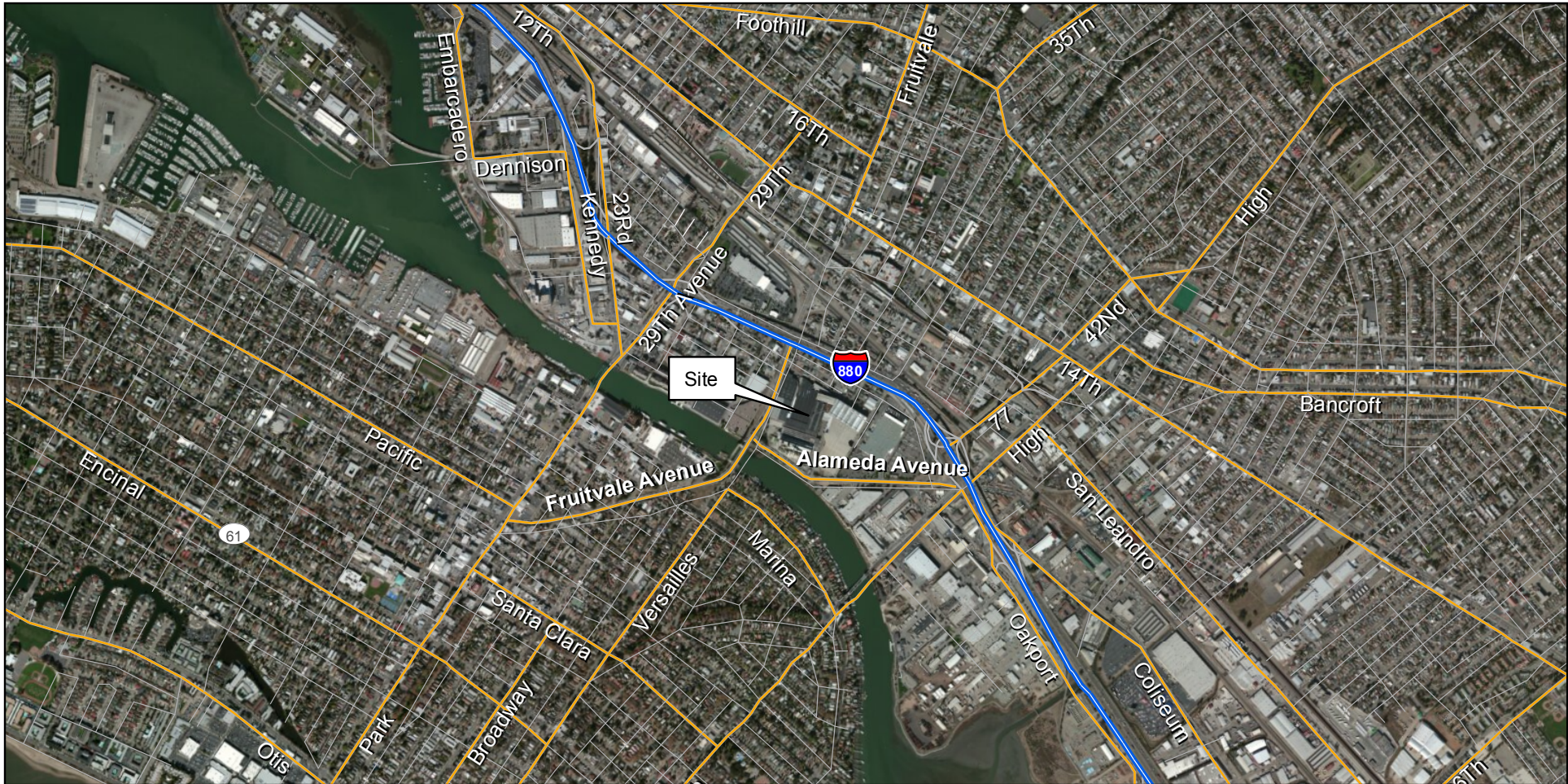
Groundwater will be recovered using a small bailer and placed in laboratory prepared containers.

A-2.5 Sample Handling

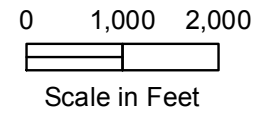
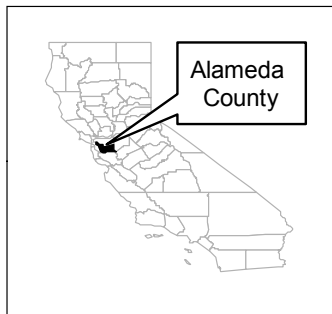
After labeling, the sample is immediately stored in an iced cooler for transport to the analytical laboratory. A laboratory chain-of-custody form is attached to the cooler. The chain-of-custody form includes CKG Environmental's name, address and telephone number, the name of the individual who performed the sampling, the sample numbers, the date and time the samples were collected, the number of containers each sample occupies, and the analyses for which the samples are being submitted, if any. Each person who handles the samples, including all CKG employees and the receiving employee of the analytical laboratory when the samples are delivered, signs the chain-of-custody form.

