Paula Champion-Braig
280 Mountain Avenue
Piedmont, CA 94611-3506
510.541.0882

Mark Detterman, PG, CEG
Senior Hazardous Material Specialist
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

**RECEIVED**
*By Alameda County Environmental Health 2:52 pm, Jan 12, 2016*

**Re: Fuel Leak Case No RO0000133**

Enclosed please find the *Groundwater Monitoring And Results of Soil Vapor Sampling* report that represents the last collection of information gathered at Alameda County's request.

During our meeting, I agreed to do additional vapor sampling because your office had concerns about methane. Taber Consultant's representative, Ellen Pyatt, noted at the time that such sampling was not a part of the Low Threat Closure Policy (LTCP), but I agreed to do it because there may be a safety issue. Ms. Roe of your office indicated that the site was suitable for closure, and if I addressed the concern regarding the methane and there was no problem, she felt the site should be closed. Additionally, your office indicated that you would expedite review of this report so that we could get the wells abandoned and the site closed this year.

Taber Consultants indicates that no methane was detected above laboratory reporting limits, and that there appears to be adequate gas exchange with the surface atmosphere to keep an oxygenated soil zone above the plume. Additionally, based on guidance provided by your office (the LTCP Checklist), all data gaps have been addressed and the conditions for closure under the LTCP are fulfilled.

As we discussed in our meeting, the cleanup action at the plant has been open for the last 25 years. I agreed that I would have Taber Consultants complete the work that you asked to have completed as a condition for site closure. I expect your office to follow through with the agreement. I expect to be able to close the books on this thing within the next few months following your directive to abandon the wells.

Thank you for your prompt attention to this matter,

Paula Champion-Braig

Taber Consultants
3911 West Capitol Avenue
West Sacramento, CA 95691-2116
**(916) 371-1690**
(707) 575-1568
Fax (916) 371-7265
**www.taberconsultants.com**

January 5, 2016

Mr. Mark Detterman
Alameda County Health Care Services Agency
1131 Harbor Parkway, #250
Alameda, CA 94502

Ms. Dilan Roe
Alameda County Health Care Services Agency
1131 Harbor Parkway, #250
Alameda, CA 94502

**Re: Groundwater Monitoring And Results of Soil Vapor Sampling**
**Fuel Leak Case No. RO0000133**
**GeoTracker Global ID T0600100379**
**City of Paris Cleaners, 3516 Adeline Street, Oakland, CA 94608**
**Taber Project No. 2011-0107**

Dear Mark:

On behalf of Paulette Satterley, Paula Champion-Bragg, Michael and Leah Champion and Frank Champion, Taber Consultants submits this report advising Alameda County Health Care Services Agency (ACHCSA) of groundwater monitoring activities conducted following the meeting between Paula Champion-Bragg, Ellen Pyatt of Taber Consultants, and Dilan Roe and Mark Detterman of ACHCSA July 16, 2015.

During that meeting, site concentrations of Stoddard Solvent (TPH-SS), site assessment findings and the Low Threat Closure Policy (LTCP) were discussed. As part of ACHCSA attempt to verify that conditions at the former City of Paris Cleaners (the Site) are appropriate for regulatory closure under the LTCP guidelines, the ACHCSA requested that additional soil vapor sampling be conducted at the Site and asked Taber Consultants to provide additional figures in support of the closure request.

Taber Consultants conducted groundwater monitoring activities on March 18, 2015, including sampling for chlorinated solvents requested by the ACHCSA on August 29, 2014 (Appendix A) and soil vapor sampling on August 19, 2015. This letter reports the findings on the groundwater monitoring and sample analysis, soil vapor analysis, a tabulated Site Conceptual Model (SCM), figures including potential receptor radii, attaches a copy of the completed LTCP forms, and recommends Site closure.

**Site Location and Description**

The former City of Paris Cleaners, located at 3516 Adeline St., Oakland, CA, is a former dry cleaning, laundry and dyeing operation currently owned by Mrs. Debra Buckley. The facility operated as City of Paris Cleaners and Dyers for about 40 years until the 1960's, but cleaning materials and tanks were not completely removed from the Site until 1992. The Site buildings remained vacant for a number of years

following the closure of the dry cleaning operation, and then the owner converted them to residential and light commercial use.

The Site lies at the southeastern corner of the intersection of 35th Street and Adeline Street at approximately 30 feet above mean sea level (amsl) in the northwest portion of the City of Oakland, California. The Site buildings currently house living quarters and City of Paris Studios, a workshop for art, art restoration, collectibles and hobbies. Mrs. Runyon acquired the property in July 2000.

**Former Tank Use**

Underground storage tanks at the Site were used to store Stoddard Solvent, the dry cleaning solvent used during operation of the dry cleaning facility until the 1960s when the facility was closed. In 1990, one 750-gallon and two 1,000-gallon underground tanks used to store Stoddard Solvent were removed from the Site. In 1991, an additional 250-gallon UST was removed.

In 1987, Frank Champion, the owner at that time, applied for permits to remove Stoddard Solvent storage tanks at the Site. Mr. Champion applied for five permits, obtaining permission to remove two 1000-gallon tanks, a 500-gallon tank, a 250-gallon tank and a 150-gallon tank. Underground storage tanks at the Site were used to store Stoddard Solvent, the dry cleaning solvent used during operation of the dry cleaning facility until the 1960s when the facility was closed.

**Site History**

On October 4, 1990, Semco Company of San Mateo excavated and reported removing one 750-gallon and two 1,000-gallon underground tanks used to store Stoddard Solvent. UES contracted W.A. Craig to over excavate the eastern portion of the tank pit on August 30, 1991. During over excavation, EUS reports that the contractor discovered an additional 250-gallon UST containing "a small volume of liquid" that was stored in a 55-gallon drum on Site after removing an aliquot for analysis. ACHCSA approved use of bioremediated soil from the tank pit as backfill, and W. A. Craig backfilled the tank pit with bioremediated soil and clean fill on April 21, 1992.

On October 29 and 30, 1992, UES supervised on-site installation of ground water monitoring wells. Soils Exploration Services of Vacaville, California, installed three 30-foot monitoring wells. Beginning November 18, 1992, groundwater samples were analyzed for Total Petroleum Hydrocarbons as Stoddard Solvent (TPH-SS), TPH as diesel (TPH-D), TPH as gasoline (TPH-G), methyl tertiary butyl ether (MTBE), and benzene, toluene, ethyl benzene and total xylenes (BTEX).

On March 19, 1998, Dugan Associates of San Jose, California (Dugan) advanced six on and off-site soil borings to a total depth of 18 feet below grade. In their September, 1999 letter, the ACHSA also noted that according to a database search they believed a 97-foot industrial well had been drilled at the Site. The well was located southeast of Monitoring Well 3 (Figure 2). Well construction for the monitoring wells and the industrial wells is described in Table 1.

Taber Consultants, formerly Western Resource Management (WRM), assumed environmental consulting responsibilities for the Site commencing in June 2007. Taber Consultants performed groundwater monitoring at the Site for the first and second semi-annual periods of 2009.

July 28, 2009, ACHCSA advised Responsible Parties that The California State Water Resources Control Board (State Water Board) had approved Resolution No. 2009-0042, which reduced quarterly groundwater monitoring requirements to semiannual or less frequent monitoring at all sites. In 2009, Taber Consultants reduced monitoring at the Site to two semi-annual monitoring events in February and August. Corresponding reports were the First Semi-Annual and Second Semi-Annual Monitoring Reports.

In March 2011 Taber Consultants resurveyed top of well casings during groundwater monitoring activities. In May 2011 Taber Consultants conducted site investigation activities which included: video well logging to evaluate well screen and casing condition; hydrogeology characterization using cone penetrometer testing (CPT), the GeoProbe® hydraulic profiling tool (CPT), continuous push soil borings; assessing distribution of impacted soil by analyzing soil samples and grab groundwater samples; and assessing Site groundwater chemistry by analyzing grab groundwater samples for natural attenuation parameters. The findings of the investigation are detailed in the *Site Investigation Report, Human Health Risk Assessment Report, and Natural Attenuation Analysis Report* dated February 1, 2012. Based on the results of CPT, HPT and soil sampling discussed in the 2012 Site Investigation Report, an upper and lower water-bearing zone were identified within approximately 40 feet beneath the Site. The upper groundwater zone is located between approximately 10 and 20 feet bgs and the lower groundwater zone is located between approximately 30 and 40 feet bgs.

In 2013 Taber Consultants conducted a Site Investigation to obtain information to resolve data gaps identified in the January 23, 2013 *Revised Site Conceptual Model and Amended Additional Site Investigation Plan*. The geophysical exploration confirmed that there were no remaining tanks on Site. Taber Consultants confirmed that concentrations of TPH-SS in soil was below laboratory reporting limits between 0 and 5 feet bgs, and that with the exception of a single 10 mg/kg sample taken at 7 feet bgs, soils sampled between 5 to 10 feet bgs were also below laboratory reporting limits.

Taber Consultants found that concentrations of TPH-SS and weathered TPH-SS (detected within the TPH-G range during laboratory analysis) attenuated rapidly with distance from the source area located at the former UST location. Groundwater in the shallow groundwater zone (between 10 and 20 feet bgs) within the Site was strongly influenced by the source-area TPH SS plume, however the deeper groundwater zone between 30 and 40 feet bgs had relatively low concentrations of TPH SS and weathered TPH-SS.

Detailed Site history and a complete Conceptual Site Model are included in Taber Consultants June 26, 2104 *Updated Site Conceptual Model, Site Investigation Report, And No Further Action Request.*

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**Zimmerman Source**

The Zimmerman Residence is located approximately 60 feet to the southwest of the Site at 3442 Adeline Street in Oakland. The property includes a residential building and a warehouse and spans the distance from Adeline Street to Chestnut Street to the east.

On February 22, 2000, one 3,750-gallon UST was removed from the Zimmerman property warehouse adjacent to Chestnut Street, approximately 180 feet to the south east of the monitoring wells at the Site. Site investigations were conducted at the Site in June 2006, October 2007, December 2007 and May 2008. Soil and groundwater samples from the Zimmerman residence site contained TPH-G, TPH-D and BTEX (AEI Consultants, July 31, 2009, Groundwater Monitoring Well Installation Report).

Approximately 1100 tons of petroleum hydrocarbon-impacted soil was removed in March 2009 from the warehouse interior adjacent to Chestnut Street. During soil removal, AEI observed a free-product sheen on water in the excavated pit, however the groundwater was not sampled. In March 2009, AEI Consultants injected hydrogen peroxide into the permeable bridge they had installed in the backfill area to treat the free product and to mitigate plume migration from the source. An injection well was installed in the tank excavation area at the Zimmerman residence in May 2009 to aerate impacted groundwater. No additional observations of free product or sheen have been recorded in Zimmerman property environmental reports through May 2012. The last data available for review for the Zimmerman site was from April 2014, whith concentrations of 12 and 670 ug/l of benzene and TPH-G, respectively, in MW-6. MW-6 is approximately 151 feet south-southwest of the TPH-SS plume at the City of Paris site.

**Groundwater Monitoring Activities And Results**

On March 18, 2015, Taber Consultants visited the site to measure water levels and collect groundwater samples from monitoring wells MW-1 through MW-3 and the industrial well W-IND.

**Groundwater Elevation Measurements**

Depth-to-groundwater was measured in wells MW-1, MW-2, MW-3 and W-IND using a water level meter capable of measurements to within 0.01 foot. Depth to groundwater was 20.12, 20.67, 21.22, and 20.87 feet below top of casing (BTOC) in MW-1, MW-2, MW-3 and W-IND, respectively. Depth to groundwater data were converted to groundwater elevations referenced to feet above mean sea level (amsl). Corresponding groundwater elevations were 11.18, 10.36, 9.91, and 11.61 feet amsl. Current groundwater depth and elevation data is presented in Table 2 and historical groundwater depth and elevation data trends are presented in Table 3.

**Groundwater Sampling and Analysis**

Following groundwater level measurements, the four wells were sampled in accordance with the HydraSleeve® no-purge sampling protocol. The HydraSleeve® was lowered into the well, water levels were allowed to equilibrate, and then a representative sample from the groundwater was collected using the HydraSleeve® as it was carefully retrieved from the well. Taber Consultants then transferred

the sample from the HydraSleeve® into the laboratory-supplied containers. The samples were transported in an iced cooler with chain-of-custody documentation to Sparger Technology, Inc. (Sparger), of Rancho Cordova, California, a state certified analytical laboratory (ELAP Certification #1614).

The groundwater samples were analyzed for TPH-SS and TPH-G by EPA Method 8015B; and BTEX and MTBE by EPA Method 8260B.

**Analytical Results**

TPH-SS was detected in the groundwater samples from monitoring wells MW-1, MW-2, MW-3 and W-IND at concentrations of 8,500, 130, 2,100 and less than 50 µg/L, respectively. TPH-G, which has the laboratory note "Non-typical TPH pattern present in gas range," was detected in the groundwater samples from monitoring wells MW 1, MW-2, MW-3 and W-IND at concentrations of 2,400, 180, 1,900 and less than 50 µg/L, respectively. MTBE was detected in the groundwater samples from monitoring wells MW-1, MW-2 and MW-3 at concentrations of 1.4, 0.7 and 3.1 µg/L, respectively. No analytes were detected in W-IND. No analytes other than TPH-SS, TPH-G, and naphthalene were detected at or above the laboratory reporting limits in the wells.

Per ACHCSA's request, a full 8260 analysis was done on the groundwater samples from each well to assess the presence of chlorinated solvents at the Site, which were typically used in dry cleaning operations after the more volatile petroleum hydrocarbons were phased out. No chlorinated solvents were detected at the Site, however in the sample from MW-1 1,3,5-Trimethylbenzene, Isopropyl benzene, n-Propyl benzene, and tert-Butyl benzene were detected at 2.0, 90, 80 and 3.2 µg/L, respectively. The sample from MW-2 had tert-Butyl benzene detected at 1.2 µg/L. The sample from MW-3 had Isopropyl benzene, n-Propyl benzene, and tert-Butyl benzene were detected at 80, 50, and 3.4 µg/L, respectively. Other analytes (with the exception of those listed in this paragraph) from the samples for MW-1, MW-2, MW-3 and W-IND were below laboratory reporting limits.

Groundwater elevations based on the March 18, 2015, water level measurements in the wells are shown on Figure 3. Laboratory analytical results are shown on Figure 4 and summarized in Table 2. A historical summary of groundwater elevations and analytical results for the wells is included in Table 3. Graphs of the groundwater elevations in the monitoring wells relative to each other are shown on Chart 1. Trend graphs of concentrations of TPH-SS, TPH-G and groundwater elevations for MW-1, MW-2, and MW-3 are shown on Charts 2, 3 and 4. The field data sheets are included in Appendix B. The laboratory analytical reports and chain-of-custody documentation are included in Appendix C.

**Landowner Identification for Case Closure Consideration**

The ACHCS requested that that the List of Landowners Form be filled out pursuant to Section 25297.15(a) of the California Health and Safety Code. The List of Landowners Form Part 1 was completed by the responsible parties for the Site cleanup and former land owners as follows:

Paulette Satterley
14601 Guadalupe Drive
Rancho Murieta, CA 95683

Frank L. Champion
9441 Laguna Lake Way
Elk Grove, CA 95758

Paula Champion-Braig
280 Mountain Avenue
Piedmont, CA 94611-3506

Michael Champion
1700 Main Street
Montara, CA 94037

Part 2 of the form for The List of Landowners Form was completed by the current property owner as follows:

Debra Buckley
3516 Adeline Street
Oakland, CA 95608

The forms are attached as Appendix D.

**Vapor Sampling**

During the July 16, 2015, meeting with ACHCSA, Ms. Roe and Mr. Detterman expressed concerns regarding the potential for concentration of degradation by-product gases at the site, specifically methane. In order to assess if methane gas had the potential to accumulate near the plume as a result of microbial methanogenesis, Taber Consultants collected vapor samples at the Site on August 19, 2015. Additionally, Taber Consultants collected oxygen to complete the discussion section of the California State Water Resources Control Board's UST Low Threat Closure Policy (LTCP).

The samples were collected using the California Department of Toxic Substances Control protocol using a shroud and a helium tracer. One-liter certified Summa canisters, sampling manifolds and sample gauges were rented from SunStar Laboratories. The helium tracer is used to indicate whether the surface seal was intact and appropriately prevented atmospheric gases from above ground surface from diluting the vapor sampled from below ground. The samples were collected at a depth of 5-feet below ground surface using one-half in stainless steel rods that were driven into the soil with a disposable tip (VP-5 and VP-6, as shown on Figure 5).

The samples were analyzed for helium, methane, and oxygen. Concentrations of helium and methane were below laboratory reporting limits (5.00 percent and 5.0 ppmv, respectively). The analytical reports are attached as Appendix C.

The vapor data show the following:

- Helium below the laboratory reporting limits indicate vapor samples were collected with adequate seal from the free atmosphere.
- Methane below the laboratory reporting limits indicate no hazardous accumulation below ground surface. The plume, already been in place more than 25 years and comprised of weathered TPH-SS, is unlikely to pose a future hazardous accumulation methane threat.
- Oxygen was detected in samples collected from VP-5 and VP-6 (8.18 and 6.63 percent, respectively). At greater than 4 percent, the oxygen content is sufficient to support microbial degradation of organic compounds in the bioattenuation zone.

**Tabulated Conceptual Site Model**

In reply to Mr. Detterman's request for a tabulated Conceptual Site Model, Taber Consultants has prepared Appendix E. Taber Consultants provided extensive detail, including tabulated monitoring and site assessment data, cross sections, health risk assessment, natural attenuation data, concentration v. groundwater depth historical charts and other supporting figures in their January 22, 2013, June 26, 2014, and April 10, 2015 Site Conceptual Model reports and updates. Additionally, the No Further Action Requests that Taber Consultants has submitted provide further information and backup data regarding the Site and surrounding area. Taber Consultants refers ACHCSA to the historical record compiled in GeoTracker for full reports, as well as GeoTracker EDF data. We believe a site conceptual model, consistent with the LTCP criteria< has been adequately prepared and presented for this site.

**Radius Map and Plume Status**

During the July 16, 2015, meeting with ACHCSA, Ms. Roe and Mr. Detterman asked Taber Consultants to draft a map showing radial distances from the center of the plume for benzene, MTBE and TPH-G which would reflect the average plume distance of these constituents as described in the LTCP. The map is attached as Figure 6.

The average plume length map was drawn using average distances of mobile constituents of TPH-G plumes. Although Taber Consultants reports hydrocarbons in the TPH-G range, the laboratory for the Site, Sparger Technology, Inc., has long noted that while petroleum hydrocarbons elute in the TPH-G range, the chromatograms do not exhibit the characteristic pattern of TPH-G. The TPH-SS chromatograms display the characteristic "double-hump" of highly weathered TPH-SS. A middle distillate, like kerosene or diesel, TPH-SS has fewer short-chain hydrocarbons that are more volatile and more easily degraded. As degradation occurs in the subsurface as a result of natural attenuation, recalcitrant petroleum hydrocarbons becomes a greater proportion of the remaining mass. While the

recalcitrant petroleum hydrocarbons are attenuated slower, they are also sparingly soluble and immobile.

During Taber Consultants 2011 and 2013 site investigations, the plume boundaries in the shallow water-bearing zone from 10 to 20 feet bgs and the deeper-bearing water zone from 30 to 40 feet bgs were explored to the north, west and east of the plume. While investigation to the south was hindered by the presence of buildings, the shallow groundwater zone has been investigated as part of the Zimmerman Residence plume assessment. As noted above, monitoring wells have been installed to the south-southwest, south, and southeast of the Site, and soil borings have been advanced near the City of Paris property boundaries to the south-southwest, south, southeast, and east of the Site. These borings did not find indications of petroleum hydrocarbons in the middle-distillate hydrocarbon range, although high concentrations of benzene, TPH-G and MTBE were reported during those investigations as a result of the TPH-G plume at the Zimmerman Residence.

The TPH-SS plume observed during Taber Consultants 2011 and 2013 investigations is clearly contracting, with weathered TPH-SS appearing in soil and groundwater samples in the TPH-G range and characteristic double-humped peaks in the chromatograms. Within the courtyard of the site, TPH-SS appears less weathered, likely as a result of low availability of electron acceptors. The greatest distance that Taber Consultants observed evidence of the TPH-SS plume was 131 feet to the northwest, below the Macarthur Freeway.

**Low Threat Closure Policy**

The Low Threat Closure Policy was enacted by the State Water Board to set realistic cleanup goals for underground storage tank sites that had languished as open cleanup cases although there was no threat to human health or the environment. The City of Paris is an example of such a languishing site—the Site has been active since 1991.

Thorough and detailed investigation at the Site by Taber Consultants has been conducted and reported with extensive documentation, including tabulated data, figures, charts and professional hydrogeologic interpretation. These facts were in ACHCSA's possession when the LTCP checklist was produced and posted to GeoTracker. Errors of fact by the ACHCSA include the following:

1. A 5th UST was permitted to be removed but was not.

   The sizes of the tanks noted in the tank removal permit were not consistent with the sizes of the tanks observed during removal, suggesting the exact sizes and number of tanks were not known during permitting.

   May 10, 2013, geophysical survey with ground penetrating radar conducted on indicated no further USTs were present on Site.

2. Three ACHCSA statements suggest free product may exist at the Site.

   No Free Product has ever been observed on Site (tanks removed in October 1990 and October 1991). Prior to ACHCSA's April 2015 statements the fact that no free product existed at the Site was not in dispute.

3. The ACHCSA states a supply well exists within 250 feet of the Site.

   In August, 2014, the ACHCSA submitted a letter to George Lockwood of the State Water Resources Control Board that the well at the Site is an industrial well that has been impacted with the plume at the Site.

   The industrial well is not suited for drinking water as it has no sanitary seal. The indicated well is an unused industrial well at the Site that is to be abandoned concurrently with the three monitoring wells once site closure is granted.

4. The ACHCSA states the nearest surface water boundary is between 250 feet and 1000 feet of the plume.

   The plume is limited to less than 150 feet in any direction, and no surface water is less than 1200 feet from the Site. Taber Consultants has shown that the plume is comprised of weathered TPH-SS that is stable and declining in extent (see the February 1, 2012 Natural Attenuation Analysis).

The general criteria of the LTCP listed by the State Water Board have been met by the following objective facts:

| General Criteria | Satisfying Condition |
|---|---|
| a. The unauthorized release is located within the service area of a public water system | The water provider for the area is East Bay MUD |
| b. The unauthorized release consists only of petroleum | Analysis at the Site for volatile and semi volatile compounds have confirmed the plume is limited to petroleum hydrocarbons |
| c. The unauthorized ("primary") release from the UST system has been stopped | Tanks were removed in 1990 and 1991; geophysical survey in May 2013 confirmed no additional tanks on Site |
| d. Free product has been removed to the maximum extent practicable | Soils were bioremediated on Site; no free product has been reported on Site in 25 years |
| e. A conceptual site model that assesses the nature, extent, and mobility of the release has been developed | The basis of the Conceptual Site Model was submitted in three reports dated February 1, 2012 – the Site Investigation Report, the Natural Attenuation Analysis Report, and the Human Health Risk |

| General Criteria | Satisfying Condition |
|---|---|
| | Assessment Report.<br><br>A digital Site Conceptual Model conforming with the model proposed by Donna Drogos of ACHCSA was developed, however no mechanism existed for uploading the linked document to Alameda County's website or GeoTracker, and the Site Conceptual Model was revised to conform to a standard narrative document.<br><br>A detailed narrative-style Revised Site Conceptual Model and Amended Additional Site Investigation Work Plan were submitted to ACHCSA January 22, 2013.<br><br>An Updated Site Conceptual Model, Site Investigation Report and No Further Action Request were submitted to ACHCSA on June 26, 2013.<br><br>A further Updated Site Conceptual Model and No Further Action Request were submitted to ACHCSA again on April 10, 2015.<br><br>Finally, in accordance with ACHCSA's request, a tabulated Site Conceptual Model is attached to this report. |
| f. Secondary source has been removed to the extent practicable | Soil was remediated on site to the extent practicable between 1991 and 1992 under the supervision of ACHCSA. Due to size constraints and Site location, additional secondary source removal is not practicable. Based on Taber Consultant's risk assessment, further remedial activity will produce little benefit at great expense. |
| g. Soil or groundwater has been tested for methyl tert-butyl ether (MTBE) and results reported in accordance with Health and Safety Code section 25296.15 | Groundwater has been tested for MTBE at the Site since 1996. MTBE was not detected in grab groundwater samples at the Site in 1998, however it has been detected in groundwater at the Site. MTBE is not a constituent of TPH-SS, however three gasoline releases |

| General Criteria | Satisfying Condition |
|---|---|
| | have been reported up-gradient and cross-gradient of the Site (in particular, the Zimmerman plume has reported high concentrations of MTBE and is with 275 feet of the Site). |
| h. Nuisance as defined by Water Code section 13050 does not exist at the site. | No Nuisance exists at the Site. |

**Conclusions**

Through analysis of the March 18, 2015, groundwater samples from the Site, Taber Consultants has confirmed that chlorinated solvents are not detected at the Site and are not an impediment to closure based on the LTCP. The oxygen content in the vadose zone soils is greater than 4 percent, providing adequate bioattenuation capacity for the soils overlying the plume. Methane was not detected in vapor sampling above and adjacent to the plume and is not likely to accumulate in place, particularly in light of the degraded state of the plume and concentration of recalcitrant petroleum hydrocarbons.

The updated LTCP checklist is attached as Appendix F. Taber Consultants has provided the ACHCSA ample evidence of suitability for closure of the Site under the LTCP.

**Recommendations**

As noted in the June 26, 2014, *Updated Site Conceptual Model, Site Investigation Report, And No Further Action Request*, studies at the Site, including vapor intrusion and health hazard risk assessment, have shown that the calculated risk of health hazard at the Site falls below criteria set by the USEPA for cancer risk and other health impacts. The TPH-SS plume at the Site is stable and contracting, and based on the Natural Attenuation Analysis conducted by Taber Consultants, the plume will continue to degrade in place. Concentrations of TPH-SS in soils less than 10 feet bgs are below the 100 mg/kg TPH criteria set forth in the LTCP, and oxygen concentrations are greater than 4 percent. Based on these factors and on the LTCP checklist criteria, Taber Consultants recommends closure to further regulatory action. Taber Consultants has consistently demonstrated that the site meets all the LTCP criteria and we recommend that the site should accorded No Further Action Required status without further delay.

In conjunction with site closure, Taber Consultants recommends abandoning the three monitoring wells and the industrial well at the Site. Upon direction by the ACHCSA, Taber Consultants will abandon the wells and prepare a Well Abandonment and Site Restoration Report, as well as submit Well Completion Reports to the Department of Water Resources.

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**Limitations**

The interpretations and/or conclusions contained in this report represent our professional opinions. These opinions are based on currently available information and were developed in accordance with currently accepted geologic, hydrogeologic, and engineering practices at this time and for this specific site in Alameda County in 2016. Other than this, no warranty is implied or intended.

This report has been prepared solely for the use of Ms. Paulette Satterley, Paula Champion-Bragg, Michael and Leah Champion and Frank Champion. Any reliance on this report by third parties shall be at such parties' sole risk. The work described herein will be performed under the direct supervision of the Professional Geologists, registered with the State of California, whose signatures appear below.

We appreciate the opportunity to provide you with geologic, engineering and environmental consulting services and trust this report meets your needs. If you have any questions or concerns, please call us at (916) 371-1690.

Sincerely,

***Taber Consultants***

Ellen Pyatt, MSc.
Project Geologist

PROFESSIONAL GEOLOGIST
THOMAS E. BALLARD
No. 961
CERTIFIED
HYDROGEOLOGIST
STATE OF CALIFORNIA

Thomas E. Ballard, P.G. #7299, C.H.G. #961
Principal Hydrogeologist

Attachments:

| | |
|---|---|
| Figure 1. | Vicinity Map |
| Figure 2. | Site Map |
| Figure 3. | Groundwater Elevation Map – March 2015 |
| Figure 4. | Groundwater Analytical Summary - March 2015 |
| Figure 5. | Vapor Concentration Analytical Summary – August 2015 |
| Figure 6. | Radial Distance From Plume of Sensitive Receptors |
| | |
| Table 1. | Well Construction Summary |
| Table 2. | September 2014 Groundwater Elevation And Analytical Results |
| Table 3. | Groundwater Elevation And Analytical Results -- Summary |
| Table 4. | Vapor Sample Analytical Results |

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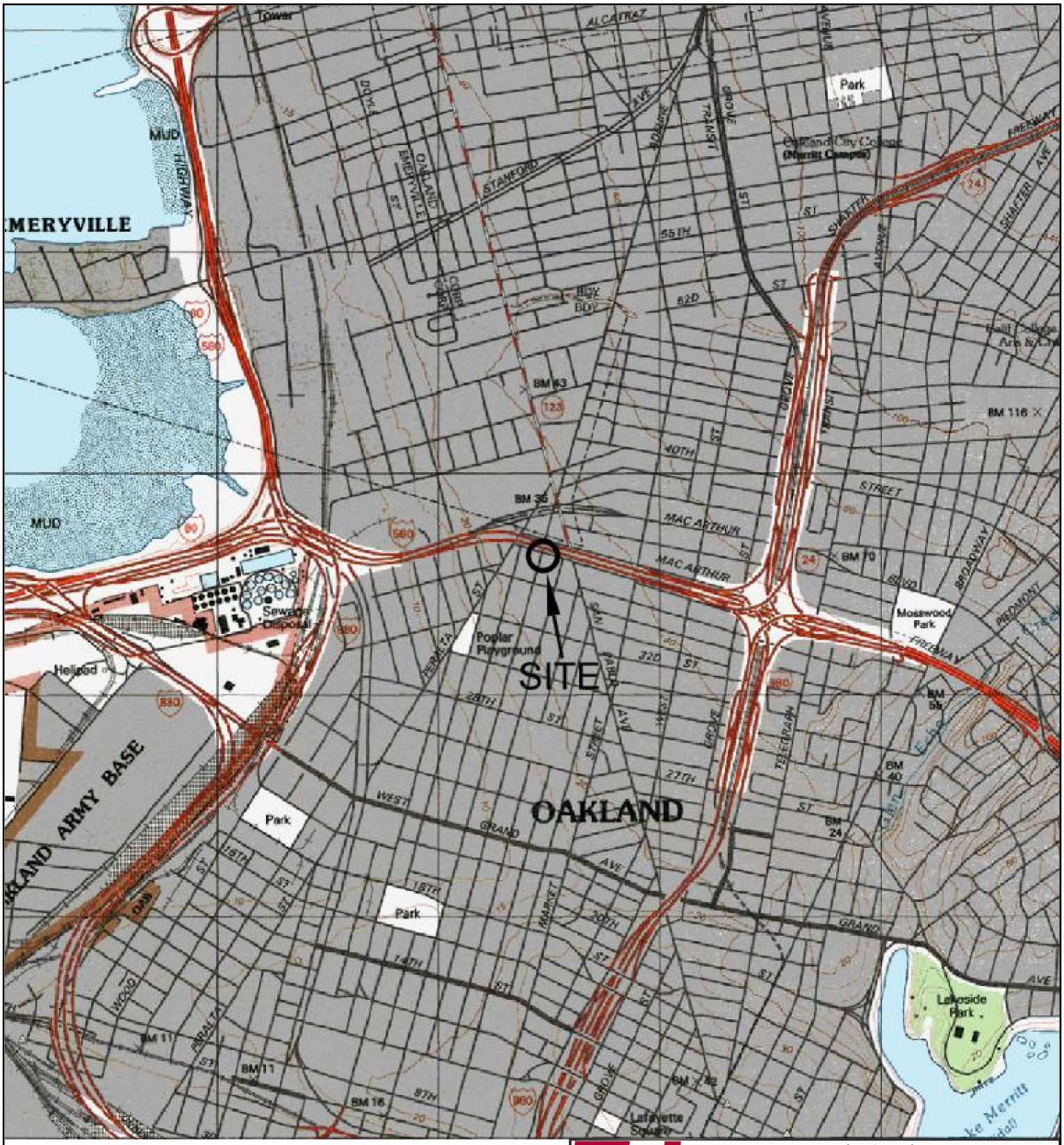
Appendix A. Alameda County Health Care Services Agency August 29, 2014 Letter
Appendix B. Field Data Sheets
Appendix C. Laboratory Analytical Reports
Appendix D. List of Landowners Forms
Appendix E. Tabulated Conceptual Site Model
Appendix F. LTCP Checklist

# FIGURES




N

Scale: 1:24,000

**Source:**
**USGS West Oakland Quadrangle Topographic Map Report, 7.5 Minute Series (topgraphic), dated 1993**

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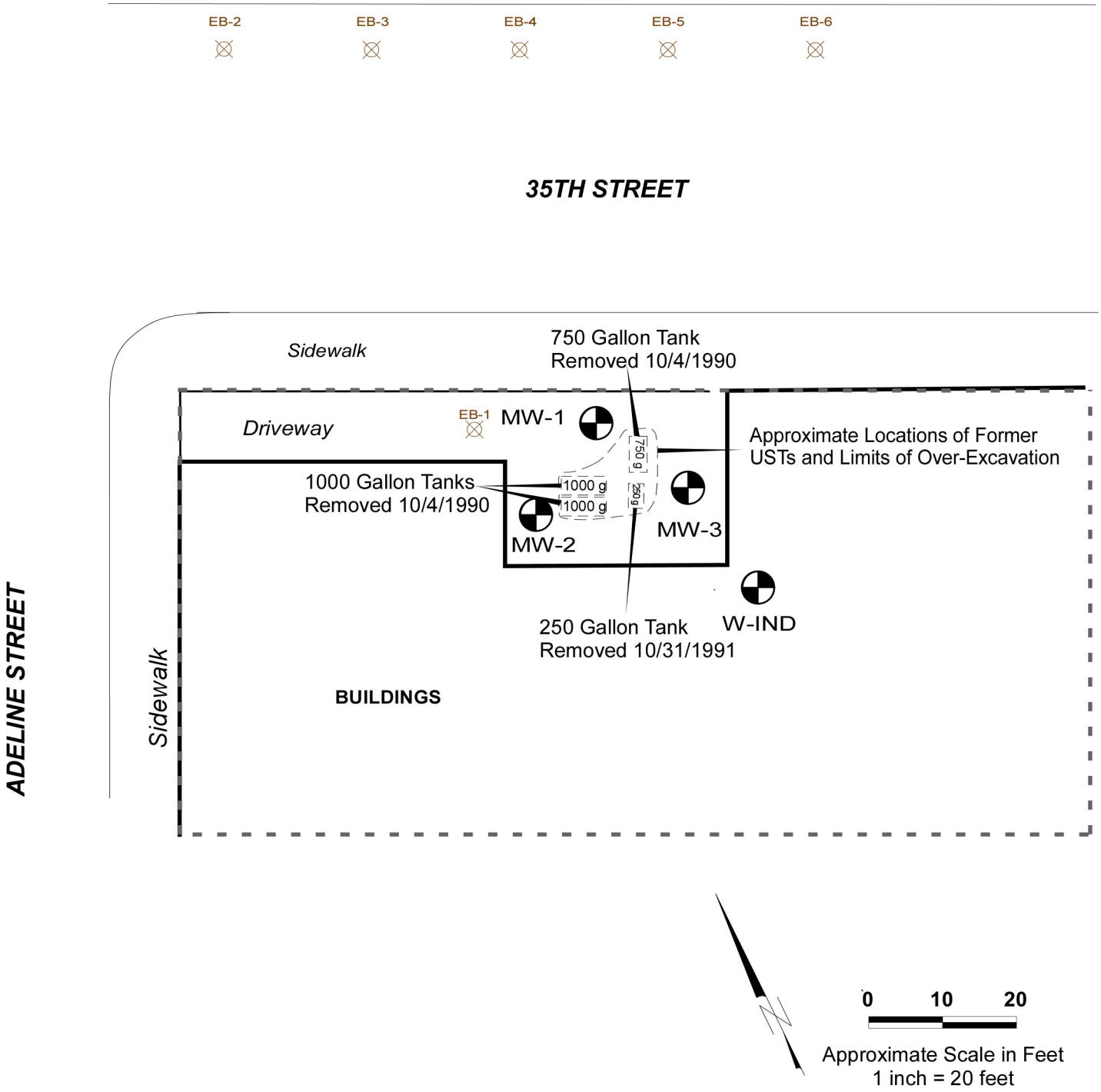
***Taber Consultants***
***Engineers and Geologists***
*3911 West Capitol Avenue*
*West Sacramento, CA 95691-2116*
*916.371.1690 Fax 916.371.7265*
*www.taberconsultants.com*


Former City of Paris Cleaners

3516 Adeline Street
Oakland, California

**Vicinity Map**

| 2011-0107 | December 2015 | Figure 1 |
|---|---|---|




## LEGEND

| | |
|---|---|
| EB-1 | Soil Boring (1998) |
| MW-2 | Groundwater Monitoring Well |
| W-IND | Industrial Well |
| 1000 g | Approximate Locations Former Underground Storage Tanks |
| - - - - | Approximate Site Boundary (Assessor's Parcel Number 5-478-23) |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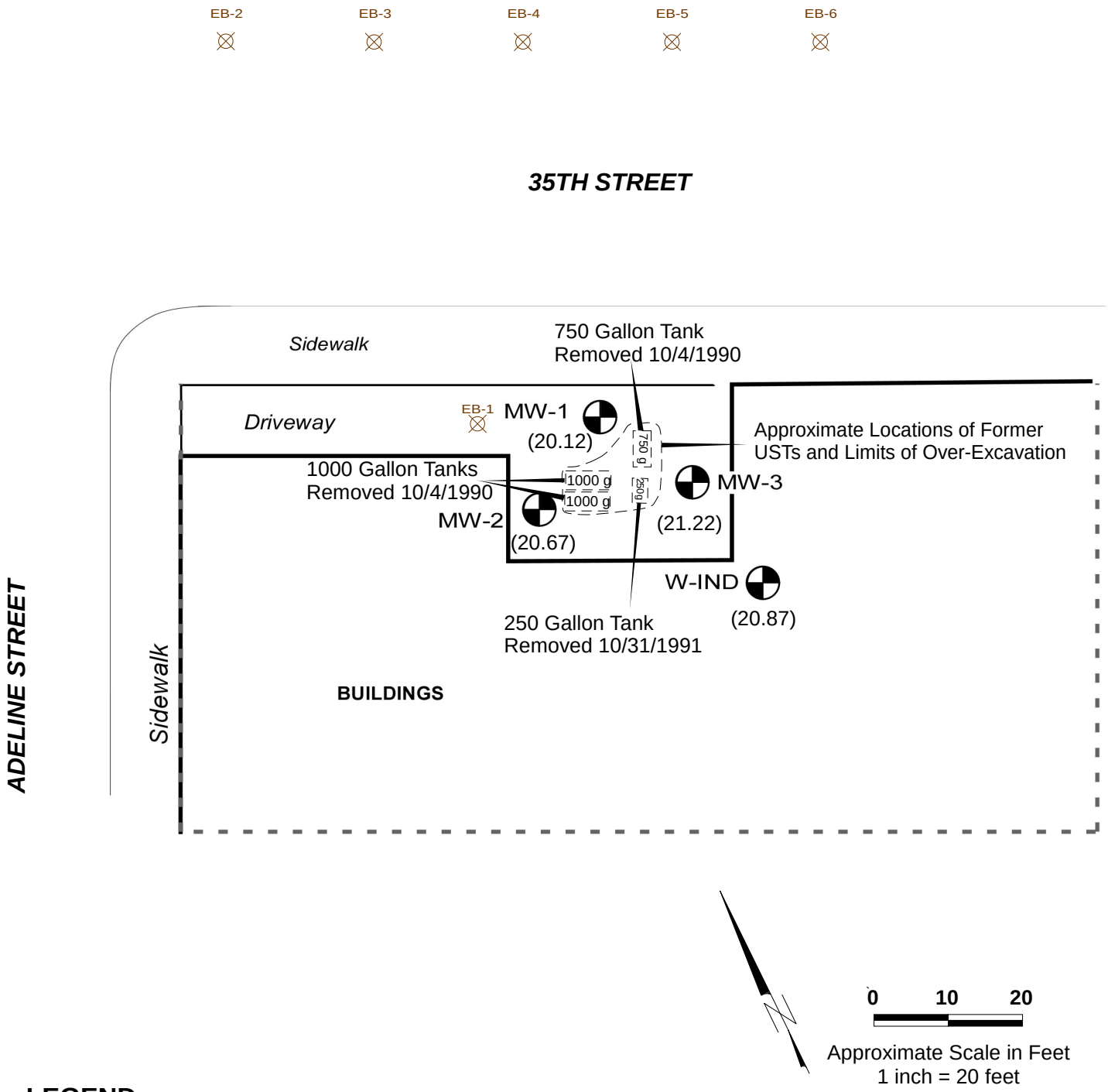
Former City of Paris Cleaners

3516 Adeline Street
Oakland, California

**Site Map**

| 2011-0107 | December 2015 | Figure 2 |
|---|---|---|




## LEGEND

MW-2 Groundwater Monitoring Well

W-IND Industrial Well

Approximate Site Boundary
(Assessor's Parcel Number 5-478-23)

(20.14) Groundwater Elevation In Feet
Above Mean Sea Level

*Groundwater Monitoring Data from March 18, 2015*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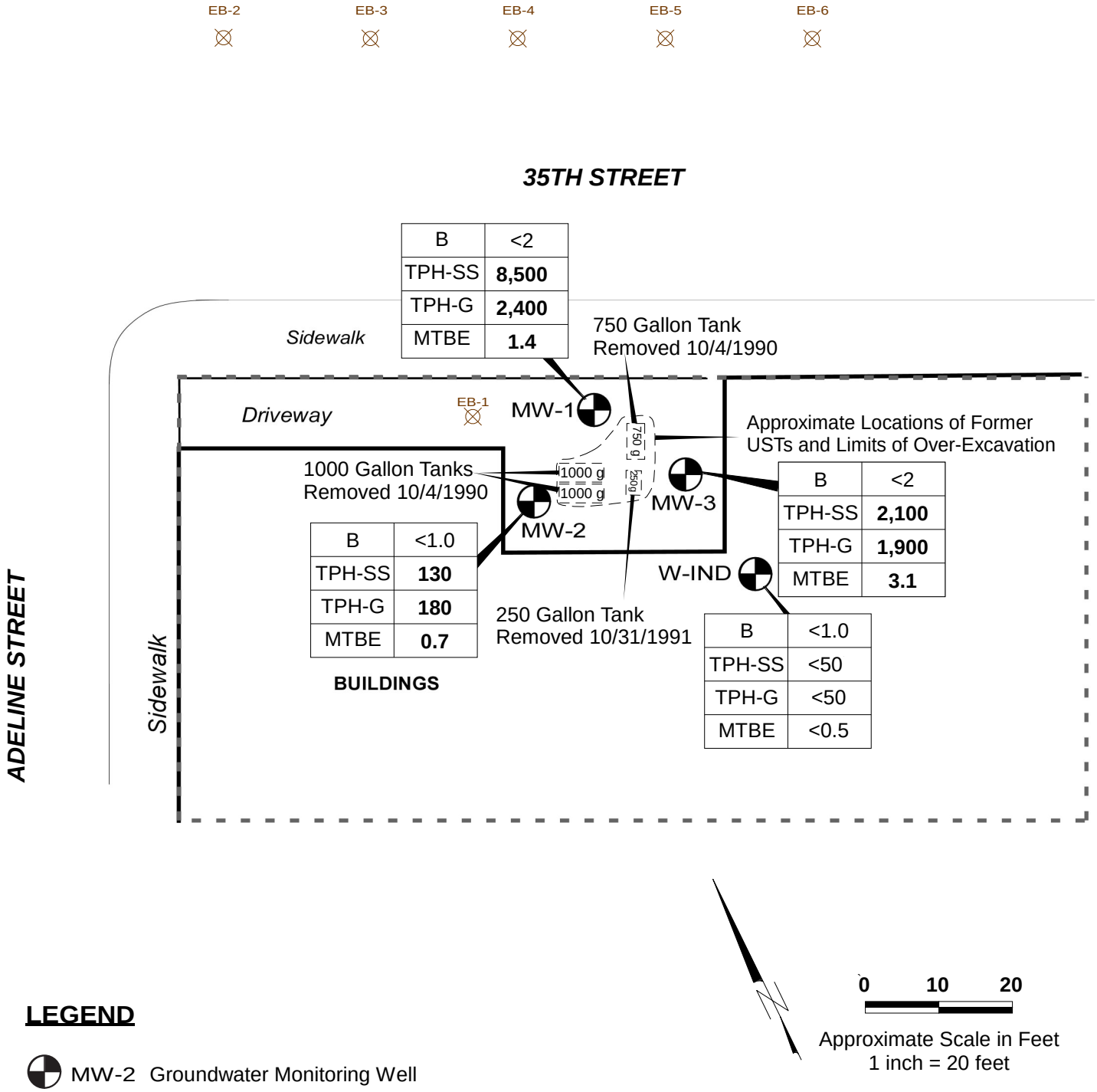
Former City of Paris Cleaners

3516 Adeline Street
Oakland, California

**Groundwater Elevation Map - March 2015**

| 2011-0107 | December 2015 | Figure 3 |
|---|---|---|




## LEGEND

MW-2 Groundwater Monitoring Well

W-IND Industrial Well

Approximate Site Boundary
(Assessor's Parcel Number 5-478-23)

| | | |
|---|---|---|
| B | <1.0 | Benzene in micrograms per liter (µg/l) |
| TPH-SS | <50 | Total petroleum hydrocarbon as Stoddard Solvent in µg/l |
| TPH-G | <50 | Total petroleum hydrocarbons as gasoline in µg/l |
| MTBE | <0.5 | Methyl tertiary-butyl ether in µg/l |

*Groundwater Monitoring Data from March 18, 2015.*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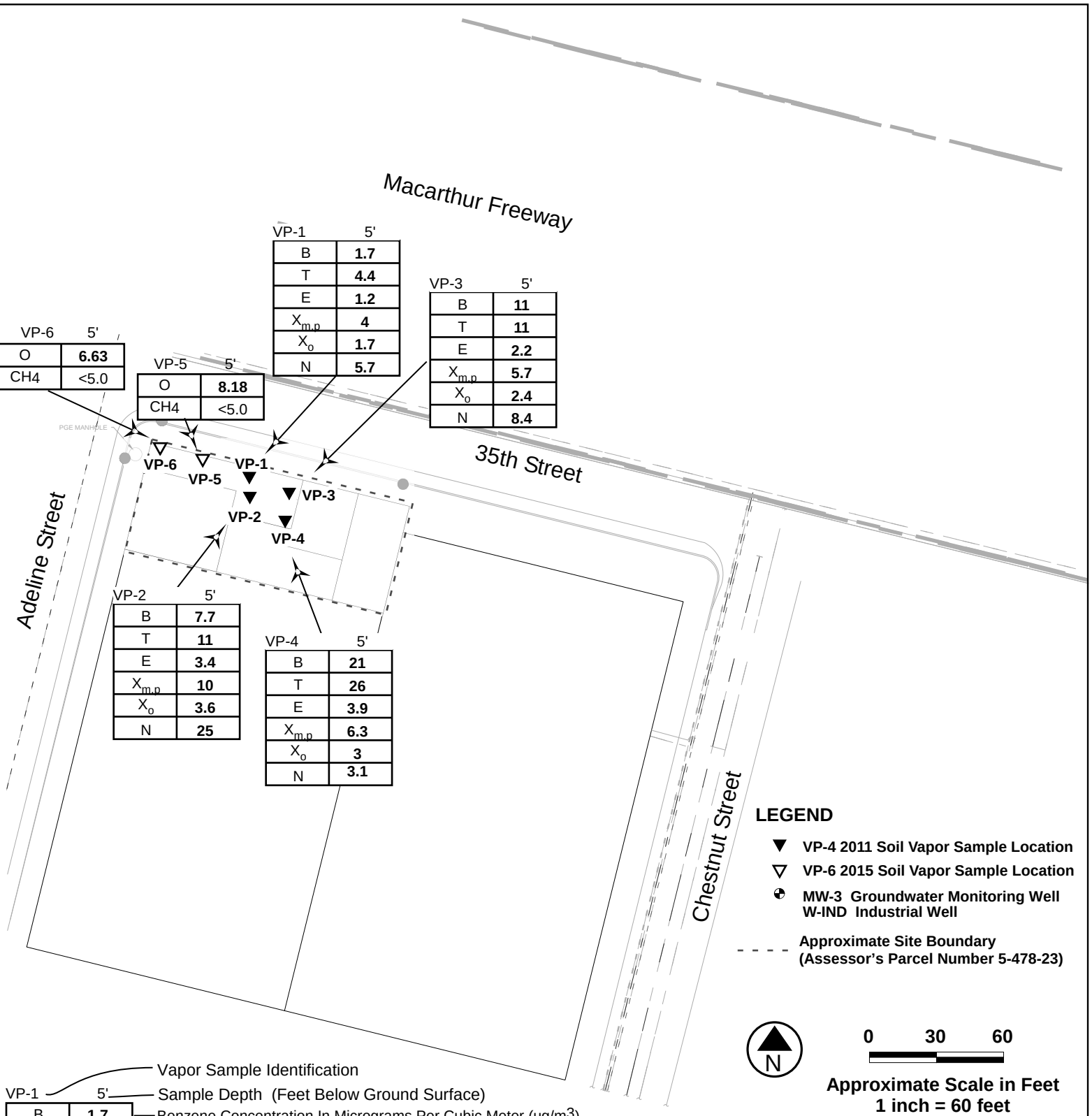
Former City of Paris Cleaners

3516 Adeline Street
Oakland, California

**Groundwater Analytical Summary**

| 2011-0107 | December 2015 | Figure 4 |
|---|---|---|




VP-1 5' — Vapor Sample Identification; Sample Depth (Feet Below Ground Surface)

| | |
|---|---|
| B | 1.7 — Benzene Concentration In Micrograms Per Cubic Meter ($ug/m^3$) |
| T | 4.4 — Toluene ($ug/m^3$) |
| E | 1.2 — Ethyl-benzene ($ug/m^3$) |
| $X_{m,p}$ | 4 — Methyl- And Para- Xylenes ($ug/m^3$) |
| $X_o$ | 1.7 — Ortho-xylene ($ug/m^3$) |
| N | 5.7 — Napthalene ($ug/m^3$) |

VP-6 5' — Vapor Sample Identification; Sample Depth (Feet Below Ground Surface)

| | |
|---|---|
| O | 6.63 — Oxygen (%) |
| CH4 | <5.0 — Methane (ppmv) |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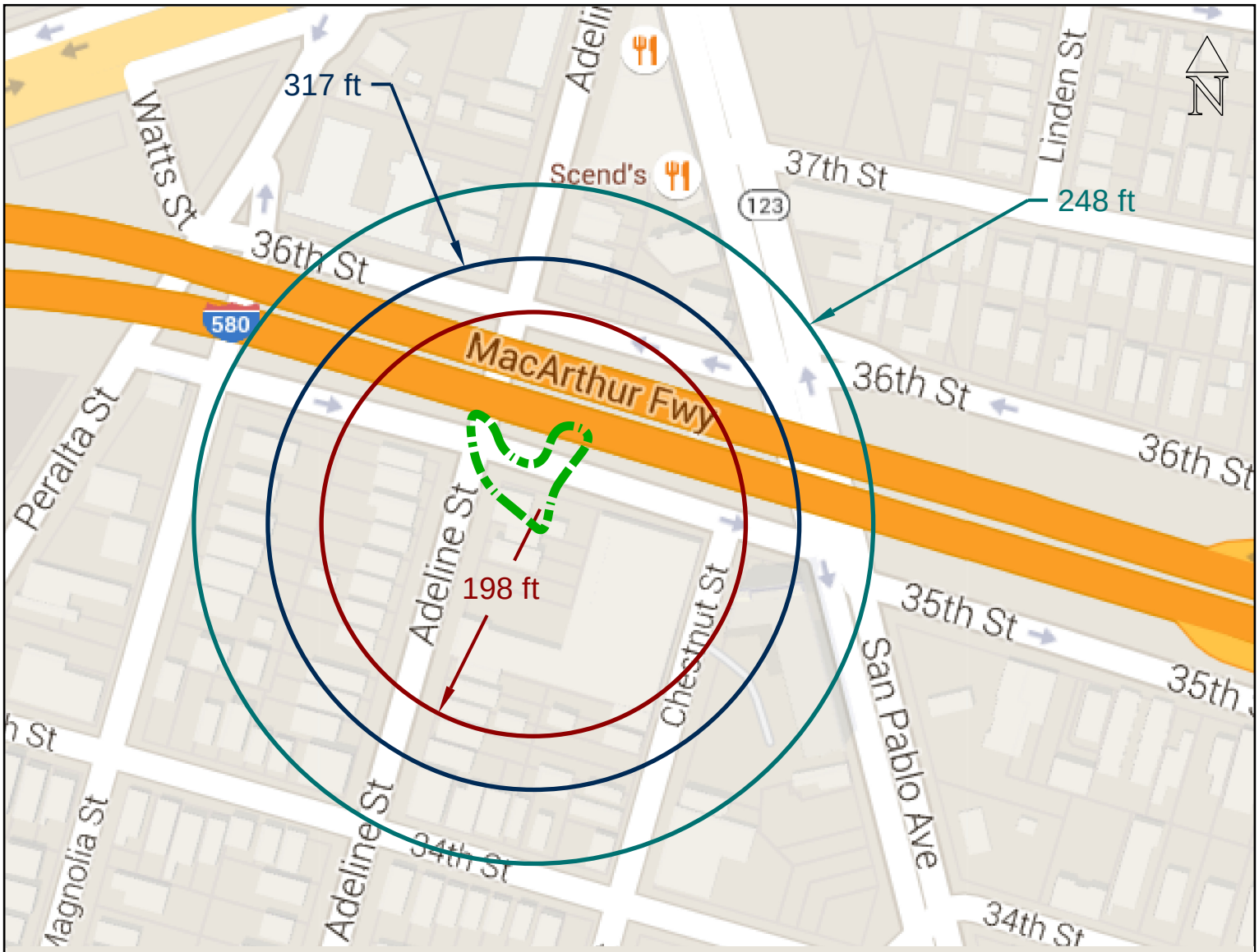
# FORMER CITY OF PARIS CLEANERS

3516 Adeline Street
Oakland, CA

**Vapor Sample Analytical Results**

| 2011-0107 | December 2015 | Figure 4 |
|---|---|---|




Note: The radial distances for benzene, methyl tert butyl ether (MTBE) and gasoline (TPH-G) do not represent the plume length of degraded Stoddard Solvent (TPH-SS), a middle distillate similar to diesel (TPH-D). Low solubility hydrocarbons in the TPH-D range create plumes which are shorter than those associated with gasoline releases. In this case, the maximum distance that weathered TPH-SS was detected was ~135 feet to the northwest of the site, and volatile constituent peaks are missing from chromatographic signatures. Samples collected east and south of the City of Paris site (related to investigation of the Zimmerman plume) did not detect TPH-SS. The extent of detections is indicated by the dashed boundary.

