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SEMI-ANNUAL (SECOND HALF 2004)

Groundwater Monitoring and Pilot Remedial Progress Report

575 Paseo Grande San Lorenzo, California

Prepared for:

David D. Bohannon Organization Sixty 31st Avenue San Mateo, California

Prepared By: EFI Global 111 Deerwood Road, Suite 195 San Ramon, California 94583 EFI Project No. 98360-0013

April 2005

DAVID D. BOHANNON

ORGANIZATION

April 20, 2005

Ms. Eva Chu Hazardous Materials Specialist Alameda County Department of Environmental Health 1131 Harbor Bay Parkway Alameda, California 94502

Re: 2nd Semester 2004 Groundwater Monitoring and Pilot Remedial Progress Report – David D. Bohannon Organization Property Located at 575 Paseo Grande - San Lorenzo, CA

Dear Ms. Chu:

The David D. Bohannon Organization is pleased to provide the enclosed copy of the above-referenced report. The report was prepared by EFI Global (EFI).

Please contact the undersigned or Mr. Chris Maxwell of EFI if you have questions or comments regarding the report.

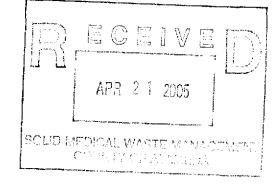
Sincerely2

Mr. Robert Webster

Chairman

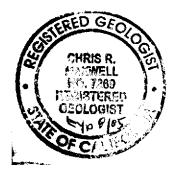
cc: Mr. Chris Maxwell-EFI Global

Attachment: 2nd Semester 2004 Groundwater Report (one copy)



Semi-Annual (Second Half 2004) Groundwater Monitoring and Pilot Remedial Progress Report 575 Paseo Grande San Lorenzo, California

The material and data in this report were prepared under the supervision and direction of the undersigned. This report was prepared consistent with current and generally accepted geologic and environmental consulting principles and practices that are within the limitations provided herein.



EFI Global

Chris R. Maxwell, R.G. Branch Manager

Mark B. Williams Senior Scientist

LIMITATIONS

The conclusions and recommendations contained in this report/assessment are based upon professional opinions with regard to the subject matter. These opinions have been arrived at in accordance with currently accepted hydrogeologic and engineering standards and practices applicable to this location and are subject to the following inherent limitations:

- 1. The data and findings presented in this report are valid as of the dates when the investigations were performed. The passage of time, manifestation of latent conditions or occurrence of future events may require further exploration at the site, analysis of the data, and reevaluation of the findings, observations, and conclusions expressed in the report.
- 2. The data reported and the findings, observations, and conclusions expressed in the report are limited by the Scope of Work. The Scope of Work was defined by the request of the client, the time and budgetary constraints imposed by the client, and availability of access to the site.
- 3. Because of the limitations stated above, the findings, observations, and conclusions expressed by EFI in this report are not, and should not be, considered an opinion concerning the compliance of any past or present owner or operator of the site with any federal, state or local law or regulation.
- 4. No warranty or guarantee, whether expressed or implied, is made with respect to the data or the reported findings, observations, and conclusions, which are based solely upon site conditions in existence at the time of investigation.
- 5. EFI reports present professional opinions and findings of a scientific and technical nature. While attempts were made to relate the data and findings to applicable environmental laws and regulations, the report shall not be construed to offer legal opinion or representations as to the requirements of, nor compliance with, environmental laws, rules, regulations or policies of federal, state or local governmental agencies. Any use of the report constitutes acceptance of the limits of EFI's liability. EFI 's liability extends only to its client and not to any other parties who may obtain the report. Issues raised by the report should be reviewed by appropriate legal counsel.

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1.0 INTRODUCTION

This report presents the results of groundwater monitoring, sampling, and analysis conducted on December 2, 2004 for the property located at 575 Paseo Grande, San Lorenzo, California (Site), Figure 1. This sampling event was conducted by EFI Global (EFI) to continue the assessment of groundwater conditions beneath the Site. The previous groundwater monitoring and sampling was conducted in April 2004. The scope of work included measuring the depth to water in groundwater monitoring wells MW-1 through MW-7 (Figure 2), and collecting groundwater samples for analysis of total petroleum hydrocarbons as gasoline (TPH-g) and benzene, toluene, ethylbenzene, and total xylenes, (collectively BTEX).

During May 2004, EFI installed wells at the Site for the purposes of pilot scale remedial activities (see Figure 2). Four wells were installed on-Site for the purposes of injecting nitrate solution to groundwater upgradient of well MW-4 (NIW-A1, -A2, -B1, -B2). Eight wells were installed on-Site for the purposes of injecting peroxide solution to soil and groundwater upgradient of well MW-3 (PIW-A1 to -A4 and PIW-B1 to -B4). Four wells were installed for the purposes of observing the affects of the injection program (NOBS-B1, POBS-A1, POBS-B1, POBS-B2).

Baseline groundwater sampling from select injection and observation wells was completed in May 2004. System construction and initial injections were completed during May/June 2004. The 1st Semester 2004 Semi-Annual groundwater monitoring report details these activities (EFI, 2004). Subsequent injections were completed in July 2004 (Phase Two) and October 2004 (Phase Three). Progress groundwater sampling for Phases Two and Three were conducted in August 2004 and December 2004, respectively. A dual-phase extraction test was completed near the former gasoline UST in February 2005. This report details the results of the progress sampling and dual-phase testing, and provides a description of remedial activities planned for the 1st Semester 2005.