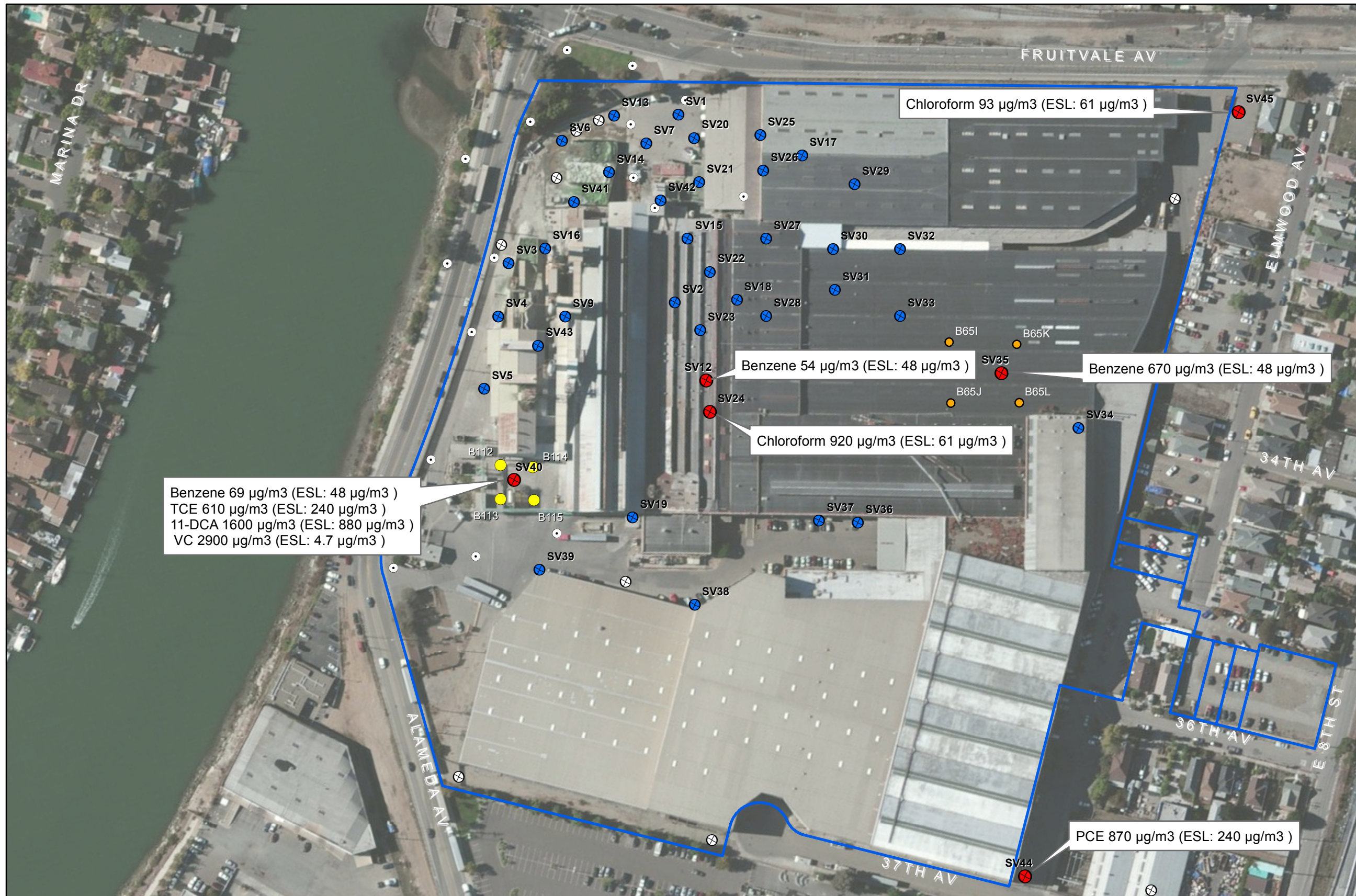
A-2.7 Soil Boring Closure and Soil Cutting Disposal

Soil borings are closed immediately after the collection and logging of soil samples. Closure is accomplished by grouting the boring with a cement/bentonite slurry or as otherwise required. Investigation derived waste will be properly disposed by Owens-Brockway as part of their ongoing waste stream.



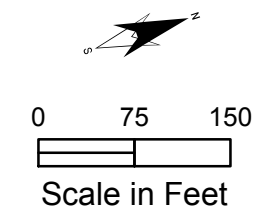
Drawn by PAD. January 2014. Base layers are unmodified Alameda County Digital Data Sets.





EXPLANATION

- ⊗ Soil Vapor Probe
- ⊗ Vocs in soil vapor exceed ESLs
- Proposed Boring
- Selected 2015 Soil Boring
- ⊗ Destroyed Well
- Monitoring Well



Drawn by PAD. 2017. Base layers are unmodified ESRI Digital Data Sets.