**LEGEND**

- Limit of TPHss Detections
- Average Benzene Plume Length
- Average MTBE Plume Length
- Average TPHg Plume Length

0 100 200 feet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Former City of Paris Cleaners

3516 Adeline Street
Oakland, California

**Average Plume Length Map**

| 2011-0107 | December 2015 | Figure 6 |
|---|---|---|

# TABLES

**TABLE 1**
**WELL CONSTRUCTION SUMMARY**
City of Paris Cleaners
3516 Adeline Street, Oakland, California 94608

| Well ID | Date Installed | Depth (feet) | Top Of Casing Elevation (feet amsl) | Screen from | Screen To | Diameter (inches) | Casing/Screen Type |
|---|---|---|---|---|---|---|---|
| MW-1 | 10/30/1992 | 30 | 17.44 | 10 | 30 | 2 | PVC |
| MW-2 | 10/30/1992 | 30 | 17.31 | 10 | 30 | 2 | PVC |
| MW-3 | 10/30/1992 | 30 | 17.44 | 10 | 30 | 2 | PVC |
| W-IND* | unknown | 72 | 32.48 | Not observed | Not observed | 8 | Steel |

**Explanation:**
amsl = above mean sea level
*The top of casing is estimated based on survey; video logging of well casing/screen did not observe screen, however well appeared to have been plugged with concrete at 72 feet below ground surface.

**TABLE 2**
**SEPTEMBER 2014 GROUNDWATER ELEVATION AND ANALYTICAL RESULTS**
City of Paris Cleaners
3516 Adeline Street, Oakland, California 94608

| | | Elevation Summary | | | Analytical Summary | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Well ID | Date | Top of Casing Elevation (feet amsl) | Depth to Water (feet BTOC) | Groundwater Elevation (feet amsl) | TPH-SS | TPH-G | Benzene | Toluene | Ethyl benzene | Xylenes (total) | MTBE | Naphthalene |
| | | | | | (ug/l) | | | | | | | |
| MW-1[a] | 03/18/15 | 31.30 | 11.18 | 20.12 | **8,500** | **2,400** | <2.0 | <2.0 | <2.0 | <2.0 | **1.4** | <4.0 |
| MW-2 | 03/18/15 | 31.03 | 10.36 | 20.67 | **130** | **180** | <1.0 | <1.0 | <1.0 | <1.0 | **0.7** | <2.0 |
| MW-3[b] | 03/18/15 | 31.13 | 9.91 | 21.22 | **2,100** | **1,900** | <2.0 | <2.0 | <2.0 | <2.0 | **3.1** | <4.0 |
| W-IND | 03/18/15 | 32.48 | 11.61 | 20.87 | <50 | <50 | <1.0 | <1.0 | <1.0 | <1.0 | <0.50 | <2.0 |

**Explanation:**

TPH-G = Total petroleum hydrocarbons as gasoline, analyzed by EPA Method 8015B.
TPH-SS = Total petroleum hydrocarbons as stoddard solvent, analyzed using EPA method 8015B.
Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8260B.
MTBE = Methyl tertiary-butyl ether, analyzed using EPA Method 8260B.
Napthalene, 1,3,5-Trimethylbenzene, Isopropylbenzene, n-Propylbenzene, tert-butylbenzene analyzed by EPA Method using EPA Method 8260B.
See laboratory report for additional 8260B analyses. All further constituent concentrations were below the laboratory reporting limit.

amsl = Above mean sea level.
BTOC = Below top of casing.
ug/l = Micrograms per liter.
<n = Not detected at or above indicated laboratory reporting limit.

On March 17, 2010, Taber Consultants implemented the HydraSleeve® no purge protocol for all wells.
On March 23, 2011, Taber Consultants resurveyed top of casing elevations for all wells.

[a]The analytical laboratory reported two water sample analyses for xylenes: m,p-Xylene was reported as 1.4 ug/l and o-Xylene was reported as <1.0 ug/l; and total Xylenes were reported as
[b]The analytical laboratory reported two water sample analyses for toluene and xylenes, 3.4 and 3.1 ug/l toluene; m,p-Xylene was reported as 10 ug/l and o-Xylene was reported as 3.9 ug/l and total Xylenes were reported as 20.0 ug/l.
The narrative report and summary Table 3 list the second set of analysis for toluene and total xylenes.

**TABLE 3**
**GROUNDWATER ELEVATION AND ANALYTICAL RESULTS**
**SUMMARY**
City of Paris Cleaners
3516 Adeline Street, Oakland, California 94608

| | | Elevation Summary | | | Analytical Summary | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Well ID | Date | Top of Casing Elevation (feet amsl) | Depth to Water (BTOC) | Groundwater Elevation (feet amsl) | TPH-SS | TPH-G | Benzene | Toluene | Ethyl benzene | Xylenes | MTBE | 1,2-DCB | 1,1-DCA | 2-Methyl-Naphthalene | Naphthalene | 1,3,5-Trimethyl benzene | Isopropyl benzene | n-Propyl benzene | tert-Butyl benzene |
| | | | | | | | | | | | | (ug/l) | | | | | | | |
| **Groundwater Sample Locations** | | | | | | | | | | | | | | | | | | | |
| EB1-18 | 03/19/98 | 18' bgs Groundwater Grab Sample | | | **270,000** | -- | <5.0 | **93** | **66** | **1,700** | <100 | -- | -- | -- | -- | -- | -- | -- | -- |
| EB2-18 | 03/19/98 | 18' bgs Groundwater Grab Sample | | | <1.0 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| EB3-18 | 03/19/98 | 18' bgs Groundwater Grab Sample | | | <1.0 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| EB4-18 | 03/19/98 | 18' bgs Groundwater Grab Sample | | | <1.0 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| EB5-18 | 03/19/98 | 18' bgs Groundwater Grab Sample | | | **780** | -- | <0.5 | <0.5 | <0.5 | **2** | <5.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| EB6-18 | 03/19/98 | 18' bgs Groundwater Grab Sample | | | <1.0 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 11/18/92 | 17.44 | 13.99 | 3.45 | **1,800** | NA | <0.5 | <0.5 | <0.5 | <0.5 | NA | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 11/4/1993 | 17.44 | 16.79 | 0.65 | **2,000** | <50 | <0.5 | <0.5 | <0.5 | <0.5 | NA | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 3/8/1994 | 17.44 | 14.14 | 3.3 | **150** | NA | **35** | **40** | **72** | **120** | NA | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 8/2/1994 | 17.44 | 13.18 | 4.26 | **2,100** | <50 | <0.5 | <0.5 | <0.5 | <0.5 | NA | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 2/8/1995 | 17.44 | 10.92 | 6.52 | **620** | <50 | <0.5 | <0.5 | <0.5 | <0.5 | NA | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1** | 7/8/1996 | 17.44 | 11.62 | 5.82 | **37,000** | **110,000** | **1.6** | <0.5 | <0.5 | **74** | **7.9** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 10/9/1996 | 17.44 | 14.11 | 3.33 | **42,000** | NA | <0.5 | **5** | <0.5 | <0.5 | NA | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 3/18/1997 | 17.44 | 12.37 | 5.07 | **2,600** | NA | <0.5 | **1.5** | **1.5** | **9.6** | <6.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 6/19/1997 | 17.44 | 13.26 | 4.18 | **660** | NA | <0.5 | <0.5 | **1.2** | **0.71** | <5.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 11/14/1997 | 17.44 | 11.45 | 5.99 | **10,000** | NA | <0.5 | <0.5 | **110** | **1.2** | <5.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 12/15/1999 | 17.44 | 11.31 | 6.13 | <20 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | NA | <0.5 | **0.59** | <0.5 | <0.5 | -- | -- | -- | -- |
| MW-1 | 03/22/02 | 17.44 | 8.97 | 8.47 | **11,000** | -- | -- | -- | -- | -- | <5.0 | -- | -- | -- | **130** | -- | -- | -- | -- |
| MW-1 | 04/15/03 | 17.44 | 9.23 | 8.21 | **3,900** | -- | <2.5 | <2.5 | <2.5 | **3** | **9** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 03/26/04 | 17.44 | 10.32 | 7.12 | **30,000** | **24,000** | <50 | <50 | <50 | <50 | <500 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 09/30/04 | 17.44 | 11.53 | 5.91 | **3,800** | **2,600** | <0.5 | <0.5 | <0.5 | **2.7** | <5 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 09/09/05 | 17.44 | 13.63 | 3.81 | **15,000** | **11,000** | c | <5 | <5 | **15** | <50 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 11/30/07 | 17.44 | 13.95 | 3.49 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 12/20/07 | 17.44 | 11.51 | 5.93 | **45,000** | **110,000** | **20** | **50** | **20** | **100** | <5 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 05/23/08 | 17.44 | 14.14 | 3.3 | **4,200** | <500 | <1 | <1 | <1 | **20** | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 08/12/08 | 17.44 | 13.78 | 3.66 | **4,000** | **12,000** | <1 | <1 | <1 | <1 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 12/18/08 | 17.44 | 10.71 | 6.73 | **9,900** | **2,700** | <1 | <1 | <1 | <1 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 02/19/09 | 17.44 | 8.91 | 8.53 | **500** | **3,100** | <10 | <10 | <10 | <10 | <5 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 08/11/09 | 17.44 | 13.35 | 4.09 | **13,000** | **7,800** | <10 | <10 | <10 | <10 | **5.9** | -- | -- | -- | -- | -- | -- | -- | -- |
| *MW-1 NP* | *08/11/09* | *17.44* | *13.35* | *4.09* | ***6,000*** | ***10,000*** | *<10* | *<10* | *<10* | *<10* | *<5* | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 03/17/10 | 17.44 | 9.31 | 8.13 | **4,000** | **12,000** | <20 | <20 | <20 | **20** | <10 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 08/18/10 | 17.44 | 12.65 | 4.79 | **2,000** | **6,900** | <100 | <100 | <100 | <100 | <50 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 03/23/11 | 31.30 | 6.75 | 24.55 | **8,800** | **8,100** | <10 | <10 | <10 | <10 | <5 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1[a] | 08/25/11 | 31.30 | 11.35 | 19.95 | **2,100** | **7,200** | <1 | <1 | <1 | <1 | **2.1** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 02/22/12 | 31.30 | 11.35 | 19.95 | **5,000** | **4,200** | <100 | <100 | <100 | <100 | <50 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 08/22/12 | 31.30 | 12.73 | 18.57 | **5,000** | **4,500** | <10 | <10 | <10 | <10 | **5.7** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 01/30/13 | 31.30 | 10.93 | 20.37 | **2,000** | **4,400** | <100 | <100 | <100 | 14 | **<5.0** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 | 05/13/13 | 31.30 | 11.08 | 20.22 | **18,200** | **7,900** | <10 | <10 | <10 | <10 | <5.0 | -- | -- | -- | <20 | -- | -- | -- | -- |
| MW-1 | 09/24/14 | 31.30 | 13.23 | 18.07 | **2,600** | **3,700** | <10 | <10 | **5.2** | **2.6** | <5.0 | -- | -- | -- | **5.7** | **2.0** | **90** | **80** | **3.2** |
| MW-1 | 03/18/15 | 31.30 | 11.18 | 20.12 | **8,500** | **2,400** | <2.0 | <2.0 | <2.0 | <2.0 | | | | | | | -- | -- | -- |
| MW-2 | 11/18/92 | 17.31 | 13.18 | 4.13 | **630** | NA | <0.5 | <0.5 | <0.5 | <0.5 | NA | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 11/04/93 | 17.31 | 14.84 | 2.47 | **3,200** | <50 | <0.5 | <0.5 | <0.5 | <0.5 | NA | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 03/08/94 | 17.31 | 11.5 | 5.81 | **45** | NA | **1.4** | **2** | **11** | **19** | NA | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 08/02/94 | 17.31 | 13.14 | 4.17 | **170** | <50 | <0.5 | <0.5 | <0.5 | <0.5 | NA | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 02/08/95 | 17.31 | 8.18 | 9.13 | **570** | <50 | <0.5 | <0.5 | <0.5 | <0.5 | NA | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2** | 07/08/96 | 17.31 | 11.06 | 6.25 | **1,800** | **2,800** | <0.5 | **2.6** | **15** | **24** | **6.3** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 10/09/96 | 17.31 | 12.38 | 4.93 | **4,100** | NA | <0.5 | **0.57** | <0.5 | <0.5 | NA | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 03/18/97 | 17.31 | 10.61 | 6.7 | **240** | <0.5 | **0.57** | <0.5 | <0.5 | **5.3** | NA | -- | -- | -- | -- | -- | -- | -- | -- |

**TABLE 3**
**GROUNDWATER ELEVATION AND ANALYTICAL RESULTS**
**SUMMARY**
City of Paris Cleaners
3516 Adeline Street, Oakland, California 94608

| | | Elevation Summary | | | Analytical Summary | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Well ID | Date | Top of Casing Elevation (feet amsl) | Depth to Water (BTOC) | Groundwater Elevation (feet amsl) | TPH-SS | TPH-G | Benzene | Toluene | Ethyl benzene | Xylenes | MTBE | 1,2-DCB | 1,1-DCA | 2-Methyl-Naphthalene | Naphthalene | 1,3,5-Trimethyl benzene | Isopropyl benzene | n-Propyl benzene | tert-Butyl benzene |
| | | | | | | | | | | | | (ug/l) | | | | | | | |
| MW-2 | 06/19/97 | 17.31 | 11.68 | 5.63 | **2,500** | NA | <0.5 | <0.5 | **9.1** | <0.5 | <5.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 11/14/97 | 17.31 | 10.61 | 6.7 | **130** | NA | <0.5 | <0.5 | **0.9** | **1.2** | <5.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 12/15/99 | 17.31 | 10.97 | 6.34 | <20 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | NA | <0.5 | **0.53** | <0.5 | **49** | -- | -- | -- | -- |
| MW-2 | 03/22/02 | 17.31 | 8.82 | 8.49 | **170** | **13,000** | **410** | **1,000** | **210** | **1,100** | <5.0 | -- | -- | -- | <10 | -- | -- | -- | -- |
| MW-2 | 04/15/03 | 17.31 | 8.52 | 8.79 | **99** | -- | <0.5 | <0.5 | <0.5 | **0.76** | **10** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 03/26/04 | 17.31 | 9.32 | 7.99 | **120** | **93** | <0.5 | <0.5 | <0.5 | **0.76** | **5.4** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 09/30/04 | 17.31 | 11.62 | 5.69 | <50 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 09/09/05 | 17.31 | 12.75 | 4.56 | **120** | **98** | <0.5 | <0.5 | <0.5 | <0.5 | <5 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 11/30/07 | 17.31 | 11.06 | 6.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 12/20/07 | 17.31 | 9.95 | 7.36 | <50 | **3,000** | <1 | **1.6** | <1 | **2.4** | **2.9** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 05/23/08 | 17.31 | 12.46 | 4.85 | **300** | **1,100** | <1 | <1 | <1 | <1 | **3.5** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 08/12/08 | 17.31 | 12.08 | 5.23 | **2,200** | **350** | <1 | <1 | <1 | <1 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 12/18/08 | 17.31 | 10.58 | 6.73 | **300** | <50 | <1 | <1 | <1 | <1 | **7.3** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 02/19/09 | 17.31 | 8.22 | 9.09 | **300** | **300** | <1 | <1 | <1 | <1 | **3.4** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 08/11/09 | 17.31 | 13.00 | 4.31 | **600** | **610** | <1 | <1 | <1 | <1 | **3.8** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 03/17/10 | 17.31 | 8.95 | 8.36 | <50 | <50 | <1 | <1 | <1 | <1 | **1.8** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 08/18/10 | 17.31 | 12.15 | 5.16 | <50.0 | **70** | <1.0 | <1.0 | <1.0 | <1.0 | **2.4** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 03/23/11 | 31.03 | 6.22 | 24.81 | **200** | <50 | <1.0 | <1.0 | <1.0 | <1.0 | **3.6** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 08/25/11 | 31.03 | 11.06 | 19.97 | <50 | <50 | <1.0 | <1.0 | <1.0 | <1.0 | **1.5** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 02/22/12 | 31.03 | 10.61 | 20.42 | **400** | **250** | <1.0 | <1.0 | <1.0 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 08/22/12 | 31.03 | 12.02 | 19.01 | <50 | **290** | <1.0 | <1.0 | <1.0 | <1.0 | **1.2** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 01/30/13 | 31.03 | 9.95 | 21.08 | <50 | **270** | <1.0 | <1.0 | <1.0 | <1.0 | **1.1** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 05/13/13 | 31.03 | 10.77 | 20.26 | <50 | **260** | <1.0 | <1.0 | <1.0 | <1.0 | **1.2** | -- | -- | -- | <2.0 | -- | | | |
| MW-2 | 09/24/14 | 31.03 | 12.40 | 18.63 | **8,000** | **340** | <1.0 | <1.0 | <1.0 | <1.0 | **1.1** | -- | -- | -- | <2.0 | <1.0 | <1.0 | <1.0 | **1.2** |
| MW-2 | 03/18/15 | 31.03 | 10.36 | 20.67 | **130** | **180** | <1.0 | <1.0 | <1.0 | <1.0 | **0.7** | | | | <2.0 | | | | |
| | | | | | | | | | | | | | | | | | -- | -- | -- |
| MW-3 | 11/18/92 | 17.44 | 13.93 | 3.51 | **11,000** | NA | <0.5 | <0.5 | <0.5 | <0.5 | NA | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 11/04/93 | 17.44 | 15.16 | 2.28 | **320** | <50 | <0.5 | <0.5 | <0.5 | <0.5 | NA | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 03/08/94 | 17.44 | 13.43 | 4.01 | **45** | NA | **0.8** | **0.9** | **5** | **10** | NA | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 08/02/94 | 17.44 | 12.82 | 4.62 | <20 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | NA | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 02/08/95 | 17.44 | 7.62 | 9.82 | <20 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | NA | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3** | 07/08/96 | 17.44 | 10.97 | 6.47 | **2,500** | **2,200** | **1** | <0.5 | **8.8** | **8** | **10** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 10/09/96 | 17.44 | 11.84 | 5.6 | **2,600** | NA | <0.5 | <0.5 | <0.5 | <0.5 | NA | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 03/18/97 | 17.44 | 10.16 | 7.28 | **2,500** | NA | <0.5 | **0.61** | **0.63** | **5.2** | NA | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 06/19/97 | 17.44 | 11.40 | 6.04 | **21,000** | NA | <0.5 | <0.5 | **11** | <0.5 | <5.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 11/14/97 | 17.44 | 10.71 | 6.73 | **1,400** | NA | <0.5 | <0.5 | **28** | **28** | <5.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 12/15/99 | 17.44 | 10.96 | 6.48 | <20 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | NA | **0.87** | **0.57** | **25** | **88** | -- | -- | -- | -- |
| MW-3 | 03/22/02 | 17.44 | 10.97 | 6.47 | **420** | <50 | <0.5 | <0.5 | <0.5 | <0.5 | **31** | -- | -- | -- | <50 | -- | -- | -- | -- |
| MW-3 | 04/15/03 | 17.44 | 8.31 | 9.13 | **2,700** | -- | <0.5 | <0.5 | <0.5 | <0.5 | **40** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 03/26/04 | 17.44 | 8.61 | 8.83 | **2,700** | **1,900** | <1.7 | <1.7 | <1.7 | **4.3** | <17 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 09/30/04 | 17.44 | 11.1 | 6.34 | **3,900** | **2,600** | <0.5 | <0.5 | <0.5 | **3.2** | <10 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 09/09/05 | 17.44 | 13.75 | 3.69 | **4,000** | **2,600** | <0.5 | <0.5 | **0.57** | **2.7** | **12** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 11/30/07 | 17.44 | 13.9 | 3.54 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 12/20/07 | 17.44 | 10.79 | 6.65 | **18,000** | **12,000** | <1 | **1.6** | **1.1** | **2.4** | **9.2** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 05/23/08 | 17.44 | 15.2 | 2.24 | **900** | **3,000** | <1 | <1 | <1 | <1 | **9.1** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 08/12/08 | 17.44 | 14.14 | 3.3 | **1,900** | **4,300** | <1 | <1 | <1 | <1 | **6.5** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 12/18/08 | 17.44 | 12.53 | 4.91 | **5,000** | **610** | <1 | **1** | <1 | <1 | **20** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 02/19/09 | 17.44 | 11.11 | 6.33 | **1,500** | **1,300** | <1 | **1** | <1 | <1 | **9** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 08/11/09 | 17.44 | 15.22 | 2.22 | **1,000** | **2,200** | <10 | <10 | <10 | <10 | **7.3** | -- | -- | -- | -- | -- | -- | -- | -- |
| *MW-3 NP* | *08/11/09* | *17.44* | *15.22* | *2.22* | ***3,000*** | ***6,700*** | *<10* | *<10* | *<10* | *<10* | *<5* | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 03/17/10 | 17.44 | 11.94 | 5.5 | **3,000** | **4,600** | <10 | <10 | <10 | <10 | **9.4** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 08/18/10 | 17.44 | 12.86 | 4.58 | **1,000** | **3,500** | <50 | <50 | <50 | <50 | <25 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3[a] | 03/23/11 | 31.13 | 3.58 | 27.55 | **500** | <50 | <1.0 | <1.0 | <1.0 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 08/25/11 | 31.13 | 11.85 | 19.28 | <50 | **2,300** | <1.0 | <1.0 | <1.0 | <1.0 | **4.5** | -- | -- | -- | -- | -- | -- | -- | -- |

**TABLE 3**
**GROUNDWATER ELEVATION AND ANALYTICAL RESULTS**
**SUMMARY**
City of Paris Cleaners
3516 Adeline Street, Oakland, California 94608

| | | Elevation Summary | | | Analytical Summary | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Well ID | Date | Top of Casing Elevation (feet amsl) | Depth to Water (BTOC) | Groundwater Elevation (feet amsl) | TPH-SS | TPH-G | Benzene | Toluene | Ethyl benzene | Xylenes | MTBE | 1,2-DCB (ug/l) | 1,1-DCA | 2-Methyl-Naphthalene | Naphthalene | 1,3,5-Trimethyl benzene | Isopropyl benzene | n-Propyl benzene | tert-Butyl benzene |
| MW-3 | 02/22/12 | 31.13 | 10.84 | 20.29 | **2,000** | **1,900** | <10 | <10 | <10 | <10 | <5.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 08/22/12 | 31.13 | 12.11 | 19.02 | **2,000** | **1,400** | <10 | <10 | <10 | **30** | **20** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 01/30/13 | 31.13 | 10.32 | 20.81 | **1,800** | **1,900** | <10 | <10 | <10 | **2.1** | **3** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 05/13/13 | 31.13 | 12.75 | 18.38 | **800** | **3,200** | <1.0 | <1.0 | <1.0 | <1.0 | **2.4** | -- | -- | -- | <2.0 | -- | | | |
| MW-3 | 09/24/14 | 31.13 | 12.3 | 18.83 | **2,100** | **700** | <1.0 | **3.1** | **6.6** | **20** | **3** | -- | -- | -- | **10** | <1.0 | **80** | **50** | **3.4** |
| MW-3 | 03/18/15 | 31.13 | 9.91 | 21.22 | **2,100** | **1,900** | <2.0 | <2.0 | <2.0 | <2.0 | **3.1** | -- | -- | -- | <4.0 | <1.0 | **80** | **50** | **3.4** |
| W-IND | 03/22/02 | NA | -- | -- | <50 | **190** | <0.5 | <0.5 | <0.5 | **0.8** | <5.0 | -- | -- | -- | -- | -- | -- | -- | -- |
| W-IND | 04/15/03 | NA | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| W-IND | 03/26/04 | NA | -- | -- | **500** | **200** | <0.5 | <0.5 | <0.5 | <0.5 | <5 | -- | -- | -- | -- | -- | -- | -- | -- |
| W-IND | 09/30/04 | NA | -- | -- | <50 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5 | -- | -- | -- | -- | -- | -- | -- | -- |
| W-IND | 09/09/05 | NA | -- | -- | <50 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5 | -- | -- | -- | -- | -- | -- | -- | -- |
| W-IND | 11/30/07 | NA | 12.92 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| W-IND | 12/20/07 | NA | 11.68 | -- | <50 | **500** | <1 | **1** | <1 | **2.2** | <.50 | -- | -- | -- | -- | -- | -- | -- | -- |
| W-IND | 05/23/08 | NA | 12.72 | -- | **300** | **250** | <1 | **3.7** | <1 | **2.4** | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- |
| W-IND | 08/12/08 | NA | 13.42 | -- | <50 | <50.0 | <1 | <1 | <1 | <1 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- |
| W-IND | 12/18/08 | NA | 12.65 | -- | <50 | <50 | <1 | <1 | <1 | <1 | **0.7** | -- | -- | -- | -- | -- | -- | -- | -- |
| W-IND | 02/19/09 | NA | 9.74 | -- | <50 | <50 | <1 | <1 | <1 | <1 | <0.5 | -- | -- | -- | -- | -- | -- | -- | -- |
| W-IND | 08/11/09 | NA | 14.13 | -- | <50 | <50 | <1 | <1 | <1 | <1 | <0.5 | -- | -- | -- | -- | -- | -- | -- | -- |
| W-IND | 03/17/10 | NA | 9.78 | -- | <50 | <50 | <1 | <1 | <1 | <1 | <0.5 | -- | -- | -- | -- | -- | -- | -- | -- |
| W-IND | 08/18/10 | NA | 12.84 | -- | <50 | <50 | <1.0 | <1.0 | <1.0 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- |
| W-IND | 03/23/11 | 32.48 | 8.32 | 24.16 | <50 | <50 | <1.0 | <1.0 | <1.0 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- |
| W-IND | 08/25/11 | 32.48 | 12.34 | 20.14 | <50 | <50 | <1.0 | <1.0 | <1.0 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- |
| W-IND | 02/22/12 | 32.48 | 11.84 | 20.64 | <50 | <50 | <1.0 | <1.0 | <1.0 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- |
| W-IND | 08/22/12 | 32.48 | 12.93 | 19.55 | <50 | <50 | <1.0 | <1.0 | <1.0 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- |
| W-IND | 01/30/13 | 32.48 | 11.13 | 21.35 | <50 | <50 | <1.0 | <1.0 | <1.0 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- |
| W-IND | 05/13/13 | 32.48 | 12.14 | 20.34 | **100** | <50 | <1.0 | <1.0 | <1.0 | <1.0 | <0.50 | -- | -- | -- | <2.0 | -- | -- | -- | -- |
| W-IND | 09/24/14 | 32.48 | 13.34 | 19.14 | **3,600** | <50 | <1.0 | <1.0 | <1.0 | <1.0 | <0.50 | -- | -- | -- | <2.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| W-IND | 03/18/15 | 32.48 | 11.61 | 20.87 | <50 | <50 | <1.0 | <1.0 | <1.0 | <1.0 | <0.50 | -- | -- | -- | <2.0 | -- | -- | -- | -- |

**Explanation:**

TPH-SS = Total petroleum hydrocarbons as stoddard solvent, analyzed using EPA method 8015B.
TPH-G = Total petroleum hydrocarbons as gasoline, analyzed using EPA Method 8015B.
Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B.
MTBE = Methyl tertiary-butyl ether, analyzed using EPA Method 8260B.
DCB = Dichlorobenzene, analyzed by EPA Method using EPA Method 8260B.
DCA = Dichloroethane, analyzed by EPA Method using EPA Method 8260B.
Napthalene, 1,3,5-Trimethylbenzene, Isopropylbenzene, n-Propylbenzene, tert-butylbenzene analyzed by EPA Method using EPA Method 8260B.
See laboratory report for additional 8260B analyses. All further constituent concentrations were below the laboratory reporting limit.

amsl = Above mean sea level.
BTOC = Below top of casing.
ug/l - Micrograms per liter.
<n = Not detected at or above indicated laboratory reporting limit.
NA = Data not available
NP = HydraSleeve® no purge protocol
-- = not analyzed

On March 17, 2010, Taber Consultants implemented the HydraSleeve® no purge protocol for all wells.
On March 23, 2011, Taber Consultants resurveyed top of casing elevations for all wells.
MW-3[a] During the 3/23/11 monitoring event, Taber Consultants replaced a damaged well cap. See First Semiannual Monitoring Report 2011 for discussion.
•• Components found in the gasoline range; however, they are not characteristic of gasoline components.

**TABLE 4**

**VAPOR SAMPLE ANALYTICAL RESULTS**

City of Paris Cleaners

3516 Adeline Street, Oakland, California 94608

| Well ID | Date | Benzene ug/$m^3$ | Toluene ug/$m^3$ | Ethyl benzene ug/$m^3$ | m,p-Xylene ug/$m^3$ | 0-Xylene ug/$m^3$ | Naphthalene ug/$m^3$ | 1,1-Difluoroethane ug/$m^3$ | Methane ppmv |
|---|---|---|---|---|---|---|---|---|---|
| VP-1 | 5/4/2011 | 1.7 | 4.4 | 1.2 | 4 | 1.7 | 5.7 | <0.052 | -- |
| VP-2 | 5/4/2011 | 7.7 | 11 | 3.4 | 10 | 3.6 | 25 | <32 | -- |
| VP-3 | 5/4/2011 | 11 | 11 | 2.2 | 5.7 | 2.4 | 8.4 | <47 | -- |
| VP-4 | 5/4/2011 | 21 | 26 | 3.9 | 6.3 | 3.0 | 3.1 | <4.7 | -- |
| VP-5 | 8/19/2015 | -- | -- | -- | -- | -- | -- | -- | <5.0 |
| VP-6 | 8/19/2015 | -- | -- | -- | -- | -- | -- | -- | <5.0 |

**Explanation:**

ug/$m^3$ = Microgram per cubic meter

ppmv = parts per million volume

Naphthalene analyzed using EPA Method TO15

Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method TO15.

**APPENDIX A.**
**ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY AUGUST 29, 2014 LETTER**

# APPENDIX B.
# FIELD DATA SHEETS

Date: 9/24/14 Sample Crew: Hal Hansen FIELD PARAMETERS – City of Paris

13.79

| Well ID | DTW | Total Depth | Sample Time | Temp (C) | EC (mS/cm) | DO (%) | DO (mg/l) | pH | ORP (mv) | TDS (mg/l) |
|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 13.23 | 29.58 | 9:45 | 19.3 | 1.428 | 9.5 | 0.88 | 6.50 | -96 | 856 |
| MW-2 | 12.40 | 29.22 | 955 | 19.1 | 1.585 | 19.7 | 1.82 | 6.87 | -117.6 | 951 |
| MW-3 | 12.30 | 29.48 | 1012 | 18.6 | 1.633 | 10.3 | 0.95 | 6.78 | -129.6 | 979 |
| W-1NE | 13.34 | 72.65 | 1030 | 18.9 | 993 | 24.3 | 2.24 | 7.16 | -12.4 | 600 |
| | | | | | | | | | | |
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**Explanation:**

Temp = Temperature in degrees celcius
EC = Electrical conductivity
mS/cm = milliSiemens/cm
% = percent
DO = Dissolved oxygen
mg/l = milligrams per liter
ORP = Oxidation reduction potential
mv = millivolts
TDS = Total dissolved solids

Observations and Comments

MW-3 well pressurized allow to equilibrate
water for for all wells to equilibrate before
measuring down W.L.

**DOULOS ENVIRONMENTAL, INC.** **SAMPLING INFORMATION SHEET**

Client: Taber Consultants Sampling Date: 9/24/14

Site: Former City of Paris Cleaners Project No.:

3516 Adeline Street Well Designation: MW-1

Oakland, CA

Is setup of traffic control devices required? (NO) YES time: _____ hours
Is there standing water in the well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? (NO) YES If no, see remarks
Height of well casing riser (in inches): 3
Well cover type: 8" or 12" UV_____ 12" EMCO_____ 8" or 12" BK_____ 8" Christy_____
12" Christy_____ 8" M&D X 12" M&D_____ 12" DWP _____
12" CNI _____ 36" CNI _____ 12" Pomeco_____ Other: _____
General condition of wellhead assembly: Excellent _____ Good X Fair_____ Poor_____

Purging Equipment: _____2" disposable bailer NA _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer _____Centrifugal pump
Sampled with: Disposable bailer _____ Teflon bailer _____ Disposable Tubing_____ Hydro + clean

Well Diameter: 2" X 4" _____ 6" _____ 8" _____
Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 830
Depth of well: 29.58
Depth to water: 13.23

Recharge Measurement
Time: _____
Depth to water: NA

Calculated purge: NA
Actual purge: NA

Start purge: NA Sampling time: 9:45

| Time | Temperature | E.C. | pH | Turbidity | Volume |
|---|---|---|---|---|---|
| | 19.3 | 1428 | 6.50 | — | NA |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Sample appearance: clear Lock: none

Equipment replaced: (check all that apply) Note condition of replaced item(s)
2" Locking Cap: _____ Lock: _____ 7/32 Allenhead: _____
4" Locking Cap: _____ Lock-Dolphin: _____ 9/16 Bolt: _____
6" Locking Cap: _____ Pinned Allenhead (DWP): _____

Remarks: _____

Signature: _____

**DOULOS ENVIRONMENTAL, INC.** **SAMPLING INFORMATION SHEET**

Client: Taber Consultants Sampling Date: 9/24/14

Site: Former City of Paris Cleaners Project No.:

3516 Adeline Street Well Designation: MW-2

Oakland, CA

Is setup of traffic control devices required? (NO) YES time: _____ hours
Is there standing water in the well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? (NO) YES If no, see remarks
Height of well casing riser (in inches): 3
Well cover type: 8" or 12" UV_____ 12" EMCO_____ 8" or 12" BK_____ 8" Christy_____
12" Christy_____ 8" M&D X 12" M&D_____ 12" DWP _____
12" CNI _____ 36" CNI _____ 12" Pomeco_____ Other: _____
General condition of wellhead assembly: Excellent _____ Good X Fair_____ Poor_____

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer _____Centrifugal pump
Sampled with: Disposable bailer _____ Teflon bailer _____ Disposable Tubing_____ X hydro sleeve

Well Diameter: 2" X 4" _____ 6" _____ 8" _____
Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 835
Depth of well: 29.22
Depth to water: 12.40

Recharge Measurement
Time: _____
Depth to water: N/A

Calculated purge: NA
Actual purge: _____

Start purge: NA Sampling time: 955

| Time | Temperature | E.C. | pH | Turbidity | Volume |
|---|---|---|---|---|---|
| | 19.1 | 1585 | 6.87 | ~ | NA |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Sample appearance: clear Lock: N/A

Equipment replaced: (check all that apply) Note condition of replaced item(s)
2" Locking Cap: _____ Lock: _____ 7/32 Allenhead: _____
4" Locking Cap: _____ Lock-Dolphin: _____ 9/16 Bolt: _____
6" Locking Cap: _____ Pinned Allenhead (DWP): _____

Remarks: _____

Signature: _____

**DOULOS ENVIRONMENTAL, INC.** **SAMPLING INFORMATION SHEET**

Client: Taber Consultants Sampling Date: 9/24/14

Site: Former City of Paris Cleaners Project No.: _____

3516 Adeline Street Well Designation: MW-3

Oakland, CA

Is setup of traffic control devices required? (NO) YES time: _____ hours
Is there standing water in the well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? (NO) YES If no, see remarks
Height of well casing riser (in inches): 3
Well cover type: 8" or 12" UV_____ 12" EMCO_____ 8" or 12" BK_____ 8" Christy_____
12" Christy_____ 8" M&D X 12" M&D_____ 12" DWP _____
12" CNI _____ 36" CNI _____ 12" Pomeco_____ Other: _____
General condition of wellhead assembly: Excellent _____ Good X Fair_____ Poor_____

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer _____Centrifugal pump
Sampled with: Disposable bailer _____ Teflon bailer _____ Disposable Tubing_____ + Hydrasleeve

Well Diameter: 2" X 4" _____ 6" _____ 8" _____
Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 8140
Depth of well: _____
Depth to water: _____

Recharge Measurement
Time: ^
Depth to water: NA

Calculated purge: NA
Actual purge: NA

Start purge: NA Sampling time: 1012

| Time | Temperature | E.C. | pH | Turbidity | Volume |
|---|---|---|---|---|---|
| | 16.6 | 1633 | 6.78 | ~ | NA |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Sample appearance: clear Lock: none

Equipment replaced: (check all that apply) Note condition of replaced item(s)
2" Locking Cap: _____ Lock: _____ 7/32 Allenhead: _____
4" Locking Cap: _____ Lock-Dolphin: _____ 9/16 Bolt: _____
6" Locking Cap: _____ Pinned Allenhead (DWP): _____

Remarks: _____

Signature: _____

**DOULOS ENVIRONMENTAL, INC.** **SAMPLING INFORMATION SHEET**

Client: Taber Consultants Sampling Date: 9/24/14

Site: Former City of Paris Cleaners Project No.:

3516 Adeline Street Well Designation: W-1NA

Oakland, CA

Is setup of traffic control devices required? NO YES time: _____ hours
Is there standing water in the well box? NO YES Above TOC Below TOC
Is top of casing cut level? NO YES If no, see remarks
Is well cap sealed and locked? NO YES If no, see remarks
Height of well casing riser (in inches): 4
Well cover type: 8" or 12" UV_____ 12" EMCO_____ 8" or 12" BK_____ 8" Christy_____
12" Christy_____ 8" M&D X 12" M&D_____ 12" DWP _____
12" CNI _____ 36" CNI _____ 12" Pomeco_____ Other: _____
General condition of wellhead assembly: Excellent _____ Good X Fair_____ Poor_____

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer _____Centrifugal pump
Sampled with: Disposable bailer _____ Teflon bailer _____ Disposable Tubing_____ x Hydra sleeve

Well Diameter: 2" X 4" _____ 6" _____ 8" _____
Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 8404
Depth of well: 72.65
Depth to water: 13.34

Recharge Measurement
Time: _____
Depth to water: NA

Calculated purge: NA
Actual purge: NA

Start purge: NA Sampling time: 1030

| Time | Temperature | E.C. | pH | Turbidity | Volume |
|---|---|---|---|---|---|
| | 18.9 | 993 | 7.16 | | NA |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Sample appearance: clear Lock: none

Equipment replaced: (check all that apply) Note condition of replaced item(s)
2" Locking Cap: _____ Lock: _____ 7/32 Allenhead: _____
4" Locking Cap: _____ Lock-Dolphin: _____ 9/16 Bolt: _____
6" Locking Cap: _____ Pinned Allenhead (DWP): _____

Remarks: _____

Signature: _____

**Sparger Technology, Inc.**
Environmental Laboratories

3738 Bradview Drive
Sacramento, CA 95827
Lab: 916.369.7688
Fax: 916.369.7689

# 21062

COC # / Lab No. _____

Page 1 of 1

## Chain-of-Custody Record and Analysis Request

| | |
|---|---|
| Project Contact ( PDF To): Tom Ballard (to email address's) | California EDF Report? ☑ Yes ☐ No |
| Company / Address: Taber Consultants: 3911 West Capitol Ave. | Sampling Company Log Code: WRMC |
| West Sacramento, CA 95691 | Global ID: T0600100379 |
| Phone #: 916-371-1690 / Fax #: 916-371-7265 | Deliver all files to: SNess@TaberConsultants.com |
| Project #: 2011-0107 / P.O. #: 3C | please email a copy to: EPyatt@TaberConsultants.com |
| Project Name: NoPurge_CityOfP | Sampler Signature: |
| Project Address: 3514 Adeline St. Oakland, CA | |

| Sample ID | Field Point Name | Sampling: Date | Sampling: Time | Container: 40 ml VOA | Container: Sleeve | Container: Poly | Container: Glass (1 L Amber) | Container: Tedlar | Preservative: HCl | Preservative: $HNO_3$ | Preservative: None | Matrix: Water | Matrix: Soil | Matrix: Air | Analysis Request: Naphthalene (EPA 8260B) | MTBE\BTEX (EPA 8260B) | TPH Gas (EPA 8015) | 5 Oxygenates (EPA 8260B) | Lead Scav.(1,2 DCA & 1,2 EDB-EPA 8260B) | Volatile Organics Full List (EPA 8260B) | TPH as Diesel (EPA 8015M) | TPH-SS Stoddard Solvent (EPA 8015) | Chromatagrams | TAT: 1 wk |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | MW-1 | 9/24/14 | 945 | 4 | | | | | x | | | X | | | X | X | X | | | X | | X | X | x |
| MW-2 | MW-2 | | 955 | 4 | | | | | x | | | X | | | X | X | X | | | X | | X | X | x |
| MW-3 | MW-3 | | 1012 | 4 | | | | | x | | | X | | | X | X | X | | | X | | X | X | x |
| W-IND | W-IND | | 1030 | 4 | | | | | x | | | X | | | X | X | X | | | X | | X | X | x |
| MW-1 | MW-1 | | 945 | | | | 1 | | | | x | X | | | | | | | | | | X | | X |
| MW-2 | MW-2 | | 955 | | | | 1 | | | | x | X | | | | | | | | | | X | | X |
| MW-3 | MW-3 | | 1012 | | | | 1 | | | | x | X | | | | | | | | | | X | | X |
| W-IND | W-IND | | 1030 | | | | 1 | | | | x | X | | | | | | | | | | X | | X |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished by: | Date | Time | Received by: |
|---|---|---|---|
| | 9/24/14 | 13:00 | |
| Relinquished by: | Date | Time | Received by: |
| Relinquished by: | Date | Time | Received by Laboratory: |

Remarks:
please save file(s), PDF's, EDF & XLS name as:
sample date year_month_day_ project name_ WO#

EXAMPLE:
2012_08_22_NoPurge_CityOfP_12345

Bill to: Invoice@TaberConsultants.com

For Lab Use Only: Sample Receipt

| Temp °C | Initials | Date | Time | | |
|---|---|---|---|---|---|
| | | | | | |

**Sparger Technology, Inc.**
Environmental Laboratories

3738 Bradview Drive
Sacramento, CA 95827
Lab: 916.369.7688
Fax: 916.369.7689

COC # / Lab No. _____

Page 1 of 1

# Chain-of-Custody Record and Analysis Request

| | |
|---|---|
| Project Contact ( PDF To): **Tom Ballard (to email address's)** | California EDF Report? ☑ Yes ☐ No |
| Company / Address: **Taber Consultants: 3911 West Capitol Ave. West Sacramento; CA 95691** | Sampling Company Log Code: **WRMC** |
| | Global ID: **T0600100379** |
| Phone #: **916-371-1690** Fax #: **916-371-7265** | Deliver all files to: **EPyatt@TaberConsultants.com** |
| Project #: **2011-0107** P.O. #: 3C | please email a copy to: **tcoffice@TaberConsultants.com** |
| Project Name: **NoPurge CityOfP** | Sampler Signature: |
| Project Address: **3514 Adeline St. Oakland, CA** | |

| Sample ID | Field Point Name | Sampling: Date | Sampling: Time | Container: 40 ml VOA | Container: Sleeve | Container: Poly | Container: Glass (1 L Amber) | Container: Tedlar | Container: | Preservative: HCl | Preservative: $HNO_3$ | Preservative: None | Preservative: | Preservative: | Matrix: Water | Matrix: Soil | Matrix: Air | Matrix: | Analysis Request: Naphthalene (EPA 8260B) | MTBE\BTEX (EPA 8260B) | TPH Gas (EPA 8015) | 5 Oxygenates (EPA 8260B) | Lead Scav.(1,2 DCA & 1,2 EDB-EPA 8260B) | Volatile Organics Full List (EPA 8260B) | TPH as Diesel (EPA 8015M) | TPH-SS Stoddard Solvent (EPA 8015) | Chromatagrams | TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | MW-1 | 3/18/15 | 10:30 | 4 | | | | | | x | | | | | X | | | | X | X | X | | | | | | X | x |
| MW-2 | MW-2 | | 11:02 | 4 | | | | | | x | | | | | X | | | | X | X | X | | | | | | X | x |
| MW-3 | MW-3 | | 11:22 | 4 | | | | | | x | | | | | X | | | | X | X | X | | | | | | X | x |
| W-IND | W-IND | | 12:00 | 4 | | | | | | x | | | | | X | | | | X | X | X | | | | | | X | x |
| MW-1 | MW-1 | | 10 30 | | | | 1 | | | | | x | | | X | | | | | | | | | | | X | | x |
| MW-2 | MW-2 | | 11 02 | | | | 1 | | | | | x | | | X | | | | | | | | | | | X | | x |
| MW-3 | MW-3 | | 11 22 | | | | 1 | | | | | x | | | X | | | | | | | | | | | X | | x |
| W-IND | W-IND | | 12 00 | | | | 1 | | | | | x | | | X | | | | | | | | | | | X | | x |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished by: | Date | Time | Received by: |
|---|---|---|---|
| | 3:57 03-19-15 | 2:57 | |
| Relinquished by: | Date | Time | Received by: |
| Relinquished by: | Date | Time | Received by Laboratory: |

Remarks:
please save file(s), PDF's, EDF & XLS name as:
**sample date year_month_day_ project name_ WO#**

**EXAMPLE:**
**2015_03_18_NoPurge_CityOfP_12345**

Bill to: Invoice@TaberConsultants.com

For Lab Use Only: Sample Receipt

| Temp °C | Initials | Date | Time | | |
|---|---|---|---|---|---|
| 4 | | 3/19/15 | 14:00 | o.f | |

PO# 15-0146

# AIR LABORATORY

## Chain of Custody Record

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE
25712 Commercentre Drive, Lake Forest, CA 92630
949-297-5020

Client: TABER CONSULTANTS
Address: 3911 W. CAPITOL AVE. WEST SAC
Phone: _____ Fax: _____
Project Manager: TOM BALLARD

Date: Aug 19, 2015 Page: 1 Of 1
Project Name: City of PARIS
Collector: STAN WALKER Client Project #: 2011-0107
Batch #: T152046 EDF #: T0600100379

| Sample ID | Date Sampled | Start Time | Finish Time | Sample Type : Soil Gas / Indoor Air | Container Type: Summa Can / Tedlar | Initial Pressure | Final Pressure | TO-3 | TO-14 | TO-15 | 8015m Methane | 8015m Gasoline | Fixed Gases by TCD | | Summa Can # / Comments | Laboratory ID # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VP-5 | 8/19/15 | 10:17 | 10:37 | SG | S | 30 | 7 | | | | | | | | 0118 | 01 |
| VP-6 | " | 10:50 | 11:10 | SG | S | 28 | 16 | | | | | | | | 0139 | 02 |

Relinquished by: (signature) Date / Time: Stan Walker 8/19
Received by: (signature) Date / Time: Tom Ballard 8/19/15 1:10 pm
Relinquished by: (signature) Date / Time: GSO 8:35 8-20-15
Received by: (signature) Date / Time: 8:35 8-20-15
Relinquished by: (signature) Date / Time:
Received by: (signature) Date / Time:

Total # of containers: 2
Chain of Custody seals Y/N/NA: (N)
Seals intact? Y/N/NA: (NA)
Received good condition/cold: 20.0

Turn around time: STD

Notes: STD. TAT

* TO-15 SIM analysis available upon prior notification. **(Precertified Summa cans needed)**

COCAL 145644

# APPENDIX C.
# LABORATORY ANALYTICAL REPORTS

Sparger Technology, Inc.
Environmental Laboratories

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

Tom Ballard
Taber Consultants
3911 West Capitol Ave.
West Sacramento, CA 95691

| | |
|---|---|
| Client | Taber Consultants |
| Workorder | 21062 NoPurge_CityOfParis |
| Received | 09/24/14 |

The samples were received in EPA specified containers. The samples were transported and received under documented chain of custody and stored at four (4) degrees C until analysis was performed.

Sparger Technology, Inc. ID Suffix Keys - These descriptors will follow the Sparger Technology, Inc. ID numbers and help identify the specific sample and clarify the report.

- DUP - Matrix Duplicate
- MS - Matrix Spike
- MSD - Matrix Spike Duplicate
- LCS - Lab Control Sample
- LCSD - Lab Control Sample Duplicate
- RPD - Relative Percent Difference
- QC - Additional Quality Control
- DIL - Results from a diluted sample
- ND - None Detected
- RL - Reporting Limit

Note: In an effort to conserve paper, the results are printed on both sides of the paper.

Ray James
Laboratory Director


3738 Bradview Drive • Sacramento, California 95827 • (916) 369-7688 • FAX (916) 369-7689

Tom Ballard
Taber Consultants
3911 West Capitol Ave.
West Sacramento, CA 95691

**Workorder** 21062

Enclosed are the results from samples received on September 24, 2014.

The requested analyses are listed below.

| SAMPLE | SAMPLE DESCRIPTION | DATE COLLECTED | TEST METHOD |
|---|---|---|---|
| 21062001 | MW-1, Water | 09/24/14 | 8015B TPHgas<br>8015B TPHss<br>8260B<br>8260B BTEX/FOC W |
| 21062002 | MW-2, Water | 09/24/14 | 8015B TPHgas<br>8015B TPHss<br>8260B<br>8260B BTEX/FOC W |
| 21062003 | MW-3, Water | 09/24/14 | 8015B TPHgas<br>8015B TPHss<br>8260B<br>8260B BTEX/FOC W |
| 21062004 | W-IND, Water | 09/24/14 | 8015B TPHgas<br>8015B TPHss<br>8260B<br>8260B BTEX/FOC W |

**Test Certificate of Analysis**

**Client ID** Taber Consultants
**Workorder #** 21062 **Workorder ID** NoPurge_CityOfParis

**Laboratory ID** 21062001 **Sampled** 09/24/14
**Sample ID** MW-1 **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8015B TPH Gas

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **TPHgas**[1] | **8015B TPHgas** | **09/25/14** | **09/25/14** | **3700** | **500** | **ug/L** | **1:10** |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| Trifluorotoluene | 18.3 ug/L | 92 % | (65 - 135) |

1 - Non-typical TPH pattern present in gas range.

**Laboratory ID** 21062001 **Sampled** 09/24/14
**Sample ID** MW-1 **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8015M_SS

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **Stoddard Solvent** | **8015B TPHss** | **09/25/14** | **10/01/14** | **2600** | **50** | **ug/L** | **1:1** |

**Laboratory ID** 21062001 **Sampled** 09/24/14
**Sample ID** MW-1 **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8260B GC/MS Volatiles

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1,1-Trichloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1,2,2-Tetrachloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1,2-Trichloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1-Dichloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1-Dichloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1-dichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2,3-Trichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2,3-Trichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2,4-Trichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2,4-Trimethylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dibromo-3-chloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dibromoethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dichloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| **1,3,5-Trimethylbenzene** | **8260B** | **09/25/14** | **09/25/14** | **2.0** | **1.0** | **ug/L** | **1:1** |


3738 Bradview Drive • Sacramento, California 95827 • (916) 369-7688 • FAX (916) 369-7689

**Test Certificate of Analysis**

**Client ID** Taber Consultants
**Workorder #** 21062 **Workorder ID** NoPurge_CityOfParis

**Laboratory ID** 21062001 **Sampled** 09/24/14
**Sample ID** MW-1 **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8260B GC/MS Volatiles (continued)

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,3-Dichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,4-Dichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 2,2-dichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 2-Butanone | 8260B | 09/25/14 | 09/25/14 | ND | 5.0 | ug/L | 1:1 |
| 2-Chloroethylvinyl ether | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 2-Chlorotoluene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 2-Hexanone | 8260B | 09/25/14 | 09/25/14 | ND | 10 | ug/L | 1:1 |
| 4-Chlorotoluene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 4-Isopropyltoluene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 4-Methyl-2-pentanone | 8260B | 09/25/14 | 09/25/14 | ND | 5.0 | ug/L | 1:1 |
| Acetone | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Acrolein | 8260B | 09/25/14 | 09/25/14 | ND | 10 | ug/L | 1:1 |
| Acrylonitrile | 8260B | 09/25/14 | 09/25/14 | ND | 10 | ug/L | 1:1 |
| Benzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromochloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromodichloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromoform | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromomethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Carbon disulfide | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Carbon tetrachloride | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Chlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Chloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Chloroform | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Chloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Dibromochloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Dibromomethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Dichlorodifluoromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Dichloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| **Ethylbenzene** | **8260B** | **09/25/14** | **09/25/14** | **5.2** | **1.0** | **ug/L** | **1:1** |
| Hexachlorobutadiene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Iodomethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| **Isopropylbenzene** | **8260B** | **09/25/14** | **09/25/14** | **90** | **1.0** | **ug/L** | **1:1** |
| Naphthalene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Styrene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |


3738 Bradview Drive • Sacramento, California 95827 • (916) 369-7688 • FAX (916) 369-7689

**Test Certificate of Analysis**

**Client ID** Taber Consultants
**Workorder #** 21062 **Workorder ID** NoPurge_CityOfParis

**Laboratory ID** 21062001 **Sampled** 09/24/14
**Sample ID** MW-1 **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8260B GC/MS Volatiles (continued)

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Toluene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Trichloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Trichlorofluoromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Vinyl acetate | 8260B | 09/25/14 | 09/25/14 | ND | 5.0 | ug/L | 1:1 |
| Vinyl chloride | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| cis-1,2-Dichloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| cis-1,3-Dichloropropene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| **m,p-Xylene** | **8260B** | **09/25/14** | **09/25/14** | **1.4** | **1.0** | **ug/L** | **1:1** |
| n-Butylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| **n-Propylbenzene** | **8260B** | **09/25/14** | **09/25/14** | **80** | **1.0** | **ug/L** | **1:1** |
| o-Xylene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| sec-Butylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| **tert-Butylbenzene** | **8260B** | **09/25/14** | **09/25/14** | **3.2** | **1.0** | **ug/L** | **1:1** |
| trans-1,2-Dichloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| trans-1,3-Dichloropropene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 52 ug/L | 104 % | (70 - 135) |
| Toluene d8 | 48 ug/L | 96 % | (70 - 135) |
| 4-Bromofluorobenzene | 38 ug/L | 76 % | (70 - 135) |

**Laboratory ID** 21062001 **Sampled** 09/24/14
**Sample ID** MW-1 **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8260B BTEX/Oxygenates

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Methyl-tert-butyl-ether | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | ND | 0.50 | ug/L | 1:1 |
| Benzene | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Toluene | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| **Ethylbenzene** | **8260B BTEX/FOC** | **09/25/14** | **09/25/14** | **5.2** | **1.0** | **ug/L** | **1:1** |
| **Xylene,Total** | **8260B BTEX/FOC** | **09/25/14** | **09/25/14** | **2.6** | **1.0** | **ug/L** | **1:1** |
| **Naphthalene** | **8260B BTEX/FOC** | **09/25/14** | **09/25/14** | **5.7** | **2.0** | **ug/L** | **1:1** |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 52 ug/L | 104 % | (65 - 135) |


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**Test Certificate of Analysis**

**Client ID** Taber Consultants
**Workorder #** 21062 **Workorder ID** NoPurge_CityOfParis

**Laboratory ID** 21062002 **Sampled** 09/24/14
**Sample ID** MW-2 **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8015B TPH Gas

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **TPHgas**[1] | **8015B TPHgas** | **09/25/14** | **09/25/14** | **340** | **50** | **ug/L** | **1:1** |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| Trifluorotoluene | 17.8 ug/L | 89 % | (65 - 135) |

1 - Non-typical TPH pattern present in gas range.

**Laboratory ID** 21062002 **Sampled** 09/24/14
**Sample ID** MW-2 **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8015M_SS

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **Stoddard Solvent** | **8015B TPHss** | **09/25/14** | **10/01/14** | **8000** | **50** | **ug/L** | **1:1** |

**Laboratory ID** 21062002 **Sampled** 09/24/14
**Sample ID** MW-2 **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8260B GC/MS Volatiles

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1,1-Trichloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1,2,2-Tetrachloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1,2-Trichloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1-Dichloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1-Dichloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1-dichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2,3-Trichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2,3-Trichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2,4-Trichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2,4-Trimethylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dibromo-3-chloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dibromoethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dichloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,3,5-Trimethylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |


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**Test Certificate of Analysis**

**Client ID** Taber Consultants
**Workorder #** 21062 **Workorder ID** NoPurge_CityOfParis

**Laboratory ID** 21062002 **Sampled** 09/24/14
**Sample ID** MW-2 **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8260B GC/MS Volatiles (continued)

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,3-Dichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,4-Dichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 2,2-dichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 2-Butanone | 8260B | 09/25/14 | 09/25/14 | ND | 5.0 | ug/L | 1:1 |
| 2-Chloroethylvinyl ether | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 2-Chlorotoluene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 2-Hexanone | 8260B | 09/25/14 | 09/25/14 | ND | 10 | ug/L | 1:1 |
| 4-Chlorotoluene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 4-Isopropyltoluene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 4-Methyl-2-pentanone | 8260B | 09/25/14 | 09/25/14 | ND | 5.0 | ug/L | 1:1 |
| Acetone | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Acrolein | 8260B | 09/25/14 | 09/25/14 | ND | 10 | ug/L | 1:1 |
| Acrylonitrile | 8260B | 09/25/14 | 09/25/14 | ND | 10 | ug/L | 1:1 |
| Benzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromochloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromodichloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromoform | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromomethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Carbon disulfide | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Carbon tetrachloride | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Chlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Chloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Chloroform | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Chloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Dibromochloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Dibromomethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Dichlorodifluoromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Dichloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Ethylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Hexachlorobutadiene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Iodomethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Isopropylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Naphthalene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Styrene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |


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**Test Certificate of Analysis**

**Client ID** Taber Consultants
**Workorder #** 21062 **Workorder ID** NoPurge_CityOfParis

**Laboratory ID** 21062002 **Sampled** 09/24/14
**Sample ID** MW-2 **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8260B GC/MS Volatiles (continued)

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Toluene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Trichloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Trichlorofluoromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Vinyl acetate | 8260B | 09/25/14 | 09/25/14 | ND | 5.0 | ug/L | 1:1 |
| Vinyl chloride | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| cis-1,2-Dichloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| cis-1,3-Dichloropropene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| m,p-Xylene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| n-Butylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| n-Propylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| o-Xylene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| sec-Butylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| **tert-Butylbenzene** | **8260B** | **09/25/14** | **09/25/14** | **1.2** | **1.0** | **ug/L** | **1:1** |
| trans-1,2-Dichloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| trans-1,3-Dichloropropene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 48 ug/L | 96 % | (70 - 135) |
| Toluene d8 | 45 ug/L | 90 % | (70 - 135) |
| 4-Bromofluorobenzene | 35 ug/L | 70 % | (70 - 135) |

**Laboratory ID** 21062002 **Sampled** 09/24/14
**Sample ID** MW-2 **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8260B BTEX/Oxygenates

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **Methyl-tert-butyl-ether** | **8260B BTEX/FOC** | **09/25/14** | **09/25/14** | **1.1** | **0.50** | **ug/L** | **1:1** |
| Benzene | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Toluene | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Ethylbenzene | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Xylene,Total | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Naphthalene | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | ND | 2.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 48 ug/L | 96 % | (65 - 135) |


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**Test Certificate of Analysis**

**Client ID** Taber Consultants
**Workorder #** 21062 **Workorder ID** NoPurge_CityOfParis

**Laboratory ID** 21062003 **Sampled** 09/24/14
**Sample ID** MW-3 **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8015B TPH Gas

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **TPHgas**[1] | **8015B TPHgas** | **09/25/14** | **09/25/14** | **2100** | **500** | **ug/L** | **1:10** |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| Trifluorotoluene | 18 ug/L | 90 % | (65 - 135) |

1 - Non-typical TPH pattern present in gas range.

**Laboratory ID** 21062003 **Sampled** 09/24/14
**Sample ID** MW-3 **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8015M_SS

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **Stoddard Solvent** | **8015B TPHss** | **09/25/14** | **10/01/14** | **700** | **50** | **ug/L** | **1:1** |

**Laboratory ID** 21062003 **Sampled** 09/24/14
**Sample ID** MW-3 **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8260B GC/MS Volatiles

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1,1-Trichloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1,2,2-Tetrachloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1,2-Trichloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1-Dichloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1-Dichloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1-dichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2,3-Trichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2,3-Trichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2,4-Trichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2,4-Trimethylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dibromo-3-chloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dibromoethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dichloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,3,5-Trimethylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |


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**Test Certificate of Analysis**

**Client ID** Taber Consultants
**Workorder #** 21062 **Workorder ID** NoPurge_CityOfParis

**Laboratory ID** 21062003 **Sampled** 09/24/14
**Sample ID** MW-3 **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8260B GC/MS Volatiles (continued)

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,3-Dichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,4-Dichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 2,2-dichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 2-Butanone | 8260B | 09/25/14 | 09/25/14 | ND | 5.0 | ug/L | 1:1 |
| 2-Chloroethylvinyl ether | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 2-Chlorotoluene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 2-Hexanone | 8260B | 09/25/14 | 09/25/14 | ND | 10 | ug/L | 1:1 |
| 4-Chlorotoluene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 4-Isopropyltoluene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 4-Methyl-2-pentanone | 8260B | 09/25/14 | 09/25/14 | ND | 5.0 | ug/L | 1:1 |
| Acetone | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Acrolein | 8260B | 09/25/14 | 09/25/14 | ND | 10 | ug/L | 1:1 |
| Acrylonitrile | 8260B | 09/25/14 | 09/25/14 | ND | 10 | ug/L | 1:1 |
| Benzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromochloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromodichloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromoform | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromomethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Carbon disulfide | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Carbon tetrachloride | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Chlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Chloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Chloroform | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Chloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Dibromochloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Dibromomethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Dichlorodifluoromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Dichloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| **Ethylbenzene** | **8260B** | **09/25/14** | **09/25/14** | **6.6** | **1.0** | **ug/L** | **1:1** |
| Hexachlorobutadiene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Iodomethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| **Isopropylbenzene** | **8260B** | **09/25/14** | **09/25/14** | **80** | **1.0** | **ug/L** | **1:1** |
| Naphthalene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Styrene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |


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**Test Certificate of Analysis**

**Client ID** Taber Consultants
**Workorder #** 21062 **Workorder ID** NoPurge_CityOfParis

**Laboratory ID** 21062003 **Sampled** 09/24/14
**Sample ID** MW-3 **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8260B GC/MS Volatiles (continued)

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| **Toluene** | **8260B** | **09/25/14** | **09/25/14** | **3.4** | **1.0** | **ug/L** | **1:1** |
| Trichloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Trichlorofluoromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Vinyl acetate | 8260B | 09/25/14 | 09/25/14 | ND | 5.0 | ug/L | 1:1 |
| Vinyl chloride | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| cis-1,2-Dichloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| cis-1,3-Dichloropropene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| **m,p-Xylene** | **8260B** | **09/25/14** | **09/25/14** | **10** | **1.0** | **ug/L** | **1:1** |
| n-Butylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| **n-Propylbenzene** | **8260B** | **09/25/14** | **09/25/14** | **50** | **1.0** | **ug/L** | **1:1** |
| **o-Xylene** | **8260B** | **09/25/14** | **09/25/14** | **3.9** | **1.0** | **ug/L** | **1:1** |
| sec-Butylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| **tert-Butylbenzene** | **8260B** | **09/25/14** | **09/25/14** | **3.4** | **1.0** | **ug/L** | **1:1** |
| trans-1,2-Dichloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| trans-1,3-Dichloropropene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 52 ug/L | 104 % | (70 - 135) |
| Toluene d8 | 47 ug/L | 94 % | (70 - 135) |
| 4-Bromofluorobenzene | 38 ug/L | 76 % | (70 - 135) |

**Laboratory ID** 21062003 **Sampled** 09/24/14
**Sample ID** MW-3 **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8260B BTEX/Oxygenates

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **Methyl-tert-butyl-ether** | **8260B BTEX/FOC** | **09/25/14** | **09/25/14** | **3.0** | **0.50** | **ug/L** | **1:1** |
| Benzene | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| **Toluene** | **8260B BTEX/FOC** | **09/25/14** | **09/25/14** | **3.1** | **1.0** | **ug/L** | **1:1** |
| **Ethylbenzene** | **8260B BTEX/FOC** | **09/25/14** | **09/25/14** | **6.6** | **1.0** | **ug/L** | **1:1** |
| **Xylene,Total** | **8260B BTEX/FOC** | **09/25/14** | **09/25/14** | **20** | **1.0** | **ug/L** | **1:1** |
| **Naphthalene** | **8260B BTEX/FOC** | **09/25/14** | **09/25/14** | **10** | **2.0** | **ug/L** | **1:1** |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 52 ug/L | 104 % | (65 - 135) |


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**Test Certificate of Analysis**

**Client ID** Taber Consultants
**Workorder #** 21062 **Workorder ID** NoPurge_CityOfParis

**Laboratory ID** 21062004 **Sampled** 09/24/14
**Sample ID** W-IND **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8015B TPH Gas

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| TPHgas | 8015B TPHgas | 09/25/14 | 09/25/14 | ND | 50 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| Trifluorotoluene | 16.6 ug/L | 83 % | (65 - 135) |

**Laboratory ID** 21062004 **Sampled** 09/24/14
**Sample ID** W-IND **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8015M_SS

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **Stoddard Solvent** | **8015B TPHss** | **09/25/14** | **10/01/14** | **3600** | **50** | **ug/L** | **1:1** |

**Laboratory ID** 21062004 **Sampled** 09/24/14
**Sample ID** W-IND **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8260B GC/MS Volatiles

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1,1-Trichloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1,2,2-Tetrachloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1,2-Trichloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1-Dichloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1-Dichloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1-dichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2,3-Trichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2,3-Trichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2,4-Trichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2,4-Trimethylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dibromo-3-chloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dibromoethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dichloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,3,5-Trimethylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,3-Dichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,3-Dichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,4-Dichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |


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**Test Certificate of Analysis**

**Client ID** Taber Consultants
**Workorder #** 21062 **Workorder ID** NoPurge_CityOfParis

**Laboratory ID** 21062004 **Sampled** 09/24/14
**Sample ID** W-IND **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8260B GC/MS Volatiles (continued)

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| 2,2-dichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 2-Butanone | 8260B | 09/25/14 | 09/25/14 | ND | 5.0 | ug/L | 1:1 |
| 2-Chloroethylvinyl ether | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 2-Chlorotoluene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 2-Hexanone | 8260B | 09/25/14 | 09/25/14 | ND | 10 | ug/L | 1:1 |
| 4-Chlorotoluene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 4-Isopropyltoluene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 4-Methyl-2-pentanone | 8260B | 09/25/14 | 09/25/14 | ND | 5.0 | ug/L | 1:1 |
| Acetone | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Acrolein | 8260B | 09/25/14 | 09/25/14 | ND | 10 | ug/L | 1:1 |
| Acrylonitrile | 8260B | 09/25/14 | 09/25/14 | ND | 10 | ug/L | 1:1 |
| Benzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromochloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromodichloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromoform | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromomethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Carbon disulfide | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Carbon tetrachloride | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Chlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Chloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Chloroform | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Chloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Dibromochloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Dibromomethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Dichlorodifluoromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Dichloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Ethylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Hexachlorobutadiene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Iodomethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Isopropylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Naphthalene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Styrene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Tetrachloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Toluene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Trichloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |


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**Test Certificate of Analysis**

**Client ID** Taber Consultants
**Workorder #** 21062 **Workorder ID** NoPurge_CityOfParis

**Laboratory ID** 21062004 **Sampled** 09/24/14
**Sample ID** W-IND **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8260B GC/MS Volatiles (continued)

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Trichlorofluoromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Vinyl acetate | 8260B | 09/25/14 | 09/25/14 | ND | 5.0 | ug/L | 1:1 |
| Vinyl chloride | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| cis-1,2-Dichloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| cis-1,3-Dichloropropene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| m,p-Xylene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| n-Butylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| n-Propylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| o-Xylene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| sec-Butylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| tert-Butylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| trans-1,2-Dichloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| trans-1,3-Dichloropropene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 50 ug/L | 100 % | (70 - 135) |
| Toluene d8 | 47 ug/L | 94 % | (70 - 135) |
| 4-Bromofluorobenzene | 36 ug/L | 72 % | (70 - 135) |

**Laboratory ID** 21062004 **Sampled** 09/24/14
**Sample ID** W-IND **Received** 09/24/14
**Matrix** Water **Reported** 10/01/14

## 8260B BTEX/Oxygenates

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Methyl-tert-butyl-ether | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | ND | 0.50 | ug/L | 1:1 |
| Benzene | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Toluene | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Ethylbenzene | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Xylene,Total | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Naphthalene | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | ND | 2.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 50 ug/L | 100 % | (65 - 135) |


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## Method Blank Report

**Client ID** Taber Consultants **Sample ID** MB for HBN 480976 [VGXV/3293]
**Laboratory ID** 112720 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| TPHgas | 8015B TPHgas | 09/25/14 | 09/25/14 | ND | 50 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| Trifluorotoluene | 20.3 ug/L | 102 % | (65 - 135) |

## Lab Control Sample Report

**Client ID** Taber Consultants **Sample ID** LCS for HBN 480976 [VGXV/3293]
**Laboratory ID** 112721 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| TPHgas | 8015B TPHgas | 09/25/14 | 09/25/14 | 788 | 50 | ug/L | 1:1 |

## Lab Control Sample Duplicate Report

**Client ID** Taber Consultants **Sample ID** LCSD for HBN 480976 [VGXV/3293
**Laboratory ID** 112722 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| TPHgas | 8015B TPHgas | 09/25/14 | 09/25/14 | 858 | 50 | ug/L | 1:1 |

## Matrix Spike Report

**Client ID** Taber Consultants **Sample ID** MS for HBN 480976 [VGXV/3293]
**Laboratory ID** 112723 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| TPHgas | 8015B TPHgas | 09/25/14 | 09/25/14 | 778 | 50 | ug/L | 1:1 |

## Matrix Spike Duplicate Report

**Client ID** Taber Consultants **Sample ID** MSD for HBN 480976 [VGXV/3293]
**Laboratory ID** 112724 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| TPHgas | 8015B TPHgas | 09/25/14 | 09/25/14 | 751 | 50 | ug/L | 1:1 |


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## Method Blank Report

**Client ID** Taber Consultants **Sample ID** MB for HBN 480979 [VMXV/3640]
**Laboratory ID** 112725 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Methyl-tert-butyl-ether | 8260B | BTEX/FOC09/25/14 | 09/25/14 | ND | 0.50 | ug/L | 1:1 |
| Benzene | 8260B | BTEX/FOC09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Toluene | 8260B | BTEX/FOC09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Ethylbenzene | 8260B | BTEX/FOC09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Xylene,Total | 8260B | BTEX/FOC09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Naphthalene | 8260B | BTEX/FOC09/25/14 | 09/25/14 | ND | 2.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 53 ug/L | 106 % | (65 - 135) |

## Lab Control Sample Report

**Client ID** Taber Consultants **Sample ID** LCS for HBN 480979 [VMXV/3640]
**Laboratory ID** 112726 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Methyl-tert-butyl-ether | 8260B | BTEX/FOC09/25/14 | 09/25/14 | 52 | 0.50 | ug/L | 1:1 |
| Benzene | 8260B | BTEX/FOC09/25/14 | 09/25/14 | 46 | 1.0 | ug/L | 1:1 |
| Toluene | 8260B | BTEX/FOC09/25/14 | 09/25/14 | 50 | 1.0 | ug/L | 1:1 |
| Ethylbenzene | 8260B | BTEX/FOC09/25/14 | 09/25/14 | 59 | 1.0 | ug/L | 1:1 |
| Xylene,Total | 8260B | BTEX/FOC09/25/14 | 09/25/14 | 178 | 1.0 | ug/L | 1:1 |

## Lab Control Sample Duplicate Report

**Client ID** Taber Consultants **Sample ID** LCSD for HBN 480979 [VMXV/3640
**Laboratory ID** 112727 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Methyl-tert-butyl-ether | 8260B | BTEX/FOC09/25/14 | 09/25/14 | 50 | 0.50 | ug/L | 1:1 |
| Benzene | 8260B | BTEX/FOC09/25/14 | 09/25/14 | 46 | 1.0 | ug/L | 1:1 |
| Toluene | 8260B | BTEX/FOC09/25/14 | 09/25/14 | 49 | 1.0 | ug/L | 1:1 |
| Ethylbenzene | 8260B | BTEX/FOC09/25/14 | 09/25/14 | 60 | 1.0 | ug/L | 1:1 |
| Xylene,Total | 8260B | BTEX/FOC09/25/14 | 09/25/14 | 177 | 1.0 | ug/L | 1:1 |

## Matrix Spike Report

**Client ID** Taber Consultants **Sample ID** MS for HBN 480979 [VMXV/3640]
**Laboratory ID** 112728 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|


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## Matrix Spike Report

**Client ID** Taber Consultants **Sample ID** MS for HBN 480979 [VMXV/3640]
**Laboratory ID** 112728 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| (continued) | | | | | | | |
| Methyl-tert-butyl-ether | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | 52 | 0.50 | ug/L | 1:1 |
| Benzene | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | 43 | 1.0 | ug/L | 1:1 |
| Toluene | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | 45 | 1.0 | ug/L | 1:1 |
| Ethylbenzene | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | 55 | 1.0 | ug/L | 1:1 |
| Xylene,Total | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | 163 | 1.0 | ug/L | 1:1 |

## Matrix Spike Duplicate Report

**Client ID** Taber Consultants **Sample ID** MSD for HBN 480979 [VMXV/3640]
**Laboratory ID** 112729 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Methyl-tert-butyl-ether | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | 57 | 0.50 | ug/L | 1:1 |
| Benzene | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | 49 | 1.0 | ug/L | 1:1 |
| Toluene | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | 51 | 1.0 | ug/L | 1:1 |
| Ethylbenzene | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | 60 | 1.0 | ug/L | 1:1 |
| Xylene,Total | 8260B BTEX/FOC | 09/25/14 | 09/25/14 | 179 | 1.0 | ug/L | 1:1 |

## Method Blank Report

**Client ID** Taber Consultants **Sample ID** MB for HBN 481370 [SGXV/2979]
**Laboratory ID** 112767 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Stoddard Solvent | 8015B TPHss | 09/25/14 | 10/01/14 | ND | 50 | ug/L | 1:1 |

## Lab Control Sample Report

**Client ID** Taber Consultants **Sample ID** LCS for HBN 481370 [SGXV/2979]
**Laboratory ID** 112768 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Stoddard Solvent | 8015B TPHss | 09/25/14 | 10/01/14 | 1060 | 50 | ug/L | 1:1 |


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## Lab Control Sample Duplicate Report

| | | | |
|---|---|---|---|
| **Client ID** | Taber Consultants | **Sample ID** | LCSD for HBN 481370 [SGXV/2979 |
| **Laboratory ID** | 112769 | **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Stoddard Solvent | 8015B TPHss | 09/25/14 | 10/01/14 | 1060 | 50 | ug/L | 1:1 |

## Method Blank Report

| | | | |
|---|---|---|---|
| **Client ID** | Taber Consultants | **Sample ID** | MB for HBN 481670 [VMXV/3641] |
| **Laboratory ID** | 112792 | **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1,1-Trichloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1,2,2-Tetrachloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1,2-Trichloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1-Dichloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1-Dichloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,1-dichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2,3-Trichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2,3-Trichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2,4-Trichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2,4-Trimethylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dibromo-3-chloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dibromoethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dichloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,2-Dichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,3,5-Trimethylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,3-Dichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,3-Dichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 1,4-Dichlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 2,2-dichloropropane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 2-Butanone | 8260B | 09/25/14 | 09/25/14 | ND | 5.0 | ug/L | 1:1 |
| 2-Chloroethylvinyl ether | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 2-Chlorotoluene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 2-Hexanone | 8260B | 09/25/14 | 09/25/14 | ND | 10 | ug/L | 1:1 |
| 4-Chlorotoluene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 4-Isopropyltoluene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| 4-Methyl-2-pentanone | 8260B | 09/25/14 | 09/25/14 | ND | 5.0 | ug/L | 1:1 |
| Acetone | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Acrolein | 8260B | 09/25/14 | 09/25/14 | ND | 10 | ug/L | 1:1 |
| Acrylonitrile | 8260B | 09/25/14 | 09/25/14 | ND | 10 | ug/L | 1:1 |


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**Method Blank Report**

| | | | |
|---|---|---|---|
| **Client ID** | Taber Consultants | **Sample ID** | MB for HBN 481670 [VMXV/3641] |
| **Laboratory ID** | 112792 | **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **(continued)** | | | | | | | |
| Benzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromochloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromodichloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromoform | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Bromomethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Carbon disulfide | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Carbon tetrachloride | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Chlorobenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Chloroethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Chloroform | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Chloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Dibromochloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Dibromomethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Dichlorodifluoromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Dichloromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Ethylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Hexachlorobutadiene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Iodomethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Isopropylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Naphthalene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Styrene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Tetrachloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Toluene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Trichloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Trichlorofluoromethane | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| Vinyl acetate | 8260B | 09/25/14 | 09/25/14 | ND | 5.0 | ug/L | 1:1 |
| Vinyl chloride | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| cis-1,2-Dichloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| cis-1,3-Dichloropropene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| m,p-Xylene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| n-Butylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| n-Propylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| o-Xylene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| sec-Butylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| tert-Butylbenzene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |
| trans-1,2-Dichloroethene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |


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## Method Blank Report

**Client ID** Taber Consultants **Sample ID** MB for HBN 481670 [VMXV/3641]
**Laboratory ID** 112792 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| (continued) | | | | | | | |
| trans-1,3-Dichloropropene | 8260B | 09/25/14 | 09/25/14 | ND | 1.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 53 ug/L | 106 % | (70 - 135) |
| Toluene d8 | 48 ug/L | 96 % | (70 - 135) |
| 4-Bromofluorobenzene | 38 ug/L | 76 % | (70 - 135) |

## Lab Control Sample Report

**Client ID** Taber Consultants **Sample ID** LCS for HBN 481670 [VMXV/3641]
**Laboratory ID** 112793 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Benzene | 8260B | 09/25/14 | 09/25/14 | 46 | 1.0 | ug/L | 1:1 |
| Toluene | 8260B | 09/25/14 | 09/25/14 | 50 | 1.0 | ug/L | 1:1 |

## Lab Control Sample Duplicate Report

**Client ID** Taber Consultants **Sample ID** LCSD for HBN 481670 [VMXV/3641
**Laboratory ID** 112794 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Benzene | 8260B | 09/25/14 | 09/25/14 | 46 | 1.0 | ug/L | 1:1 |
| Toluene | 8260B | 09/25/14 | 09/25/14 | 49 | 1.0 | ug/L | 1:1 |

## Matrix Spike Report

**Client ID** Taber Consultants **Sample ID** MS for HBN 481670 [VMXV/3641]
**Laboratory ID** 112795 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Benzene | 8260B | 09/25/14 | 09/25/14 | 43 | 1.0 | ug/L | 1:1 |
| Toluene | 8260B | 09/25/14 | 09/25/14 | 45 | 1.0 | ug/L | 1:1 |


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**Matrix Spike Duplicate Report**

| | | | |
|---|---|---|---|
| **Client ID** | Taber Consultants | **Sample ID** | MSD for HBN 481670 [VMXV/3641] |
| **Laboratory ID** | 112796 | **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Benzene | 8260B | 09/25/14 | 09/25/14 | 49 | 1.0 | ug/L | 1:1 |
| Toluene | 8260B | 09/25/14 | 09/25/14 | 51 | 1.0 | ug/L | 1:1 |



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## QC SUMMARY

| | | | |
|---|---|---|---|
| **Client ID** | Taber Consultants | **Original** | 21062004 |
| **QC Batch** | VGX 3413 | **Samples** | Matrix Spike [112723] |
| **Matrix** | Water | | Matrix Spike Duplicate [112724] |

| Parameter | Spike %Recovery | Spike Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| TPHgas | 78 | 75 | (65-135) | 3.9 | (20 MAX) |

| | | | |
|---|---|---|---|
| **Client ID** | Taber Consultants | **Original** | 21062004 |
| **QC Batch** | VMX 3677 | **Samples** | Matrix Spike [112728] |
| **Matrix** | Water | | Matrix Spike Duplicate [112729] |

| Parameter | Spike %Recovery | Spike Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| Methyl-tert-butyl-ether | 104 | 114 | (65-135) | 9.2 | (20 MAX) |
| Benzene | 86 | 98 | (65-135) | 13 | (20 MAX) |
| Toluene | 90 | 102 | (65-135) | 13 | (20 MAX) |
| Ethylbenzene | 110 | 120 | (65-135) | 8.7 | (20 MAX) |
| Xylene,Total | 109 | 119 | (65-135) | 8.8 | (20 MAX) |

| | | | |
|---|---|---|---|
| **Client ID** | Taber Consultants | **Original** | 21062004 |
| **QC Batch** | VMX 3678 | **Samples** | Matrix Spike [112795] |
| **Matrix** | Water | | Matrix Spike Duplicate [112796] |

| Parameter | Spike %Recovery | Spike Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| Benzene | 86 | 98 | (70-135) | 13 | (20 MAX) |
| Toluene | 90 | 102 | (70-135) | 13 | (20 MAX) |

| | | | |
|---|---|---|---|
| **Client ID** | Taber Consultants | **Samples** | Lab Control Sample [112721] |
| **QC Batch** | VGX 3413 | | Lab Control Sample Duplicate [112722] |
| **Matrix** | Water | | |

| Parameter | Check %Recovery | Check Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| TPHgas | 79 | 86 | (65-135) | 8.5 | (20 MAX) |

| | | | |
|---|---|---|---|
| **Client ID** | Taber Consultants | **Samples** | Lab Control Sample [112726] |
| **QC Batch** | VMX 3677 | | Lab Control Sample Duplicate [112727] |
| **Matrix** | Water | | |

| Parameter | Check %Recovery | Check Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|


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## QC SUMMARY

**Client ID** Taber Consultants
**QC Batch** VMX 3677
**Matrix** Water
**Samples** Lab Control Sample [112726]
Lab Control Sample Duplicate [112727]
**(continued)**

| Parameter | Check %Recovery | Check Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| Methyl-tert-butyl-ether | 104 | 100 | (65-135) | 3.9 | (20 MAX) |
| Benzene | 92 | 92 | (65-135) | 00 | (20 MAX) |
| Toluene | 100 | 98 | (65-135) | 2.0 | (20 MAX) |
| Ethylbenzene | 118 | 120 | (65-135) | 1.7 | (20 MAX) |
| Xylene,Total | 119 | 118 | (65-135) | 0.80 | (20 MAX) |

**Client ID** Taber Consultants
**QC Batch** SGX 3003
**Matrix** Water
**Samples** Lab Control Sample [112768]
Lab Control Sample Duplicate [112769]

| Parameter | Check %Recovery | Check Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| Stoddard Solvent | 106 | 106 | (65-135) | 00 | (20 MAX) |

**Client ID** Taber Consultants
**QC Batch** VMX 3678
**Matrix** Water
**Samples** Lab Control Sample [112793]
Lab Control Sample Duplicate [112794]

| Parameter | Check %Recovery | Check Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| Benzene | 92 | 92 | (70-135) | 00 | (20 MAX) |
| Toluene | 100 | 98 | (70-135) | 2.0 | (20 MAX) |


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**Sparger Technology, Inc.**
Environmental Laboratories

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Sacramento, CA 95827
Lab: 916.369.7688
Fax: 916.369.7689

# 21062

COC # / Lab No. _____

Page 1 of 1

## Chain-of-Custody Record and Analysis Request

| | |
|---|---|
| Project Contact ( PDF To): **Tom Ballard (to email address's)** | California EDF Report? ☑ Yes ☐ No |
| Company / Address: **Taber Consultants: 3911 West Capitol Ave. West Sacramento, CA 95691** | Sampling Company Log Code: **WRMC** |
| | Global ID: **T0600100379** |
| Phone #: **916-371-1690** Fax #: **916-371-7265** | Deliver all files to: **SNess@TaberConsultants.com** |
| Project #: **2011-0107** P.O. #: 3C | please email a copy to: **EPyatt@TaberConsultants.com** |
| Project Name: **NoPurge_CityOfP** | Sampler Signature: |
| Project Address: **3514 Adeline St. Oakland, CA** | |

| Sample ID | Field Point Name | Sampling Date | Sampling Time | Container: 40 ml VOA | Container: Sleeve | Container: Poly | Container: Glass (1 L Amber) | Container: Tedlar | Preservative: HCl | Preservative: $HNO_3$ | Preservative: None | Matrix: Water | Matrix: Soil | Matrix: Air | Analysis: Naphthalene (EPA 8260B) | Analysis: MTBE\BTEX (EPA 8260B) | Analysis: TPH Gas (EPA 8015) | Analysis: 5 Oxygenates (EPA 8260B) | Analysis: Lead Scav.(1,2 DCA & 1,2 EDB-EPA 8260B) | Analysis: Volatile Organics Full List (EPA 8260B) | Analysis: TPH as Diesel (EPA 8015M) | Analysis: TPH-SS Stoddard Solvent (EPA 8015) | Analysis: Chromatograms | TAT: 1 wk |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | MW-1 | 9/24/14 | 945 | 4 | | | | | x | | | x | | | x | x | x | | | x | | x | x | x |
| MW-2 | MW-2 | | 955 | 4 | | | | | x | | | x | | | x | x | x | | | x | | x | x | x |
| MW-3 | MW-3 | | 1012 | 4 | | | | | x | | | x | | | x | x | x | | | x | | x | x | x |
| W-IND | W-IND | | 1030 | 4 | | | | | x | | | x | | | x | x | x | | | x | | x | x | x |
| MW-1 | MW-1 | | 945 | | | | 1 | | | | x | x | | | | | | | | | | X | | X |
| MW-2 | MW-2 | | 955 | | | | 1 | | | | x | x | | | | | | | | | | X | | X |
| MW-3 | MW-3 | | 1012 | | | | 1 | | | | x | x | | | | | | | | | | X | | X |
| W-IND | W-IND | ↓ | 1030 | | | | 1 | | | | x | x | | | | | | | | | | X | | X |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished by: | Date | Time | Received by: |
|---|---|---|---|
| Hal Hansen | 9/24/14 | 13:00 | RAY JAMES |
| Relinquished by: | Date | Time | Received by: |
| Relinquished by: | Date | Time | Received by Laboratory: |

Remarks:
please save file(s), PDF's, EDF & XLS name as:
**sample date year_month_day_ project name_ WO#**

EXAMPLE:
2012_08_22_NoPurge_CityOfP_12345

Bill to: Invoice@TaberConsultants.com

For Lab Use Only: Sample Receipt

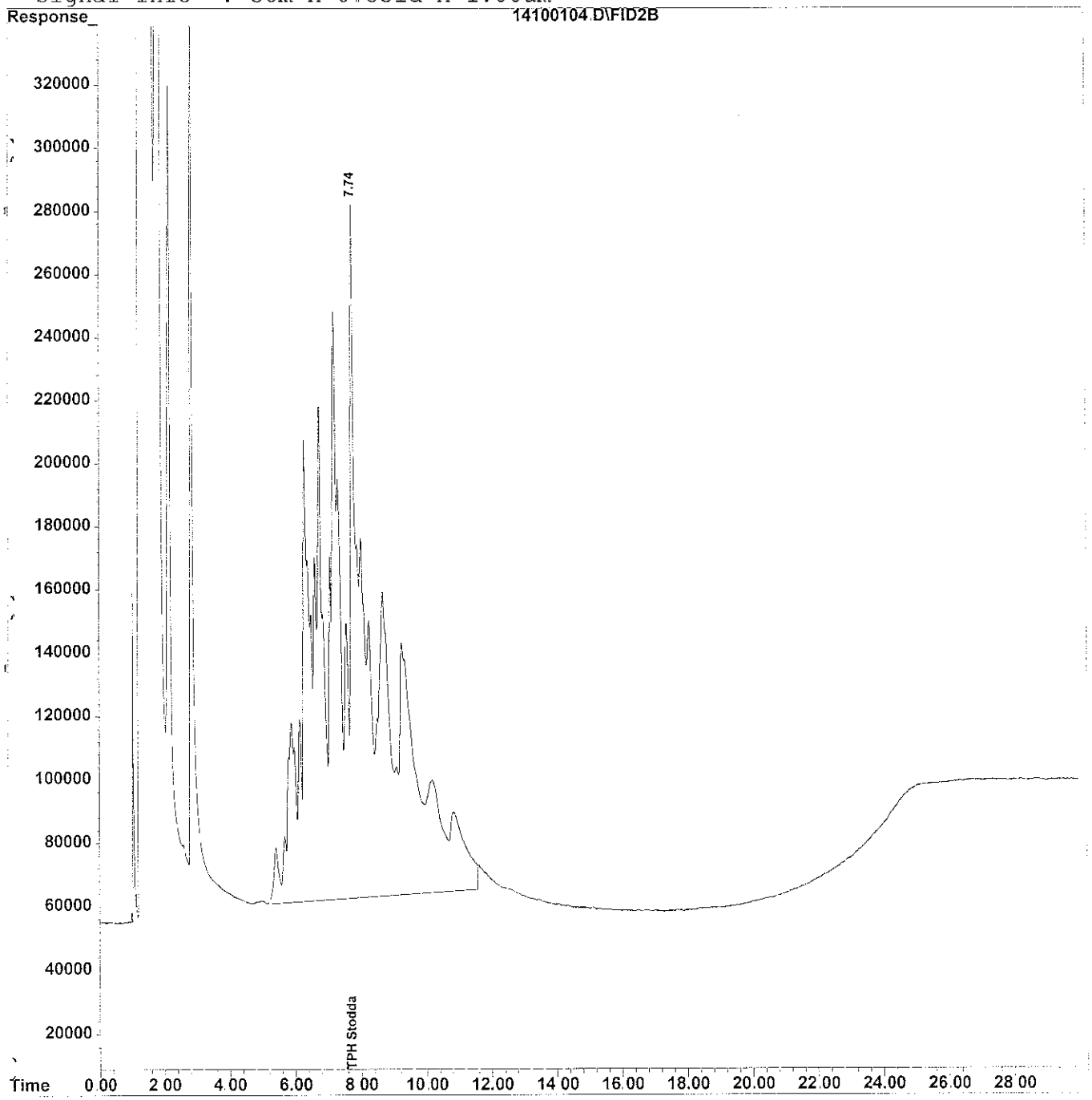
| Temp °C | Initials | Date | Time | | |
|---|---|---|---|---|---|
| 14 | TB | 9/24/14 | 13:00 | 0.5 | |

Quantitation Report

Data File : C:\HPCHEM\2\DATA\100114A\14100104.D Vial: 4
Acq On : 1 Oct 2014 12:37 Operator: R.L. JAMES
Sample : 1000PPM TPH SS Inst : HP-FID
Misc : 1000PPM TPH SS (2uL) Multiplr: 0.50
IntFile : EVENTS2.E
Quant Time: Oct 2 8:41 2014 Quant Results File: TPHST1B.RES

Quant Method : C:\HPCHEM\2\METHODS\TPHST1B.M (Chemstation Integrator)
Title : 3500/8015 TPH Stoddard Solvent
Last Update : Thu Oct 02 08:40:30 2014
Response via : Multiple Level Calibration
DataAcq Meth : TPHST1B.M

Volume Inj. : 2uL
Signal Phase : J&W DB-5
Signal Info : 30m X 0.53id X 1.00um

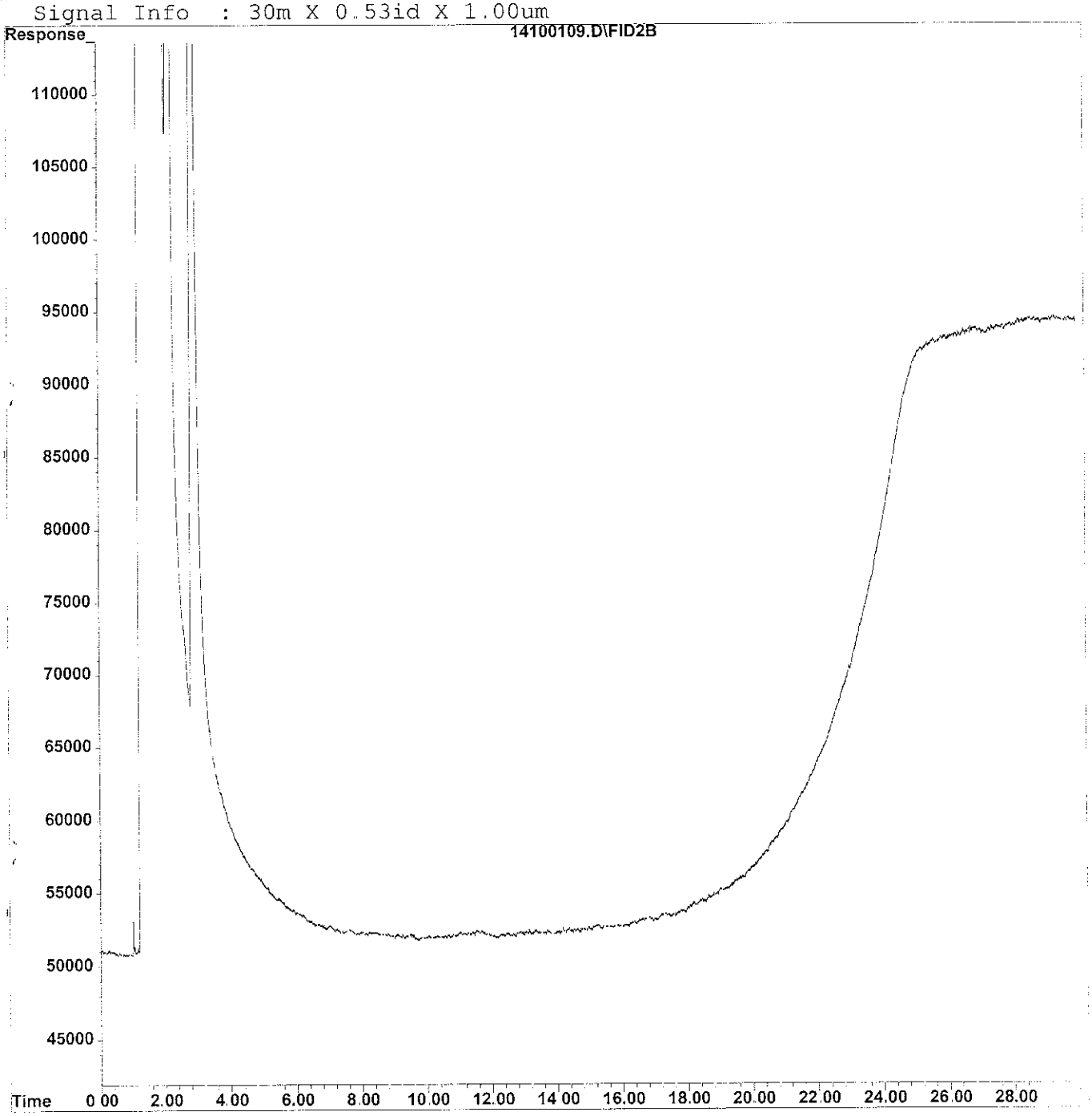


2

Data File : C:\HPCHEM\2\DATA\100114A\14100109.D  Vial: 8
Acq On : 1 Oct 2014 16:34  Operator: R.L. JAMES
Sample : MBW-BATCH  Inst : HP-FID
Misc : QC WATER (1L/1ML)  Multiplr: 0.50
IntFile : EVENTS2.E
Quant Time: Oct 2 12:15 2014 Quant Results File: TPHST1B.RES

Quant Method : C:\HPCHEM\2\METHODS\TPHST1B.M (Chemstation Integrator)
Title : 3500/8015 TPH Stoddard Solvent
Last Update : Wed May 15 11:49:53 2013
Response via : Multiple Level Calibration
DataAcq Meth : TPHST1B.M

Volume Inj. : 2uL
Signal Phase : J&W DB-5
Signal Info : 30m X 0.53id X 1.00um

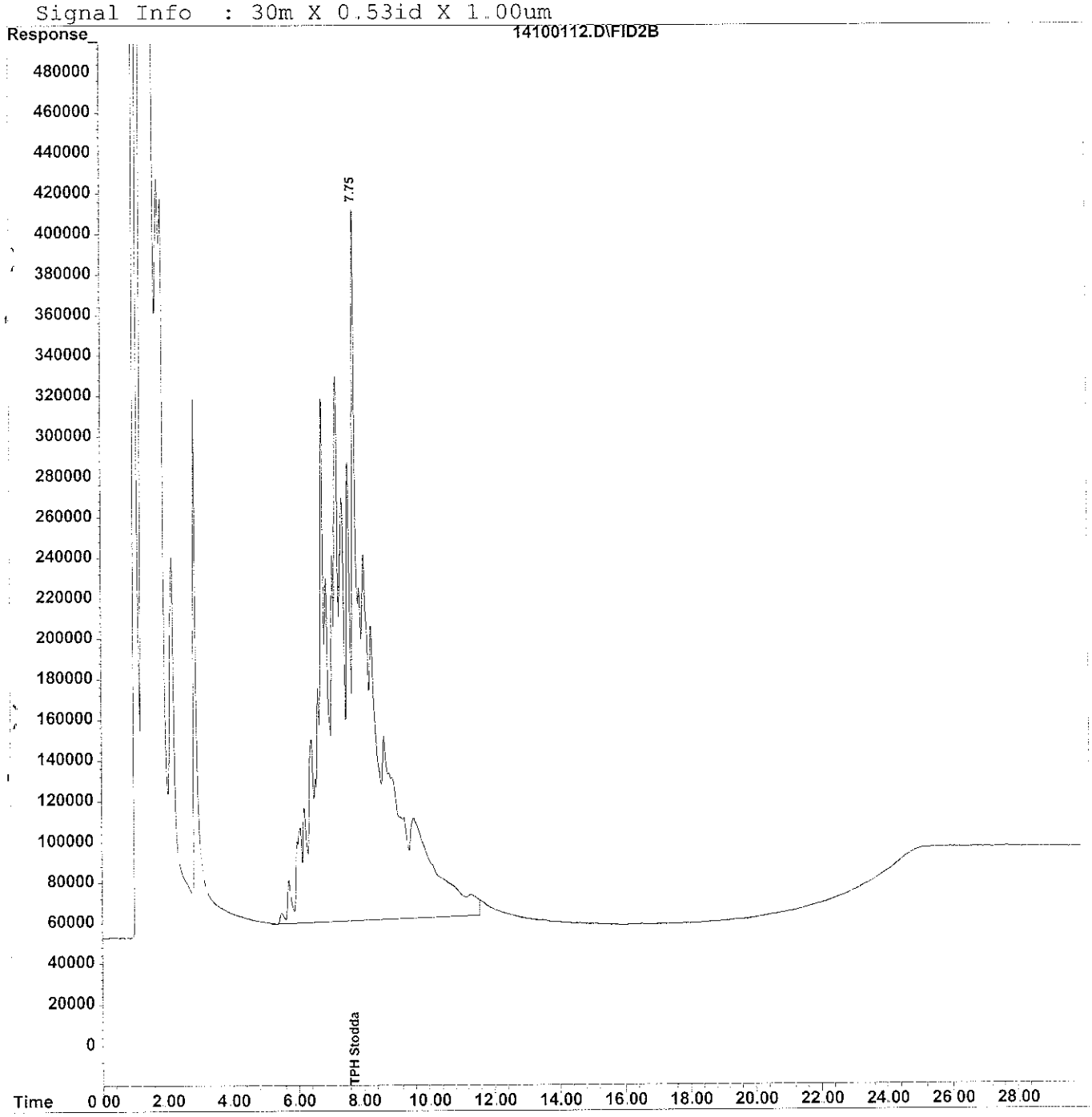


3

Data File : C:\HPCHEM\2\DATA\100114A\14100112.D  Vial: 10
Acq On : 1 Oct 2014 17:52  Operator: R.L. JAMES
Sample : 21062-01; TABER  Inst : HP-FID
Misc : MW-1 (500L/1ML)  Multiplr: 1.00
IntFile : EVENTS2.E
Quant Time: Oct 2 8:47 2014 Quant Results File: TPHST1B.RES

Quant Method : C:\HPCHEM\2\METHODS\TPHST1B.M (Chemstation Integrator)
Title : 3500/8015 TPH Stoddard Solvent
Last Update : Thu Oct 02 08:40:30 2014
Response via : Multiple Level Calibration
DataAcq Meth : TPHST1B.M

Volume Inj. : 2uL
Signal Phase : J&W DB-5
Signal Info : 30m X 0.53id X 1.00um

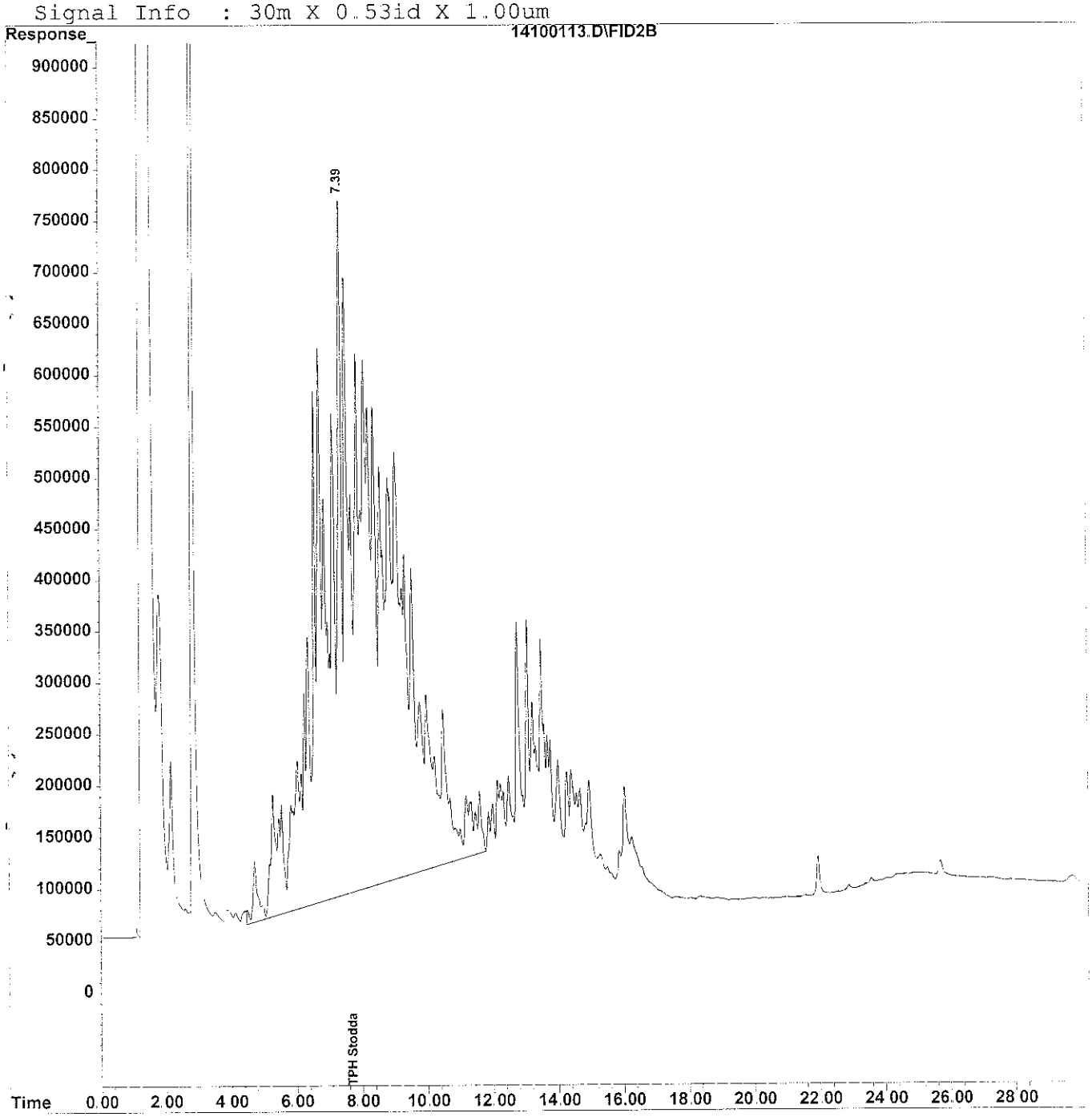


4

Data File : C:\HPCHEM\2\DATA\100114A\14100113.D  Vial: 11
Acq On : 1 Oct 2014 18:31  Operator: R.L. JAMES
Sample : 21062-02; TABER  Inst : HP-FID
Misc : MW-2 (500L/1ML)  Multiplr: 1.00
IntFile : EVENTS2.E
Quant Time: Oct 2 8:48 2014 Quant Results File: TPHST1B.RES

Quant Method : C:\HPCHEM\2\METHODS\TPHST1B.M (Chemstation Integrator)
Title : 3500/8015 TPH Stoddard Solvent
Last Update : Thu Oct 02 08:40:30 2014
Response via : Multiple Level Calibration
DataAcq Meth : TPHST1B.M

Volume Inj. : 2uL
Signal Phase : J&W DB-5
Signal Info : 30m X 0.53id X 1.00um



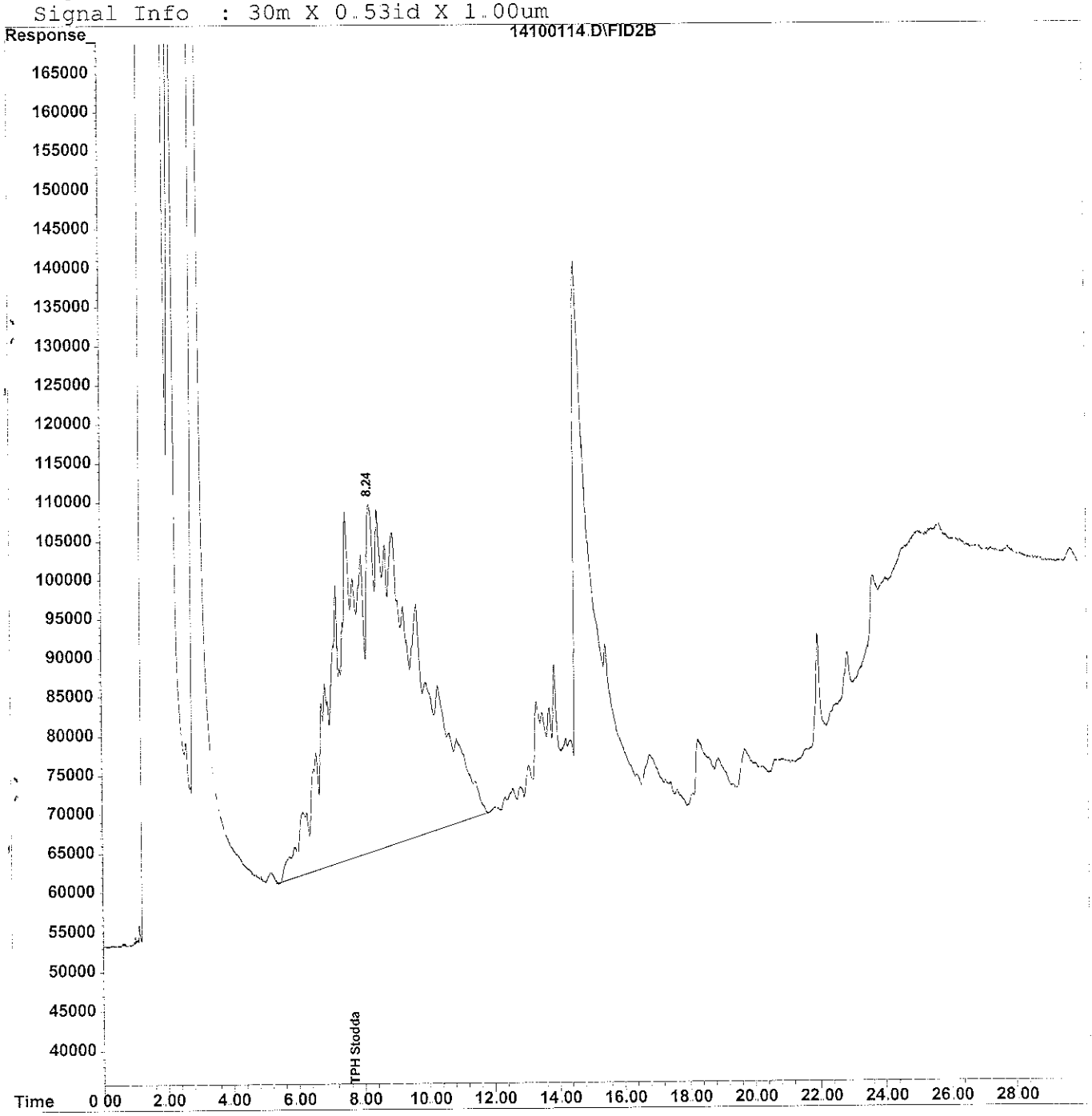
5

Data File : C:\HPCHEM\2\DATA\100114A\14100114.D
Acq On : 1 Oct 2014 19:10
Sample : 21062-03; TABER
Misc : MW-3 (500L/1ML)
IntFile : EVENTS2.E
Quant Time: Oct 2 8:48 2014 Quant Results File: TPHST1B.RES

Vial: 12
Operator: R.L. JAMES
Inst : HP-FID
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\TPHST1B.M (Chemstation Integrator)
Title : 3500/8015 TPH Stoddard Solvent
Last Update : Thu Oct 02 08:40:30 2014
Response via : Multiple Level Calibration
DataAcq Meth : TPHST1B.M

Volume Inj. : 2uL
Signal Phase : J&W DB-5
Signal Info : 30m X 0.53id X 1.00um

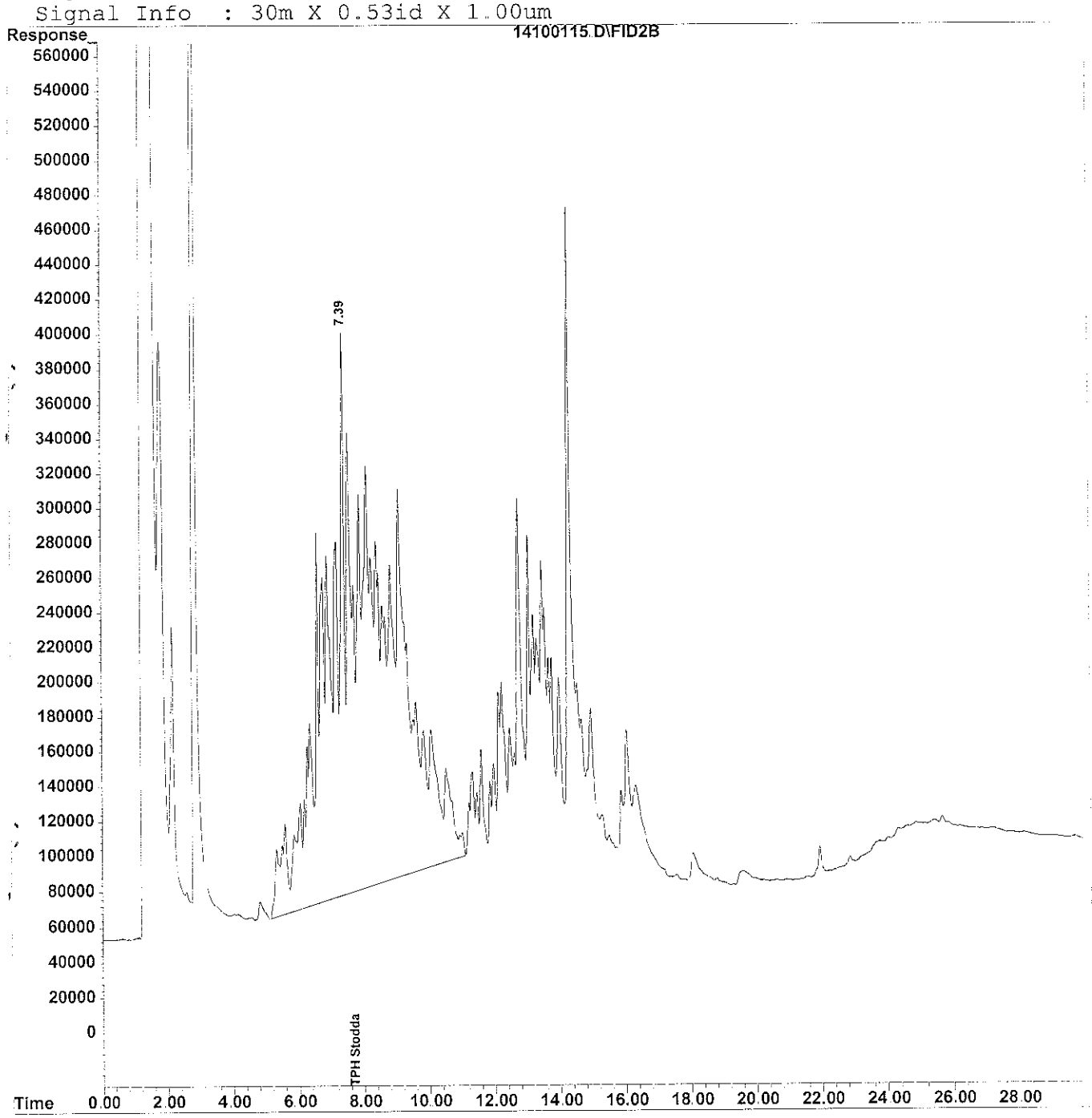


6

Data File : C:\HPCHEM\2\DATA\100114A\14100115.D  Vial: 13
Acq On : 1 Oct 2014 19:50  Operator: R.L. JAMES
Sample : 21062-04; TABER  Inst : HP-FID
Misc : W-IND (500L/1ML)  Multiplr: 1.00
IntFile : EVENTS2.E
Quant Time: Oct 2 8:49 2014 Quant Results File: TPHST1B.RES

Quant Method : C:\HPCHEM\2\METHODS\TPHST1B.M (Chemstation Integrator)
Title : 3500/8015 TPH Stoddard Solvent
Last Update : Thu Oct 02 08:40:30 2014
Response via : Multiple Level Calibration
DataAcq Meth : TPHST1B.M

Volume Inj. : 2uL
Signal Phase : J&W DB-5
Signal Info : 30m X 0.53id X 1.00um

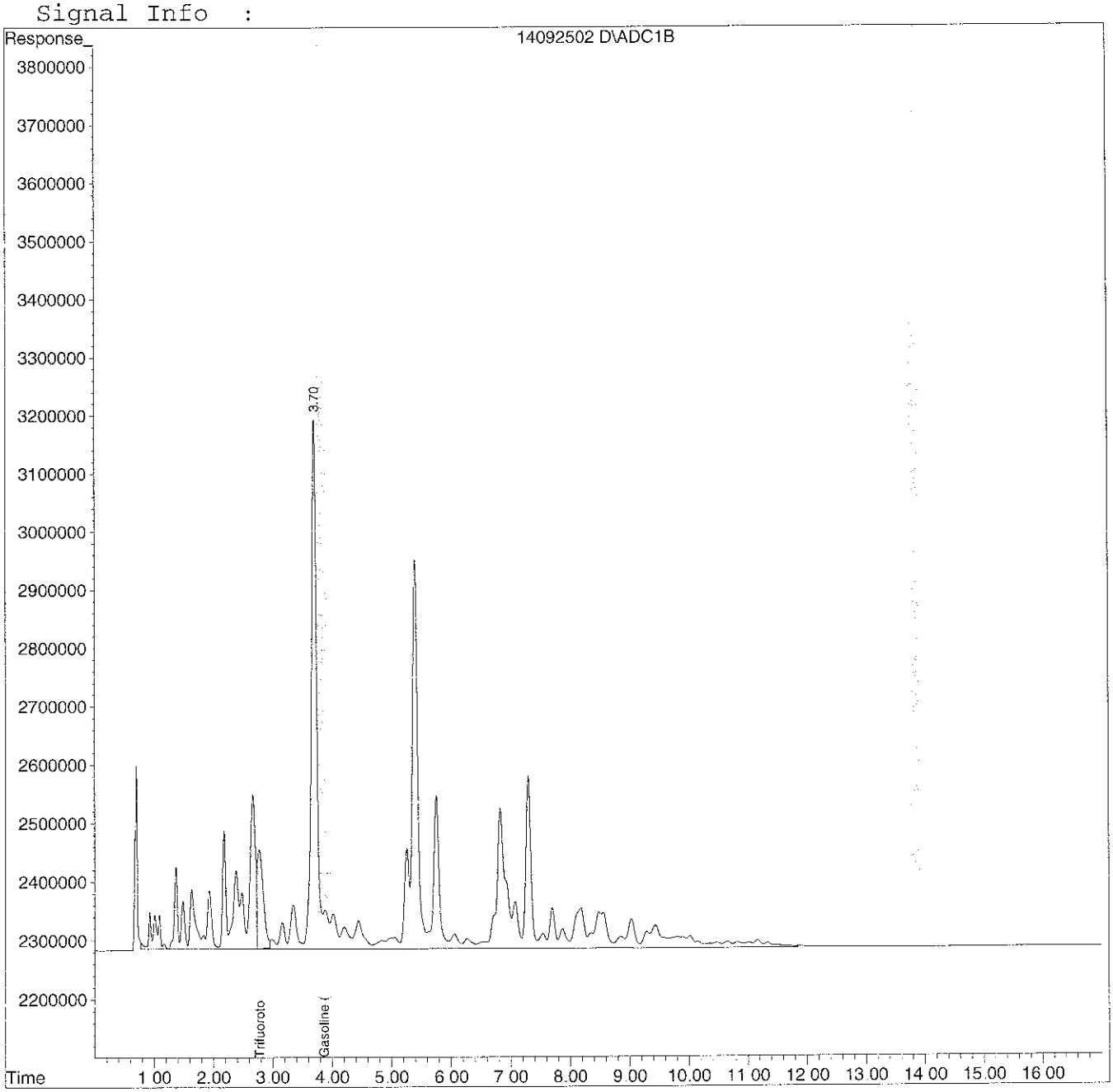


# Quantitation Report

Data File : D:\HPCHEM\1\DATA\092514V4\14092502.D  Vial: 2
Acq On : 25 Sep 2014 16:25  Operator: R.L. JAMES
Sample : 1.0PPM TPHgas  Inst : VAR-4
Misc : P&T (5ML)  Multiplr: 0.20
IntFile : EVENTS.E
Quant Time: Sep 25 16:42 2014 Quant Results File: TPHGV4.RES

Quant Method : D:\HPCHEM\1\METHODS\TPHGV4.M (Chemstation Integrator)
Title : GC TPH Method
Last Update : Fri Aug 08 16:53:57 2014
Response via : Multiple Level Calibration
DataAcq Meth : TPHGV4.M

Volume Inj. : 5ml
Signal Phase :
Signal Info :

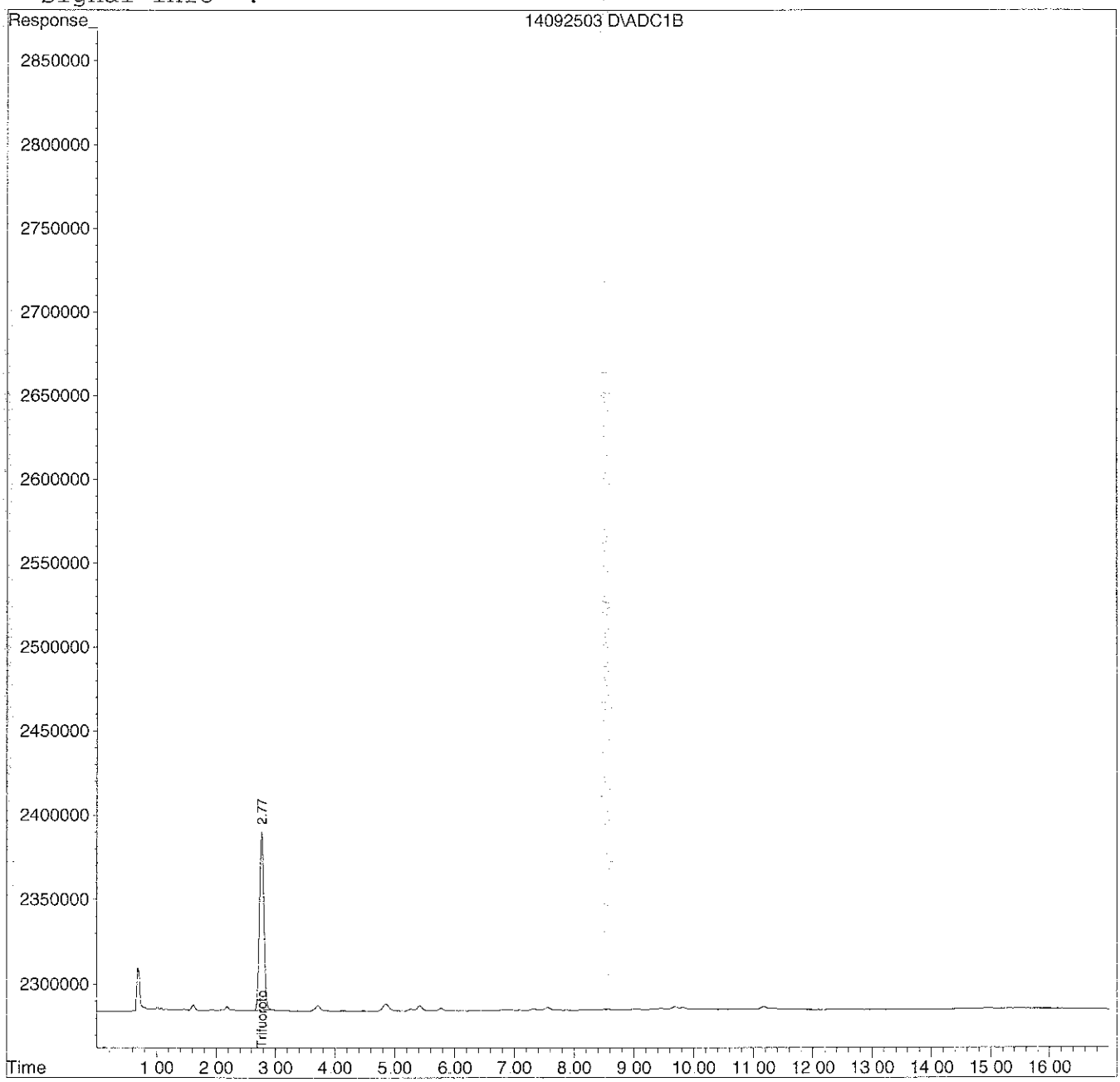


# Quantitation Report

Data File : D:\HPCHEM\1\DATA\092514V4\14092503.D Vial: 1
Acq On : 25 Sep 2014 17:10 Operator: R.L. JAMES
Sample : MB-BATCH Inst : VAR-4
Misc : QC-BATCH Multiplr: 0.20
IntFile : EVENTS.E
Quant Time: Sep 25 17:27 2014 Quant Results File: TPHGV4.RES

Quant Method : D:\HPCHEM\1\METHODS\TPHGV4.M (Chemstation Integrator)
Title : GC TPH Method
Last Update : Fri Aug 08 16:53:57 2014
Response via : Multiple Level Calibration
DataAcq Meth : TPHGV4.M

Volume Inj. : 5ml
Signal Phase :
Signal Info :

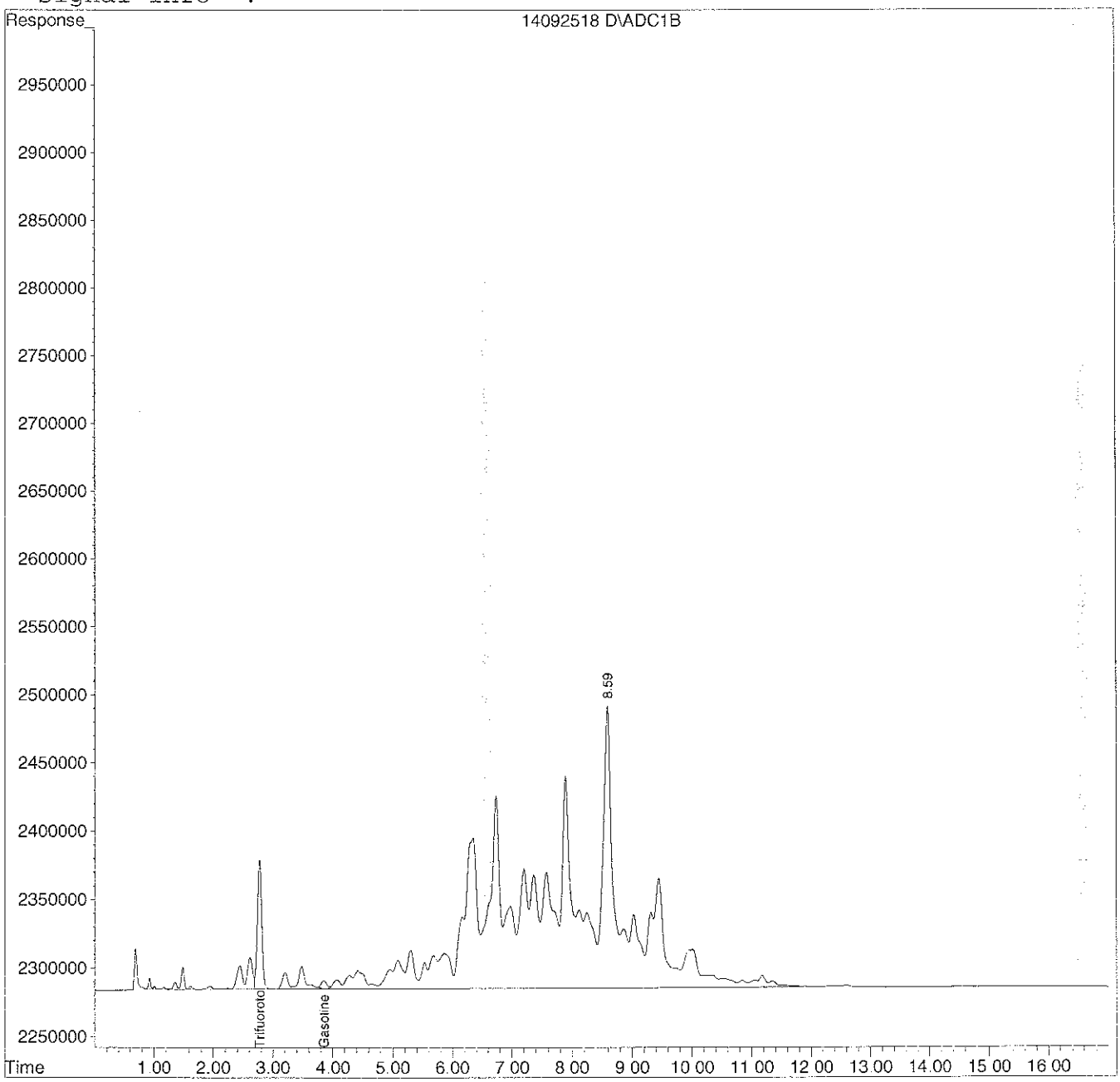


# Quantitation Report

Data File : D:\HPCHEM\1\DATA\092514V4\14092518.D Vial: 16
Acq On : 25 Sep 2014 23:27 Operator: R.L. JAMES
Sample : 21062-01;TABER Inst : VAR-4
Misc : MW-1 (500UL/5ML) 1:10 Multiplr: 2.00
IntFile : EVENTS.E
Quant Time: Sep 25 23:44 2014 Quant Results File: TPHGV4.RES

Quant Method : D:\HPCHEM\1\METHODS\TPHGV4.M (Chemstation Integrator)
Title : GC TPH Method
Last Update : Fri Aug 08 16:53:57 2014
Response via : Multiple Level Calibration
DataAcq Meth : TPHGV4.M

Volume Inj. : 5ml
Signal Phase :
Signal Info :

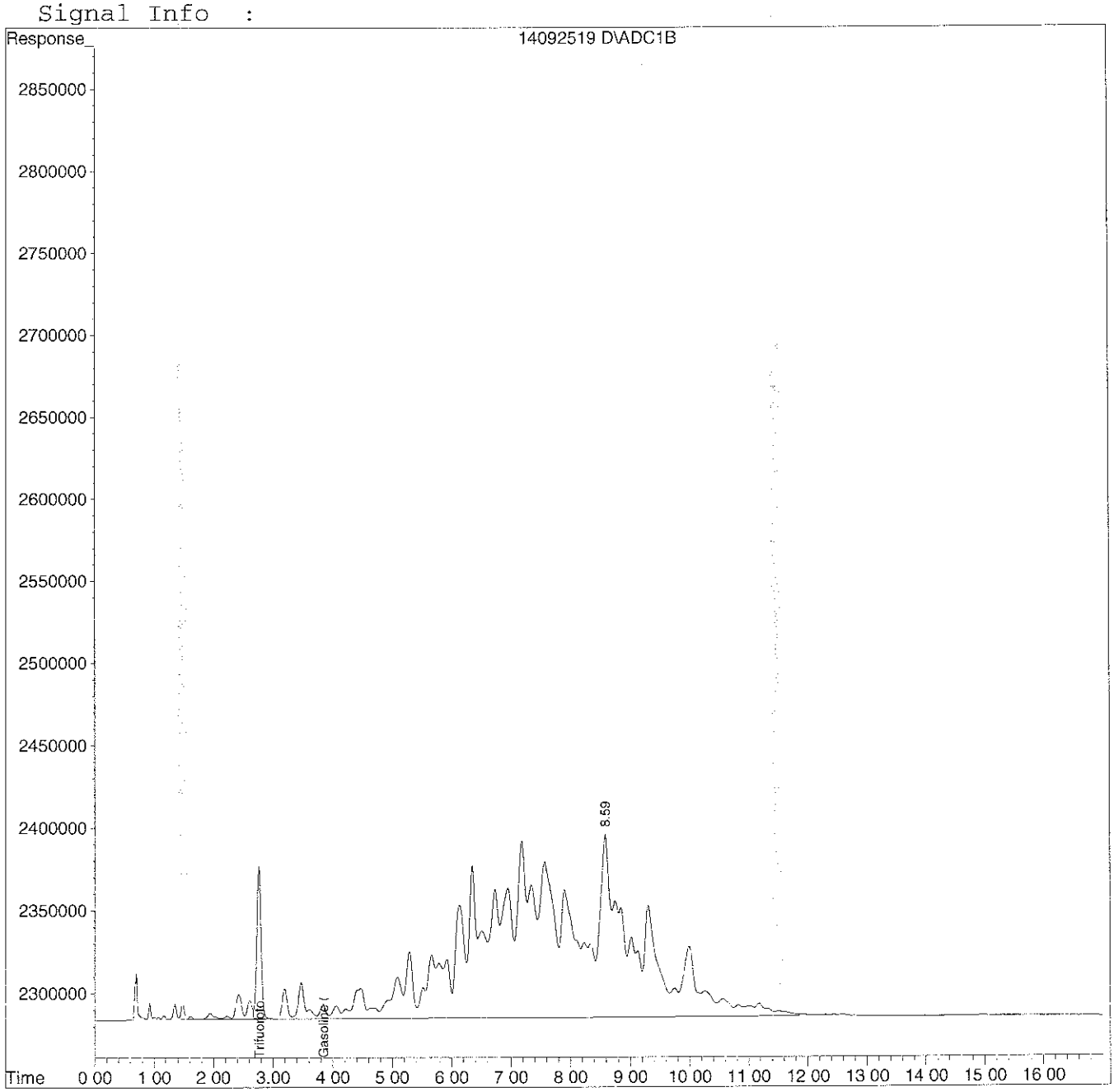


# Quantitation Report

Data File : D:\HPCHEM\1\DATA\092514V4\14092519.D Vial: 17
Acq On : 25 Sep 2014 23:52 Operator: R.L. JAMES
Sample : 21062-02;TABER Inst : VAR-4
Misc : MW-2 (5ML) Multiplr: 0.20
IntFile : EVENTS.E
Quant Time: Sep 26 0:09 2014 Quant Results File: TPHGV4.RES

Quant Method : D:\HPCHEM\1\METHODS\TPHGV4.M (Chemstation Integrator)
Title : GC TPH Method
Last Update : Fri Aug 08 16:53:57 2014
Response via : Multiple Level Calibration
DataAcq Meth : TPHGV4.M

Volume Inj. : 5ml
Signal Phase :
Signal Info :

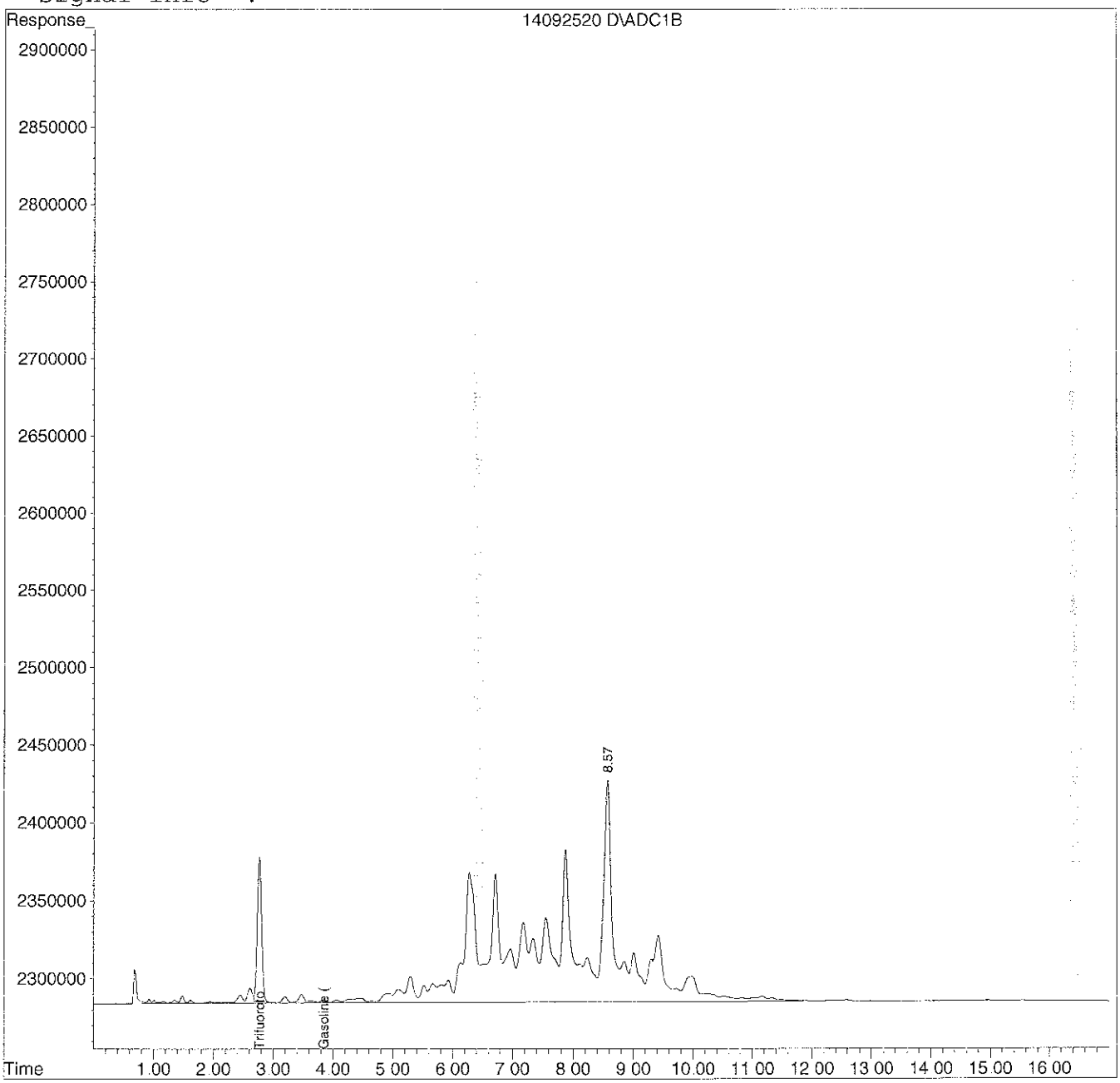


Quantitation Report

Data File : D:\HPCHEM\1\DATA\092514V4\14092520.D Vial: 18
Acq On : 26 Sep 2014 00:17 Operator: R.L. JAMES
Sample : 21062-03;TABER Inst : VAR-4
Misc : MW-3 (500UL/5ML) 1:10 Multiplr: 2.00
IntFile : EVENTS.E
Quant Time: Sep 26 0:34 2014 Quant Results File: TPHGV4.RES

Quant Method : D:\HPCHEM\1\METHODS\TPHGV4.M (Chemstation Integrator)
Title : GC TPH Method
Last Update : Fri Aug 08 16:53:57 2014
Response via : Multiple Level Calibration
DataAcq Meth : TPHGV4.M

Volume Inj. : 5ml
Signal Phase :
Signal Info :

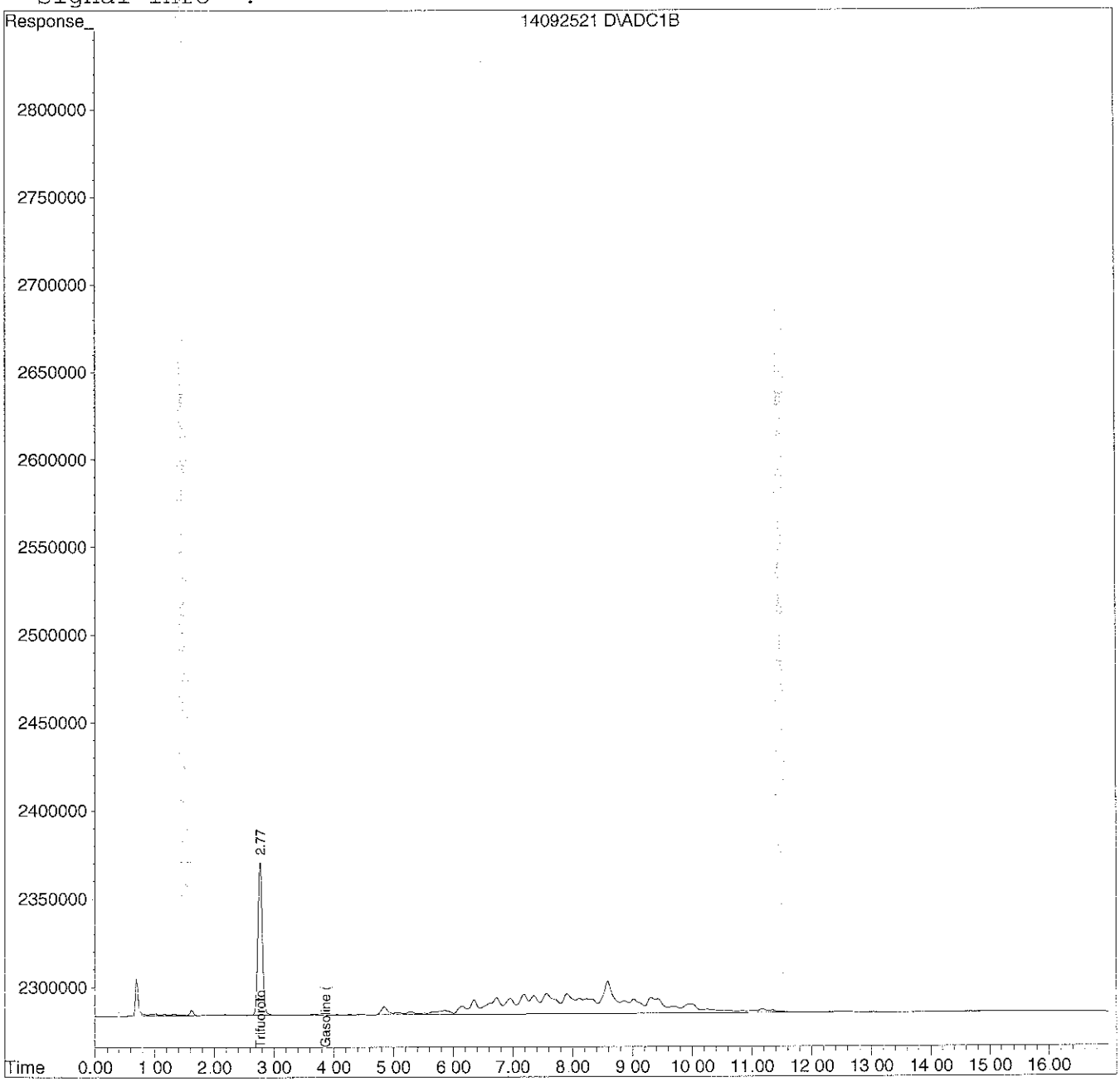


# Quantitation Report

Data File : D:\HPCHEM\1\DATA\092514V4\14092521.D  Vial: 19
Acq On : 26 Sep 2014 00:42  Operator: R.L. JAMES
Sample : 21062-04;TABER  Inst : VAR-4
Misc : W-IND (5ML)  Multiplr: 0.20
IntFile : EVENTS.E
Quant Time: Sep 26 0:59 2014 Quant Results File: TPHGV4.RES

Quant Method : D:\HPCHEM\1\METHODS\TPHGV4.M (Chemstation Integrator)
Title : GC TPH Method
Last Update : Fri Aug 08 16:53:57 2014
Response via : Multiple Level Calibration
DataAcq Meth : TPHGV4.M

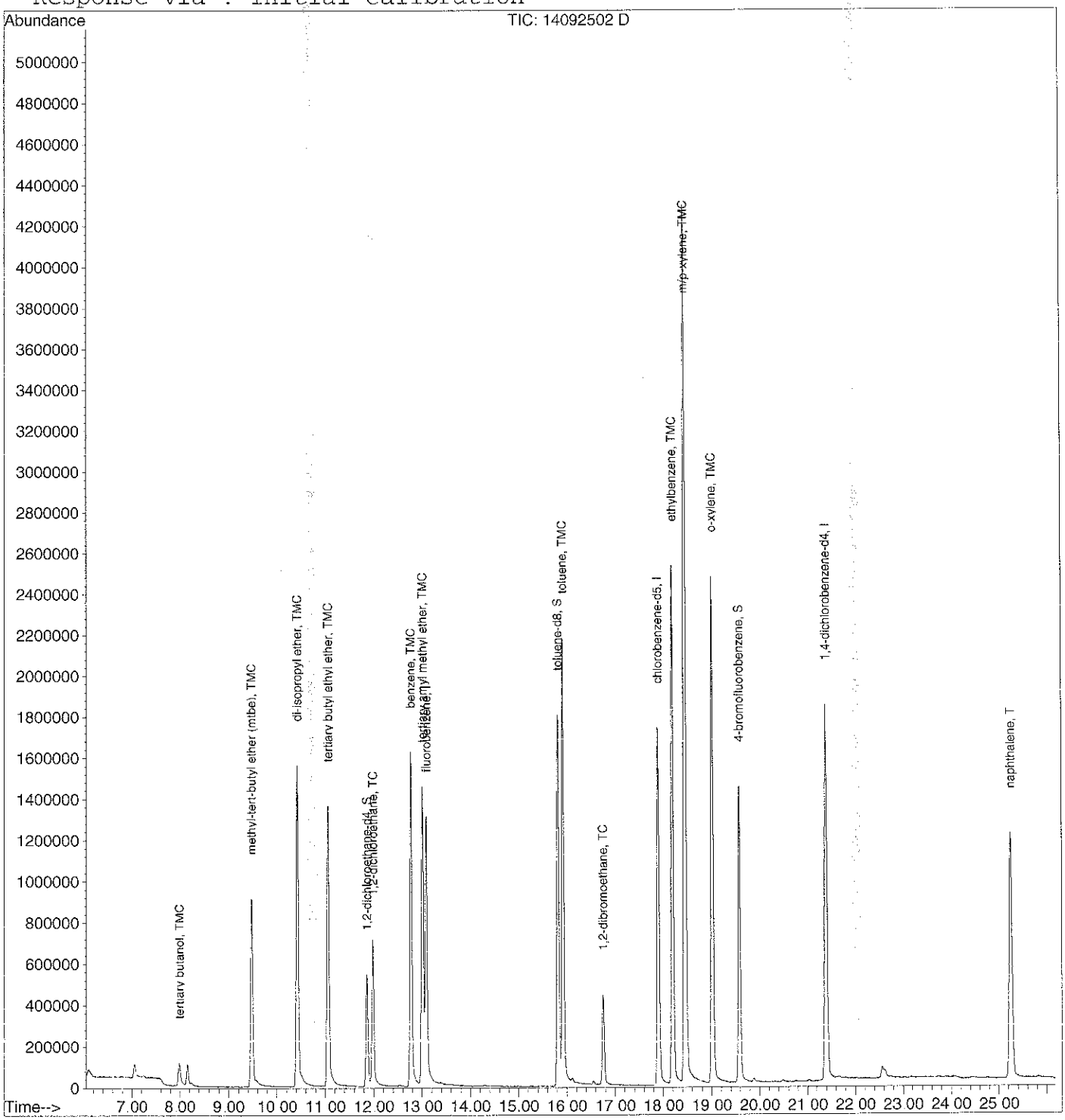
Volume Inj. : 5ml
Signal Phase :
Signal Info :



# Quantitation Report

Data File : D:\HPCHEM\1\DATA\092514V2\14092502.D Vial: 2
Acq On : 25 Sep 2014 16:40 Operator: R.L. JAMES
Sample : 50PPB 8260 OXY-STD Inst : GCMSVOA2
Misc : QC Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 25 17:06 2014 Quant Results File: OXYFV2.RES

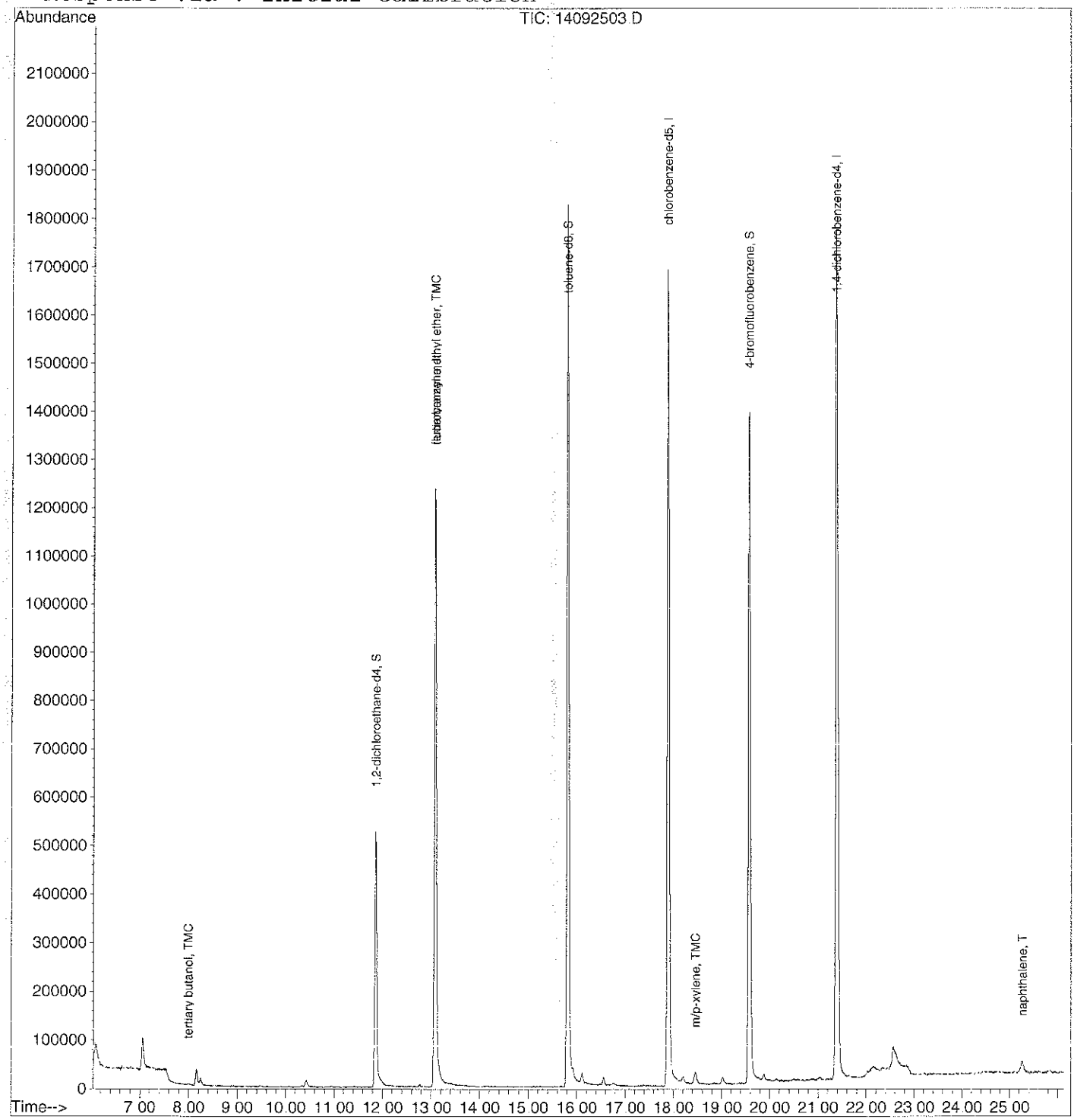
Method : D:\HPCHEM\1\METHODS\OXYFV2.M (RTE Integrator)
Title : GCMSVOA2-8260 Oxygenates
Last Update : Fri Sep 19 15:01:07 2014
Response via : Initial Calibration



Quantitation Report

Data File : D:\HPCHEM\1\DATA\092514V2\14092503.D Vial: 1
Acq On : 25 Sep 2014 17:48 Operator: R.L. JAMES
Sample : MB-BATCH Inst : GCMSVOA2
Misc : QC Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 25 18:14 2014 Quant Results File: OXYFV2.RES

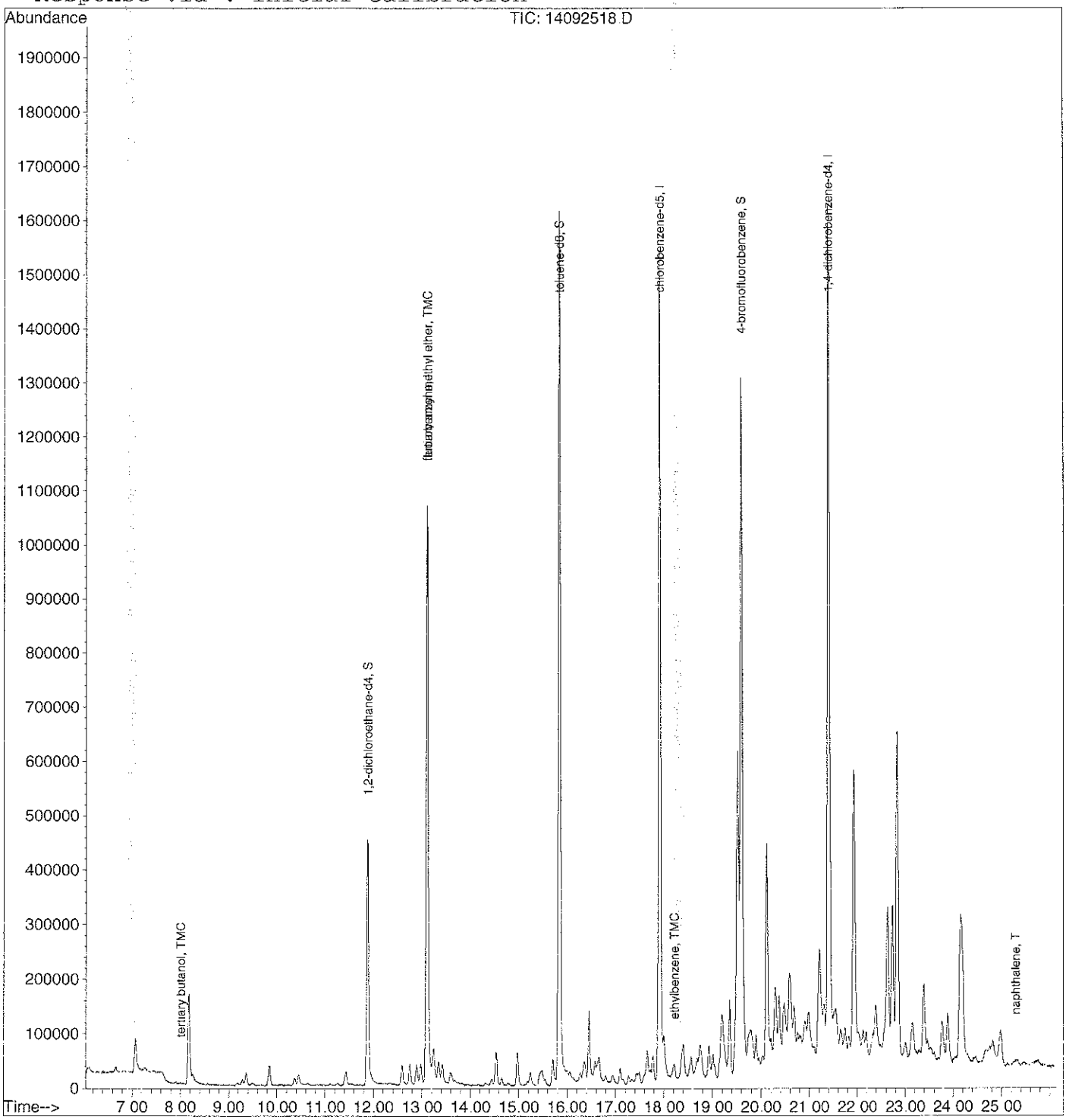
Method : D:\HPCHEM\1\METHODS\OXYFV2.M (RTE Integrator)
Title : GCMSVOA2-8260 Oxygenates
Last Update : Thu Sep 25 17:28:01 2014
Response via : Initial Calibration



# Quantitation Report

Data File : D:\HPCHEM\1\DATA\092514V2\14092518.D Vial: 16
Acq On : 26 Sep 2014 2:25 Operator: R.L. JAMES
Sample : 21062-01;TABER Inst : GCMSVOA2
Misc : MW-1 (500UL/5ML) 1:10 Multiplr: 10.00
MS Integration Params: rteint.p
Quant Time: Sep 26 2:51 2014 Quant Results File: OXYFV2.RES

Method : D:\HPCHEM\1\METHODS\OXYFV2.M (RTE Integrator)
Title : GCMSVOA2-8260 Oxygenates
Last Update : Thu Sep 25 17:28:01 2014
Response via : Initial Calibration

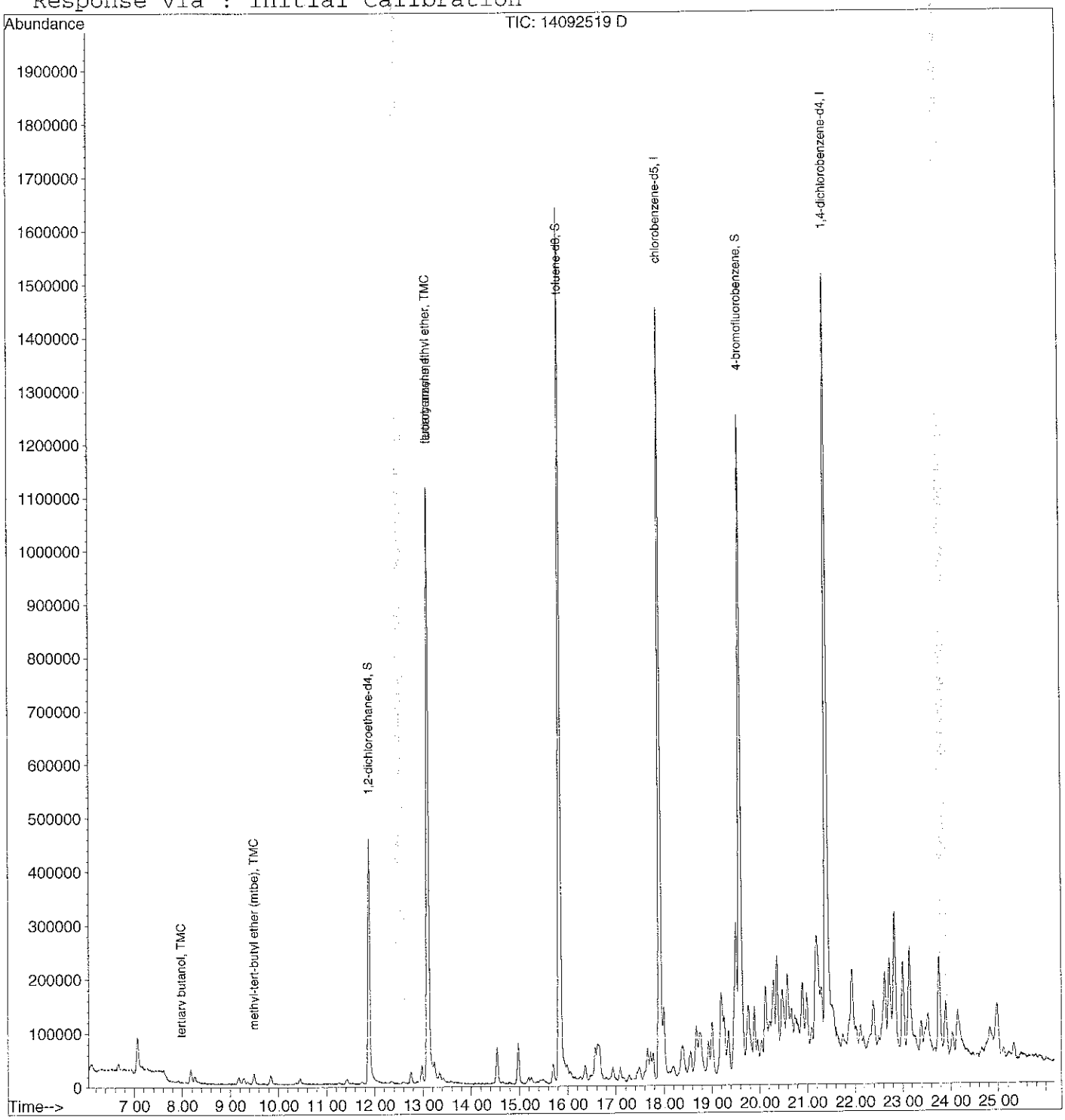


# Quantitation Report

Data File : D:\HPCHEM\1\DATA\092514V2\14092519.D
Acq On : 26 Sep 2014 2:59
Sample : 21062-02;TABER
Misc : MW-2 (5ML)
MS Integration Params: rteint.p
Quant Time: Sep 26 3:26 2014

Vial: 17
Operator: R.L. JAMES
Inst : GCMSVOA2
Multiplr: 1.00
Quant Results File: OXYFV2.RES

Method : D:\HPCHEM\1\METHODS\OXYFV2.M (RTE Integrator)
Title : GCMSVOA2-8260 Oxygenates
Last Update : Thu Sep 25 17:28:01 2014
Response via : Initial Calibration



Sparger Technology, Inc.
Environmental Laboratories

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

Tom Ballard
Taber Consultants
3911 West Capitol Ave.
West Sacramento, CA 95691

| | |
|---|---|
| Client | Taber Consultants |
| Workorder | 21223 NoPurge_CityOfParis |
| Received | 03/19/15 |

The samples were received in EPA specified containers. The samples were transported and received under documented chain of custody and stored at four (4) degrees C until analysis was performed.

Sparger Technology, Inc. ID Suffix Keys - These descriptors will follow the Sparger Technology, Inc. ID numbers and help identify the specific sample and clarify the report.

- DUP - Matrix Duplicate
- MS - Matrix Spike
- MSD - Matrix Spike Duplicate
- LCS - Lab Control Sample
- LCSD - Lab Control Sample Duplicate
- RPD - Relative Percent Difference
- QC - Additional Quality Control
- DIL - Results from a diluted sample
- ND - None Detected
- RL - Reporting Limit

Note: In an effort to conserve paper, the results are printed on both sides of the paper.

Ray James
Laboratory Director



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Tom Ballard
Taber Consultants
3911 West Capitol Ave.
West Sacramento, CA 95691

**Workorder** 21223

Enclosed are the results from samples received on March 19, 2015.

The requested analyses are listed below.

| SAMPLE | SAMPLE DESCRIPTION | DATE COLLECTED | TEST METHOD |
|---|---|---|---|
| 21223001 | MW-1, Water | 03/18/15 | 8015B TPHgas<br>8015B TPHss<br>8260B BTEX/FOC W |
| 21223002 | MW-2, Water | 03/18/15 | 8015B TPHgas<br>8015B TPHss<br>8260B BTEX/FOC W |
| 21223003 | MW-3, Water | 03/18/15 | 8015B TPHgas<br>8015B TPHss<br>8260B BTEX/FOC W |
| 21223004 | W-IND, Water | 03/18/15 | 8015B TPHgas<br>8015B TPHss<br>8260B BTEX/FOC W |

**Test Certificate of Analysis**

**Client ID** Taber Consultants
**Workorder #** 21223 **Workorder ID** NoPurge_CityOfParis

**Laboratory ID** 21223001 **Sampled** 03/18/15
**Sample ID** MW-1 **Received** 03/19/15
**Matrix** Water **Reported** 03/27/15

## 8015B TPH Gas

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **TPHgas**[1] | **8015B TPHgas** | **03/27/15** | **03/27/15** | **2400** | **250** | **ug/L** | **1:5** |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| Trifluorotoluene | 21.5 ug/L | 108 % | (65 - 135) |

1 - Non-typical TPH pattern present in gas range.

**Laboratory ID** 21223001 **Sampled** 03/18/15
**Sample ID** MW-1 **Received** 03/19/15
**Matrix** Water **Reported** 03/27/15

## 8015M_SS

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **Stoddard Solvent** | **8015B TPHss** | **03/21/15** | **03/25/15** | **8500** | **50** | **ug/L** | **1:1** |

**Laboratory ID** 21223001 **Sampled** 03/18/15
**Sample ID** MW-1 **Received** 03/19/15
**Matrix** Water **Reported** 03/27/15

## 8260B BTEX/Oxygenates

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **Methyl-tert-butyl-ether** | **8260B BTEX/FOC** | **03/20/15** | **03/20/15** | **1.4** | **1.0** | **ug/L** | **1:2** |
| Benzene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 2.0 | ug/L | 1:2 |
| Toluene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 2.0 | ug/L | 1:2 |
| Ethylbenzene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 2.0 | ug/L | 1:2 |
| Xylene,Total | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 2.0 | ug/L | 1:2 |
| Naphthalene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 4.0 | ug/L | 1:2 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 48 ug/L | 96 % | (65 - 135) |


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**Test Certificate of Analysis**

**Client ID** Taber Consultants
**Workorder #** 21223 **Workorder ID** NoPurge_CityOfParis

**Laboratory ID** 21223002 **Sampled** 03/18/15
**Sample ID** MW-2 **Received** 03/19/15
**Matrix** Water **Reported** 03/27/15

## 8015B TPH Gas

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **TPHgas**[1] | **8015B TPHgas** | **03/27/15** | **03/27/15** | **180** | **50** | **ug/L** | **1:1** |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| Trifluorotoluene | 20 ug/L | 100 % | (65 - 135) |

**Laboratory ID** 21223002 **Sampled** 03/18/15
**Sample ID** MW-2 **Received** 03/19/15
**Matrix** Water **Reported** 03/27/15

## 8015M_SS

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **Stoddard Solvent** | **8015B TPHss** | **03/21/15** | **03/25/15** | **130** | **50** | **ug/L** | **1:1** |

**Laboratory ID** 21223002 **Sampled** 03/18/15
**Sample ID** MW-2 **Received** 03/19/15
**Matrix** Water **Reported** 03/27/15

## 8260B BTEX/Oxygenates

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **Methyl-tert-butyl-ether** | **8260B BTEX/FOC** | **03/20/15** | **03/20/15** | **0.7** | **0.50** | **ug/L** | **1:1** |
| Benzene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 1.0 | ug/L | 1:1 |
| Toluene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 1.0 | ug/L | 1:1 |
| Ethylbenzene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 1.0 | ug/L | 1:1 |
| Xylene,Total | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 1.0 | ug/L | 1:1 |
| Naphthalene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 2.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 56 ug/L | 112 % | (65 - 135) |

**Laboratory ID** 21223003 **Sampled** 03/18/15
**Sample ID** MW-3 **Received** 03/19/15
**Matrix** Water **Reported** 03/27/15

## 8015B TPH Gas

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **TPHgas**[1] | **8015B TPHgas** | **03/27/15** | **03/27/15** | **1900** | **50** | **ug/L** | **1:1** |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| Trifluorotoluene | 21 ug/L | 105 % | (65 - 135) |


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**Test Certificate of Analysis**

**Client ID** Taber Consultants
**Workorder #** 21223 **Workorder ID** NoPurge_CityOfParis

**Laboratory ID** 21223003 **Sampled** 03/18/15
**Sample ID** MW-3 **Received** 03/19/15
**Matrix** Water **Reported** 03/27/15

**8015M_SS**

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **Stoddard Solvent** | **8015B TPHss** | **03/21/15** | **03/25/15** | **1300** | **50** | **ug/L** | **1:1** |

**Laboratory ID** 21223003 **Sampled** 03/18/15
**Sample ID** MW-3 **Received** 03/19/15
**Matrix** Water **Reported** 03/27/15

**8260B BTEX/Oxygenates**

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **Methyl-tert-butyl-ether** | **8260B BTEX/FOC** | **03/20/15** | **03/20/15** | **3.1** | **1.0** | **ug/L** | **1:2** |
| Benzene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 2.0 | ug/L | 1:2 |
| Toluene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 2.0 | ug/L | 1:2 |
| Ethylbenzene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 2.0 | ug/L | 1:2 |
| Xylene,Total | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 2.0 | ug/L | 1:2 |
| Naphthalene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 4.0 | ug/L | 1:2 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 54 ug/L | 108 % | (65 - 135) |

**Laboratory ID** 21223004 **Sampled** 03/18/15
**Sample ID** W-IND **Received** 03/19/15
**Matrix** Water **Reported** 03/27/15

**8015B TPH Gas**

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| TPHgas | 8015B TPHgas | 03/27/15 | 03/27/15 | ND | 50 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| Trifluorotoluene | 21 ug/L | 105 % | (65 - 135) |

**Laboratory ID** 21223004 **Sampled** 03/18/15
**Sample ID** W-IND **Received** 03/19/15
**Matrix** Water **Reported** 03/27/15

**8015M_SS**

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Stoddard Solvent | 8015B TPHss | 03/21/15 | 03/25/15 | ND | 50 | ug/L | 1:1 |


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**Test Certificate of Analysis**

**Client ID** Taber Consultants
**Workorder #** 21223 **Workorder ID** NoPurge_CityOfParis

**Laboratory ID** 21223004 **Sampled** 03/18/15
**Sample ID** W-IND **Received** 03/19/15
**Matrix** Water **Reported** 03/27/15

## 8260B BTEX/Oxygenates

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Methyl-tert-butyl-ether | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 0.50 | ug/L | 1:1 |
| Benzene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 1.0 | ug/L | 1:1 |
| Toluene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 1.0 | ug/L | 1:1 |
| Ethylbenzene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 1.0 | ug/L | 1:1 |
| Xylene,Total | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 1.0 | ug/L | 1:1 |
| Naphthalene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 2.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 55 ug/L | 110 % | (65 - 135) |


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## Method Blank Report

**Client ID** Taber Consultants **Sample ID** MB for HBN 490070 [SGXV/3007]
**Laboratory ID** 114231 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Stoddard Solvent | 8015B TPHss | 03/21/15 | 03/25/15 | ND | 50 | ug/L | 1:1 |

## Lab Control Sample Report

**Client ID** Taber Consultants **Sample ID** LCS for HBN 490070 [SGXV/3007]
**Laboratory ID** 114232 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Stoddard Solvent | 8015B TPHss | 03/21/15 | 03/25/15 | 912 | 50 | ug/L | 1:1 |

## Lab Control Sample Duplicate Report

**Client ID** Taber Consultants **Sample ID** LCSD for HBN 490070 [SGXV/3007
**Laboratory ID** 114233 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Stoddard Solvent | 8015B TPHss | 03/21/15 | 03/25/15 | 904 | 50 | ug/L | 1:1 |

## Method Blank Report

**Client ID** Taber Consultants **Sample ID** MB for HBN 490570 [VGXV/3325]
**Laboratory ID** 114289 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| TPHgas | 8015B TPHgas | 03/27/15 | 03/27/15 | ND | 50 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| Trifluorotoluene | 22.5 ug/L | 112 % | (65 - 135) |

## Lab Control Sample Report

**Client ID** Taber Consultants **Sample ID** LCS for HBN 490570 [VGXV/3325]
**Laboratory ID** 114290 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| TPHgas | 8015B TPHgas | 03/27/15 | 03/27/15 | 984 | 50 | ug/L | 1:1 |


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## Lab Control Sample Duplicate Report

**Client ID** Taber Consultants **Sample ID** LCSD for HBN 490570 [VGXV/3325
**Laboratory ID** 114291 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| TPHgas | 8015B TPHgas | 03/27/15 | 03/27/15 | 1040 | 50 | ug/L | 1:1 |

## Matrix Spike Report

**Client ID** Taber Consultants **Sample ID** MS for HBN 490570 [VGXV/3325]
**Laboratory ID** 114292 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| TPHgas | 8015B TPHgas | 03/27/15 | 03/27/15 | 1200 | 50 | ug/L | 1:1 |

## Matrix Spike Duplicate Report

**Client ID** Taber Consultants **Sample ID** MSD for HBN 490570 [VGXV/3325]
**Laboratory ID** 114293 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| TPHgas | 8015B TPHgas | 03/27/15 | 03/27/15 | 1240 | 50 | ug/L | 1:1 |

## Method Blank Report

**Client ID** Taber Consultants **Sample ID** MB for HBN 490573 [VMXV/3684]
**Laboratory ID** 114294 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Methyl-tert-butyl-ether | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 0.50 | ug/L | 1:1 |
| Benzene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 1.0 | ug/L | 1:1 |
| Toluene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 1.0 | ug/L | 1:1 |
| Ethylbenzene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 1.0 | ug/L | 1:1 |
| Xylene,Total | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | ND | 1.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 54 ug/L | 108 % | (65 - 135) |

## Lab Control Sample Report

**Client ID** Taber Consultants **Sample ID** LCS for HBN 490573 [VMXV/3684]
**Laboratory ID** 114295 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Methyl-tert-butyl-ether | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | 48 | 0.50 | ug/L | 1:1 |
| Benzene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | 42 | 1.0 | ug/L | 1:1 |


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## Lab Control Sample Report

**Client ID** Taber Consultants **Sample ID** LCS for HBN 490573 [VMXV/3684]
**Laboratory ID** 114295 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **(continued)** | | | | | | | |
| Toluene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | 43 | 1.0 | ug/L | 1:1 |
| Ethylbenzene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | 40 | 1.0 | ug/L | 1:1 |
| Xylene,Total | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | 116 | 1.0 | ug/L | 1:1 |

## Lab Control Sample Duplicate Report

**Client ID** Taber Consultants **Sample ID** LCSD for HBN 490573 [VMXV/3684
**Laboratory ID** 114296 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Methyl-tert-butyl-ether | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | 44 | 0.50 | ug/L | 1:1 |
| Benzene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | 38 | 1.0 | ug/L | 1:1 |
| Toluene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | 39 | 1.0 | ug/L | 1:1 |
| Ethylbenzene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | 36 | 1.0 | ug/L | 1:1 |
| Xylene,Total | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | 104 | 1.0 | ug/L | 1:1 |

## Matrix Spike Report

**Client ID** Taber Consultants **Sample ID** MS for HBN 490573 [VMXV/3684]
**Laboratory ID** 114297 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Methyl-tert-butyl-ether | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | 49 | 0.50 | ug/L | 1:1 |
| Benzene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | 43 | 1.0 | ug/L | 1:1 |
| Toluene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | 44 | 1.0 | ug/L | 1:1 |
| Ethylbenzene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | 41 | 1.0 | ug/L | 1:1 |
| Xylene,Total | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | 118 | 1.0 | ug/L | 1:1 |

## Matrix Spike Duplicate Report

**Client ID** Taber Consultants **Sample ID** MSD for HBN 490573 [VMXV/3684]
**Laboratory ID** 114298 **Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Methyl-tert-butyl-ether | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | 46 | 0.50 | ug/L | 1:1 |
| Benzene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | 40 | 1.0 | ug/L | 1:1 |
| Toluene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | 41 | 1.0 | ug/L | 1:1 |
| Ethylbenzene | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | 38 | 1.0 | ug/L | 1:1 |


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**Matrix Spike Duplicate Report**

| | | | |
|---|---|---|---|
| **Client ID** | Taber Consultants | **Sample ID** | MSD for HBN 490573 [VMXV/3684] |
| **Laboratory ID** | 114298 | **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **(continued)** | | | | | | | |
| Xylene,Total | 8260B BTEX/FOC | 03/20/15 | 03/20/15 | 110 | 1.0 | ug/L | 1:1 |


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## QC SUMMARY

| | | | |
|---|---|---|---|
| **Client ID** | Taber Consultants | **Original** | 21223004 |
| **QC Batch** | VGX 3445 | **Samples** | Matrix Spike [114292] |
| **Matrix** | Water | | Matrix Spike Duplicate [114293] |

| Parameter | Spike %Recovery | Spike Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| TPHgas | 120 | 124 | (65-135) | 3.3 | (20 MAX) |

| | | | |
|---|---|---|---|
| **Client ID** | Taber Consultants | **Original** | 21223004 |
| **QC Batch** | VMX 3721 | **Samples** | Matrix Spike [114297] |
| **Matrix** | Water | | Matrix Spike Duplicate [114298] |

| Parameter | Spike %Recovery | Spike Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| Methyl-tert-butyl-ether | 98 | 92 | (65-135) | 6.3 | (20 MAX) |
| Benzene | 86 | 80 | (65-135) | 7.2 | (20 MAX) |
| Toluene | 88 | 82 | (65-135) | 7.1 | (20 MAX) |
| Ethylbenzene | 82 | 76 | (65-135) | 7.6 | (20 MAX) |
| Xylene,Total | 79 | 73 | (65-135) | 7.9 | (20 MAX) |

| | | | |
|---|---|---|---|
| **Client ID** | Taber Consultants | **Samples** | Lab Control Sample [114232] |
| **QC Batch** | SGX 3029 | | Lab Control Sample Duplicate [114233] |
| **Matrix** | Water | | |

| Parameter | Check %Recovery | Check Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| Stoddard Solvent | 91 | 90 | (65-135) | 1.1 | (20 MAX) |

| | | | |
|---|---|---|---|
| **Client ID** | Taber Consultants | **Samples** | Lab Control Sample [114290] |
| **QC Batch** | VGX 3445 | | Lab Control Sample Duplicate [114291] |
| **Matrix** | Water | | |

| Parameter | Check %Recovery | Check Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| TPHgas | 98 | 104 | (65-135) | 5.9 | (20 MAX) |

| | | | |
|---|---|---|---|
| **Client ID** | Taber Consultants | **Samples** | Lab Control Sample [114295] |
| **QC Batch** | VMX 3721 | | Lab Control Sample Duplicate [114296] |
| **Matrix** | Water | | |

| Parameter | Check %Recovery | Check Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| Methyl-tert-butyl-ether | 96 | 88 | (65-135) | 8.7 | (20 MAX) |
| Benzene | 84 | 76 | (65-135) | 10 | (20 MAX) |
| Toluene | 86 | 78 | (65-135) | 9.8 | (20 MAX) |


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## QC SUMMARY

**Client ID** Taber Consultants
**QC Batch** VMX 3721
**Matrix** Water

**Samples** Lab Control Sample [114295]
Lab Control Sample Duplicate [114296]
**(continued)**

| Parameter | Check %Recovery | Check Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| Ethylbenzene | 80 | 72 | (65-135) | 11 | (20 MAX) |
| Xylene,Total | 77 | 69 | (65-135) | 11 | (20 MAX) |


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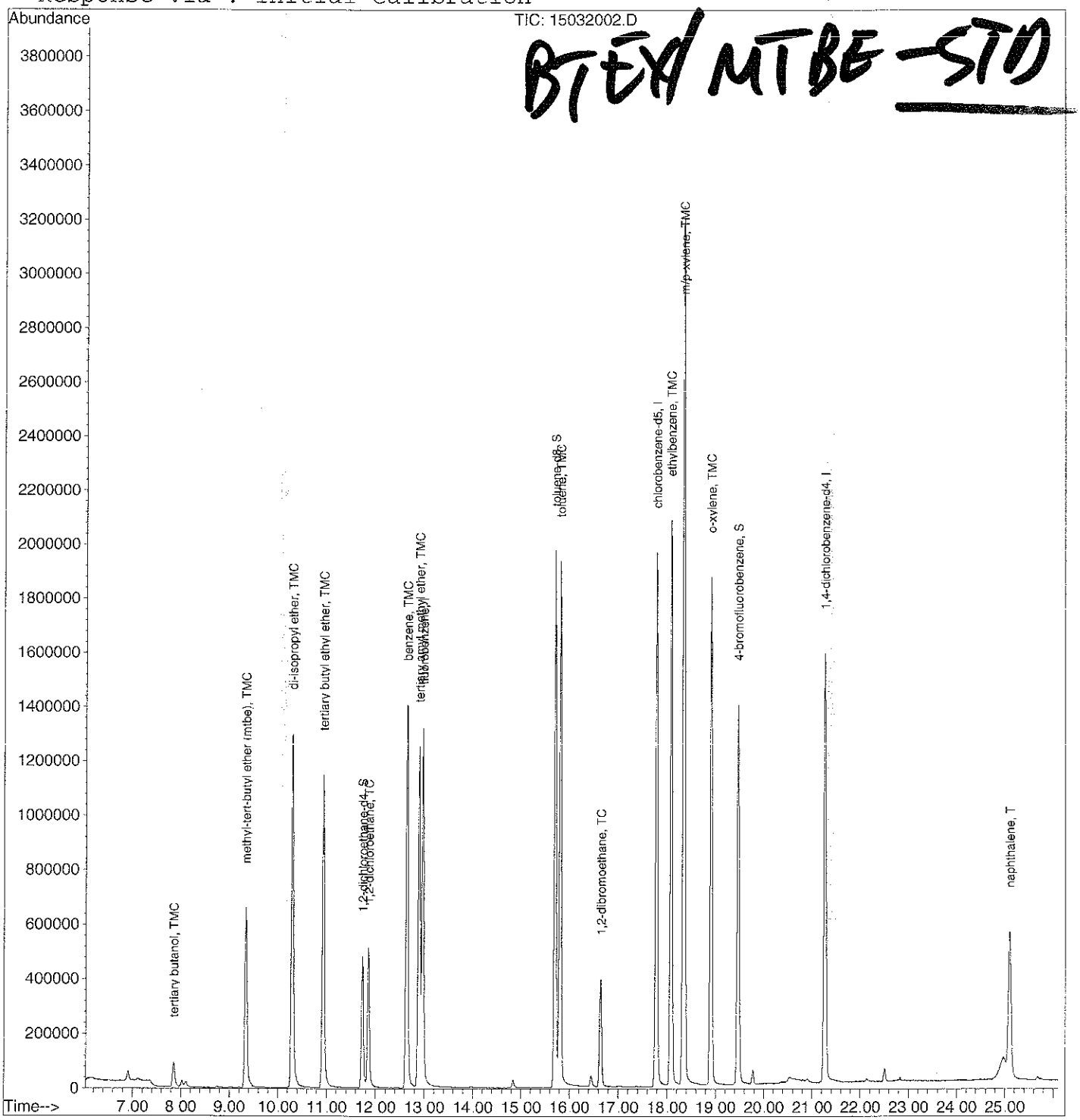
# Quantitation Report

Data File : D:\HPCHEM\1\DATA\032015V2\15032002.D Vial: 1
Acq On : 20 Mar 2015 9:19 Operator: R.L. JAMES
Sample : 50PPB 8260 OXY-STD Inst : GCMSVOA2
Misc : QC Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 20 9:50 2015 Quant Results File: OXYFV2.RES

Method : D:\HPCHEM\1\METHODS\OXYFV2.M (RTE Integrator)
Title : GCMSVOA2-8260 Oxygenates
Last Update : Tue Apr 14 06:03:48 2015
Response via : Initial Calibration

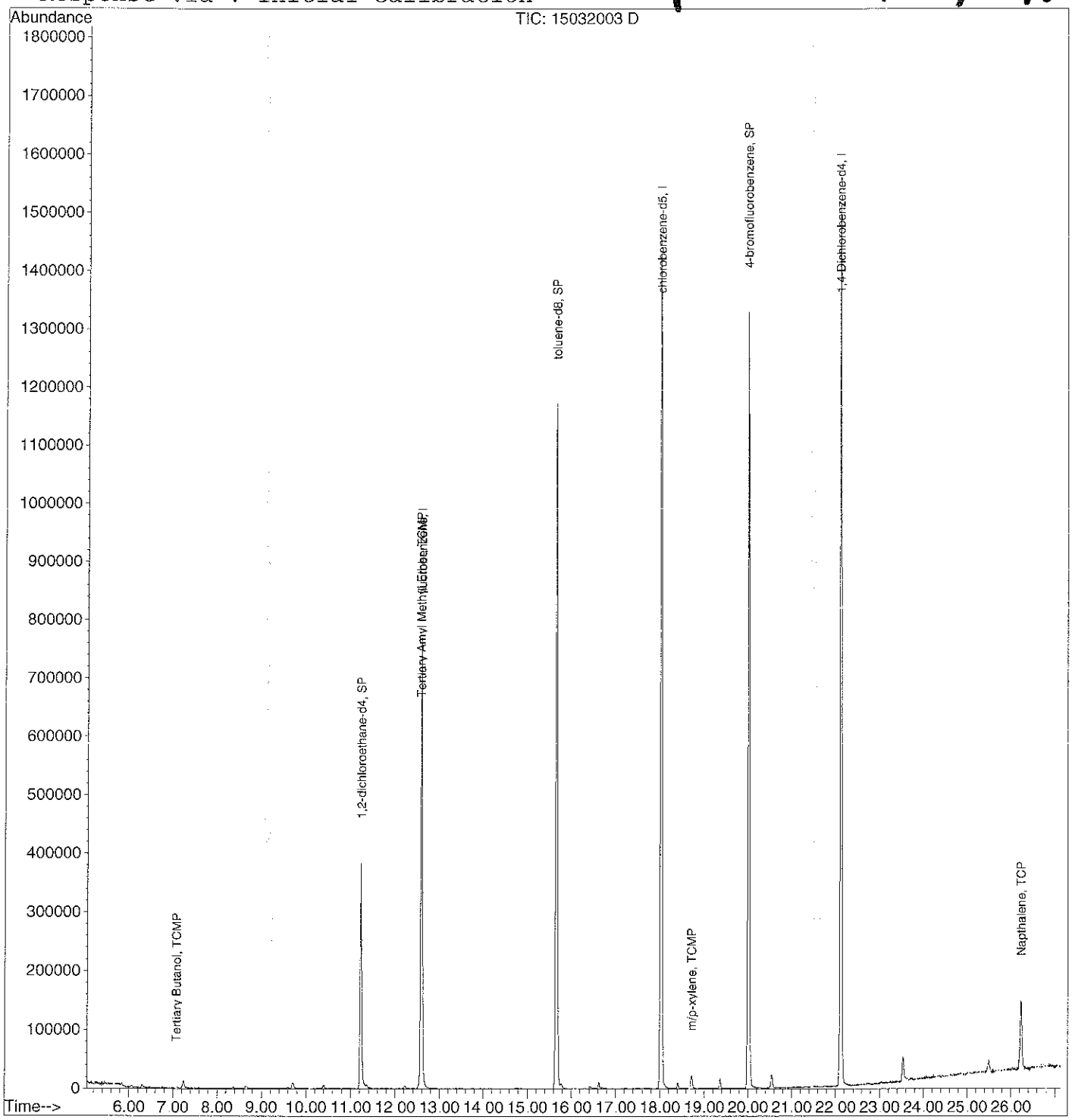


# Quantitation Report

Data File : C:\HPCHEM\1\DATA\032015V1\15032003.D  Vial: 1
Acq On : 20 Mar 2015 14:28  Operator: R.L. JAMES
Sample : MB-BATCH  Inst : GCMSVOA1
Misc : QC  Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 20 14:55 2015  Quant Results File: OXYNAP.RES

Method : C:\HPCHEM\1\METHODS\OXYNAP.M (RTE Integrator)
Title : GCMS-VOA#1-OXYGENATES
Last Update : Fri Feb 13 09:16:12 2015
Response via : Initial Calibration

BLANK - BTEX/MTBE

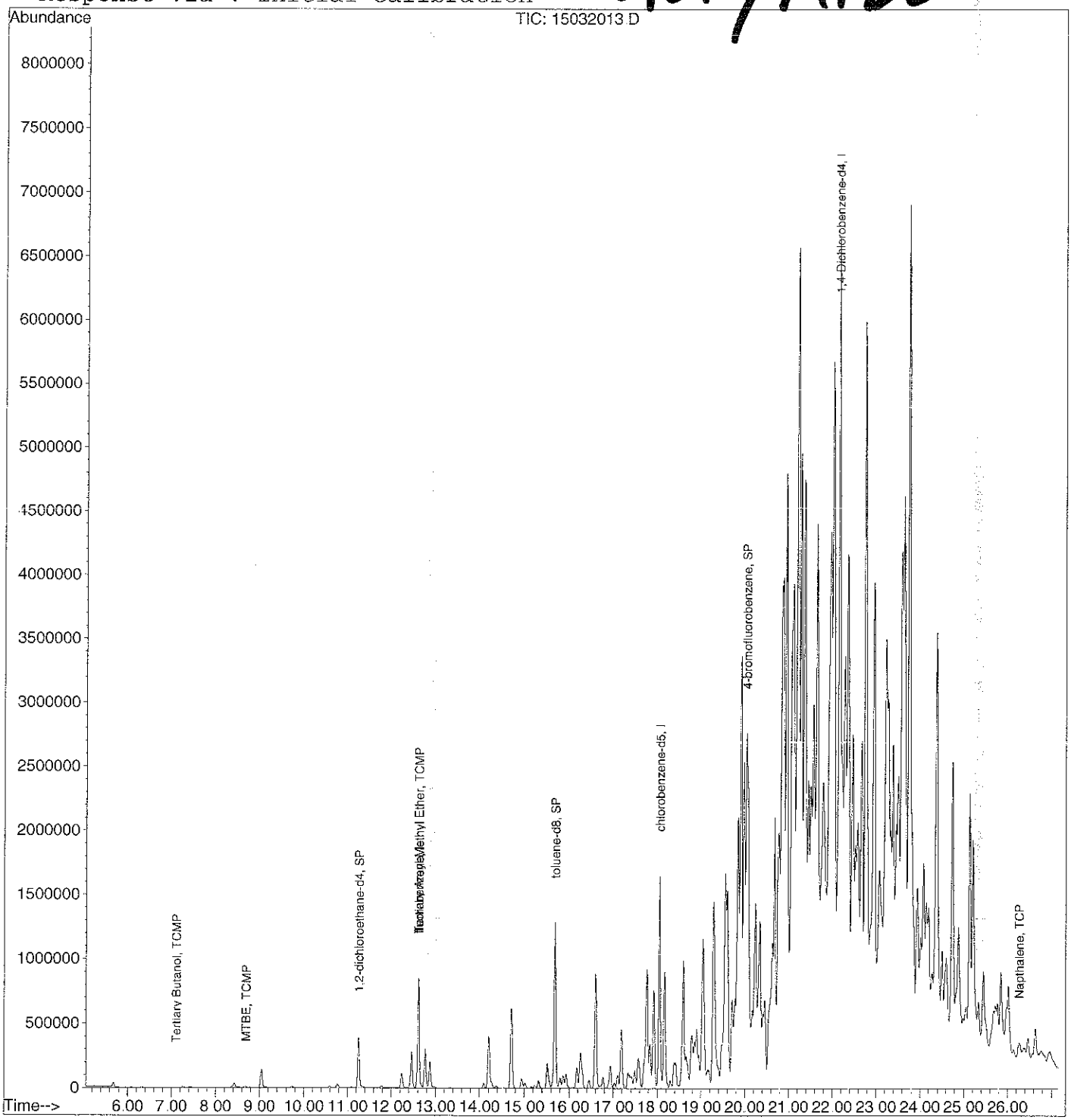


# Quantitation Report

Data File : C:\HPCHEM\1\DATA\032015V1\15032013.D  Vial: 8
Acq On : 20 Mar 2015 20:08  Operator: R.L. JAMES
Sample : 21223-01R1;TABER  Inst : GCMSVOA1
Misc : MW-1 (500UL/5ML) 1:2  Multiplr: 2.00
MS Integration Params: rteint.p
Quant Time: Mar 20 20:35 2015  Quant Results File: OXYNAP.RES

Method : C:\HPCHEM\1\METHODS\OXYNAP.M (RTE Integrator)
Title : GCMS-VOA#1-OXYGENATES
Last Update : Fri Mar 20 14:05:24 2015
Response via : Initial Calibration

BTEX/MTBE

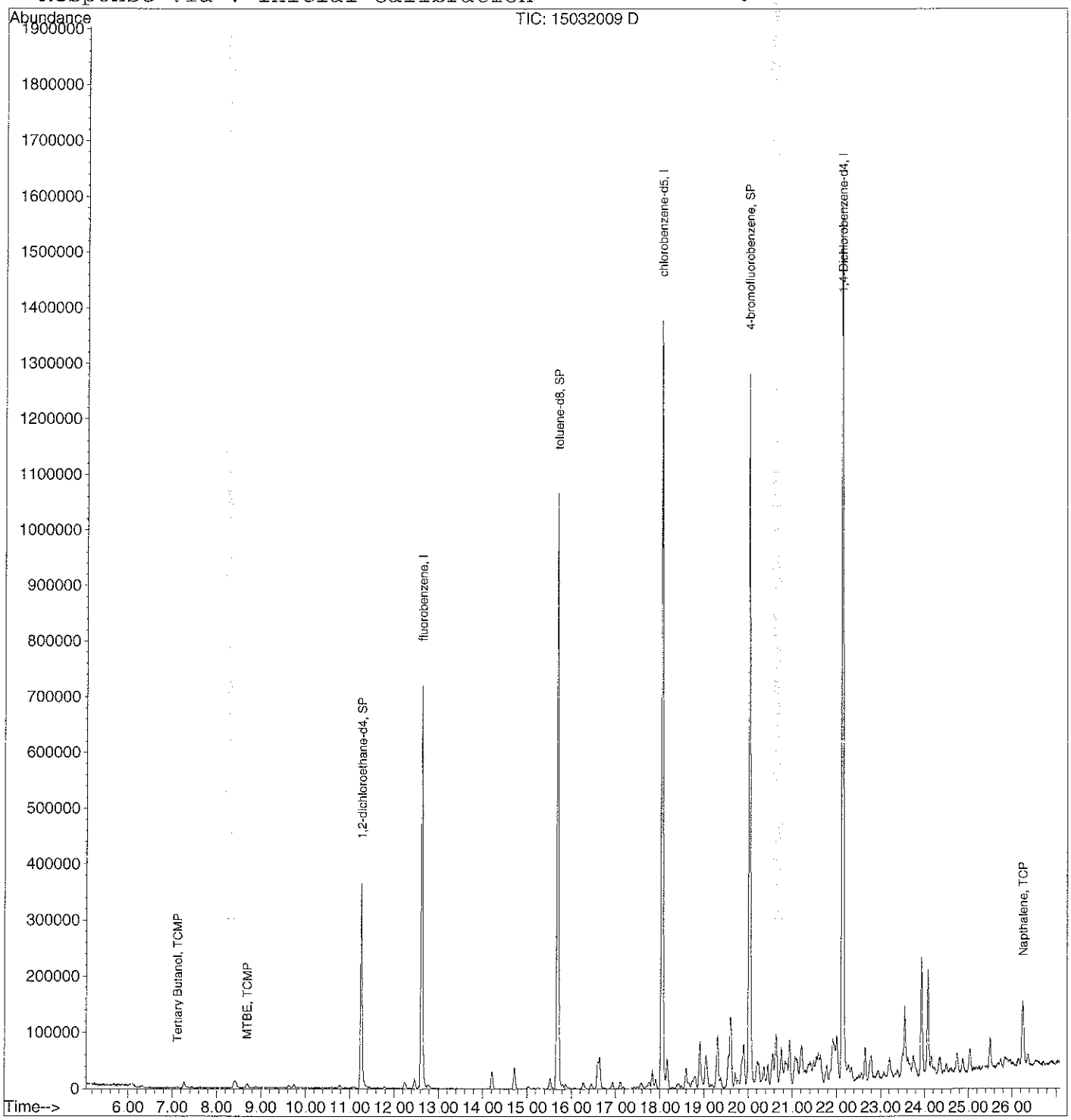


# Quantitation Report

Data File : C:\HPCHEM\1\DATA\032015V1\15032009.D  Vial: 4
Acq On : 20 Mar 2015 17:51  Operator: R.L. JAMES
Sample : 21223-02;TABER  Inst : GCMSVOA1
Misc : MW-2 (5ML)  Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 20 18:18 2015  Quant Results File: OXYNAP.RES

Method : C:\HPCHEM\1\METHODS\OXYNAP.M (RTE Integrator)
Title : GCMS-VOA#1-OXYGENATES
Last Update : Fri Mar 20 14:05:24 2015
Response via : Initial Calibration

BTEX/MTBE

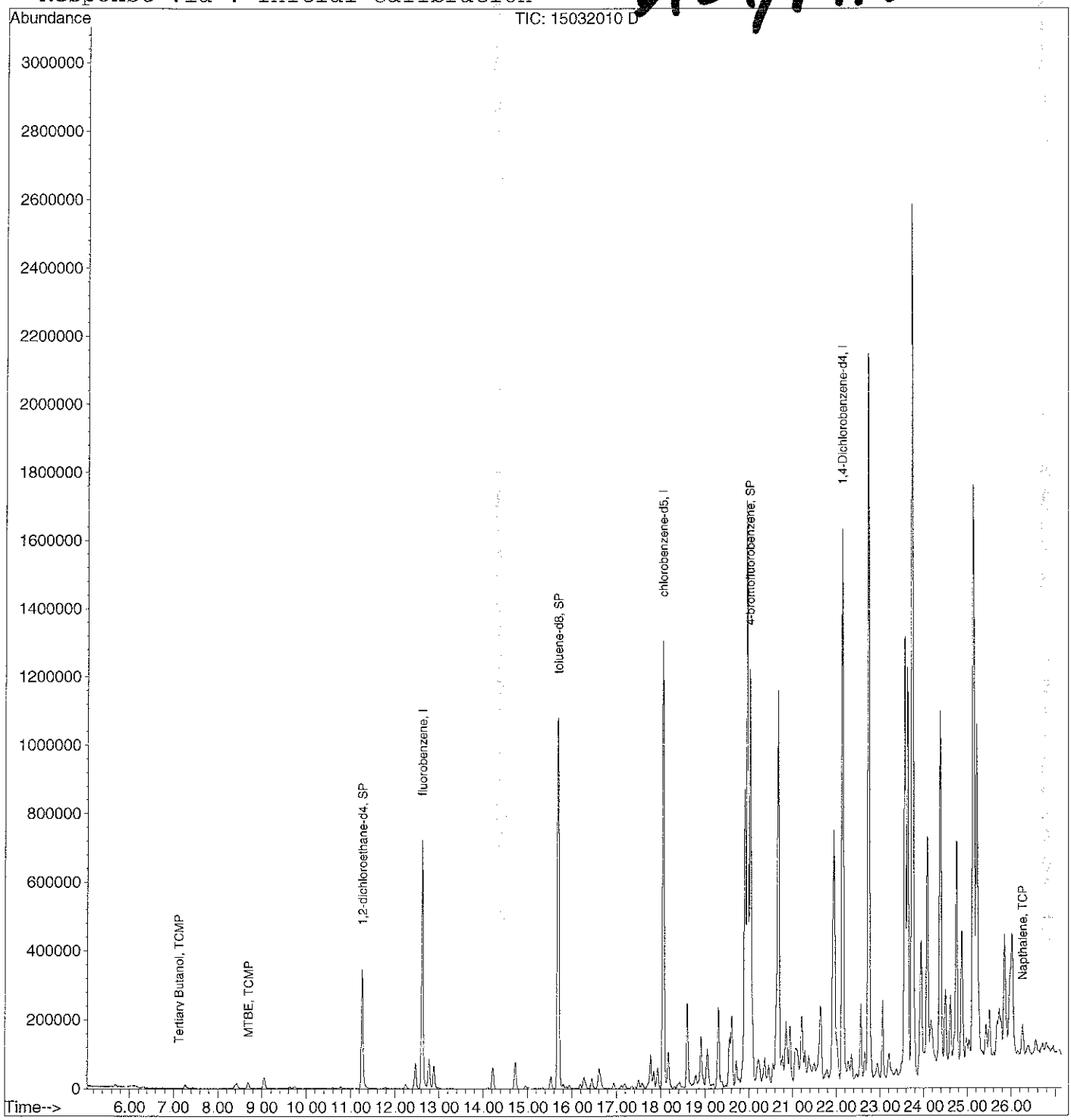


# Quantitation Report

Data File : C:\HPCHEM\1\DATA\032015V1\15032010.D  Vial: 5
Acq On : 20 Mar 2015 18:25  Operator: R.L. JAMES
Sample : 21223-03;TABER  Inst : GCMSVOA1
Misc : MW-3 (2.5ML/5ML) 1:2  Multiplr: 2.00
MS Integration Params: rteint.p
Quant Time: Mar 20 18:52 2015  Quant Results File: OXYNAP.RES

Method : C:\HPCHEM\1\METHODS\OXYNAP.M (RTE Integrator)
Title : GCMS-VOA#1-OXYGENATES
Last Update : Fri Mar 20 14:05:24 2015
Response via : Initial Calibration

BTEX/MTBE

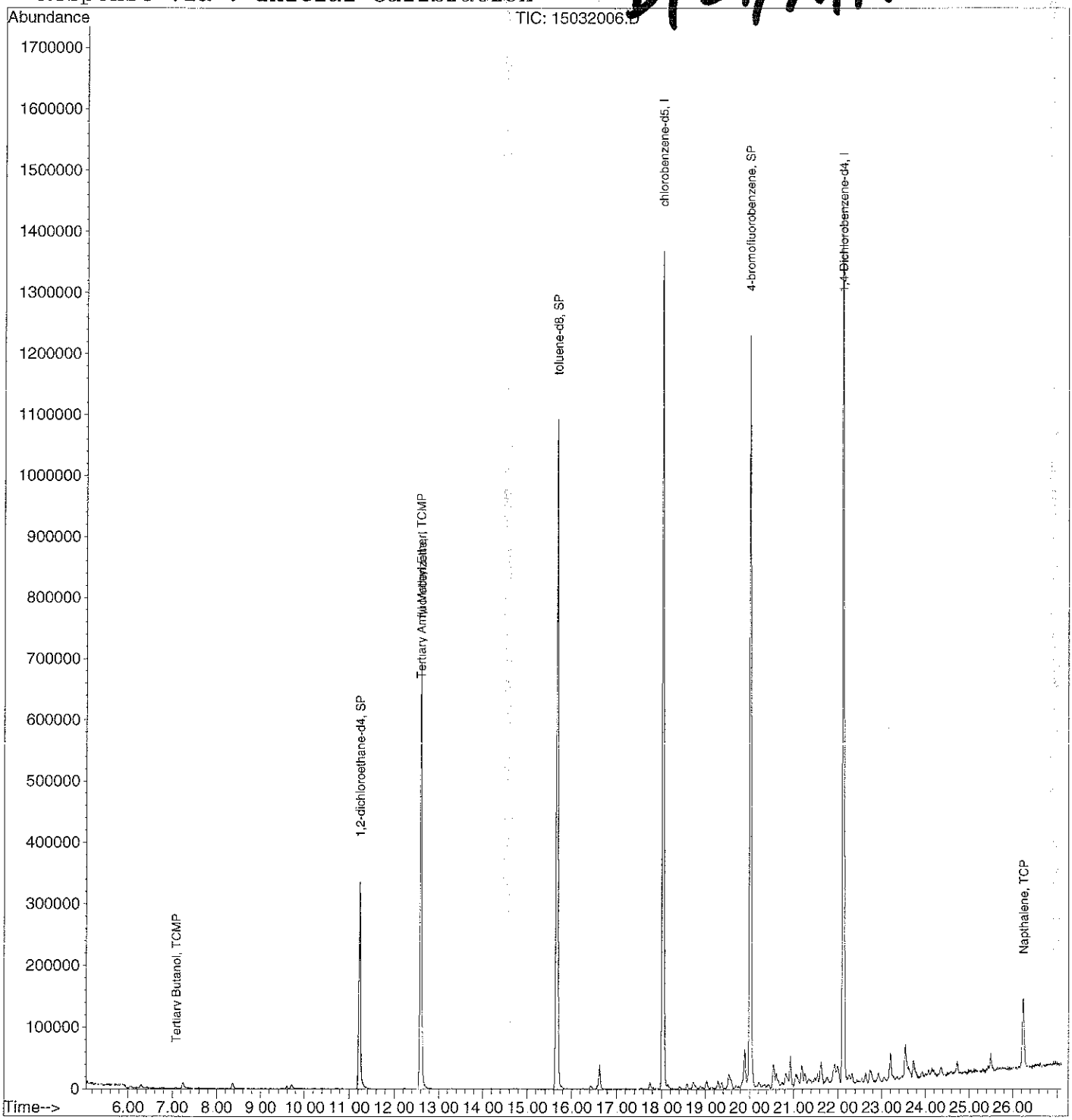


# Quantitation Report

Data File : C:\HPCHEM\1\DATA\032015V1\15032006.D  Vial: 1
Acq On : 20 Mar 2015 16:11  Operator: R.L. JAMES
Sample : 21223-04;TABER  Inst : GCMSVOA1
Misc : W-IND (5ML)  Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 20 16:38 2015  Quant Results File: OXYNAP.RES

Method : C:\HPCHEM\1\METHODS\OXYNAP.M (RTE Integrator)
Title : GCMS-VOA#1-OXYGENATES
Last Update : Fri Mar 20 14:05:24 2015
Response via : Initial Calibration

BTEX/MTBE



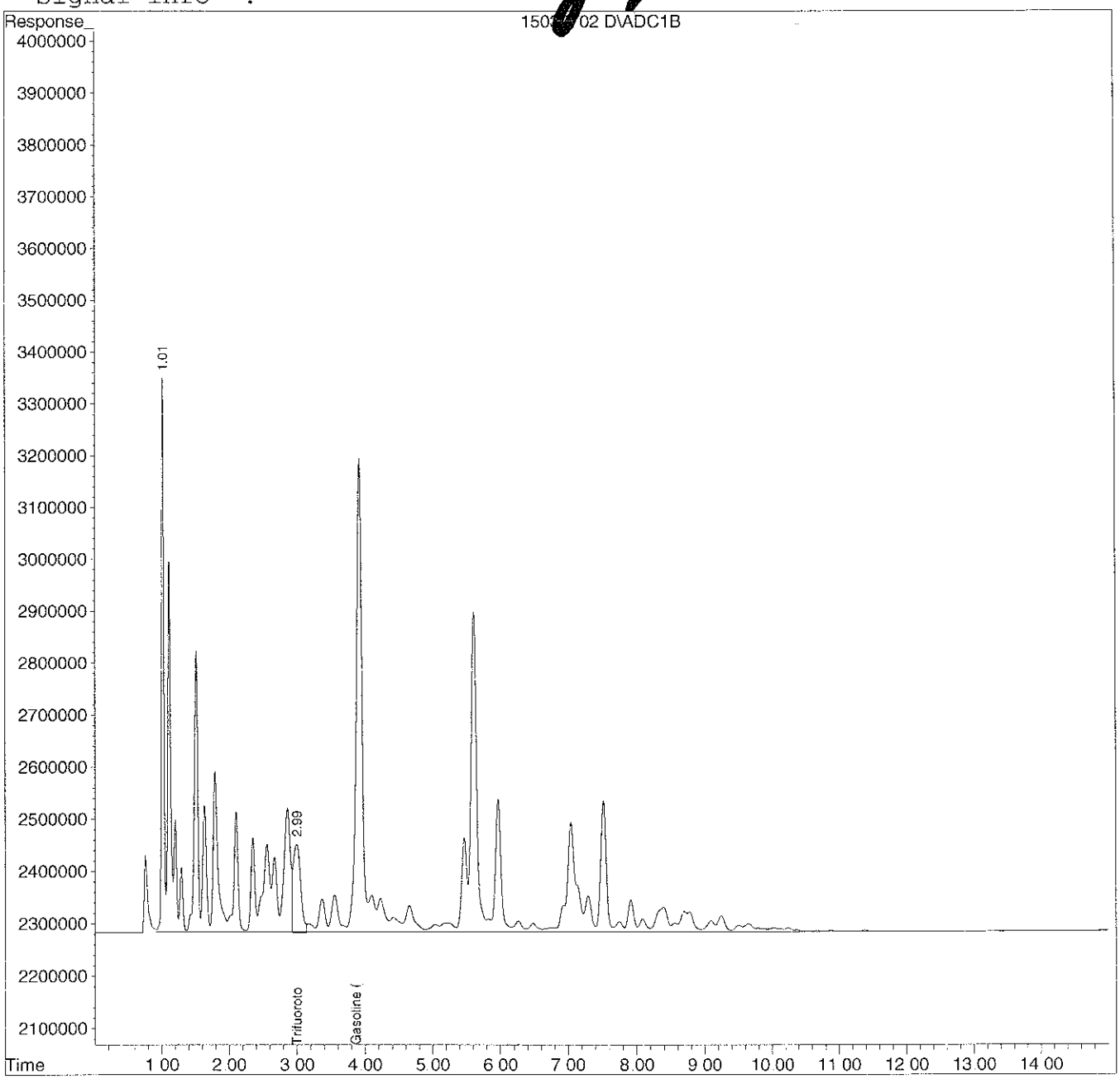
# Quantitation Report

Data File : D:\HPCHEM\1\DATA\032715V4\15032702.D Vial: 2
Acq On : 27 Mar 2015 8:52 Operator: R.L. JAMES
Sample : 1.0PPM TPHgas Inst : VAR-4
Misc : P&T (5ML) Multiplr: 0.20
IntFile : TFT1.E
Quant Time: Mar 27 9:07 2015 Quant Results File: TPHGV4.RES

Quant Method : D:\HPCHEM\1\METHODS\TPHGV4.M (Chemstation Integrator)
Title : GC TPH Method
Last Update : Sat Feb 14 06:25:05 2015
Response via : Multiple Level Calibration
DataAcq Meth : TPHGV4.M

TPHgas -ST

Volume Inj. : 5ml
Signal Phase :
Signal Info :



Quantitation Report

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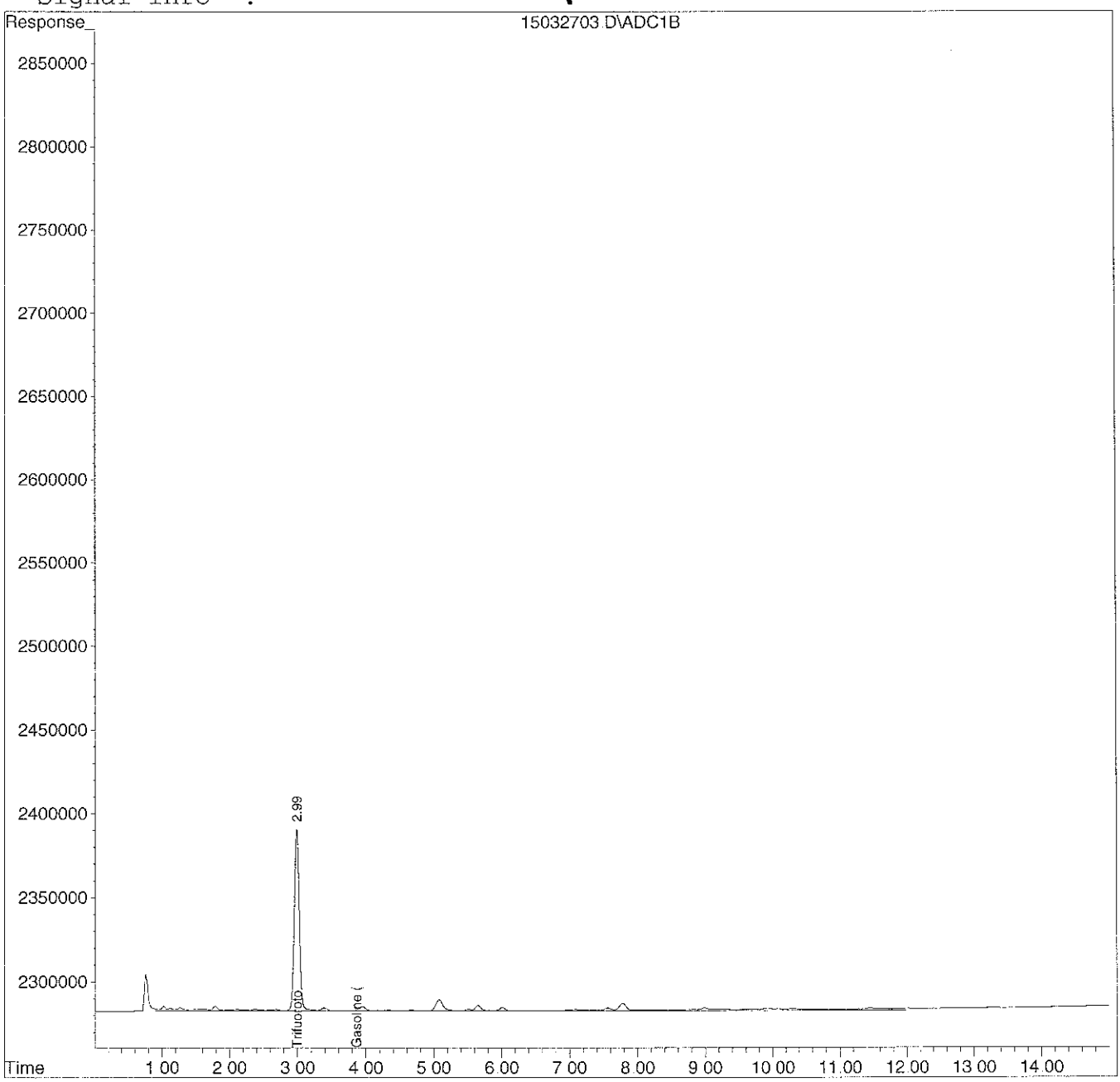
Data File : D:\HPCHEM\1\DATA\032715V4\15032703.D Vial: 1
Acq On : 27 Mar 2015 10:11 Operator: R.L. JAMES
Sample : MB-BATCH Inst : VAR-4
Misc : QC-BATCH Multiplr: 0.20
IntFile : TFT1.E
Quant Time: Mar 27 10:26 2015 Quant Results File: TPHGV4.RES

Quant Method : D:\HPCHEM\1\METHODS\TPHGV4.M (Chemstation Integrator)
Title : GC TPH Method
Last Update : Sat Feb 14 06:25:05 2015
Response via : Multiple Level Calibration
DataAcq Meth : TPHGV4.M

Volume Inj. : 5ml
Signal Phase :
Signal Info :

Blank



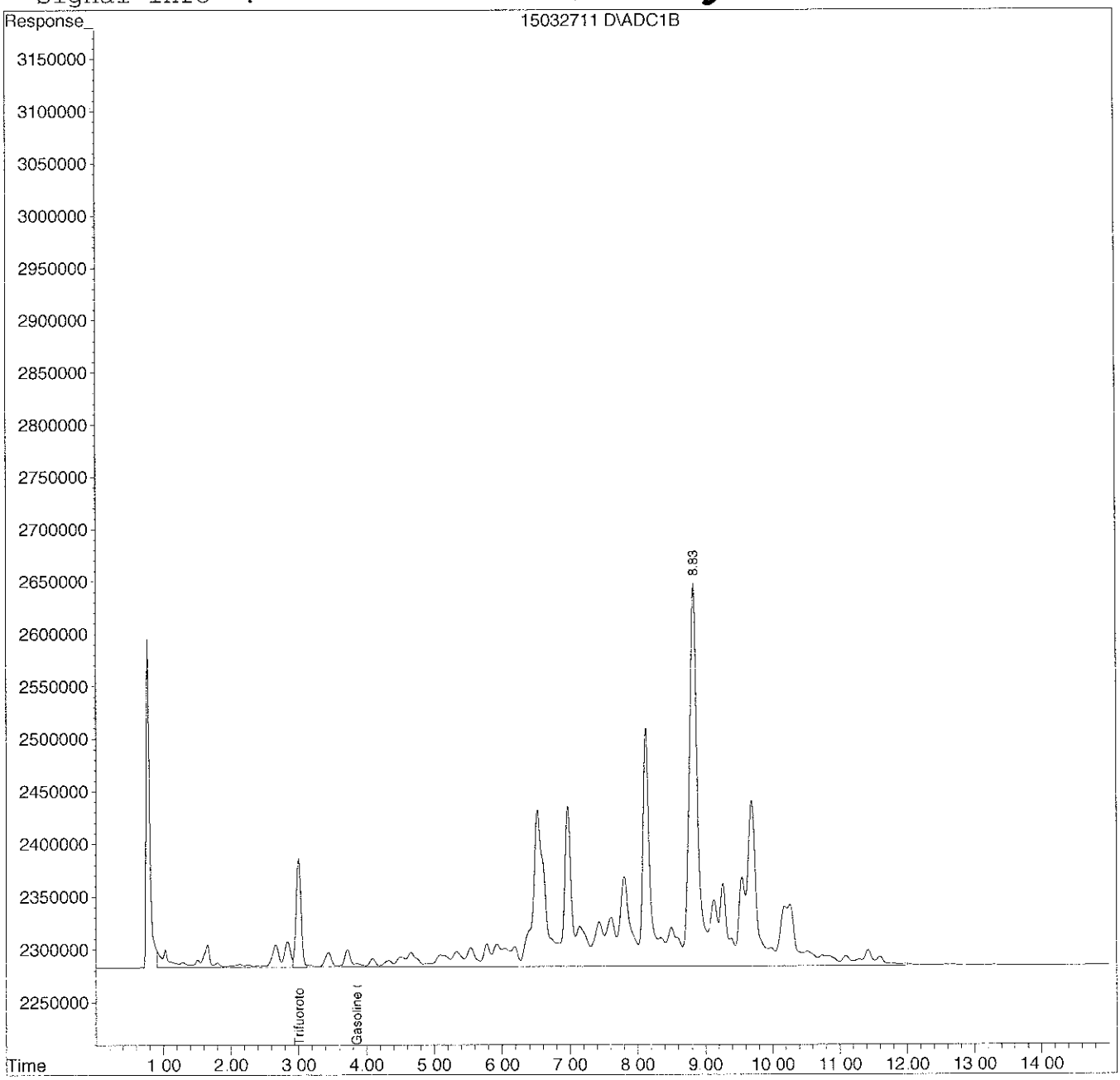
# Quantitation Report

Data File : D:\HPCHEM\1\DATA\032715V4\15032711.D  Vial: 9
Acq On : 27 Mar 2015 13:57  Operator: R.L. JAMES
Sample : 21223-01;TABER  Inst : VAR-4
Misc : MW-1 (1ML/5ML) 1:5  Multiplr: 1.00
IntFile : TFT1.E
Quant Time: Mar 27 14:12 2015 Quant Results File: TPHGV4.RES

Quant Method : D:\HPCHEM\1\METHODS\TPHGV4.M (Chemstation Integrator)
Title : GC TPH Method
Last Update : Sat Feb 14 06:25:05 2015
Response via : Multiple Level Calibration
DataAcq Meth : TPHGV4.M

Volume Inj. : 5ml
Signal Phase :
Signal Info :

TPHgas



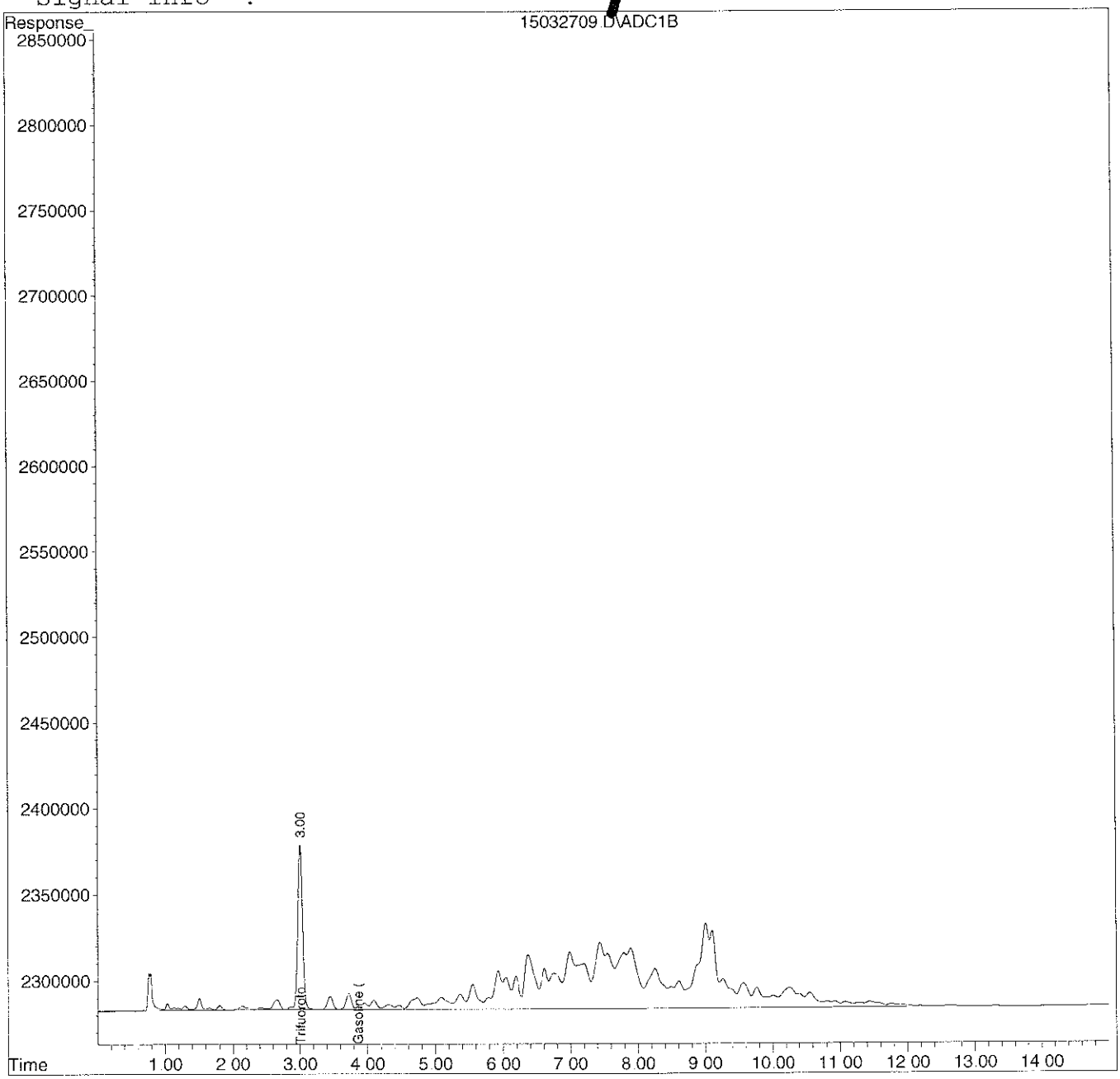
# Quantitation Report

Data File : D:\HPCHEM\1\DATA\032715V4\15032709.D  Vial: 7
Acq On : 27 Mar 2015 13:06  Operator: R.L. JAMES
Sample : 21223-02;TABER  Inst : VAR-4
Misc : MW-2 (5ML)  Multiplr: 0.20
IntFile : TFT1.E
Quant Time: Mar 27 13:21 2015 Quant Results File: TPHGV4.RES

Quant Method : D:\HPCHEM\1\METHODS\TPHGV4.M (Chemstation Integrator)
Title : GC TPH Method
Last Update : Sat Feb 14 06:25:05 2015
Response via : Multiple Level Calibration
DataAcq Meth : TPHGV4.M

Volume Inj. : 5ml
Signal Phase :
Signal Info :

TPHgas



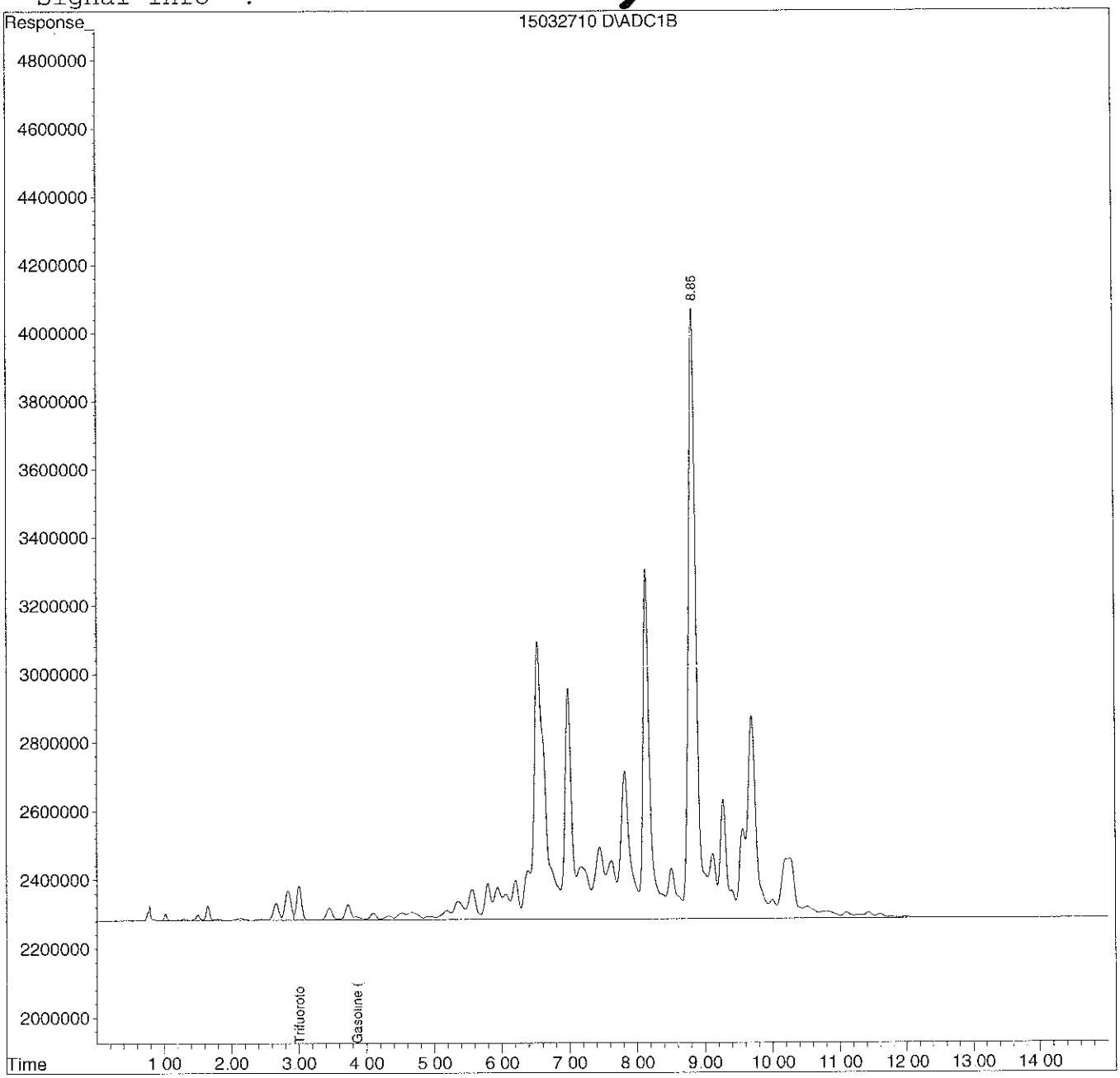
# Quantitation Report

Data File : D:\HPCHEM\1\DATA\032715V4\15032710.D  Vial: 8
Acq On : 27 Mar 2015 13:32  Operator: R.L. JAMES
Sample : 21223-03;TABER  Inst : VAR-4
Misc : MW-3 (5ML)  Multiplr: 0.20
IntFile : TFT1.E
Quant Time: Mar 27 13:47 2015 Quant Results File: TPHGV4.RES

Quant Method : D:\HPCHEM\1\METHODS\TPHGV4.M (Chemstation Integrator)
Title : GC TPH Method
Last Update : Sat Feb 14 06:25:05 2015
Response via : Multiple Level Calibration
DataAcq Meth : TPHGV4.M

TPHgas

Volume Inj. : 5ml
Signal Phase :
Signal Info :



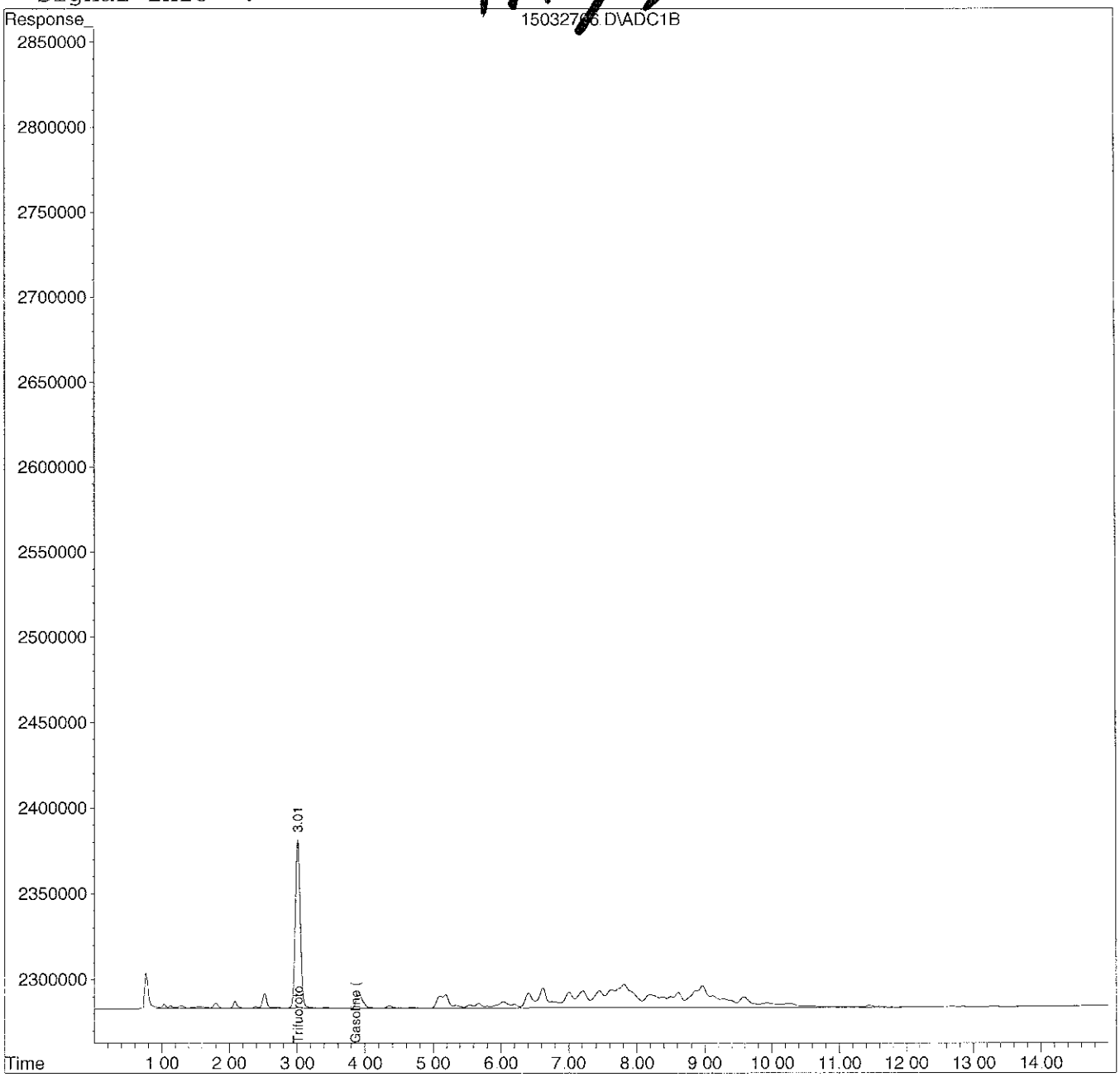
# Quantitation Report

Data File : D:\HPCHEM\1\DATA\032715V4\15032706.D Vial: 4
Acq On : 27 Mar 2015 11:51 Operator: R.L. JAMES
Sample : 21223-04;TABER Inst : VAR-4
Misc : W-IND (5ML) Multiplr: 0.20
IntFile : TFT1.E
Quant Time: Mar 27 12:06 2015 Quant Results File: TPHGV4.RES

Quant Method : D:\HPCHEM\1\METHODS\TPHGV4.M (Chemstation Integrator)
Title : GC TPH Method
Last Update : Sat Feb 14 06:25:05 2015
Response via : Multiple Level Calibration
DataAcq Meth : TPHGV4.M

Volume Inj. : 5ml
Signal Phase :
Signal Info :

TPHgas



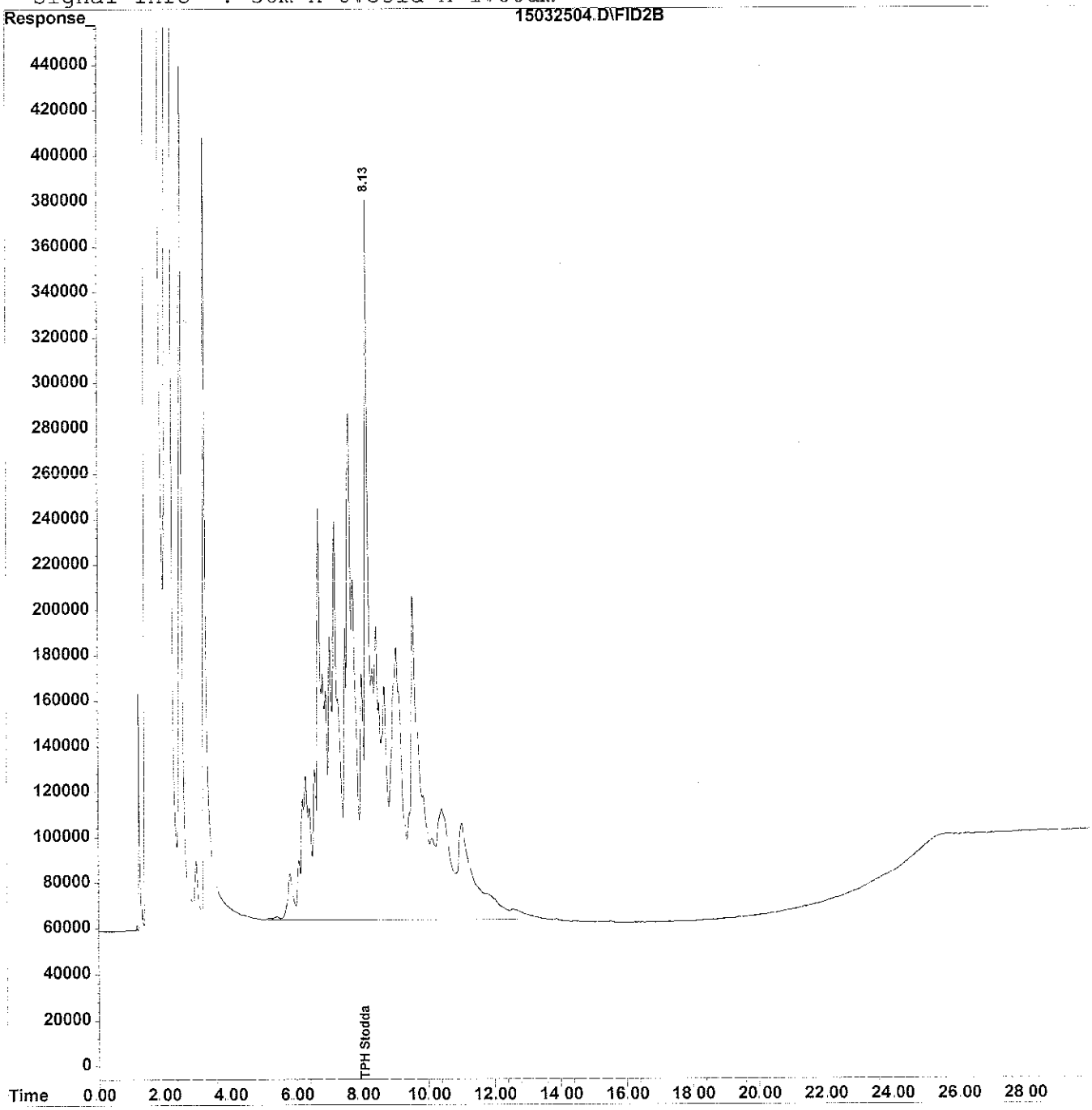
13

Data File : C:\HPCHEM\2\DATA\032515A\15032504.D  Vial: 4
Acq On : 25 Mar 2015 10:13  Operator: R.L. JAMES
Sample : 1000 PPM Stoddard Solvent STD  Inst : HP-FID
Misc : 1000 PPM Stoddard Solvent (2uL)  Multiplr: 0.50
IntFile : EVENTS2.E
Quant Time: Mar 25 12:43 2015 Quant Results File: TPHST1B.RES

Quant Method : C:\HPCHEM\2\METHODS\TPHST1B.M (Chemstation Integrator)
Title : 3500/8015 TPH Stoddard Solvent
Last Update : Wed Mar 25 12:33:48 2015
Response via : Multiple Level Calibration
DataAcq Meth : TPHD2C.M

STD - ~~TPH diesel~~ Stoddard Solvent

Volume Inj. : 2uL
Signal Phase : J&W DB-5
Signal Info : 30m X 0.53id X 1.00um



14

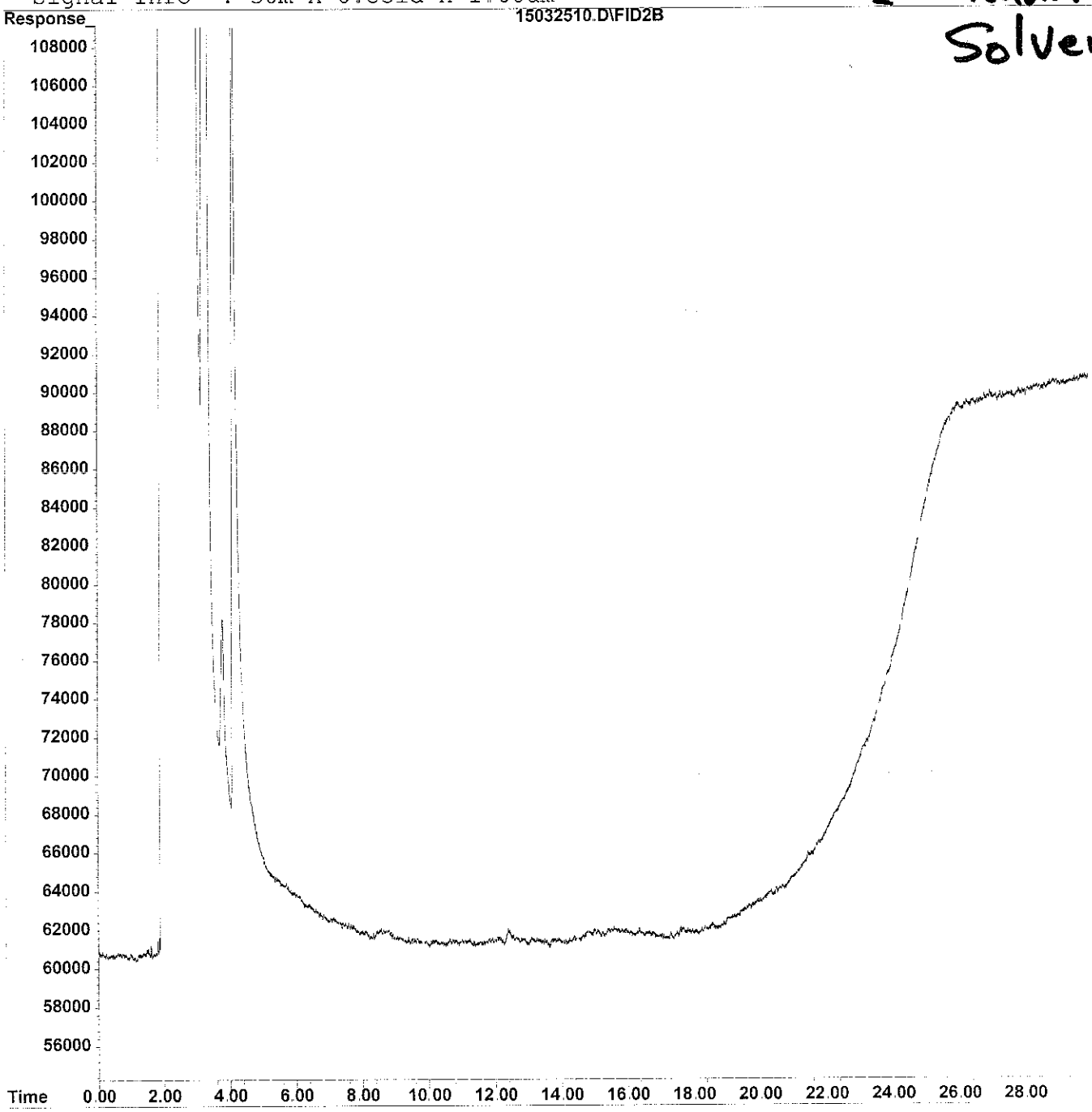
Data File : C:\HPCHEM\2\DATA\032515A\15032510.D
Acq On : 25 Mar 2015 14:06
Sample : MBW-BATCH
Misc : QC WATER (1L/1ML)
IntFile : EVENTS2.E
Quant Time: Mar 26 10:01 2015 Quant Results File: TPHST1B.RES

Vial: 9
Operator: R.L. JAMES
Inst : HP-FID
Multiplr: 0.50

Quant Method : C:\HPCHEM\2\METHODS\TPHST1B.M (Chemstation Integrator)
Title : 3500/8015 TPH Stoddard Solvent
Last Update : Wed Mar 25 12:33:48 2015
Response via : Multiple Level Calibration
DataAcq Meth : TPHD2C.M

Volume Inj. : 2uL
Signal Phase : J&W DB-5
Signal Info : 30m X 0.53id X 1.00um

Blank - ~~TPH diesel~~ - Stoddard Solvent



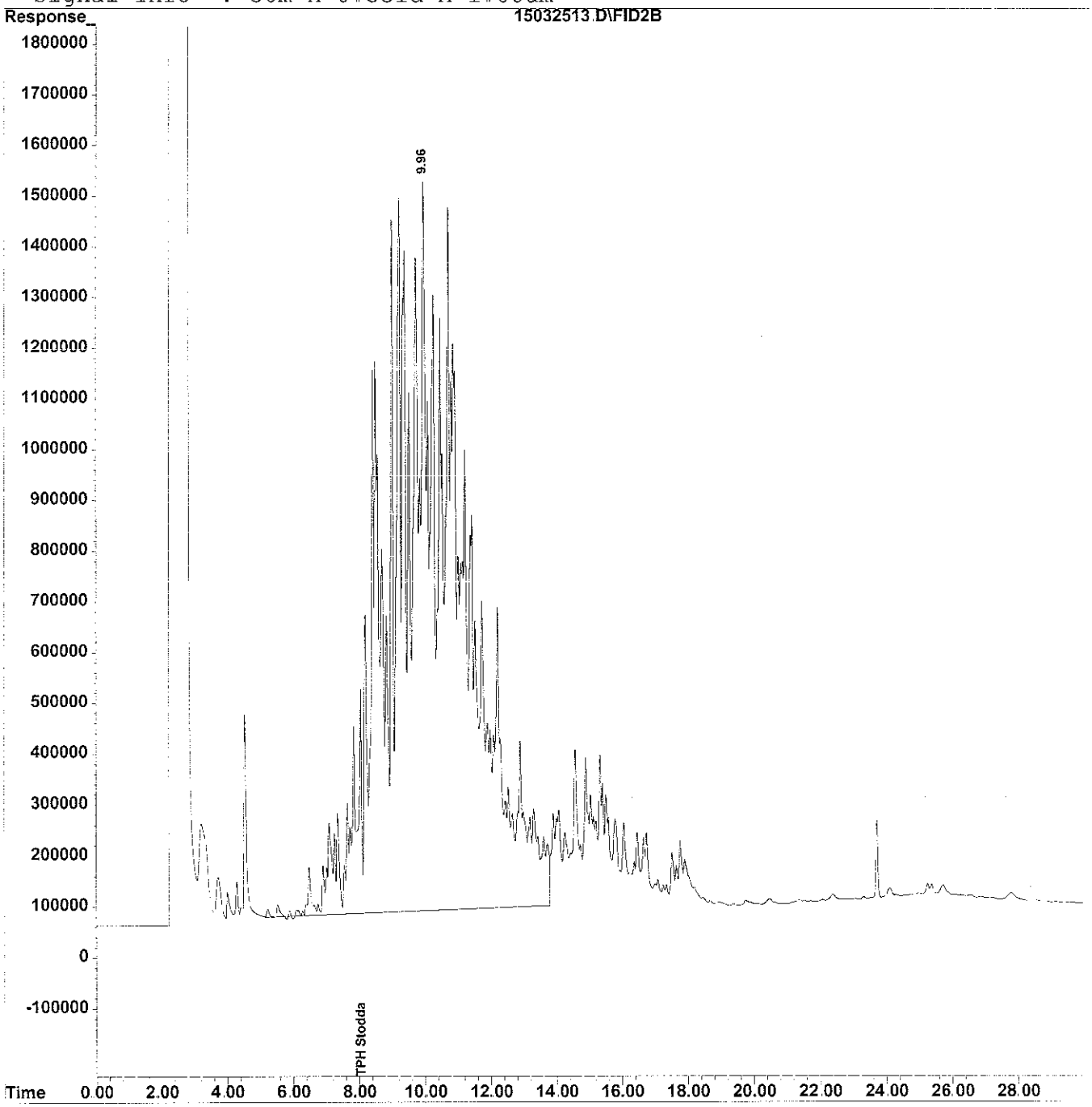
15

Data File : C:\HPCHEM\2\DATA\032515A\15032513.D Vial: 12
Acq On : 25 Mar 2015 16:03 Operator: R.L. JAMES
Sample : 21223-01; TABER Inst : HP-FID
Misc : MW-1 (1L/1ML) Multiplr: 0.50
IntFile : EVENTS2.E
Quant Time: Mar 26 10:03 2015 Quant Results File: TPHST1B.RES

Quant Method : C:\HPCHEM\2\METHODS\TPHST1B.M (Chemstation Integrator)
Title : 3500/8015 TPH Stoddard Solvent
Last Update : Wed Mar 25 12:33:48 2015
Response via : Multiple Level Calibration
DataAcq Meth : TPHD2C.M

TPH diesel
Stoddard Solvent

Volume Inj. : 2uL
Signal Phase : J&W DB-5
Signal Info : 30m X 0.53id X 1.00um



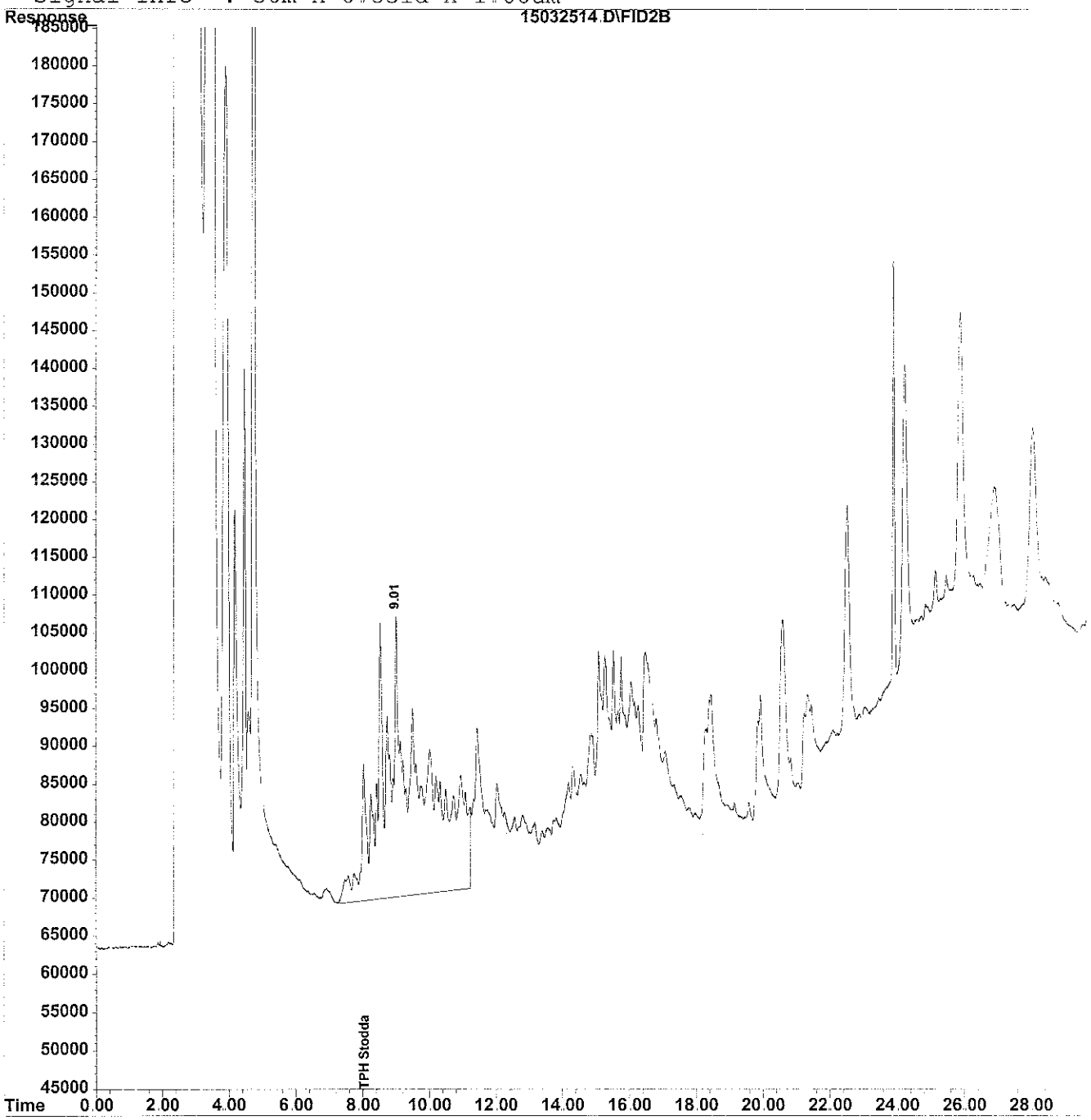
16

Data File : C:\HPCHEM\2\DATA\032515A\15032514.D Vial: 13
Acq On : 25 Mar 2015 16:42 Operator: R.L. JAMES
Sample : 21223-02; TABER Inst : HP-FID
Misc : MW-2 (1L/1ML) Multiplr: 0.50
IntFile : EVENTS2.E
Quant Time: Mar 26 10:04 2015 Quant Results File: TPHST1B.RES

Quant Method : C:\HPCHEM\2\METHODS\TPHST1B.M (Chemstation Integrator)
Title : 3500/8015 TPH Stoddard Solvent
Last Update : Wed Mar 25 12:33:48 2015
Response via : Multiple Level Calibration
DataAcq Meth : TPHD2C.M

TPH Stoddard Solvent

Volume Inj. : 2uL
Signal Phase : J&W DB-5
Signal Info : 30m X 0.53id X 1.00um



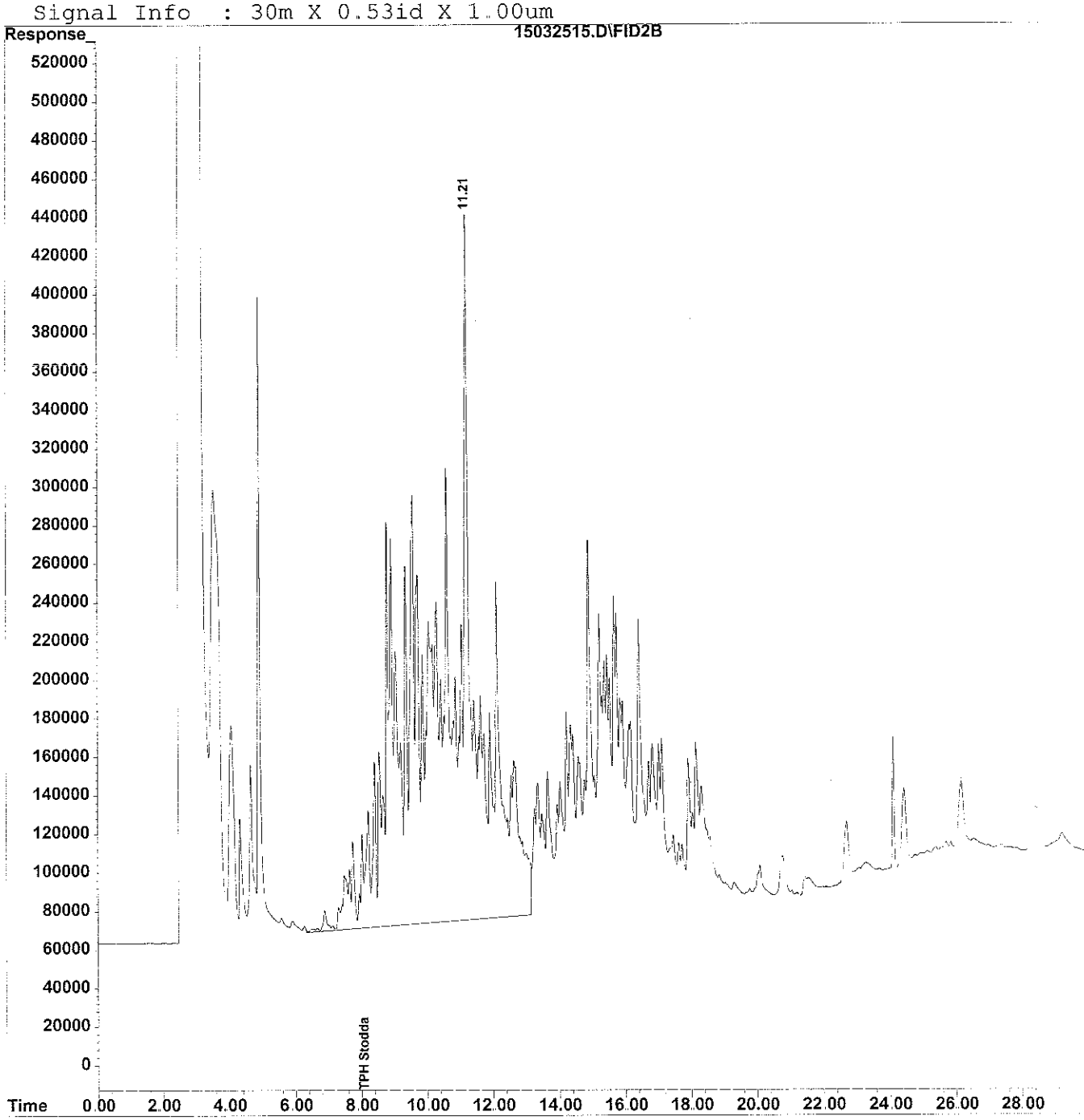
Quantitation Report

Data File : C:\HPCHEM\2\DATA\032515A\15032515.D  Vial: 14
Acq On : 25 Mar 2015 17:21  Operator: R.L. JAMES
Sample : 21223-03; TABER  Inst : HP-FID
Misc : MW-3 (1L/1ML)  Multiplr: 0.50
IntFile : EVENTS2.E
Quant Time: Mar 26 10:05 2015 Quant Results File: TPHST1B.RES

Quant Method : C:\HPCHEM\2\METHODS\TPHST1B.M (Chemstation Integrator)
Title : 3500/8015 TPH Stoddard Solvent
Last Update : Wed Mar 25 12:33:48 2015
Response via : Multiple Level Calibration
DataAcq Meth : TPHD2C.M

TPH Stoddard Solvent

Volume Inj. : 2uL
Signal Phase : J&W DB-5
Signal Info : 30m X 0.53id X 1.00um



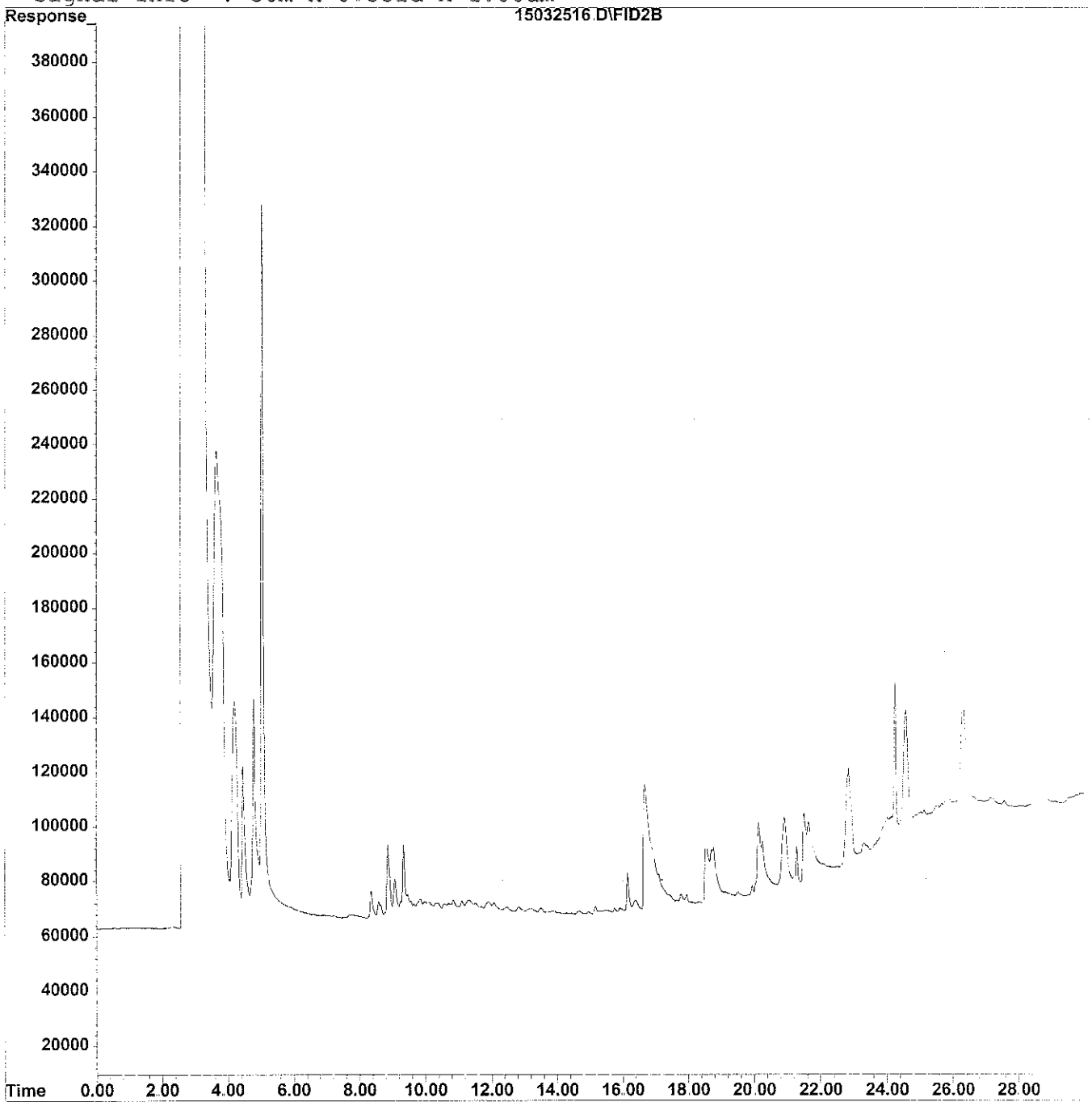
18

Data File : C:\HPCHEM\2\DATA\032515A\15032516.D Vial: 15
Acq On : 25 Mar 2015 18:00 Operator: R.L. JAMES
Sample : 21223-04; TABER Inst : HP-FID
Misc : W-IND (1L/1ML) Multiplr: 0.50
IntFile : EVENTS2.E
Quant Time: Mar 26 10:06 2015 Quant Results File: TPHST1B.RES

Quant Method : C:\HPCHEM\2\METHODS\TPHST1B.M (Chemstation Integrator)
Title : 3500/8015 TPH Stoddard Solvent
Last Update : Wed Mar 25 12:33:48 2015
Response via : Multiple Level Calibration
DataAcq Meth : TPHD2C.M

TPH Stoddard Solvent

Volume Inj. : 2uL
Signal Phase : J&W DB-5
Signal Info : 30m X 0.53id X 1.00um



# 21223

**Sparger Technology, Inc.**
*Environmental Laboratories*

3738 Bradview Drive
Sacramento, CA 95827
Lab: 916.369.7688
Fax: 916.369.7689

COC # / Lab No. _____



## Chain-of-Custody Record and Analysis Request

| | |
|---|---|
| Project Contact ( PDF To): **Tom Ballard (to email address's)** | California EDF Report? ☑ Yes ☐ No |
| Company / Address: **Taber Consultants: 3911 West Capitol Ave. West Sacramento, CA 95691** | Sampling Company Log Code: **WRMC** |
| Phone #: **916-371-1690** Fax #: **916-371-7265** | Global ID: **T0600100379** |
| Project #: **2011-0107** P.O. #: 3C | Deliver all files to: EPyatt@TaberConsultants.com |
| Project Name: **NoPurge_CityOfP** | please email a copy to: tcoffice@TaberConsultants.com |
| Project Address: **3514 Adeline St. Oakland, CA** | Sampler Signature: |

| Sample ID | Field Point Name | Sampling: Date | Sampling: Time | Container: 40 ml VOA | Container: Sleeve | Container: Poly | Container: Glass (1 L Amber) | Container: Tedlar | Preservative: HCl | Preservative: $HNO_3$ | Preservative: None | Matrix: Water | Matrix: Soil | Matrix: Air | Analysis Request: Naphthalene (EPA 8260B) | MTBE\BTEX (EPA 8260B) | TPH Gas (EPA 8015) | 5 Oxygenates (EPA 8260B) | Lead Scav.(1,2 DCA & 1,2 EDB-EPA 8260B) | Volatile Organics Full List (EPA 8260B) | TPH as Diesel (EPA 8015M) | TPH-SS Stoddard Solvent (EPA 8015) | Chromatagrams | TAT: 1 wk |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | MW-1 | 3/19/15 | 10:30 | 4 | | | | | x | | | X | | | X | X | X | | | | | | X | x |
| MW-2 | MW-2 | | 11:02 | 4 | | | | | x | | | X | | | X | X | X | | | | | | X | x |
| MW-3 | MW-3 | | 11:22 | 4 | | | | | x | | | X | | | X | X | X | | | | | | X | x |
| W-IND | W-IND | | 12:00 | 4 | | | | | x | | | X | | | X | X | X | | | | | | X | x |
| MW-1 | MW-1 | | 10:30 | | | | 1 | | | | x | X | | | | | | | | | | X | | x |
| MW-2 | MW-2 | | 11:02 | | | | 1 | | | | x | X | | | | | | | | | | X | | x |
| MW-3 | MW-3 | | 11:22 | | | | 1 | | | | x | X | | | | | | | | | | X | | x |
| W-IND | W-IND | | 12:00 | | | | 1 | | | | x | X | | | | | | | | | | X | | x |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished by: | Date | Time | Received by: |
|---|---|---|---|
| | 3:57 3-19-15 | 2:57 | |
| Relinquished by: | Date | Time | Received by: |
| Relinquished by: | Date | Time | Received by Laboratory: |

Remarks:
please save file(s), PDF's, EDF & XLS name as:
**sample date year_month_day_ project name_ WO#**

**EXAMPLE:**
**2015_03_18_NoPurge_CityOfP_12345**

Bill to: Invoice@TaberConsultants.com

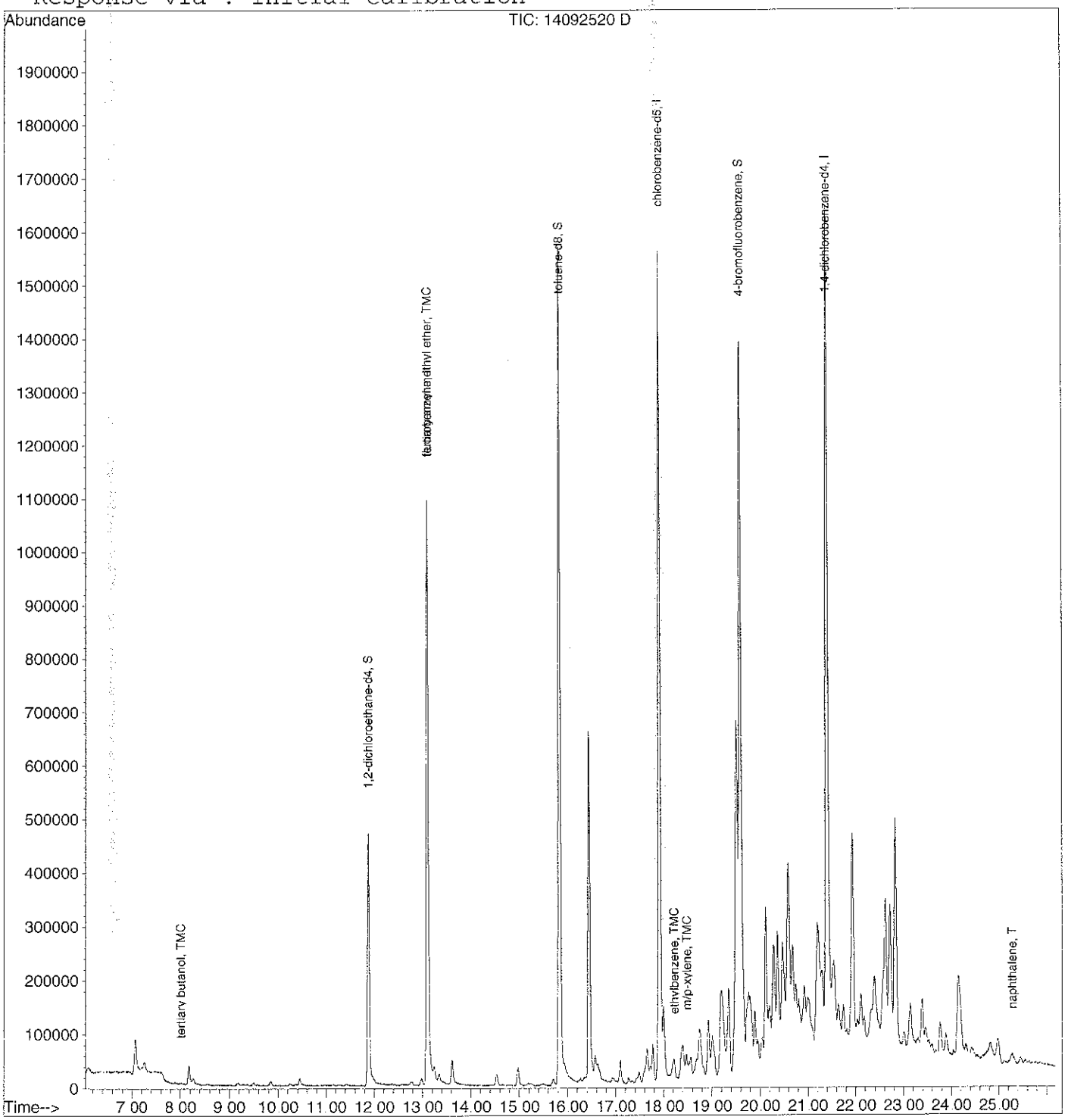
For Lab Use Only: Sample Receipt

| Temp °C | Initials | Date | Time | |
|---|---|---|---|---|
| | | 3/19/15 | 15:10 | |

# Quantitation Report

Data File : D:\HPCHEM\1\DATA\092514V2\14092520.D  Vial: 18
Acq On : 26 Sep 2014 3:34  Operator: R.L. JAMES
Sample : 21062-03;TABER  Inst : GCMSVOA2
Misc : MW-3 (500UL/5ML) 1:10  Multiplr: 10.00
MS Integration Params: rteint.p
Quant Time: Sep 26 4:00 2014  Quant Results File: OXYFV2.RES

Method : D:\HPCHEM\1\METHODS\OXYFV2.M (RTE Integrator)
Title : GCMSVOA2-8260 Oxygenates
Last Update : Thu Sep 25 17:28:01 2014
Response via : Initial Calibration

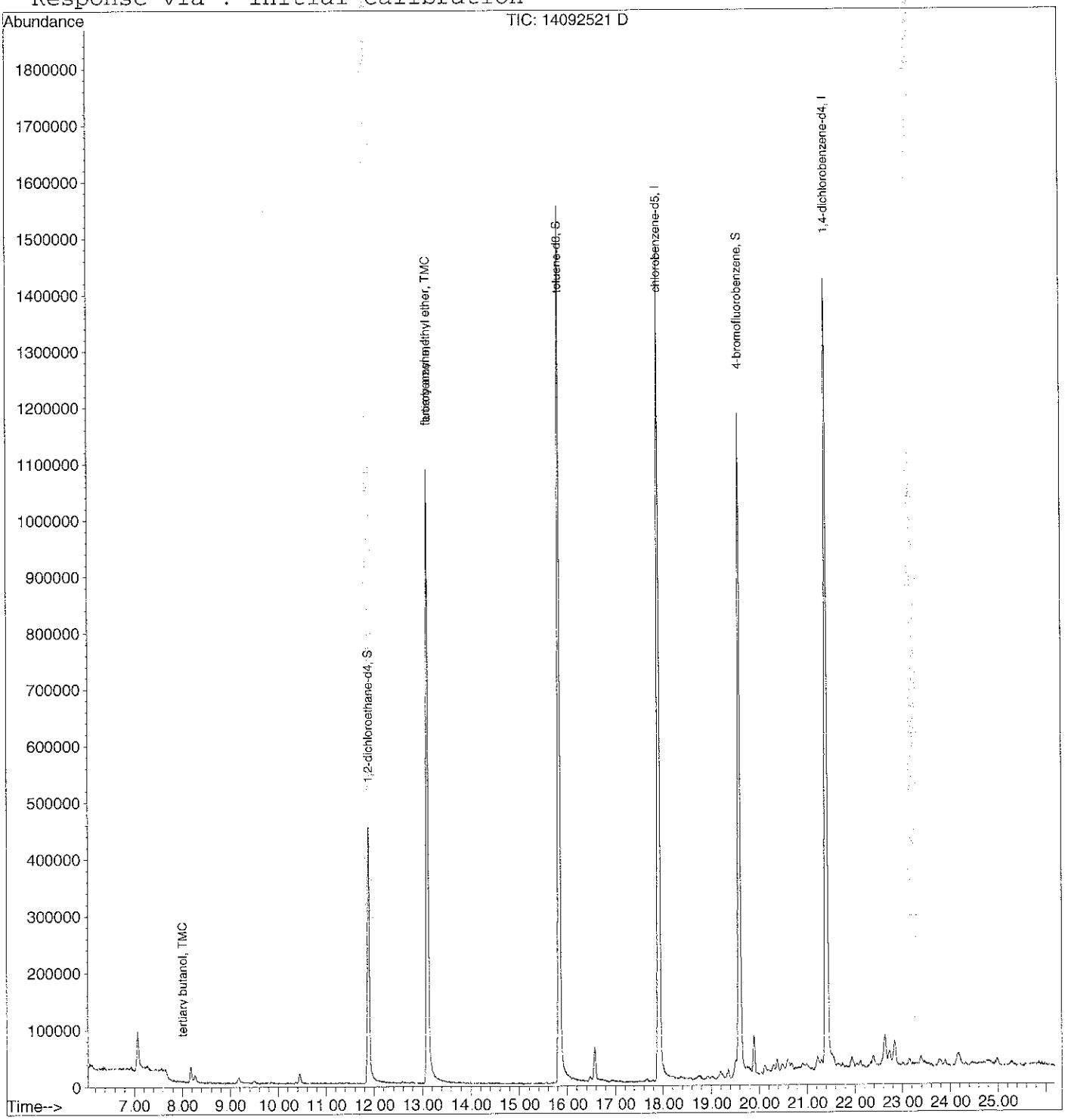


# Quantitation Report

Data File : D:\HPCHEM\1\DATA\092514V2\14092521.D
Acq On : 26 Sep 2014 4:08
Sample : 21062-04;TABER
Misc : W-IND (5ML)
MS Integration Params: rteint.p
Quant Time: Sep 26 4:35 2014

Vial: 19
Operator: R.L. JAMES
Inst : GCMSVOA2
Multiplr: 1.00
Quant Results File: OXYFV2.RES

Method : D:\HPCHEM\1\METHODS\OXYFV2.M (RTE Integrator)
Title : GCMSVOA2-8260 Oxygenates
Last Update : Thu Sep 25 17:28:01 2014
Response via : Initial Calibration



SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

08 September 2015

Tom Ballard
Taber Consultants
3911 West Capitol Ave.
West Sacramento, CA 95691

RE: City Of Paris

Enclosed are the results of analyses for samples received by the laboratory on 08/20/15 08:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Katherine RunningCrane
Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

**25712 Commercentre Drive**
**Lake Forest, California 92630**
**949.297.5020 Phone**
**949.297.5027 Fax**

| | | |
|---|---|---|
| Taber Consultants | Project: City Of Paris | |
| 3911 West Capitol Ave. | Project Number: 2011-0107 | **Reported:** |
| West Sacramento CA, 95691 | Project Manager: Tom Ballard | 09/08/15 16:11 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| VP-5 | T152046-01 | Air | 08/19/15 10:37 | 08/20/15 08:35 |
| VP-6 | T152046-02 | Air | 08/19/15 10:50 | 08/20/15 08:35 |

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Katherine RunningCrane

Katherine RunningCrane, Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

**25712 Commercentre Drive**
**Lake Forest, California 92630**
**949.297.5020 Phone**
**949.297.5027 Fax**

| | | |
|---|---|---|
| Taber Consultants | Project: City Of Paris | |
| 3911 West Capitol Ave. | Project Number: 2011-0107 | **Reported:** |
| West Sacramento CA, 95691 | Project Manager: Tom Ballard | 09/08/15 16:11 |

## DETECTIONS SUMMARY

**Sample ID:** VP-5 **Laboratory ID:** T152046-01

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| Oxygen | **8.18** | 1.00 | % | GC | |

**Sample ID:** VP-6 **Laboratory ID:** T152046-02

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| Oxygen | **6.63** | 1.00 | % | GC | |

SunStar Laboratories, Inc.
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**25712 Commercentre Drive**
**Lake Forest, California 92630**
**949.297.5020 Phone**
**949.297.5027 Fax**

| | | |
|---|---|---|
| Taber Consultants | Project: City Of Paris | |
| 3911 West Capitol Ave. | Project Number: 2011-0107 | **Reported:** |
| West Sacramento CA, 95691 | Project Manager: Tom Ballard | 09/08/15 16:11 |

## VP-5

### T152046-01 (Air)

**SunStar Laboratories, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Methane by GC** | | | | | | | | | |
| Methane | ND | 5.0 | ppm(v) | 1 | 5090226 | 09/02/15 | 09/03/15 | 8015M | |
| **Fixed Gases ASTM D1946-90** | | | | | | | | | |
| **Oxygen** | **8.18** | 1.00 | % | 1 | 5082830 | 08/28/15 | 08/28/15 | GC | |
| Helium | ND | 5.00 | " | " | " | " | " | " | |

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Katherine RunningCrane

Katherine RunningCrane, Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

**25712 Commercentre Drive**
**Lake Forest, California 92630**
**949.297.5020 Phone**
**949.297.5027 Fax**

| | | |
|---|---|---|
| Taber Consultants | Project: City Of Paris | |
| 3911 West Capitol Ave. | Project Number: 2011-0107 | **Reported:** |
| West Sacramento CA, 95691 | Project Manager: Tom Ballard | 09/08/15 16:11 |

## VP-6

## T152046-02 (Air)

**SunStar Laboratories, Inc.**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Methane by GC** | | | | | | | | | |
| Methane | ND | 5.0 | ppm(v) | 1 | 5090226 | 09/02/15 | 09/03/15 | 8015M | |
| **Fixed Gases ASTM D1946-90** | | | | | | | | | |
| **Oxygen** | **6.63** | 1.00 | % | 1 | 5082830 | 08/28/15 | 08/28/15 | GC | |
| Helium | ND | 5.00 | " | " | " | " | " | " | |

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Katherine RunningCrane

Katherine RunningCrane, Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

**25712 Commercentre Drive**
**Lake Forest, California 92630**
**949.297.5020 Phone**
**949.297.5027 Fax**

| | | |
|---|---|---|
| Taber Consultants | Project: City Of Paris | |
| 3911 West Capitol Ave. | Project Number: 2011-0107 | **Reported:** |
| West Sacramento CA, 95691 | Project Manager: Tom Ballard | 09/08/15 16:11 |

## Methane by GC - Quality Control

## SunStar Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 5090226 - EPA 5030 GC** | | | | | | | | | | |
| **Blank (5090226-BLK1)** | | | | Prepared: 09/02/15 Analyzed: 09/03/15 | | | | | | |
| Methane | ND | 5.0 | ppm(v) | | | | | | | |
| **Duplicate (5090226-DUP1)** | | **Source: T152046-01** | | Prepared: 09/02/15 Analyzed: 09/03/15 | | | | | | |
| Methane | ND | 5.0 | ppm(v) | | ND | | | | 20 | |



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Katherine RunningCrane

Katherine RunningCrane, Project Manager

SunStar Laboratories, Inc.
Providing Quality Analytical Services Nationwide

25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

| | | |
|---|---|---|
| Taber Consultants | Project: City Of Paris | |
| 3911 West Capitol Ave. | Project Number: 2011-0107 | **Reported:** |
| West Sacramento CA, 95691 | Project Manager: Tom Ballard | 09/08/15 16:11 |

## Fixed Gases ASTM D1946-90 - Quality Control

## SunStar Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 5082830 - General Prep VOC-GC** | | | | | | | | | | |
| **Blank (5082830-BLK1)** | | | | Prepared & Analyzed: 08/28/15 | | | | | | |
| Oxygen | ND | 1.00 | % | | | | | | | |
| Helium | ND | 5.00 | " | | | | | | | |
| **Duplicate (5082830-DUP1)** | **Source: T152046-01** | | | Prepared & Analyzed: 08/28/15 | | | | | | |
| Oxygen | 10.2 | 1.00 | % | | 8.18 | | | 22.1 | 20 | DUP-01 |
| Helium | ND | 5.00 | " | | ND | | | | 200 | |

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Katherine RunningCrane

Katherine RunningCrane, Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

**25712 Commercentre Drive**
**Lake Forest, California 92630**
**949.297.5020 Phone**
**949.297.5027 Fax**

| | | |
|---|---|---|
| Taber Consultants | Project: City Of Paris | |
| 3911 West Capitol Ave. | Project Number: 2011-0107 | **Reported:** |
| West Sacramento CA, 95691 | Project Manager: Tom Ballard | 09/08/15 16:11 |

## Notes and Definitions

| | |
|---|---|
| DUP-01 | The RPD result exceeded the QC control limits for this analyte; sample results for the QC batch were accepted based on percent recoveries and completeness of QC data. |
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

PO# 15-0146

# AIR LABORATORY

## Chain of Custody Record

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE
25712 Commercentre Drive, Lake Forest, CA 92630
949-297-5020

Client: TABER CONSULTANTS
Address: 3911 W. CAPITOL AVE. WEST SAC
Phone: _____ Fax: _____
Project Manager: TOM BALLARD

Date: Aug 19, 2015 Page: 1 Of 1
Project Name: City of PARIS
Collector: STAN WALKER Client Project #: 2011-0107
Batch #: T152046 EDF #: T0600100379

| Sample ID | Date Sampled | Start Time | Finish Time | Sample Type : Soil Gas / Indoor Air | Container Type: Summa Can / Tedlar | Initial Pressure | Final Pressure | TO-3 | TO-14 | TO-15 | 8015m Methane | 8015m Gasoline | Fixed Gases by TCD | | Summa Can # / Comments | Laboratory ID # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VP-5 | 8/19/15 | 10:17 | 10:37 | SG | S | 30 | 7 | | | | | | | | 0118 | 01 |
| VP-6 | " | 10:50 | 11:10 | SG | S | 28 | 16 | | | | | | | | 0139 | 02 |

Relinquished by: (signature) Date / Time: Stan Walker 8/19
Received by: (signature) Date / Time: Tom Ballard 8/19/15 1:10 pm
Relinquished by: (signature) Date / Time: GSO 8:35 8-20-15
Received by: (signature) Date / Time: 8:35 8-20-15
Relinquished by: (signature) Date / Time:
Received by: (signature) Date / Time:

Total # of containers: 2
Chain of Custody seals Y/N/NA: (N)
Seals intact? Y/N/NA: (NA)
Received good condition/cold: 20.0

Turn around time: STD

Notes: STD. TAT

* TO-15 SIM analysis available upon prior notification. **(Precertified Summa cans needed)**

COCAL 145644

SunStar Laboratories Inc.
25712 Commercentre Dr.
Lake Forest, CA 92630
(949)297-5020
(949)297-5027 fax

Form F-LP0005-1.2
Effective Date: 01/01/2013



* PLEASE DO *NOT* WRITE ON OR PLACE LABELS ON SUMMA CANS

# SunStar Laboratories

## Canister Data Sheet

**Client:** TABER_STAN_7-30-15_6+3

| Shipping Information | | CHECK | Pressure | Sampling Information | | Initial | Final | Sample | Sample |
|---|---|---|---|---|---|---|---|---|---|
| Canister Serial # | | Date | (-30 +/- 2 psia) | Sample ID | Sample Date | Pressure | Pressure | Start Time | Finish Time |
| SSAT- | 0080 | 7/30/2015 | -30 | | | | | | |
| SSAT- | 0118 | 7/30/2015 | -30 | | 8/19 | 30 | 7 | 10:17 | 10:27 |
| SSAT- | 0139 | 7/30/2015 | -30 | | 8/19 | 28 | 10 | 10:50 | 11:10 |
| SSAT- | 0221 | 7/30/2015 | -30 | | | | | | |
| SSAT- | 0259 | 7/30/2015 | -30 | PURGE CAN | 8/19 | | | | |
| SSAT- | 0487 | 7/30/2015 | -30 | PURGE CAN | | | | | |
| SSAT- | 2032 | 7/30/2015 | | MANIFOLD (150) | 8/19 | | | | |
| SSAT- | 2060 | 7/30/2015 | | MANIFOLD (150) | 11 | | | | |
| SSAT- | 2066 | 7/30/2015 | | MANIFOLD (150) | 11 | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
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SunStar Laboratories, Inc.
Providing Quality Analytical Services Nationwide



# SAMPLE RECEIVING REVIEW SHEET

**BATCH #** T152046

Client Name: TABER CON. Project: CITY OF PARIS

Received by: BRIAN Date/Time Received: 8.20.15 / 8:35

Delivered by : ☐ Client ☐ SunStar Courier ☒ GSO ☐ FedEx ☐ Other _____

Total number of coolers received 0 **Temp criteria = 6°C > 0°C (no frozen containers)**

Temperature: cooler #1 20.2 °C +/- the CF (- 0.2°C) = 20.0 °C corrected temperature

cooler #2 _____ °C +/- the CF (- 0.2°C) = _____ °C corrected temperature

cooler #3 _____ °C +/- the CF (- 0.2°C) = _____ °C corrected temperature

| | | | |
|---|---|---|---|
| Samples outside temp. but received on ice, w/in 6 hours of final sampling. | ☐Yes | ☐No* | ☒N/A |
| Custody Seals Intact on Cooler/Sample | ☒Yes | ☐No* | ☐N/A |
| Sample Containers Intact | ☒Yes | ☐No* | |
| Sample labels match COC ID's | ☒Yes | ☐No* | |
| Total number of containers received match COC | ☒Yes | ☐No* | |
| Proper containers received for analyses requested on COC | ☒Yes | ☐No* | |
| Proper preservative indicated on COC/containers for analyses requested | ☐Yes | ☐No* | ☒N/A |

Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified holding times. ☒ **Yes** ☐ **No***

* Complete Non-Conformance Receiving Sheet if checked Cooler/Sample Review - Initials and date SL 8.20.15

Comments:

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

| Company: TABER CON. | Name: STAN |
|---|---|
| **Item:** | **Quantity:** |
| **2 oz jars** 24/CS | |
| **4 oz jars** 24/CS | |
| **8 oz jars** 12/CS | |
| **40 ml unp. Voas** 72/BOX | |
| **40 ml HCL Voas** 72/BOX | |
| **250 ml Poly** 60/CS | |
| **1 Liter Poly** 30/CS | |
| **500 ml Poly** 16/CS | |
| **500 ml Amber Bottle Wide** 12/CS | |
| **1 Liter Amber Bottle** 12/CS | |
| **1 Gallon Poly** 4/BOX | |
| **5035 kits:(2)Sodium Bisulfate Voas** 72/BOX | |
| **(1) Methanol Voa** 72/BOX | |
| **(1)Syringe** 50/PACK | |
| **Lock-N-Load Handle** 1/PACK | |
| **Tedlar Bags** 10/PACK | |
| **Manifold,Inst Sampler, Var. Sampler** | 3-MANIFOLDS (150) CHARGE 2 |
| **Sub Slab Insert w/ washer** | |
| **Soil Gas Drop Tubes** | |
| **Gas extraction fittings** | |
| **Soil Gas Filters** | |
| **B.C. Summa Cans** **400cc:** | |
| **1L:** | 2 (2-PURGE) |
| **3L:** | |
| **6L:** | |
| **Certified Summa Cans** **400cc:** | |
| **1L:** | 4 CHARGE 2 |
| **3L:** | |
| **6L:** | |
| **Cooler (S,MED,LRG)** Number & Quantity | |
| **Swagelok Fittings:** Ferrules,Unions, Nuts | 4-NUTS/FERRULES CHARGE -2 RETURNED-2 |
| **Other:** Poly Tube, Tools, etc | |
| | |
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| | |
| **Prepared By: SUNNY** | **Date: 7-30-15** |
| **Reviewed By:** | **Date :** |

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

**WORK ORDER**

**T152046**

**Client:** **Taber Consultants** **Project Manager:** **Katherine RunningCrane**
**Project:** **City Of Paris** **Project Number:** **2011-0107**

**Report To:**
Taber Consultants
Tom Ballard
3911 West Capitol Ave.
West Sacramento, CA 95691

Date Due: 08/27/15 15:00 (5 day TAT)
Received By: Brian Charon Date Received: 08/20/15 08:35
Logged In By: Sunny Lounethone Date Logged In: 08/20/15 09:07

Samples Received at: **20°C**
Custody Seals Yes Received On Ice No
Containers Intact Yes
COC/Labels Agree Yes
Preservation Confir No

| Analysis | Due | TAT | Expires | Comments |
|---|---|---|---|---|
| **T152046-01 VP-5 [Air] Sampled 08/19/15 10:17 (GMT-08:00) Pacific Time (US &** | | | | |
| 8015m Methane | 08/27/15 15:00 | 5 | 08/22/15 10:17 | |
| Fixed Gases | 08/27/15 15:00 | 5 | 08/24/15 10:17 | Oxygen only |
| **T152046-02 VP-6 [Air] Sampled 08/19/15 10:50 (GMT-08:00) Pacific Time (US &** | | | | |
| 8015m Methane | 08/27/15 15:00 | 5 | 08/22/15 10:50 | |
| Fixed Gases | 08/27/15 15:00 | 5 | 08/24/15 10:50 | Oxygen only |

Reviewed By Date

# APPENDIX D.
# LIST OF LANDOWNERS FORMS

# LIST OF LANDOWNERS FORM

County of Alameda
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

CERTIFIED LIST OF RECORD FEE TITLE OWNERS FOR:

Site Name: City of Paris Cleaners

Address: 3516 Adeline Street

City, State, Zip: Oakland, CA 94608

Record ID #: RO0000133

Please fill out item 1 if there are multiple site landowners (attach an extra sheet if necessary). If you are the sole site landowner, skip item 1 and fill out item 2.

1. In accordance with Section 25297.15(a) of Chapter 6.7 of the California Health & Safety Code, I, * PAULA D. CHAMPION-BRAIG (name of primary responsible party), certify that the following is a complete list of current record fee title owners and their mailing addresses for the above site: *ESTATE OF FRANK R. CHAMPION

Name: PAULA D. CHAMPION-BRAIG
Address: 280 MOUNTAIN AVE.
City, State, Zip: PIEDMONT, CA. 94611-3506
E-mail Address: USCHAMPION@AOL.COM

Name: PAULETTE D. BATTERLEY
Address: 14601 GUADALUPE DR.
City, State, Zip: RANCHO MURIETA, CA. 95683
E-mail Address: IVSNOOPY@CALWEB.COM

Name: MICHAEL W. CHAMPION
Address: 1700 MAIN ST.
City, State, Zip: MONTARA, CA. 94037
E-mail Address: LEAHCHAMPION@COMCAST.NET

** SEE Additional Pg. for one more Perso

2. In accordance with Section 25297.15(a) of Chapter 6.7 of the California Health & Safety Code, I _____, certify that I am the sole landowner for the above site.

Sincerely,

| Signature of Primary Responsible Party | Printed Name | Date | E-mail Address |
|---|---|---|---|
| | | | |

Pg. 1 of 2

# LIST OF LANDOWNERS FORM

County of Alameda
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

CERTIFIED LIST OF RECORD FEE TITLE OWNERS FOR:

Site Name: City of Paris Cleaners

Address: 3516 Adeline Street

City, State, Zip: Oakland, CA 94608

Record ID #: RO0000133

Please fill out item 1 if there are multiple site landowners (attach an extra sheet if necessary). If you are the sole site landowner, skip item 1 and fill out item 2.

1. In accordance with Section 25297.15(a) of Chapter 6.7 of the California Health & Safety Code, I, * PAULA P. CHAMPION BRAIG (name of primary responsible party), certify that the following is a complete list of current record fee title owners and their mailing addresses for the above site: * ESTATE OF FRANK R. CHAMPION

** Name: FRANK R. CHAMPION, JR.
Address: 9441 LAGUNA LAKE WAY
City, State, Zip: ELK GROVE CA. 95758
E-mail Address: LCHAMP4@AOL.COM

Name:
Address:
City, State, Zip:
E-mail Address:

Name:
Address:
City, State, Zip:
E-mail Address:

Name:
Address:
City, State, Zip:
E-mail Address:

2. In accordance with Section 25297.15(a) of Chapter 6.7 of the California Health & Safety Code, I _____, certify that I am the sole landowner for the above site.

Sincerely,

| Signature of Primary Responsible Party | Printed Name | Date | E-mail Address |
|---|---|---|---|
| | | | |

Pg 2 of 2

# LIST OF LANDOWNERS FORM

County of Alameda
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

CERTIFIED LIST OF RECORD FEE TITLE OWNERS FOR:

Site Name: City of Paris Cleaners

Address: 3516 Adeline Street

City, State, Zip: Oakland, CA 94608

Record ID #: RO0000133

Please fill out item 1 if there are multiple site landowners (attach an extra sheet if necessary). If you are the sole site landowner, skip item 1 and fill out item 2.

1. In accordance with Section 25297.15(a) of Chapter 6.7 of the California Health & Safety Code, I, _____ (name of primary responsible party), certify that the following is a complete list of current record fee title owners and their mailing addresses for the above site:

   Name: _____

   Address: _____

   City, State, Zip: _____
   E-mail Address: _____

   Name: _____

   Address: _____

   City, State, Zip: _____
   E-mail Address: _____

   Name: _____

   Address: _____

   City, State, Zip: _____
   E-mail Address: _____

2. In accordance with Section 25297.15(a) of Chapter 6.7 of the California Health & Safety Code, I DEBRA BUCKLEY, certify that I am the sole landowner for the above site.

Sincerely,

Debra Buckley DEBRA BUCKLEY 12-2-2014

Signature of Primary Responsible Party | Printed Name | Date | E-mail Address

I AM AND HAVE NEVER BEEN PRIMARY RESPONSIBLE PARTY → I AM CURRENT OWNER

# APPENDIX E.
# TABULATED CONCEPTUAL SITE MODEL

**TABULATED CONCEPTUAL SITE MODEL**

City of Paris Cleaners

3516 Adeline Street, Oakland, California 94608

| Component | Summary | Detailed Description | Data Gap | How to Address |
|---|---|---|---|---|
| **Geology and Hydrogeology** | **GEOLOGY** - The City of Paris site is located within the San Francisco Bay structural depression of the Coast Ranges Physiographic Province in central Alameda County, California. | The City of Paris site is located within the San Francisco Bay structural depression of the Coast Ranges Physiographic Province in central Alameda County, California. Bedrock in the region consists of sedimentary, metasedimentary, volcanic and intrusive rocks of Jurassic through Tertiary geologic age. Quaternary marine and alluvial sediments blanket the downwarped bedrock within the basin in which the Site is located.<br><br>Stratrigraphy is characterized by lower part of SF Basin filled with several hundred feet of continental alluvial fan/plain deposits with alternating sequences of estuarine and alluvial deposits, i.e. Yerba Buena, Young Bay Mud and Old Bay Mud. | **None.** | **N/A** |
| | **HYDROGEOLOGY** - The site is located within the East Bay Plain groundwater basin which consists of two main water bearing units. | The site lies within the East Bay Plain groundwater basin which consists of two main water bearing units. The primary unit is comprised of unconsolidated alluvial deposits of Late Quaternary age and a secondary, older semi-consolidated deposit of Tertiary-Quaternary age. Groundwater within these deposits is both confined and unconfined, with the majority of the aquifers being confined. The Site is within the Oakland alluvial plain sub-area of the Bay Plains Groundwater Basin, Oakland sub-area of the East Bay Plain. Upper aquitards are formed by Young Bay Mud and Yerba Buena Mud, deeper aquitards are alluvial fan, fine-grained, flood deposits. Aquifers formed from continental/alluvial fan material are deposited between bay muds. (East Bay Plain Beneficial Use Study, 1998). Little or no continuity exists between aquifers and no thick continuous aquifer is present beneath the East Bay Plain. Wells drilled in this area were artesian when they were originally installed; however by 1893 the water table had been drawn down to 8 feet below ground surface, as depicted in the figure Groundwater In Oakland, 1890-1900. There no plans to develop local groundwater resources for drinking water purposes due to existing or potential saltwater intrusion, contamination, and limited supply. | **None.** | **N/A** |
| | **SOILS -** Clear Lake - Urban Land soil series; Talf landform. | Urban land-Clear Lake complex; Parent material: Alluvium derived from sedimentary rock; upper 60 inches clay. | **None.** | **N/A** |
| | **PRODUCTION WELLS** - One inactive industrial well has been identified and located on-site, but an additional industrial well log for the site has been identified and the location is unknown. | Results from a California Department of Water Resources records search completed by Taber Consultants produced a well log for a 97-foot deep industrial well that was installed at City of Paris Cleaning & Dyeing Works, 3516 Adeline Street, Oakland. The date the well was drilled is not recorded on the log. At the time the well was installed, groundwater was 16 feet below the top of the casing. On March 23, 2011, when the wells at the site were resurveyed, the top of the well casing was determined to be approximately 32.48 feet above mean sea level (amsl). During the May 2011 Site Investigation performed by Taber Consultants, the well was video logged to determine total depth, depths of screen intervals and other information. The well video log revealed that the total depth of the well is now approximately 72 feet below ground surface (bgs), with solid metal casing and no screened intervals.<br><br>The California Department of Water Resources (DWR) provided a well log for an additional industrial well which was reportedly installed at a location also named "City of Paris Laundry" in 1927 and extended to a total depth of 295 feet. The location of the 295-foot deep well is unknown, but notes on the well indicate that a representative from DWR contacted the property owner at one point (no date given on log). A handwritten note on the log reads, "Owner says he never had this well, only to 97'." The lithology described in this log is also disparate from the lithology of the shallow well known to be on site. Some heterogeneity in lithology might be expected with distance, however interbedding of sands with silt and clay that was observed during the May 2011 site investigation is lacking from the lithology described by the 1927 log, which is dominated by clay and cemented gravel. In the era this well was drilled, multiple laundry businesses in the Bay Area went by the name of "City of Paris," including locations in San Jose, Alameda and San Francisco. Taber Consultants does not believe this well is at 3516 Adeline Street, and may not be in Oakland.<br><br>Geophysical subsurface survey was completed in 2012. No deep well was identified. | **None.** | **N/A** |
| | **PREFERENTIAL PATHWAYS** - Utilities corridors include water service, storm line drain, sanitary sewer line, and gas main. Sand/gravel layers beneath the water table may also serve as a preferential pathway for dissolved phase TPH. | Based on the results of a utility locating and records search, gas, sewer, and water enter the site from Adeline Street to the west; trenches extend north-south in Adeline Street as shown in Figure 7. Water and gas trenches are approximately three feet deep; the sewer trench west of the site boundary is approximately 13 feet deep. The sewer flow direction is south. The water, sewer and gas trenches are approximately 25 feet, 40 feet and 55 feet west of the site boundary. The top of the shallow groundwater zone is approximately 16 feet bgs in west area of the site near Adeline Street.<br><br>Onsite sewer and gas trenches are estimated to be three feet deep or less. Depth of the water trench for the site could not be identified. The sewer trench apparently extends over the former tank excavation and the gas trench is near the west side of the former tank excavation. The bottom of the former tanks was at approximately12 to 13 feet bgs. The depth to the top of the former tanks was not identified in available reports, but tanks are typically buried three to four feet bgs.<br><br>It does not appear that utility trenches and wells have been conduits for vertical and horizontal migration of petroleum hydrocarbon plumes in soil or groundwater resulting from UST releases at the site. However, MTBE was detected in groundwater from GP-5 located next to utility trenches along Chestnut Street and in several borings near the north side of the site (GP-9, 11, 12, 13 and 19) and the up-gradient Zimmerman site has a significant gasoline release. The highest MTBE concentration in groundwater was 10 ug/L in GP-5, located approximately 170 feet north of the former Zimmerman UST. Both the former Zimmerman UST and GP-5 are located adjacent to the same set of utility trenches. For further detail, see Taber Consultants report history and cross sections. | **None.** | **N/A** |

**TABULATED CONCEPTUAL SITE MODEL**

City of Paris Cleaners

3516 Adeline Street, Oakland, California 94608

| Component | Summary | Detailed Description | Data Gap | How to Address |
|---|---|---|---|---|
| | **NEARBY RELEASE SITES** - The Geotracker database includes records for four release sites located within 500 ft of the subject site | (1) Cahon Associates, Inc. Cahon Associates, Inc. was located at 3501 San Pablo Avenue in Oakland. The soil at the site was impacted with motor, hydraulic, and/or lubricating waste oil. Impacted soil was excavated and treated. The responsible party is listed as Oakland Community Housing. The incident date is listed as January 1, 1965, with no known source identified. The report date is listed as November 19, 1990 and the case was closed on October 28, 1998.<br><br>(2) Owens Mortgage Investment. Owens Mortgage Investment was located at 3623 Adeline Street in Emeryville. The soil and groundwater at the site were impacted with diesel. Impacted site soil was excavated. The responsible party is listed as Owens Mortgage Investment Fund. The incident date is listed as January 1, 1965, with no known source identified. The report date is listed as September 5, 1995, and the case was closed February 13, 1997.<br><br>(3) Former Ambassador Laundry (Private Residence). The address of this private residence is not provided in the GeoTracker database. However, the residence is mapped in the 1150 block of 36th Street in Emeryville and listed as The Former Ambassador Laundry. An 8,000-gallon gasoline UST was removed from the eastern edge of the parcel in November 1994. A 2,500-gallon UST, installed between 1906 and 1912, and presumed to be used to store fuel oil or kerosene, was removed in August 1995. Residual fuel oil was removed during the UST removal, and 54 tons of soil was subsequently excavated. In November 1995, six soil borings were advanced and well MW-1/EW-1 was installed. In September 1999, three soil borings were advanced near a recently discovered sump containing oily sludge near the eastern property line. In May 2003, 10 Geoprobe borings were advanced at the site. In August 2005, a sump on the western portion of the site was discovered and removed during site demolition. A third UST was discovered at the time of sump removal, but this UST was left in place. In October 2007, a UST likely used to store diesel was removed from the site. In December 2007, 10 soil borings and six soil vapor sample points were installed at the site. In February 2009, seven CPT boring were advanced to characterize the subsurface and determine appropriate screening intervals for five monitoring wells that were subsequently installed. One round of groundwater sampling was conducted in April 2009. The site was closed July 2, 2014.<br><br>(4) Zimmerman Residence. A source of TPH-G has been identified at the Zimmerman property adjacent to the City of Paris Cleaners at 3442 Adeline Street. The Zimmerman Residence is located approximately 60 feet to the southwest of the former City of Paris Cleaners site at 3442 Adeline Street in Oakland. The property includes a residential building and a warehouse and spans the distance from Adeline Street to Chestnut street to the east. On February 22, 2000, one 3,750-gallon UST was removed from the warehouse adjacent to Chestnut Street, approximately 180 feet to the south east of the monitoring wells at the City of Paris site. Soil and groundwater samples from the Zimmerman residence site contained TPH-G, TPH-D and benzene. Site investigations were conducted at the site in June 2006, October 2007, December 2007 and May 2008. Maximum concentrations reported in groundwater samples from soil borings were 120,000 µg/L TPH-G (S-4), 10,000 µg/L benzene (SB-11), 930 µg/L toluene (pit water), 3,500 µg/L ethyl-benzene (S-4), and 7,900 µg/L xylenes (SB-11), respectively. Grab groundwater samples were taken in May 2008 740 µg/l TPH-G in soil boring SB-27 (east of the industrial well W-IND at the site), 3,600 µg/l TPH-G in soil boring SB-25 (on the southeast corner of the site), and 2,300 µg/l TPH-G in soil boring SB-26 (south the monitoring wells at the site). See AEI Consultants July 31, 2009, Groundwater Monitoring Well Installation Report. Remediation at the site has included peroxide treatement, excavation and air sparge. Monitoring at the site has not been uploaded to GeoTracker since spring 2014. Site investigation at the site was done east, southeast and south of the City of Paris location, showing that no TPH-SS has migrated east, southeast or south of the City of Paris site. | **None.** | **N/A** |
| **SITE SETTING** | **SITE DESCRIPTION** - The former City of Paris Cleaners, located at 3516 Adeline St., Oakland, CA, is a former dry cleaning, laundry and dyeing operation currently owned by Mrs. Debra Runyon. | The former City of Paris Cleaners, located at 3516 Adeline St., Oakland, California, is located at the southeastern corner of the intersection of 35th Street and Adeline Street in the northwest portion of the City of Oakland, California. Elevation at the site is approximately 30 feet above mean sea level (amsl).<br><br>The site was a former dry cleaning, laundry and dyeing operation. The facility operated as City of Paris Cleaners and Dyers for about 40 years until the 1960's, but cleaning materials and tanks were not completely removed from the site until 1992. The site buildings remained vacant for a number of years following the closure of the dry cleaning operation, and then the owner converted them to residential and light commercial use. Ms. Debra Runyon acquired the property in July 2000. The site buildings have since been used as on-site living quarters and the City of Paris Studios (a workshop for art, art restoration, collectibles and hobbies). | **None.** | **N/A** |
| | **GEOLOGY** - 0-15 feet bgs: predominantly sandy gravel in the former tank pit; 0-15 feet away from pit fill and clay; 15-30 feet bgs: clayey sand/sandy clay; between 30 and 40 feet (the maximum depth explored) there are clay layers interspersed with a coarse sand- or fine gravel-water bearing zone. | Site well logs indicate that geology beneath the site is complex with characteristic alluvial morphology of interbedded strata of sandy gravel, clayey sand and sandy clays. Boring logs completed prior to and during 1927 for industrial wells located in the site vicinity indicate the presence of clay layers from 37 to 120 feet. While these older industrial well logs indicate "black adobe" or top soil in the upper surface layer, boring logs from monitoring wells completed in 1992 show sandy gravel extending below ground surface to a depth of 10 feet. This discrepancy suggests use of fill material at the site after 1927. | **None.** | **N/A** |
| | **HYDROGEOLOGY:** Depth-to-groundwater in site monitoring wells typically ranges from 8 feet bgs to 13 feet bgs. Monitoring results are suspect as they suggest that groundwater flows to the northeast at unusually steep gradient for the area, which is typically west toward the San Francisco Bay with slow groundwater velocities. | Based on previous drilling activities performed, the soils beneath the Site consist mainly of silty, sandy, and gravelly clays to 25 feet below ground surface (bgs). From 25 feet to 50 feet, the silt, clay and silty clay strata are intercalated with a water-bearing layers of silty/clayey sand and gravel. A shallow water-bearing layer about a foot thick was identified between 10 and 20 feet bgs, composed of sand and gravel with about 50 percent fines. A deeper water-bearing zone about a foot thick was identified between 30 and 40 feet bgs, composed of sands and gravels with less than 10 percent fines.<br><br>Depth-to-groundwater in site monitoring wells typically ranges from 6 feet bgs to 16 feet bgs. Groundwater elevation readings from the three monitoring wells produce flow contours that suggest groundwater flows to the northeast at unusually steep gradient, however these results are problematic. The monitoring wells are less than 100 feet apart, with differences in groundwater elevation of several feet. Additionally, Taber Consultants believes, based on lithology data and groundwater elevation data from nearby sites, that the shallow groundwater in this area is influenced by confining or semi-confining conditions that influence the elevation of the groundwater peizometric surface. As an older neighborhood in Oakland, there is the possibility that the integrity of sewer lines in the area could also be suspect. The combination of these factors renders groundwater gradient calculations ambiguous at the Site. Groundwater in the nearby area flows predominantly to the west, toward the San Francisco Bay; therefore Taber Consultants assumes a westerly groundwater gradient. | **None.** | **N/A** |
| | **Source Area -** Soil and groundwater beneath the site is impacted with petroleum hydrocarbons likely related to the release of Stoddard Solvent from the USTs formerly located beneath the site. | Site assessment in 1992 found impacts in soil in the area of the tanks. The primary source area, the tanks, removed one 750-gallon tank and two 1000-gallon tanks in 1990, and a small 250-gallon tank in 1991. 59 cubic yards of soil were bioremediated on site. The remaining volume within the former tank pit was filled with pea gravel and soil. The secondary source area is the groundwater plume which extended from the tank area to the northwest corner of Adeline Street and 35th Street, north to about 30 feet under the MacArthur Freeway, and in the courtyard area. Plume boundaries to the east, southeast, south and southwest do not extend to the Zimmerman property (see Zimmerman Site, Geotracker, for 2009 soil boring records which show gasoline impacts but no middle distillate impacts. | **None.** | **N/A** |
| | **IMPACTS TO SOIL -** Persistent levels of TPH in site groundwater suggests that a source area may remain in the soil beneath the site. | 2013 GeoProbe borings advanced on 35th Street, Adeline Street and in the courtyard and driveway of the site were specifically advanced to sample shallow soils outside of the remediated tank area (which soils had been remediated). Only two borings found concentrations of TPH above the detection limit, at low levels (GP-26-7 had 20 mg/kg degraded TPH-SS, and GP-22-9.5 had 4 mg/kg degraded TPH-SS. Other soil samples from borings on 35th Street and Adeline Street that contained TPH-SS or degraded TPH-SS above laboratory reporting limits were in soils that were intercepted by groundwater and the TPH-SS plume. See cross sections A, B and C in Taber Consultants site documents. | **None.** | **N/A** |

**TABULATED CONCEPTUAL SITE MODEL**
City of Paris Cleaners
3516 Adeline Street, Oakland, California 94608

| Component | Summary | Detailed Description | Data Gap | How to Address |
|---|---|---|---|---|
| | **IMPACTS TO GROUNDWATER -** The lateral extent of impacted groundwater appears to be concentrated in the vicinity of the former tank pit and may extend to the northeast. The persistance of TPH-SS in groundwater suggests that a residual soil source area may remain on the property. The groundwater plume remains undefined both down and cross gradient from the location of the former USTs at the site. | The highest concentrations of TPH-SS impacts to groundwater were observed in close proximity to the former tank pit. With distance from the tank pit, concentrations of TPH-SS and degraded TPH-SS were observed at much reduced levels, indicating that the plume filled voids in the shallow groundwater zone (clayey gravel). Groundwater samples collected in support of site investigation at the Zimmerman residence did not find evidence of TPH-SS to the southeast, south or southwest of the City of Paris site. | **None.** | **N/A** |
| | **IMPACTS TO SOIL VAPOR** -On July 31 and August 1 and 2, 1991, Uriah Inc. screened soil vapor at the site using PID technology. Elevated PID readings were noted in some areas of the site, with the highest reading appearing in SP-6 at 110 ppmv. | Soil vapor samples were collected in four locations in the City of Paris courtyard in close proximity to the residences to assess health risks from the underlying plume. Benzene, toluene, ethyl benzene, m,p-xylene, o-xylene and naphthalene were sampled from shallow soils (less than 5 feet bgs). All concentrations were below Region 2 Environmental Screening Levels. Oxygen and methane in soil vapor were assessed through vapor sampling August 19, 2015. Oxygen exceeded 4 percent, (in two samples the concentrations were 6.13 and 8.18). No methane was detected above laboratory reporting limits. | **None.** | **N/A** |
| **SITE HISTORY** | October 1990: Three Stoddard Solvent USTs removed from site. July-Aug 1991: Soil vapor survey completed. August 1991: Overexcavation completed and UST removed. October 1992: Three monitoring wells installed. March 1998: Subsurface investigation completed. July 2009: Groundwater monitoring reduced from quarterly to semiannual events. | In 1987, Frank Champion, the owner at that time, applied for permits for remove Stoddard Solvent storage tanks at the site. Mr. Champion applied for five permits, obtaining permission to remove two 1000-gallon tanks, a 500-gallon tank, a 250-gallon tank and a 150-gallon tank. Underground storage tanks at the site were used to store Stoddard Solvent, the dry cleaning solvent used during operation of the dry cleaning facility until the 1960s when the facility was closed.<br><br>On October 4, 1990, Semco Company of San Mateo excavated and reported removing one 750-gallon and two 1,000-gallon underground tanks used to store Stoddard Solvent. Six soil samples were collected in conjunction with the UST removal.<br><br>On July 31 and August 1 and 2, 1991, Uriah Inc. (UES) performed a soil vapor survey at the site in an attempt to define the approximate boundaries of soil impacted by Stoddard Solvent. Soil vapors were found to be widely distributed across the site, but due to physical impediments posed by site structures, sidewalks, etc., the full extent of the impacted soil was not defined.<br><br>UES contracted W.A. Craig to overexcavate the eastern portion of the tank pit on August 30, 1991. Approximately 44 cubic yards were excavated and placed in a cell for on-site bioremediation of the impacted soil. During overexcavation, EUS reports that the contractor discovered an additional 250-gallon UST containing "a small volume of liquid" that was stored in a 55-gallon drum on site after removing an aliquot for analysis. This UST was removed and disposed by W. A. Craig on October 31, 1991. An additional 15 cubic yards was overexcavated from the tank pit by W.A. Craig on January 27, 1992 and added to the on-site bioremediation cell.<br><br>On March 31, 1992, composite samples of the on-site soil treated via bioremediation were analyzed to verify that sufficient hydrocarbon removal had occurred so at to reuse soil as fill material at the site. No additional soils were excavated due to safety concerns regarding building foundation integrity; however soil samples were collected from the tank pit side walls. ACHCSA approved use of the bioremediated soil as backfill, and W. A. Craig backfilled the tank pit with treated soil and clean fill on April 21, 1992.<br><br>On October 29 and 30, 1992, UES supervised on-site installation of ground water monitoring wells. Soils Exploration Services of Vacaville, California, installed three 30-foot monitoring wells. Initial depth to groundwater measurements in the wells ranged from 13 to 14 feet below grade. Beginning November 18, 1992, groundwater samples were analyzed for Total Petroleum Hydrocarbons (as Stoddard Solvent, TPH-SS), Total Petroleum Hydrocarbons (as diesel, TPH-D), Total Petroleum Hydrocarbons (as gasoline, TPH-G), methyl tertiary butyl ether (MtBE), benzene, toluene, ethylbenzene and total xylenes (BTEX). Samples from all three monitoring wells contained TPH-SS ranging from 630 parts per billion (ppb) in MW-2 to 11,000 ppb in MW-3. TPH-D, TPH-G, MtBE and BTEX concentrations were below laboratory detection limits.<br><br>On March 19, 1998, Dugan Associates of San Jose, California (Dugan) advanced six on and off-site soil borings to a total depth of 18 feet below grade. Five of the soil borings were advanced on the north side of 35th Street in the projected downgradient direction from the site (EB-2 through EB-6). One soil boring was advanced on-site to the northwest of the former UST location (EB-1).<br><br>In September, 1999, ACHSA issued a directive letter which required groundwater analysis for semivolatile organics (SVOCs) and volatile organics (VOCs) historically associated with dry cleaning operations. In December 1999, using EPA method 625 and 3510, or 8270 and 3550, 1,2-dichlorobenzene (DCB), 1,1-dichloroethane (1,1-DCA), 2-methylnaphthalene and naphthalene were detected | **None.** | **N/A** |
| **REMEDIATION HISTORY** | October 1990: USTs removed. August 1991: Overexcavation and UST Removal | In 1987, Frank Champion, the owner at that time, applied for permits to remove Stoddard Solvent storage tanks from the site. Mr. Champion applied for five permits, and was granted permission to remove two 1000-gallon tanks, a 500-gallon tank, a 250-gallon tank and a 150-gallon tank. Underground storage tanks at the site were used to store Stoddard Solvent, the dry cleaning solvent used during operation of the dry cleaning facility until the 1960s when the facility was closed.<br><br>On October 4, 1990, Semco Company of San Mateo excavated one 750-gallon UST and two 1,000-gallon USTs used to store Stoddard Solvent. Six soil samples were collected in conjunction with UST removal activities.<br><br>UES contracted W.A. Craig to overexcavate the eastern portion of the tank pit on August 30, 1991. Approximately 44 cubic yards were excavated and placed in a cell for on-site bioremediation of the impacted soil. During overexcavation, EUS reports that the contractor discovered an additional 250-gallon UST containing "a small volume of liquid" that was stored in a 55-gallon drum on site after removing an aliquot for analysis. This UST was removed and disposed by W. A. Craig on October 31, 1991. An additional 15 cubic yards was overexcavated from the tank pit by W.A. Craig on January 27, 1992 and added to the on-site bioremediation cell.<br><br>On March 31, 1992, composite samples of the on-site bioremediated soil were analyzed to verify that TPH levels had declined sufficiently and that the soil was suitable for use as on-site fill material. No additional soil was excavated due to safety concerns regarding building foundation integrity. However soil samples were collected from the tank pit side walls. ACHCSA approved use of the bioremediated soil as backfill, and W. A. Craig backfilled the tank pit with bioremediated soil and clean fill on April 21, 1992. | **None.** | **N/A** |
| **PREDICTIVE MODELING** | **Risk Analysis**- Groundwater in the site vicinity is unlikely to serve as a drinking water source. | The 1999 East Bay Plain Groundwater Basin Beneficial Use Evaluation Report designates shallow groundwater (less than 300 feet) as Zone B - groundwater that is unlikely to be used as a drinking water resource.<br><br>On April 18, 2013, Mr. Stewart King of Taber Consultants observed foundation and ground floor flooring conditions in the residential on-site dwellings, no cracks or settling were observed at the site. A vapor barrier has been installed in the main dwelling. Currently there are no residents in the former storefront building. It has been converted to an event space with no full time occupants.<br><br>In February 2012, Taber Consultants prepared a human health risk assessment (HHRA) using the RISC4 – Risk Integrated Software for Clean-ups (RISC4) software program developed by BP Oil International that evaluated risks related to air, ingestion of shallow soil and dermal contact with soil. | **None.** | **N/A** |

**TABULATED CONCEPTUAL SITE MODEL**

City of Paris Cleaners

3516 Adeline Street, Oakland, California 94608

| Component | Summary | Detailed Description | Data Gap | How to Address |
|---|---|---|---|---|
| | **Contaminant Fate, Transport & Attenuation-**Taber Consultants completed a Natural Attenuation Analysis in 2012. Bioattenuation zone data was collected in 2013, establishing eligibility for the Low Threat Closure Policy. | The Natural Attenuation Analysis (NAA) conducted by Taber Consultants in 2011 indicate that the TPH-SS plume at the Site is shrinking, leaving low-mobility, more recalcitrant weathered TPH-SS in its place. The NAA also indicated that while electron acceptors are depleted within the plume itself, electron acceptors NO3- and SO4- are abundant outside of the plume (~35 mg/l and up to 146 mg/l, respectively). Furthermore, remediation on up-gradient and cross-grandient TPH plumes have caused other sources of TPH to decrease, so that groundwater is no longer electron-acceptor depleted when it reaches the Site. Under these conditions, the TPH-SS plume will continue to degrade and contract. The chromatographs collected during groundwater monitoring show the TPH-SS is highly weathered, with the remaining fraction being non-volatile and longer chain hydrocarbons that have very low immobility. See attachment F. | **None.** | **N/A** |

# APPENDIX F.
# LTCP CHECKLIST

**ALAMEDA COUNTY ENVIRONMENTAL HEALTH**
**LOW THREAT UST CASE CLOSURE POLICY COMPLIANCE AND**
**IDENTIFICATION OF IMPEDIMENTS TO CASE CLOSURE CHECKLIST**

| | |
|---|---|
| Agency Name : Alameda County Environmental Health | Date: 12/12/2013 |
| ACEH Case Worker: MARK DETTERMAN | Fuel Leak Case No: RO000 0133 |
| Site Name: City of Paris Cleaners | GeoTracker Global ID: T0600100379 |
| Site Address:<br>3516 Adeline St, Oakland, CA 94608 | USTCF Claim No: 2192 |

**Thomas E. Ballard** has reviewed the above listed site for consideration of case closure using the framewotk provided by the State Water Resources Control Board Low-Threat Underground Storage Tank Case Closure Policy (LTCP), adopted on May 1, 2012, and effective August 17, 2012. The results of our review indicate that the site ☒ PASSES ☐ FAILS the LTCP criteria.

Section 25296.10 of the California Health and Safety Code (H&SC) requires that sites be cleaned up to protect human health, safety, and the environment. The current conceptual site model ☒ is ☐ is not adequate to determine that residual petroleum constituents at the site do not pose a significant risk to human health, safety, or the environment.

**Professional Seal and Signature Requirements**

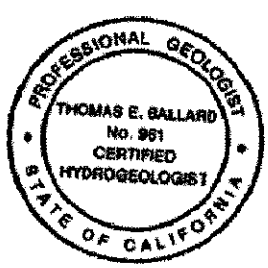
Pursuant to sections 6735, 7835, and 7835.1 of the California Business and Professions Code, all work and reports which require geologic or engineering evaluations or technical judgments must be performed under the direction of a California Professional Engineer, Certified Engineering Geologist, Professional Geologist, or Certified Hydrogeologist.

Licensee Name: Thomas Ballard, PG, CHG

Licensee Number: P.G. #7299, C.H.G. #961

Licensee Signature: Thos E Ballard

Licensee Professional Seal:




**Perjury Statement:**

"I declare under penalty of perjury, that the information and/or recommendations contained in the attached document is true and correct to the best of my knowledge".

Responsible Party Name: Paula Champion-Braig

Responsible Party Signature: Paula Champion Braig

# LOW THREAT CLOSURE POLICY - GENERAL CRITERIA A

**General Criteria a:**
**Is the Unauthorized Release Located within the Service Area of a Public Water System?** ☐ Yes ☐ No ☐ NE

**LTCP Statement:** "This policy is protective of existing water supply wells. New water supply wells are unlikely to be installed in the shallow groundwater near former UST release sites. However, it is difficult to predict, on a statewide basis, where new wells will be installed, particularly in rural areas that are undergoing new development. This policy is limited to areas with available public water systems to reduce the likelihood that new wells in developing areas will be inadvertently impacted by residual petroleum in groundwater. Case closure outside of areas with a public water system should be evaluated based upon the fundamental principles in this policy and a site specific evaluation of developing water supplies in the area. For purposes of this policy, a public water system is a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year."

| **Does the public water system have 15 or more service connection or regularly serves at least 25 individuals daily at least 60 days of the year?** | ☐ **Yes** | ☐ **No** | |
|---|---|---|---|
| Name of public water system agency? | | | |
| East Bay Municipal Utility District | ☐ Yes | | |
| Zone 7 Water Agency | ☐ Yes | | |
| City of Hayward Water | ☐ Yes | | |
| Alameda County Water District | ☐ Yes | | |

| **Has the minimum required information listed below been provided in the CSM for evaluation of case compliance with General Criteria a?** | ☐ **Yes** | ☐ **No** | |
|---|---|---|---|
| Has confirmation that the property has a hook-up and uses the public water system been provided? | ☐ Yes | ☐ NE | ☐ NA |
| Has a well search been conducted to identify wells located within 2,000 feet of the site? | ☐ Yes | ☐ NE | ☐ NA |
| Are there existing water supply wells or other sources of water in the vicinity of the site? | ☐ Yes | ☐ NE | ☐ NA |
| Domestic Water Supply Wells | ☐ Yes | ☐ No | ☐ NA |
| Irrigation Wells | ☐ Yes | ☐ No | ☐ NA |
| Other Capture Systems | ☐ Yes | ☐ No | ☐ NA |
| Are existing supply wells or other sources of water used by property owners/tenants in the vicinity of the site? | ☐ Yes | ☐ NE | ☐ NA |
| Have existing supply wells or other sources of water been sampled for chemicals of concern associated with the release site? | ☐ Yes | ☐ NE | ☐ NA |
| Have existing supply wells or other sources of water been properly abandoned and well destruction records been provided? | ☐ Yes | ☐ NE | ☐ NA |

**(Refer to Att. 1 - CSM Detailed Evaluation Checklist for Identification of Data Gaps)**

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY - GENERAL CRITERIA A

Case Notes

***End of General Criteria a Evaluation***

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY - GENERAL CRITERIA B

**General Criteria b:** **Does the Unauthorized Release Consist Only of Petroleum?** ☒ YES ☐ NO ☐ NE

**LTCP Statement:** "For purposes of this policy, petroleum is defined as crude oil, or any fraction thereof, which is liquid at standard conditions and temperature and pressure, which means 60 degrees Fahrenheit and 14.7 pounds per square inch absolute including the following substances: motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents and used oils, including any additives and blending agents such as oxygenates contained in the formulation of the substances."

**Site Contaminants Dectected in Soil, Soil Gas, Groundwater, and Surface Water**

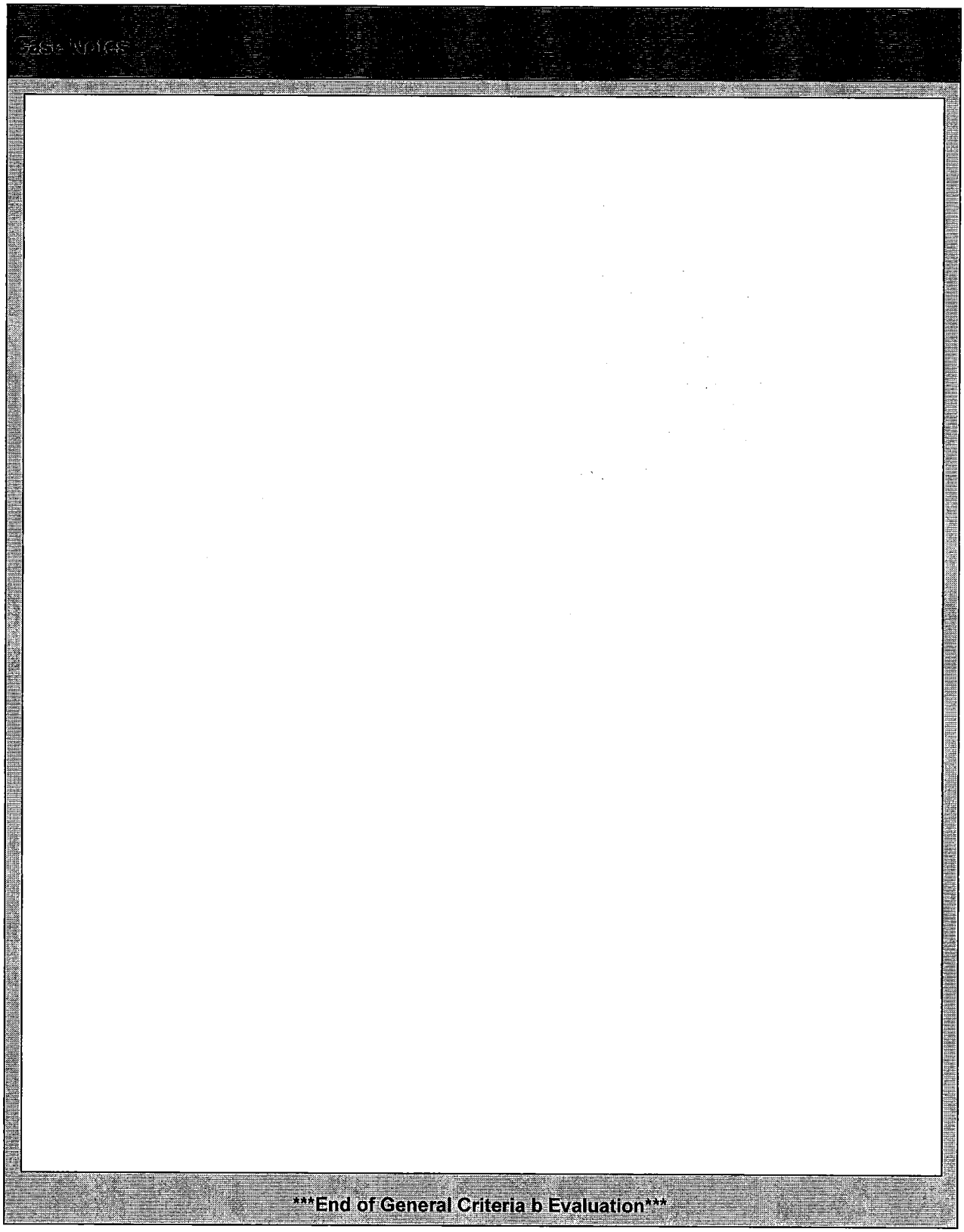
| | | | | ☒ Yes | ☐ No | ☐ NE |
|---|---|---|---|---|---|---|
| **Petroleum** | | | | | | |
| Motor fuels | ☐ Yes | ☒ No | ☐ NE | | | |
| TPH middle distillates | ☒ Yes | ☐ No | ☐ NE | | | |
| Residual fuels | ☐ Yes | ☒ No | ☐ NE | | | |
| Fuel oxygenates | ☒ Yes | ☐ No | ☐ NE | | | |
| Lead scavengers | ☐ Yes | ☒ No | ☐ NE | | | |
| Aromatic compounds | ☒ Yes | ☐ No | ☐ NE | | | |
| TPH middle distillates | ☒ Yes | ☐ No | ☐ NE | | | |
| **Non Petroleum Contaminants** | | | | ☒ Yes | ☐ No | ☐ NE |
| VOCs | ☒ Yes | ☐ No | ☐ NE | | | |
| SVOCs | ☒ Yes | ☐ No | ☐ NE | | | |
| Dioxans & Furans | ☐ Yes | ☒ No | ☐ NE | | | |
| Other PAHs | ☐ Yes | ☒ No | ☐ NE | | | |
| PCBs | ☐ Yes | ☒ No | ☐ NE | | | |
| Phenols | ☐ Yes | ☒ No | ☐ NE | | | |
| Metals | ☐ Yes | ☒ No | ☐ NE | | | |

| **Has the minimum required information listed below been provided in the CSM for evaluation of case compliance with General Criteria b?** | ☒ Yes | ☐ No | |
|---|---|---|---|
| Description of the site history? | ☒ Yes | ☐ No | ☐ NA |
| Types of products or chemicals used at the site? | ☒ Yes | ☐ No | ☐ NA |
| History of types of releases other than petroleum? | ☐ Yes | ☐ No | ☒ NA |
| Presentation of sampling results for all chemicals other than petroleum such as volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), phenol, 1,4-dioxane, dibenzofurans, or dioxins? | ☒ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |

**(Refer to Att. 1 - CSM Detailed Evaluation Checklist for Identification of Data Gaps)**

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY - GENERAL CRITERIA B



***End of General Criteria b Evaluation***

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY - GENERAL CRITERIA C

**General Criteria C:**
**Has the unauthorized release ("primary") release from the UST System been stopped?** ☒ YES ☐ NO ☐ NE

**LTCP Statement:** "The tank, pipe, or other appurtenant structure that released petroleum into the environment (i.e. the primary source) has been removed, repaired or replaced. It is not the intent of this policy to allow sites with ongoing leaks from the UST system to qualify for low-threat closure."

| | | | |
|---|---|---|---|
| Have the tank(s), piping, dispenser islands, or other appurtenant structures that released petroleum into the environment been removed, repaired or replaced? | ☒ Yes | ☐ No | ☐ NE |
| Tanks? | ☒ Yes | ☐ No | ☐ NE |
| Product piping? | ☒ Yes | ☐ No | ☐ NE |
| Dispenser islands? | ☒ Yes | ☐ No | ☐ NE |
| Other structures? | ☒ Yes | ☐ No | ☐ NE |
| Have the tanks, piping, and/or dispenser islands been moved to a different location at the site? | ☐ Yes | ☒ No | ☐ NE |
| Were/are the tanks permitted by a local regulatory agency having jurisdiction over USTs? | ☐ Yes | ☒ No | ☐ NE |
| Have the operating records been reviewed (i.e., operating permit, types of products dispensed, tanks construction, tank capacity, tank tightness tests, etc)? | ☐ Yes | ☒ No | ☐ NE |
| Was a tank removal permit issued by the local regulatory agency? | ☒ Yes | ☐ No | ☐ NE |
| Was a tank removal report submitted? | ☒ Yes | ☐ No | ☐ NE |
| Is there indication that new release(s) have occurred subsequent to the initial release? | ☐ Yes | ☒ No | ☐ NE |
| Are there spikes or increasing concentration trends in historic data subsequent to the initial release? | ☐ Yes | ☒ No | ☐ NE |
| Are there new detections of free product subsequent to the initial release in historic data? | ☐ Yes | ☒ No | ☐ NE |
| Have new contaminants been detected in historic data subsequent to the initial release? | ☐ Yes | ☒ No | ☐ NE |
| Have new petroleum hydrocarbons or other hazardous products been dispensed of at the site since the initial release occurred? | ☐ Yes | ☒ No | ☐ NE |
| Is there indication of new impacts from offsite sources? | ☐ Yes | ☒ No | ☐ NE |

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY - GENERAL CRITERIA C

| Has the minimum required information listed below been provided in the CSM for evaluation of case compliance with General Criteria c? | ☒ Yes | ☐ No | |
|---|---|---|---|
| Description of the history of releases and the actions taken to stop each release? | ☒ Yes | ☐ No | ☐ NA |
| Evaluation and accounting for changing contaminant concentrations over the full time period of site investigations? | ☒ Yes | ☐ No | ☐ NA |
| Data from other sites in the vicinity with unauthorized releases of petroleum hydrocarbons or other hazardous materials | ☒ Yes | ☐ No | ☐ NA |
| Hazardous Materials Business Plans (historic and current) | ☐ Yes | ☐ No | ☒ NA |
| CUPA UST permits and inspection reports | ☐ Yes | ☐ No | ☒ NA |

**(Refer to Att. 1 - CSM Detailed Evaluation Checklist for Identification of Data Gaps)**

**Case Notes:**

The tanks were used during dry cleaning operations that terminated in the 1960s. The tanks were removed in 1992. No records were available regarding tank permitting for that time frame.

Alameda County had requested a geophysical investigation to verify that no further tanks or piping were present at the site. Please see the NorCal Geophysics report in the June 26, 2014 NFAR.

There is a benzene, MTBE and TPH-G plume from the Zimmerman property within 275 feet of the Site. Insufficient remediation at that location has likely negatively affecting natural attenuation of the City of Paris site due to surpassing electron acceptor capacity up-and cross-gradient to the City of Paris. Additionally, spikes of BTEX and MTBE have been observed in the monitoring data which is not characteristic of for the City of Paris plume.

*****End of General Criteria c Evaluation*****

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY - GENERAL CRITERIA D

**General Criteria d:**
**Has Free Product been Removed to the Maximum Extent Practicable?**

☐ YES ☐ NO ☐ NE ☐ NA

**LTCP Statement:** "At petroleum unauthorized release sites where investigations indicate the presence of free product, free product shall be removed to the maximum extent practicable. In meeting the requirements of this section:

(a) Free product shall be removed in a manner that minimizes the spread of the unauthorized release into previously uncontaminated zones by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the site, and that properly treats, discharges or disposes of recovery byproducts in compliance with applicable laws;

(b) Abatement of free product migration shall be used as a minimum objective for the design of any free product removal system; and

(c) Flammable products shall be stored for disposal in a safe and competent manner to prevent fires or explosions."

| **Has the minimum required information listed below been provided in the CSM for evaluation of case compliance with General Criteria d?** | ☒ **Yes** | ☐ **No** | |
|---|---|---|---|
| Has the presence of free product been evaluated? | ☒ Yes | ☐ No | ☐ NA |
| Has a description of investigation and monitoring activities that have been undertaken to assess whether free product is present been provided? | ☒ Yes | ☐ No | ☐ NA |
| Has a preferential pathway study been conducted to determine the probability of free product encountering geologic and anthropogenic preferential pathways and conduits that can act as contaminant migration pathways to or from the site? | ☒ Yes | ☐ No | ☐ NA |
| Has tabulation and an evaluation of historic groundwater levels and flow direction and identification of a smear zone been provided? | ☒ Yes | ☐ No | ☐ NA |
| Has data including tables and figures showing any observation and measurements of free product been provided? | ☒ Yes | ☐ No | ☐ NA |
| Has an evaluation of the adequacy of the monitoring well network and appropriateness of screen interval to detect free product been conducted? | ☒ Yes | ☐ No | ☐ NA |
| Has an evaluation of whether free product removal is practicable, or if not practicable, a description of the conditions that prevent free product removal been conducted? | ☐ | ☐ | ☒ |
| Has free product removal been implemented? | ☐ Yes | ☐ No | ☒ NA |
| Absorbent Materials | ☐ Yes | ☐ No | |
| Bailing | ☐ Yes | ☐ No | |
| Skimmer | ☐ Yes | ☐ No | |
| HVDPE | ☐ Yes | ☐ No | |
| Other Methods: No free product has ever been at the site. | ☐ Yes | ☐ No | |
| Has a description of corrective action(s) that were taken to remove product, dates of removal actions, and volumes removed been provided? | ☒ Yes | ☐ No | ☐ NA |
| Is free product removal still being conducted? | ☐ Yes | ☐ No | ☒ NA |
| Does data indicate rebound of free product subsequent to product removal? | ☐ Yes | ☐ No | ☒ NA |

**(Refer to Att. 1 - CSM Detailed Evaluation Checklist for Identification of Data Gaps)**

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY - GENERAL CRITERIA D

Data Notes:

Following tank removal in 1992, the soil was removed from the tank pit to the safest extent practical, then bioremediated on site. Free product was never observed at the site. No further active remediation has been conducted, although natural attenuation has proceeded.

***End of General Criteria d Evaluation***

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY - GENERAL CRITERIA E

**General Criteria e:**
**Has a Conceptual Site Model that Adequately Assesses the Nature, Extent, and Mobility of the Release been Developed?** ☒ YES ☐ NO ☐ NE

**LTCP Statement:** "The Conceptual Site Model (CSM) is a fundamental element of a comprehensive site investigation. The CSM establishes the source and attributes of the unauthorized release, describes all affected media (including soil, groundwater, and soil vapor as appropriate), describes local geology, hydrogeology and other physical site characteristics that affect contaminant environmental transport and fate, and identifies all confirmed and potential contaminant receptors (including water supply wells, surface water bodies, structures and their inhabitants). The CSM is relied upon by practitioners as a guide for investigative design and data collection. Petroleum release sites in California occur in a wide variety of hydrogeologic settings. As a result, contaminant fate and transport and mechanisms by which receptors may be impacted by contaminants vary greatly from location to location. Therefore, the CSM is unique to each individual release site. All relevant site characteristics identified by the CSM shall be assessed and supported by data so that the nature, extent and mobility of the release have been established to determine conformance with applicable criteria in this policy. The supporting data and analysis used to develop the CSM are not required to be contained in a single report and may be contained in multiple reports submitted to the regulatory agency over a period of time."

| | | | |
|---|---|---|---|
| Has a CSM that adequately assesses the nature, extent, and mobility of the release in affected media in the vicinity of the site been developed? | ☒ Yes | ☐ No | |
| Groundwater assessment? | ☒ Yes | ☐ No | ☐ NA |
| Surface water assessment? | ☐ Yes | ☐ No | ☒ NA |
| Soil assessment? | ☒ Yes | ☐ No | ☐ NA |
| Soil vapor assessment? | ☒ Yes | ☐ No | ☐ NA |
| Indoor Air assessment? | ☐ Yes | ☒ No | ☐ NA |
| Has the CSM been developed in accordance with industry standards? | ☒ Yes | ☐ No | ☐ NA |
| SWRCB CA LUFT Manual, September 2012 | ☒ Yes | ☐ No | ☐ NA |
| ITRC Vapor Intrusion Pathway: A Practical Guideline (ITRC 2007) | ☒ Yes | ☐ No | ☐ NA |
| ASTM Method 1689-95 - Standard Guide for Developing Conceptual Site Models for Contaminated Sites | ☒ Yes | ☐ No | ☐ NA |
| ASTM Method 2531-6 - Standard Guide for Development of Conceptual Models for Light Nonaqueous-Phase Liquids Released to the Subsurface | ☒ Yes | ☐ No | ☐ NA |
| DTSC Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (October 2011) | ☒ Yes | ☐ No | ☐ NA |
| Is the CSM presented in one comprehensive document or has a summary document been submitted that identifies the documents where the requisite CSM elements are located?<br><br>A comprehensive CSM and a tabulated CSM have been submitted. | ☒ Yes | ☐ No | ☐ NA |
| Is the CSM representative of current site conditions? | ☒ Yes | ☐ No | ☐ NA |
| Does the final closure review validate the CSM? | ☒ Yes | ☐ No | ☐ NA |

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY - GENERAL CRITERIA E

| Has the minimum required information listed below been provided in the CSM for evaluation of case compliance with General Criteria e? | ☒ Yes | ☐ No | |
|---|---|---|---|
| Site history? | ☒ Yes | ☐ No | ☐ NA |
| Receptor survey? | ☒ Yes | ☐ No | ☐ NA |
| Description of releases? | ☒ Yes | ☐ No | ☐ NA |
| Geologic and hydrogeologic assessment? | ☒ Yes | ☐ No | ☐ NA |
| Identified stratigraphic and manmade migration pathways? | ☒ Yes | ☐ No | ☐ NA |
| Identified controls on contaminant migration? | ☒ Yes | ☐ No | ☐ NA |
| Delineation of the lateral and vertical extent of contamination in all affected media? | ☒ Yes | ☐ No | ☐ NA |
| Assessment of vapor intrusion pathways? | ☒ Yes | ☐ No | ☐ NA |
| Groundwater monitoring and evaluation of plume stability? | ☒ Yes | ☐ No | ☐ NA |
| Description of the type and effectiveness of corrective actions? | ☒ Yes | ☐ No | ☐ NA |
| Identification of data gaps? | ☒ Yes | ☐ No | ☐ NA |

**(Refer to Att. 1 - CSM Detailed Evaluation Checklist for Identification of Data Gaps)**

**Case Notes:**

During the May 2013 site assessment soil samples were collected in the site courtyard as close to the site buildings as could be performed safely. One soil sample at 7 feet below ground surface had 20 mg/kg total petroleum hydrocarbons as Stoddard Solvent (TPH-SS). Oxygen vapor was measured adjacent to the plume at 5 feet bgs. Concentrations of 8.18 and 6.63 percent was reported in the paved area adjacent to the former store front. The plume area within the courtyard has two areas of soil with trees where gas exchange is not impeded by asphalt or concrete. Additionally, methane concentrations were measured, however methane was not detected in the vapor samples. These results indicate adequate exchange of gases in the vadose zone between the plume and the ground surface to allow for the bioattenuation zone to funny attenuate the TPH-SS.

Indoor pathways were evaluated by reviewing the foundations and floors of the residential buildings at the site. No cracks were observed in the building foundations. The main residence ground level floor had been renovated and a moisture vapor barrier installed.

Due to the good conditions of the building foundations and floors, and the low or below detection of TPH-SS at the site, the potential for vapor intrusion of TPH-SS is very low.

*****End of General Criteria e Evaluation*****

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY - GENERAL CRITERIA F

**General Criteria f:**

**Has Secondary Source been Removed to the Extent Practicable?** ☒ YES ☐ NO ☐ NE

**LTCP Statement:** "Secondary source" is defined as petroleum-impacted soil or groundwater located at or immediately beneath the point of release from the primary source. Unless site attributes prevent secondary source removal (e.g. physical or infrastructural constraints exist whose removal or relocation would be technically or economically infeasible), petroleum-release sites are required to undergo secondary source removal to the extent practicable as described herein. "To the extent practicable" means implementing a cost-effective corrective action which removes or destroys-in-place the most readily recoverable fraction of source-area mass. It is expected that most secondary mass removal efforts will be completed in one year or less. Following removal or destruction of the secondary source, additional removal or active remedial actions shall not be required by regulatory agencies unless (1) necessary to abate a demonstrated threat to human health or (2) the groundwater plume does not meet the definition of low threat as described in this policy."

| | | | | | |
|---|---|---|---|---|---|
| Has secondary source been removed to the extent practicable? | | | | ☒ Yes | ☐ No ☐ NE |
| Petroleum-impacted soil? | ☒ Yes | ☐ No | ☐ NE | | |
| Petroleum-impacted groundwater? | ☒ Yes | ☐ No | ☐ NE | | |
| Is corrective action currently in progress to remove or destroy-in-place the most readily recoverable fraction of source-area mass? | | | | ☐ Yes | ☒ No ☐ NE |
| Petroleum-impacted soil remediation? | ☐ Yes | ☒ No | ☐ | | |
| Petroleum-impacted groundwater remediation? | ☐ Yes | ☒ No | ☐ | | |
| Have the current site remediation efforts been in progress for more than one year? | ☐ Yes | ☒ No | ☐ | | |
| Petroleum-impacted soil? | ☐ Yes | ☒ No | | | |
| Petroleum-impacted groundwater? | ☐ Yes | ☒ No | | | |
| Is site remediation cost effective? | ☐ Yes | ☒ No | ☐ NE | | |
| Is site remediation progressing adequately? | ☒ Yes | ☐ No | ☐ NE | | |
| Are additional removal or active remedial actions necessary to remove or abate a demonstrated threat to human health? | | | | ☐ Yes | ☒ No ☐ NE |
| Petroleum-impacted soil? | ☐ Yes | ☒ No | ☐ NE | | |
| Petroleum-impacted groundwater? | ☐ Yes | ☒ No | ☐ NE | | |

| **Has the minimum required information listed below been provided in the CSM for evaluation of case compliance with General Criteria f?** | **☒ Yes** | **☐ No** | |
|---|---|---|---|
| History of corrective actions for the site including the types of cleanup actions taken, dates of the actions, and mass removed? | ☒ Yes | ☐ No | ☐ NA |
| Figures depicting the location(s) of the removal action? | ☒ Yes | ☐ No | ☐ NA |
| Confirmation sampling results which demonstrate the effectiveness of secondary source removal? | ☒ Yes | ☐ No | ☐ NA |
| Narrative description of the actions and areas of success or infeasibility of actions? | ☒ Yes | ☐ No | ☐ NA |
| For in-situ corrective actions, presentation of long-term monitoring data that demonstrate that concentration have not rebounded following the cessation of corrective action? | ☐ Yes | ☒ No | ☐ NA |

**(Refer to Att. 1 - CSM Detailed Evaluation Checklist for Identification of Data Gaps)**

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY - GENERAL CRITERIA F

Case Notes

Natural attenuation is the primary remedial action at the site. The secondary source at the site is the groundwater plume. Alameda County Health Care Services Agency requested a pilot test for enhanced natural attenuation using sulfate injection as the remediation method, however the work plan was not approved pending resolution of data gaps relative to closing the site under the low-threat closure policy, particularly determining concentrations of TPH-SS in soils less than 10 feet deep. This data gap was addressed during the May 2013 site investigation, where soils at 4.5, 7 and 9.5 feet were sampled. In all but one sample, concentrations of TPH-SS and other petroleum hydrocarbon constituents were below laboratory reporting limits. One sample at 7 feet below ground surface had a concentration of 20 mg/kg TPH-SS, with no other constituents detected.

The remaining TPH-SS in the groundwater plume is highly weathered. Although total petroleum hydrocarbons as gasoline (TPH-G) has been reported in groundwater and soil, chromatogram analysis indicates that the "TPH-G" reported does not align with TPH-G standards, and is in fact more recalcitrant compounds present as a result of degradation of TPH-SS.

*****End of General Criteria f Evaluation*****

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY - GENERAL CRITERIA G

**General Criteria g:** Has Soil or Groundwater been Tested for MTBE and Results Reported in Accordance with Health and Safety Code Section 25296.15? ☒ Yes ☐ No ☐ NE

**LTCP Statement:** "Health and Safety Code section 25296.15 prohibits closing a UST case unless the soil, groundwater, or both, as applicable have been tested for MTBE and the results of that testing are known to the Regional Water Board. The exception to this requirement is where a regulatory agency determines that the UST that leaked has only contained diesel or jet fuel. Before closing a UST case pursuant to this policy, the requirements of section 25296.15, if applicable, shall be satisfied."

| **Has the minimum required information listed below been provided in the CSM for evaluation of case compliance with General Criteria g?** | ☒ Yes | ☐ No | |
|---|---|---|---|
| Presentation of sufficient data to assess whether MTBE is or was present in soil at or in the vicinity of the site? | ☒ Yes | ☐ No | ☐ NE |
| Presentation of sufficient data to assess whether MTBE is or was present in groundwater at or in the vicinity of the site? | ☒ Yes | ☐ No | ☐ NE |

**(Refer to Att. 1 - CSM Detailed Evaluation Checklist for Identification of Data Gaps)**

**Case Notes:**

MTBE is not a constituent of TPH-SS. MTBE is ubiquitous in the environment of a high-density city as a result of non-point source pollution. However, a source of MTBE has been identified within 275 feet cross- and up-gradient of the City of Paris.

*****End of General Criteria g Evaluation*****

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY - GENERAL CRITERIA H

**General Criteria h:**
**Does a Nuisance as Defined by Water Code Section 13050 Exist at the Site?** ☐ YES ☒ NO ☐ NE

**LTCP Statement:** "Water Code section 13050 defines "nuisance" as anything which meets all of the following requirements:

(1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.

(2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.

(3) Occurs during, or as a result of, the treatment or disposal of wastes.

For the purpose of this policy, waste means a petroleum release."

| **Does a nuisance condition currently exist (or potentially could exist) as defined by the LTCP above?** | ☐ **Yes** | ☒ **No** | ☐ **NE** |
|---|---|---|---|
| Is injurious to health? | ☐ Yes | ☒ No | ☐ NE |
| Is indecent or offensive to the senses? | ☐ Yes | ☒ No | ☐ NE |
| Is an obstruction to the free use of property so as to interfere with the comfortable enjoyment of life or property? | ☐ Yes | ☒ No | ☐ NE |
| Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal? | ☐ Yes | ☒ No | ☐ NE |
| Is a result of the treatment or disposal of waste? | ☐ Yes | ☒ No | ☐ NE |

| **Has the minimum required information listed below been provided in the CSM for evaluation of case compliance with General Criteria h?** | ☒ **Yes** | ☐ **No** | |
|---|---|---|---|
| Description of whether site contamination is present in locations that have the potential to pose nuisance conditions during common or reasonably expected site activities? | ☒ Yes | ☐ No | ☐ NA |
| Surface soils? | ☒ Yes | ☐ No | ☐ NE |
| Near surface soils? | ☒ Yes | ☐ No | ☐ NE |
| Utility corridors? | ☒ Yes | ☐ No | ☐ NE |
| Groundwater? | ☒ Yes | ☐ No | ☐ NE |
| Surface water? | ☐ Yes | ☒ No | ☐ NE |
| Soil gas? | ☒ Yes | ☐ No | ☐ NE |
| Basements or other subsurface structures? | ☐ Yes | ☒ No | ☐ NE |
| Descriptions of the type and vertical and lateral extent of shallow soil? | ☒ Yes | ☐ No | ☐ NE |
| Descriptions of the lateral extent of surface soil contamination, and depths to contamination? | ☒ Yes | ☐ No | ☐ NE |
| Presentation of analytical results for surface soil, shallow soil, soil gas, groundwater, and surface water samples? | ☒ Yes | ☐ No | ☐ NE |
| Discussion of odors or visual evidence of contamination? | ☒ Yes | ☐ No | ☐ NE |
| Presentation of preferential pathway and utility conduit surveys? | ☒ Yes | ☐ No | ☐ NE |
| Evaluation of potential points for exposure such as groundwater or free product seeps into basements or surface water bodies or conveyances? | ☒ Yes | ☐ No | ☐ NE |
| Description of surface water runoff from the property to storm drains, other sites, or other surface water body receptors? | ☒ Yes | ☐ No | ☐ NE |
| Description of the current and expected future use of the site and impacted or potentially impacted property in the site vicinity? | ☒ Yes | ☐ No | ☐ NE |

**(Refer to Att. 1 - CSM Detailed Evaluation Checklist for Identification of Data Gaps)**

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY - GENERAL CRITERIA H

General Notes

***End of General Criteria h Evaluation***

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY
## MEDIA SPECIFIC CRITERIA - GROUNDWATER

**Does the site meet the LTCP criteria for groundwater? Does the site qualify for the Soil Only Case exemption?** ☐ Yes ☐ No

**LTCP Statement:** "This policy describes criteria on which to base a determination that threats to existing and anticipated beneficial uses of groundwater have been mitigated or are de minimis, including cases that have not affected groundwater.

State Water Board Resolution 92-49, *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304* is a state policy for water quality control and applies to petroleum UST cases. Resolution 92-49 directs that water affected by an unauthorized release attain either background water quality or the best water quality that is reasonable if background water quality cannot be restored. Any alternative level of water quality less stringent than background must be consistent with the maximum benefit to the people of the state, not unreasonably affect current and anticipated beneficial use of affected water, and not result in water quality less than that prescribed in the water quality control plan for the basin within which the site is located. Resolution No. 92-49 does not require that the requisite level of water quality be met at the time of case closure; it specifies compliance with cleanup goals and objectives within a reasonable time frame.

Water quality control plans (Basin Plans) generally establish "background" water quality as a restorative endpoint. This policy recognizes the regulatory authority of the Basin Plans but underscores the flexibility contained in Resolution 92-49.

It is a fundamental tenet of this low-threat closure policy that if the closure criteria described in this policy are satisfied at a petroleum unauthorized release site, attaining background water quality is not feasible, establishing an alternate level of water quality not to exceed that prescribed in the applicable Basin Plan is appropriate, and that water quality objectives will be attained through natural attenuation within a reasonable time, prior to the expected need for use of any affected groundwater.

If groundwater with a designated beneficial use is affected by an unauthorized release, to satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites listed below. A plume that is "stable or decreasing" is a contaminant mass that has expanded to its maximum extent: the distance from the release where attenuation exceeds migration."

**"Sites with Releases that Have Not Affected Groundwater** - Sites with soil that does not contain sufficient mobile constituents [leachate, vapors, or light non-aqueous-phase liquids (LNAPL)] to cause groundwater to exceed the groundwater criteria in this policy shall be considered low-threat sites for the groundwater medium. Provided the general criteria and criteria for other media are also met, those sites are eligible for case closure. For older releases, the absence of current groundwater impact is often a good indication that residual concentrations present in the soil are not a source for groundwater pollution."

| | | |
|---|---|---|
| **Does the site qualify for the Soil Only Case EXEMPTION?** | ☐ Yes | ☒ No |
| **If the site <u>does not</u> qualify for the soil only exemption, then, is the contaminant plume stable or decreasing in areal extent?** | ☒ Yes | ☐ No |
| **If the contaminant plume is stable or decreasing, then does it meet <u>all of the additional characteristics</u> of one of the five (5) LTCP classes?** | ☒ Yes | ☐ No |

| | | |
|---|---|---|
| Class 1 | ☐ Yes | ☒ No |
| Class 2 | ☒ Yes | ☐ No |
| Class 3 | ☐ Yes | ☒ No |
| Class 4 | ☒ Yes | ☐ No |
| Class 5 | ☒ Yes | ☐ No |

(Refer to Next Page for Contaminant Plume Classification Characteristics)

(Media Specific Criteria for Groundwater Evaluation Continued on Next Page)

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY
## MEDIA SPECIFIC CRITERIA - GROUNDWATER

### Groundwater Contaminant Plume Classification Characteristics

| If the Contaminant Plume is Stable or Decreasing, then Does the contaminant plume meet all of the additional characteristics of one of the five (5) LTCP classes listed below? | ☒ Yes | ☐ No | ☐ NE |
|---|---|---|---|
| **Class 1** | ☐ **Yes** | ☒ **No** | ☐ **NE** |
| Is < 100 feet in length | ☐ Yes | ☒ No | ☐ NE |
| There is no free product | ☒ Yes | ☐ No | ☐ NE |
| The nearest existing water supply well is > 250 feet from the defined plume boundary | ☒ Yes | ☐ No | ☐ NE |
| The nearest existing surface water body is > 250 feet from the defined plume boundary | ☒ Yes | ☐ No | ☐ NE |
| **Class 2** | ☒ **Yes** | ☐ **No** | ☐ **NE** |
| Is < 250 feet in length | ☒ Yes | ☐ No | ☐ NE |
| There is no free product | ☒ Yes | ☐ No | ☐ NE |
| The nearest existing water supply well is > 1,000 feet from the defined plume boundary | ☒ Yes | ☐ No | ☐ NE |
| The nearest existing surface water body is > 1,000 feet from the defined plume boundary | ☒ Yes | ☐ No | ☐ NE |
| The dissolved concentration of benzene is <3,000 µg/L | ☒ Yes | ☐ No | ☐ NE |
| The dissolved concentration of MTBE is <1,000 µg/L | ☒ Yes | ☐ No | ☐ NE |
| **Class 3** | ☐ **Yes** | ☒ **No** | ☐ **NE** |
| Is < 250 feet in length | ☒ Yes | ☐ No | ☐ NE |
| Free product has been removed to the maximum extent practicable, may still be present below the site where the release originated, but does not extend off-site | ☒ Yes | ☐ No | ☐ NE |
| The plume has been stable or decreasing for a minimum of 5 years | ☒ Yes | ☐ No | ☐ NE |
| The nearest existing water supply well is > 1,000 feet from the defined plume boundary | ☒ Yes | ☐ No | ☐ NE |
| The nearest existing surface water body is > 1,000 feet from the defined plume boundary | ☒ Yes | ☐ No | ☐ NE |
| The property owner is willing to accept a land use restriction if the regulatory agency requires a land use restriction as a condition for closure | ☐ Yes | ☒ No | ☐ NE |
| **Class 4** | ☒ **Yes** | ☐ **No** | ☐ **NE** |
| Is < 1,000 feet in length | ☒ Yes | ☐ No | ☐ NE |
| There is no free product | ☒ Yes | ☐ No | ☐ NE |
| The nearest existing water supply well or surface water body is > 1,000 feet from the defined plume boundary | ☒ Yes | ☐ No | ☐ NE |
| The nearest existing surface water body is > 1,000 feet from the defined plume boundary | ☒ Yes | ☐ No | ☐ NE |
| The dissolved concentration of benzene is <1,000 µg/L | ☒ Yes | ☐ No | ☐ NE |
| The dissolved concentration of MTBE is <1,000 µg/L | ☒ Yes | ☐ No | ☐ NE |
| **Class 5** | ☒ **Yes** | ☐ **No** | ☐ **NE** |
| Based on an analysis of site specific conditions at the site under current and reasonable anticipated near-term future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and water quality objectives will be achieved within a reasonable time frame | ☒ Yes | ☐ No | ☐ NE |

**(Media Specific Criteria for Groundwater Evaluation Continued on Next Page)**

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## Sites Not Meeting the Characteristics of the Five Groundwater Plume Classes

**Indicate those conditions that do not meet the characteristics of one of the five classes of sites listed in the LTCP.**

| | | | |
|---|---|---|---|
| **Plume Length (That Exceeds Water Quality Objectives)** | | | |
| ≥ 100 feet and < 250 feet | ☒ Yes | | |
| ≥ 250 feet and < 1,000 feet | ☐ Yes | | |
| ≥ 1,000 feet | ☐ Yes | | |
| Unknown | ☐ Yes | | |
| **For Sites with Free Product** | | | |
| Free product in groundwater | ☐ Yes | ☒ No | ☐ UNK |
| Free product has been removed to the maximum extent practicable | ☒ | ☐ No | ☐ UNK |
| The plume has been stable or decreasing for 5-Years | ☒ | ☐ No | ☐ UNK |
| The owner is willing to accept a Land Use Restriction (if required) | ☐ | ☒ No | ☐ UNK |
| Free product extends offsite | ☐ Yes | ☒ | ☐ UNK |
| **Benzene Concentration** | | | |
| ≥ 1,000 µg/L and < 3,000 µg/L | ☐ Yes | | |
| ≥ 3,000 µg/L | ☐ Yes | | |
| Unknown | ☐ Yes | | |
| **MTBE Concentration** | | | |
| ≥ 1,000 µg/L | ☐ Yes | | |
| Unknown | ☐ Yes | | |
| **Nearest Supply Well (From Plume Boundary)** | | | |
| ≤ 250 Feet | ☐ Yes | | |
| > 250 Feet and ≤ 1,000 Feet | ☐ Yes | | |
| Unknown | ☐ Yes | | |
| **Nearest Surface Water Body (From Plume Boundary)** | | | |
| ≤ 250 Feet | ☐ Yes | | |
| > 250 Feet and ≤ 1,000 Feet | ☐ Yes | | |
| Unknown | ☐ Yes | | |

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY
## MEDIA SPECIFIC CRITERIA - GROUNDWATER

### CSM Minimum Required Information

| Has the minimum required information listed below been provided in the CSM for evaluation of case compliance with Media Specific Criteria for Groundwater? | ☒ Yes | ☐ No | |
|---|---|---|---|
| Sufficient data been presented to demonstrate that site characterization activities have defined the horizontal and vertical extent of the plume? | ☒ Yes | ☐ No | ☐ NA |
| Demonstration of plume stability using a valid technical analysis that considers the accuracy of data from the wells, well placement within the plum, and changes in horizontal and vertical extent of the plume? | ☒ Yes | ☐ No | ☐ NA |
| Evaluation of factors such as seasonal variability, water level changes, sampling methods, well construction, and other factors that can affect data quality? | ☒ Yes | ☐ No | ☐ NA |
| A recent well survey that uses all available well information from both the Department of Water Resources and local agencies (Zone 7 Water Agency of Alameda County Public Works as appropriate)? | ☒ Yes | ☐ No | ☐ NA |
| The location of surface water bodies and water supply wells located within 2,000 feet of the site presented on a site figure with benzene and MTBE isoconcentration contours? | ☐ Yes | ☐ No | ☒ NA |
| A table identifying each water supply well along with the well construction details? | ☐ Yes | ☐ No | ☒ NA |
| A discussion of surface water bodies within 2,000 feet of the site and details on hydraulic connection with the groundwater plume? | ☐ Yes | ☐ No | ☒ NA |
| A discussion of current and reasonable anticipated near-term future scenarios at the site and in the vicinity of the site and possible Land Use Restrictions? | ☐ Yes | ☐ No | ☒ NA |
| Benzene is not a constituent at the site. | ☒ Yes | ☐ No | ☐ NA |
| Soil concentrations of TPH less than 100 mg/kg at depths less than 10 feet | ☒ Yes | ☐ No | ☐ NA |
| Vapor assessment has found low risk from TPH to residences. | ☒ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |

**(Refer to Att. 1 - CSM Detailed Evaluation Checklist for Identification of Data Gaps)**

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY
## MEDIA SPECIFIC CRITERIA - GROUNDWATER

CASE NOTES

***End of Groundwater Criteria Evaluation***

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

| Does the site meet one of the three petroleum vapor intrusion to indoor air specific criteria (a, b, or c), or qualify for the active commercial fueling facility exemption? | ☒ YES | ☐ NO |
|---|---|---|

**LTCP Statement:** "Exposure to petroleum vapors migrating from soil or groundwater to indoor air may pose unacceptable human health risks. This policy describes conditions, including bioattenuation zones, which if met will assure that exposure to petroleum vapors in indoor air will not pose unacceptable health risks. In many petroleum release cases, potential human exposures to vapors are mitigated by bioattenuation processes as vapors migrate toward the ground surface. For the purposes of this section, the term "bioattenuation zone" means an area of soil with conditions that support biodegradation of petroleum hydrocarbon vapors.

The low-threat vapor-intrusion criteria described below apply to sites where the release originated and impacted or potentially impacted adjacent parcels when:

(1) existing buildings are occupied or may be reasonably expected to be occupied in the future, or

(2) buildings for human occupancy are reasonably expected to be constructed in the future.

Appendices 1 through 4 (attached) illustrate four potential exposure scenarios and describe characteristics and criteria associated with each scenario. Petroleum release sites shall satisfy the media-specific criteria for petroleum vapor intrusion to indoor air and be considered low-threat for the vapor-intrusion-to-indoor-air pathway if:

a. Site-specific conditions at the release site satisfy all of the characteristics and criteria of scenarios 1 through 3 as applicable, or all of the characteristics and criteria of scenario 4 as applicable; or

b. A site-specific risk assessment for the vapor intrusion pathway is conducted and demonstrates that human health is protected to the satisfaction of the regulatory agency; or

c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, the regulatory agency determines that petroleum vapors migrating from soil or groundwater will have no significant risk of adversely affecting human health.

Exception: Exposures to petroleum vapors associated with historical fuel system releases are comparatively insignificant relative to exposures from small surface spills and fugitive vapor releases that typically occur at active fueling facilities. Therefore, satisfaction of the media-specific criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities, except in cases where release characteristics can be reasonably believed to pose an unacceptable health risk."

| | ☐ Yes | ☒ No |
|---|---|---|
| **Does the site qualify for an EXEMPTION from the Petroleum Vapor Intrusion to Indoor Air criteria (i.e., the site is an active commercial petroleum fueling facility?** | | |
| Are release characteristics reasonably believed to pose an unacceptable health risk to facility users or nearby facilities? ☐ Yes ☒ No ☐ NE | | |
| **a. Do site-specific conditions at the release site satisfy all of the characteristics and criteria of scenarios 1 through 3 as applicable, or all of the characteristics and criteria of scenario 4?** | ☐ Yes | ☐ No |
| Scenario 1: Unweathered LNAPL in groundwater ☐ Yes ☒ No | | |
| Scenario 2: Unweathered LNAPL in soil ☐ Yes ☒ No | | |
| Scenario 3: Dissolved benzene concentrations in groundwater (oxygen ≥ 4%) ☐ Yes ☒ No | | |
| Scenario 4: Dissolved phase benzene concentrations in groundwater (oxygen < 4%) ☐ Yes ☒ No | | |
| (Refer to Next Page for Scenario 1 through 4 Characteristics) | | |
| **b. Has a site-specific risk assessment for the vapor intrusion pathway been conducted and demonstrates that human health is protected to the satisfaction of the regulatory agency?** | ☒ Yes | ☐ No |
| **c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that petroleum vapors migrating from soil or groundwater will have no significant risk of adversely affecting human health?** | ☐ Yes | ☒ No |

(Media Specific Criteria for Vapor Intrusion to Indoor Air Evaluation Continued on Next Page)

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## Scenarios 1 through 3: Bioattenuation Zone Characteristics

| Scenario 1: Unweathered LNAPL in Groundwater | | | | |
|---|---|---|---|---|
| The bioattenuation zone is a continuous zone provides a separation of at least 30 feet vertically between the LNAPL in groundwater and the foundation of existing or potential buildings; and | ☐ Yes | ☒ No | ☐ NE | ☐ NA |
| Total TPH (TPH-g and TPH-d combined) are less than 100 mg/kg throughout the entire depth of the bioattenuation zone | ☒ Yes | ☐ No | ☐ NE | ☐ NA |

| Scenario 2: Unweathered LNAPL in Soil | | | | |
|---|---|---|---|---|
| The bioattenuation zone is a continuous zone that provides a separation of at least 30 feet vertically between the LNAPL in soil and the foundation of existing or potential buildings; and | ☐ Yes | ☒ No | ☐ NE | ☐ NA |
| Total TPH (TPH-g and TPH-d combined) are <100 mg/kg throughout the entire lateral and vertical extent of the bioattenuation zone | ☒ Yes | ☐ No | ☐ NE | ☐ NA |

| Scenario 3: Dissolved Phase Benzene Concentrations in Groundwater | | | | |
|---|---|---|---|---|
| **Sites without oxygen data or where oxygen is <4% and benzene concentrations < 100 µg/l (Figure A)** | ☒ **Yes** | ☐ **No** | ☐ **NE** | ☐ **NA** |
| The bioattenuation zone is a continuous zone that provides a separation of at least 5 feet vertically between the dissolved phase benzene and the foundation of existing or potential buildings; and | ☒ Yes | ☐ No | ☐ NE | ☐ NA |
| Contains total TPH (TPH-g and TPH-d combined) < 100 mg/kg throughout the entire depth of the bioattenuation zone | ☒ Yes | ☐ No | ☐ NE | ☐ NA |
| **Sites without oxygen data or where oxygen is <4% and benzene concentrations ≥ 100 µg/L but < 1,000 µg/L (Figure B)** | ☐ **Yes** | ☐ **No** | ☐ **NE** | ☒ **NA** |
| The bioattenuation zone is a continuous zone that provides a separation of at least 10 feet vertically between the dissolved phase benzene and the foundation of existing or potential buildings | ☒ Yes | ☐ No | ☐ NE | ☐ NA |
| **Sites with oxygen ≥ 4% and benzene concentrations < 1,000 µg/L (Figure C)** | ☒ **Yes** | ☐ **No** | ☐ **NE** | ☐ **NA** |
| A continuous zone that provides a separation of at least 10 feet vertically between the dissolved phase benzene and the foundation of existing or potential buildings | ☒ Yes | ☐ No | ☐ NE | ☐ NA |
| Contains total TPH (TPH-g and TPH-d combined) < 100 mg/kg throughout the entire depth of the bioattenuation zone | ☒ Yes | ☐ No | ☐ NE | ☐ NA |

(LTCP Media Specific Criteria for Vapor Intrusion to Indoor Air Evaluation Continued on Next Page)

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## Scenario 4 Characteristics: Direct Measurement of Soil Gas Concentrations (No Bioattenuation Zone)

| **Were soil gas samples obtained from the required locations?** | **☒ Yes** | **☐ No** | **☐ NE** | **☐ NA** |
|---|---|---|---|---|
| **Beneath or adjacent to an existing building:** Soil gas samples collected at least 5 feet below the bottom of the building foundation | ☒ Yes | ☐ No | ☐ NE | ☐ NA |
| **Future construction:** Soil gas samples from at least five feet below ground surface | ☒ Yes | ☐ No | ☐ NE | ☐ NA |
| **Were soil gas samples collected in accordance with DTSC Advisory with DTSC Advisory – Active Soil Gas Investigations (April 2012)?** | **☒ Yes** | **☐ No** | **☐ NE** | **☐ NA** |

| **Are all of the following criteria for a bioattenuation zone satisfied?** | **☒ Yes** | **☐ No** | **☐ NE** | **☐ NA** |
|---|---|---|---|---|
| There is a minimum of five vertical feet of soil between the soil vapor measurements and the foundation of an existing building or ground surface of future construction; and | ☒ Yes | ☐ No | ☐ NE | ☐ NA |
| TPH (TPHg + TPHd) is less than 100 mg/kg (measured in at least two depths within the five-foot zone; and | ☒ Yes | ☐ No | ☐ NE | ☐ NA |
| Oxygen is ≥ 4% measured at the bottom of the five-foot zone | ☒ Yes | ☐ No | ☐ NE | ☐ NA |

| **If the bioattenuation zone criteria are all satisfied, then do soil gas concentrations meet the following criteria?** | **☒ Yes** | **☐ No** | **☐ NE** | **☐ NA** |
|---|---|---|---|---|
| **Residential** | **☒ Yes** | **☐ No** | **☐ NE** | **☐ NA** |
| Benzene <85,000 µg/m$^3$ | ☒ Yes | ☐ No | ☐ NE | ☐ NA |
| Ethylbenzene <1,100,000 µg/m$^3$ | ☒ Yes | ☐ No | ☐ NE | ☐ NA |
| Napthalene <93,000 µg/m$^3$ | ☒ Yes | ☐ No | ☐ NE | ☐ NA |
| **Commercial** | **☐ Yes** | **☐ No** | **☐ NE** | **☒ NA** |
| Benzene <280,000 µg/m$^3$ | ☐ Yes | ☐ No | ☐ NE | ☒ NA |
| Ethylbenzene <3,600,000 µg/m$^3$ | ☐ Yes | ☐ No | ☐ NE | ☒ NA |
| Napthalene <310,000 µg/m$^3$ | ☐ Yes | ☐ No | ☐ NE | ☒ NA |

| **If the bioattenuation zone criteria are not satisfied, then do soil gas concentrations meet the following criteria?** | **☒ Yes** | **☐ No** | **☐ NE** | **☐ NA** |
|---|---|---|---|---|
| **Residential** | **☒ Yes** | **☐ No** | **☐ NE** | **☐ NA** |
| Benzene <85 µg/m$^3$ | ☒ Yes | ☐ No | ☐ NE | ☐ NA |
| Ethylbenzene <1,100 µg/m$^3$ | ☒ Yes | ☐ No | ☐ NE | ☐ NA |
| Napthalene <93 µg/m$^3$ | ☒ Yes | ☐ No | ☐ NE | ☐ NA |
| **Commercial** | **☐ Yes** | **☐ No** | **☐ NE** | **☒ NA** |
| Benzene <280 µg/m$^3$ | ☐ Yes | ☐ No | ☐ NE | ☒ NA |
| Ethylbenzene <3,600 µg/m$^3$ | ☐ Yes | ☐ No | ☐ NE | ☒ NA |
| Napthalene <310 µg/m$^3$ | ☐ Yes | ☐ No | ☐ NE | ☒ NA |

**(LTCP Media Specific Criteria for Vapor Intrusion to Indoor Air Evaluation Continued on Next Page)**

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY
## MEDIA SPECIFIC CRITERIA - VAPOR INTRUSION TO INDOOR AIR

**Additional questions for sites that do not meet the LTCP Criteria (a, b, or c):**

| | |
|---|---|
| **Soil Gas Samples** | |
| Insufficient number to be representative | ☐ Yes |
| Temporal variability not evaluated | ☐ Yes |
| No soil gas samples | ☐ Yes |
| Taken incorrectly | ☐ Yes |
| Not taken at two depths within 5 foot zone | ☐ Yes |
| High spatial or temporal variability | ☐ Yes |
| Insufficient analytes | ☐ Yes |
| **Exposure Type** | |
| Residential | ☒ Yes |
| Commercial | ☐ Yes |
| **Free Product** | |
| In groundwater | ☐ Yes |
| In soil | ☐ Yes |
| Unknown | ☐ Yes |
| **TPH in the Bioattenuation Zone** | |
| < 5 feet (No Biozone) | ☐ Yes |
| ≥ 5 feet and < 10 feet | ☐ Yes |
| ≥ 10 feet and < 30 feet | ☒ Yes |
| ≥ 30 Feet | ☐ Yes |
| 30 Feet BioZone compromised (TPH>100 µg/L) | ☐ Yes |
| Unknown | ☐ Yes |
| **Oxygen Data In Bioattenuation Zone** | |
| No oxygen data | ☐ Yes |
| Oxygen < 4% | ☐ Yes |
| Oxygen ≥ 4% | ☒ Yes |
| **Benzene in Groundwater** | |
| ≥ 100 µg/L and < 1,000 µg/L | ☐ Yes |
| ≥ 1,000 µg/L | ☐ Yes |
| Unknown | ☐ Yes |
| **Soil Gas Benzene** | |
| ≥ 85 $\mu g/m^3$ and < 280 $\mu g/m^3$ | ☐ Yes |
| ≥ 280 $\mu g/m^3$ and < 85,000 $\mu g/m^3$ | ☐ Yes |
| ≥ 85,000 $\mu g/m^3$ and < 280,000 $\mu g/m^3$ | ☐ Yes |
| ≥ 280,000 $\mu g/m^3$ | ☐ |
| Unknown | ☐ Yes |
| **Soil Gas Ethylbenzene** | |
| ≥ 1,100 $\mu g/m^3$ and < 3,600 $\mu g/m^3$ | ☐ Yes |
| ≥ 3,600 $\mu g/m^3$ and < 1,100,000 $\mu g/m^3$ | ☐ Yes |
| ≥ 1,100,000 $\mu g/m^3$ and < 3,600,000 | ☐ Yes |
| ≥ 3,600,000 $\mu g/m^3$ | ☐ Yes |
| Unknown | ☐ Yes |
| **Soil Gas Napthalene** | |
| ≥ 93 $\mu g/m^3$ and < 310 $\mu g/m^3$ | ☐ Yes |
| ≥ 310 $\mu g/m^3$ and < 93,000 $\mu g/m^3$ | ☐ Yes |
| ≥ 93,000 $\mu g/m^3$ and < 310,000 $\mu g/m^3$ | ☐ Yes |
| ≥ 310,000 $\mu g/m^3$ | ☐ Yes |
| Unknown | ☐ |

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## CSM Minimum Required Information

| Has the minimum required information listed below been provided in the CSM for evaluation of case compliance with the Media Specific Criteria for Vapor Intrusion to Indoor Air? | ☒ Yes | ☐ No | |
|---|---|---|---|
| Sufficient data to demonstrate that site characterization is complete and that the data demonstrate that the site-specific conditions satisfy all the assumptions, characteristics, and screening criteria of scenarios 1 through 3, or all the assumptions, characteristics, and screening criteria of scenario 4? | ☒ Yes | ☐ No | ☐ NA |
| Evidence of unweathered LNAPL in soil or groundwater? | ☐ Yes | ☒ No | ☐ NA |
| Soil data to demonstrate that total TPH concentrations (TPH-g and TPH-d combined) in soil are < 100 mg/kg throughout the specified bioattenuation zone depth? | ☒ Yes | ☐ No | ☐ NA |
| Depth of foundation of existing or potential buildings? | ☐ Yes | ☒ No | ☐ NA |
| Soil gas data to demonstrate that a continuous bioattenuation zone is or is not present? | ☒ Yes | ☐ No | ☐ NA |
| Concentrations of benzene in groundwater? | ☒ Yes | ☐ No | ☐ NA |
| Oxygen data in the bioattenuation zone? | ☒ Yes | ☐ No | ☐ NA |
| Results and evaluation of preferential pathway and utility conduit surveys to determine whether a continuous bioattenuation zone is present? | ☒ Yes | ☐ No | ☐ NA |
| Evaluation of data representativeness, quality, spatial distribution, and temporal variability relative to current or potential receptors and sources? | ☒ Yes | ☐ No | ☐ NA |
| Evaluation to assess whether nearby facilities potentially may be impacted by petroleum vapor intrusion? | ☒ Yes | ☐ No | ☐ NA |
| Sufficient data to demonstrate that through the use of mitigation measures or institutional controls, exposure to petroleum vapors migrating from soil or groundwater will have no significant risk of adversely affecting human health? | ☒ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |
| | | | |
| | | | |
| | | | |

(Refer to Att. 1 - CSM Checklist for Identification of Data Gaps)

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

Case Notes:

***End of Vapor Intrusion to Indoor Air Evaluation***

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

| Does the site satisfy the Media-Specific Criteria for Direct Contact and Outdoor Air Exposure, or does the site qualify for the exemption? | ☒ YES | ☐ NO |
|---|---|---|

**LTCP Statement:** "This policy describes conditions where direct contact with contaminated soil or inhalation of contaminants volatized to outdoor air poses a low threat to human health. Release sites where human exposure may occur satisfy the media-specific criteria for direct contact and outdoor air exposure and shall be considered low-threat if they meet any of the following:

a. Maximum concentrations of petroleum constituents in soil are less than or equal to those listed in Table 1 for the specified depth below ground surface (bgs). The concentration limits for 0 to 5 feet bgs protect from ingestion of soil, dermal contact with soil, and inhalation of volatile soil emissions and inhalation of particulate emissions. The 5 to 10 feet bgs concentration limits protect from inhalation of volatile soil emissions. Both the 0 to 5 feet bgs concentration limits and the 5 to 10 feet bgs concentration limits for the appropriate site classification (Residential or Commercial/Industrial) shall be satisfied. In addition, if exposure to construction workers or utility trench workers is reasonably anticipated, the concentration limits for Utility Worker shall also be satisfied; or

b. Maximum concentration of petroleum constituents in soil are less than levels that a site specific risk assessment demonstrates will have no significant risk of adversely affecting human health; or

c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, the regulatory agency determines that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health."

| | | |
|---|---|---|
| **Does the site qualify for an EXEMPTION from Direct Contact and Outdoor Air Exposure Criteria (i.e., is the upper 10 feet of soil free of petroleum contamination)?** | ☒ Yes | ☐ No |
| **If the site does not qualify for the exemption, then does the site satisfy the media-specific criteria (a, b, or c) for direct contact and outdoor air exposure?** | ☒ Yes | ☐ No |

| | | |
|---|---|---|
| a. Are maximum concentrations of petroleum constituents in soil less than or equal to those listed in Table 1 for the specified depth bgs? **(Refer to Next Page for Concentrations Limits Evaluation)** | ☒ Yes | ☐ No |
| b. Are the maximum concentrations of petroleum constituents in soil less than levels that a site specific risk assessment demonstrates will have no significant risk of adversely affecting human health? | ☒ Yes | ☐ No |
| c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health? | ☒ Yes | ☐ No |

**(Media Specific Criteria for Direct Contact and Outdoor Air Exposure Evaluation Continued on Next Page)**

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY
## MEDIA SPECIFIC CRITERIA - DIRECT CONTACT AND OUTDOOR AIR EXPOSURE

### Maximum Concentrations of Petroleum Constituents in Soil (Scenario a)

**Table 1 – Concentrations of Petroleum Constituents in Soil That will Have No Significant Risk of Adversely Affecting Human Health**

| Chemical | Residential | | Commercial/Industrial | | Utility Worker |
|---|---|---|---|---|---|
| | 0 to 5 ft bgs (mg/kg) | 5 to 10 ft bgs (mg/kg) | 0 to 5 ft bgs (mg/kg) | 5 to 10 ft bgs (mg/kg) | 0 to 10 ft bgs (mg/kg) |
| **Benzene** | 1.9 | 2.8 | 8.2 | 12 | 14 |
| *Max Soil Conc[1]* | *Insert* | *Insert* | *Insert* | *Insert* | *Insert* |
| **Ethylbenzene** | 21 | 32 | 89 | 134 | 314 |
| *Max Soil Conc[1]* | *Insert* | *Insert* | *Insert* | *Insert* | *Insert* |
| **Napthalene** | 9.7 | 9.7 | 45 | 45 | 219 |
| *Max Soil Conc[1]* | *Insert* | *Insert* | *Insert* | *Insert* | *Insert* |
| **PAH** | 0.063 | NA | 0.68 | NA | 4.5 |
| *Max Soil Conc[1]* | *Insert* | *Insert* | *Insert* | *Insert* | *Insert* |

Notes:

1. The maximum concentrations of petroleum constituents in soil should be compared to those listed in Table 1 (Technical Justification for Soil Screening Levels for Direct Contact and Outdoor Air Exposure Pathways, SWRCB)
2. Based on the seven carcinogenic poly-aromatic hydrocarbons (PAHs) as benzo(a)pyrene toxicity equivalent [BaPe]. Sampling and analysis for PAHs is only necessary where soil is affected by either waste oil or Bunker C oil.

| | | | |
|---|---|---|---|
| **Are both the 0 to 5 feet bgs concentration limits 5 to 10 feet bgs concentration limits for the appropriate site classification satisfied?** | ☒ Yes | ☐ No | ☐ NE |
| Residential: 0 to 5 feet bgs | ☒ Yes | ☐ No | ☐ NE |
| Residential: 5 to 10 feet bgs | ☒ Yes | ☐ No | ☐ NE |
| Commercial/Industrial: 0 to 5 feet bgs | ☒ Yes | ☐ No | ☐ NE |
| Commercial/Industrial: 5 to 10 feet bgs | ☒ Yes | ☐ No | ☐ NE |
| **If exposure to construction or utility trench workers is reasonably anticipated, are the concentration limits for the Utility Worker satisfied?** | ☒ Yes | ☐ No | ☐ NE |
| **Have the requirements for using the screening levels in Table 1 been satisfied (i.e., have the model assumptions presented in the SWRCB document entitled *"Technical Justification for Soil Screening Levels for Direct Contact and Outdoor Air Exposure Pathways"* been met?** | ☒ Yes | ☐ No | ☐ NE |
| Is the area of impacted soil where a particular exposure occurs ≤ 82 feet by 82 feet? | ☒ Yes | ☐ No | ☐ NE |
| Is the receptor located at the downgradient edge for inhalation exposure? | ☐ Yes | ☒ No | ☐ NE |
| Is the wind speed < 2.25 meters per second (7.38 feet per second) on average? | ☐ Yes | ☐ No | ☒ NE |
| Are there different exposure scenarios than residential, commercial/industrial, utility worker) at the site? | ☐ Yes | ☒ No | ☐ NE |

(LTCP Media Specific Criteria for Direct Contact and Outdoor Air Exposure Evaluation Continued on Next Page)

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## Additional Questions FOR Sites That Do Not Meet the LTCP Criteria

**Indicate only those conditions that do not meet the Direct Contact and Outdoor Air Exposure scenarios:**

| | |
|---|---|
| **Exposure Type:** | |
| Residential | ☐ Yes |
| Commercial | ☐ Yes |
| Utility Worker | ☐ Yes |
| **Petroleum Constituents in Soil:** | |
| ≤ 5 feet bgs | ☐ Yes |
| > 5 feet bgs and ≤ 10 feet bgs | ☐ Yes |
| Unknown | ☐ Yes |
| **Soil Concentrations of Benzene:** | |
| > 1.9 mg/kg and ≤ 2.8 mg/kg | ☐ Yes |
| > 2.8 mg/kg and ≤ 8.2 mg/kg | ☐ Yes |
| > 8.2 mg/kg and ≤ 12 mg/kg | ☐ Yes |
| > 12 mg/kg and ≤ 14 mg/kg | ☐ |
| > 14 mg/kg | ☐ Yes |
| Unknown | ☐ Yes |
| **Soil Concentrations of Ethylbenzene:** | |
| > 21 mg/kg and ≤ 32 mg/kg | ☐ Yes |
| > 32 mg/kg and ≤ 89 mg/kg | ☐ Yes |
| > 89 mg/kg and ≤ 134 mg/kg | ☐ Yes |
| > 134 mg/kg and ≤ 314 mg/kg | ☐ Yes |
| > 314 mg/kg | ☐ Yes |
| Unknown | ☐ Yes |
| **Soil Concentrations of Naphthalene:** | |
| > 9.7 mg/kg and ≤ 45 mg/kg | ☐ Yes |
| > 45 mg/kg and ≤ 219 mg/kg | ☐ Yes |
| > 219 mg/kg | ☐ Yes |
| Unknown | ☐ Yes |
| **Soil Concentrations of PAH:** | |
| > 0.063 mg/kg and ≤ 0,68 mg/kg | ☐ Yes |
| > 0.68 mg/kg and ≤ 4.5 mg/kg | ☐ Yes |
| > 4.5 mg/kg | ☐ Yes |
| Unknown | ☐ |
| **Area of Impacted Soil:** | |
| Area of Impacted Soil > 82 by 82 Feet | ☐ Yes |
| Unknown | ☐ Yes |

| | |
|---|---|
| This case should be closed in spite of <u>not</u> meeting policy criteria:<br><br>List Reasons: | ☐ Yes |

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

## LOW THREAT CLOSURE POLICY
## MEDIA SPECIFIC CRITERIA - DIRECT CONTACT AND OUTDOOR AIR EXPOSURE

**CSM Minimum Required Information**

| Has the minimum required information listed below been provided in the CSM for evaluation of case compliance with following Media Specific Criteria for Direct Contact and Outdoor Air Exposure? | ☒ Yes | ☐ No | |
|---|---|---|---|
| Sufficient data to demonstrate that site characterization is complete for the prescribed depth ranges of 0 to 5 feet and 5 to 10 feet bgs in order to assess potential direct contact and outdoor air exposure? | ☒ Yes | ☐ No | ☐ NA |
| Figures and tables showing the soil data for each of the prescribed depth ranges with a comparison to the screening levels for each exposure scenario? | ☒ Yes | ☐ No | ☐ NA |
| Analytical data for all chemicals of concern including total petroleum hydrocarbons in order and an assessment of whether unique conditions not considered in the Policy may exist at the site? | ☒ Yes | ☐ No | ☐ NA |
| Evaluation of data for data representativeness, quality, spatial distribution relative to current or potential receptors and sources, and temporal variability? | ☒ Yes | ☐ No | ☐ NA |
| Description of the current and expected future land use, redevelopment, or construction for the site? | ☒ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |
| | ☐ Yes | ☐ No | ☐ NA |
| | | | |

(Refer to Att. 1 - CSM Detailed Evaluation Checklist for Identification of Data Gaps)

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

**Direct Contact and Outdoor Air Exposure: Case Notes**

***End of Direct Contact and Outdoor Air Exposure Criteria Evaluation***

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**