1.1 Background

Over the last 25 years, the Site has been used as an asphalt-paved parking area located in a C1 commercial zone. The Site was a gasoline station prior to 1969. Little information is known about the Site history related to its use as a gasoline service station. In anticipation of property redevelopment, initial investigation activities were conducted in March 1995 to determine if former underground service station equipment remained-onsite. The work was conducted by Twining Laboratories, Inc. as documented in their letter report dated April 15, 1995. The investigation included a magnetometer survey followed by an exploratory excavation. In summary, the work conducted identified underground gasoline service station equipment which included what appeared to be the former tank pit, approximately 110 feet of fuel delivery system piping, and a grease sump and/or hydraulic lift pit in an area which may have been the former service garage. Field evidence and one soil sample indicated the potential for soil contamination along the piping runs, around the grease sump, and around the inferred location of the former

tank pit. Characterization of the magnitude and extent of potential soil contamination were not performed during the initial activities.

In June 1995, SECOR conducted additional activities at the Site which included removal of the former underground storage tank (UST) system piping and the former grease sump, and characterization soil sampling along the pipelines and around the former grease sump and former tank pit areas. This work was summarized in SECOR's letter report dated June 29, 1995. The characterization data from this investigation indicated that there were two areas of concern at the Site: 1) the former grease sump area; and 2) the former gasoline distribution system area. SECOR subsequently conducted excavation activities in these two areas. The soil excavated from the former sump area was transported off-site for disposal. The soil generated from the UST excavation was treated by means of aeration and later transported off-site for disposal. Three groundwater monitoring wells (MW-1, MW-2, and MW-3) were installed during the investigation activities to evaluate the degree to which the groundwater had been affected. The results of the soil characterization and groundwater monitoring activities are reported in SECOR's Report of Interim Remedial Actions dated June 4, 1994, and Fourth Quarter 1996 Monitoring and Sampling Report dated November 26, 1996. Monitoring well locations are illustrated in Figure 2.

In June 1999, a utility trench survey was conducted around the Site, and a passive soil vapor survey was performed downgradient from the Site. The results of the utility trench and passive soil vapor surveys are documented in SECOR's *Third Quarter Groundwater Monitoring Results and Plume Definition Report* dated October 21, 1999.

On December 5, 2000, four additional groundwater monitoring wells (MW-4 through MW-7) were installed at the Site. Soil and groundwater sampling was conducted to evaluate possible off-site migration of petroleum-related constituents originating from the Site, and to collect data to direct further subsurface investigations and/or remediation at the Site, if necessary. The work was conducted in general accordance with SECOR's *Work Plan for Additional Groundwater Monitoring Well Installation* dated October 22, 1999, and SECOR's *Addendum to the Work Plan for Additional Groundwater Monitoring Well Installation* dated December 2, 1999. The Work Plan was approved with comments in correspondence from the Alameda County Health Care Services Agency (ACHCSA) in a letter dated November 4, 1999. Historically, two of the on-site wells (MW-2 and MW-3) and one well immediately downgradient to the west (MW-4) contain elevated concentrations of petroleum hydrocarbons. Wells further off-site to the west (MW-6 and MW-7) and south (MW-5) typically do not contain detectable levels of petroleum hydrocarbons, with exception of MW-7, which reported low concentrations of total xylenes (up to 6.7 microgram per Liter [µg/L]) in the first two sampling events (December 2000 and February 2001). The well has since been non-detect for all constituents.

In January 2003, SECOR performed an additional limited subsurface investigation as described in the *Remedial Action Work Plan* dated October 25, 2002, and submitted to the ACHCSA. The Work Plan was approved by the ACHSA in a letter dated October 28, 2002. Based on field observations, soil boring logs, and laboratory analytical results, SECOR concluded that: (1)

perched groundwater was encountered within fill materials at approximately 5 to 8 feet below ground surface (bgs); (2) water-bearing zones were encountered in silt and sand at depths of 13 to 15 feet bgs (A zone), in sand from 16 to 19 feet bgs (B zone), and in silty sand at 22.5 feet bgs (C zone); and (3) soil sample analytical results suggest that the majority of chemical impact exists in silty clay from approximately 8 to 13.5 feet bgs within and adjacent to the former gasoline UST and pump island excavation. The findings of the investigation were presented in the report Limited Subsurface Investigation Report and Work Plan for Additional Soil and Groundwater Assessment dated February 19, 2003 and prepared by SECOR.

At the request of the ACHCSA, a sensitive receptor survey was performed for the Site. The survey consisted of identifying the locations and depths of subsurface utilities near the Site, and reviewing data provided by the California Department of Water Resources (DWR) for potential groundwater production wells. The survey results are presented in SECOR'S *Third Quarter 1999 Groundwater Monitoring Results and Plume Definition Report*, dated October 21, 1999. The report indicates that no groundwater production wells are likely to be affected by hydrocarbons in the soil and groundwater at the Site.

The October 2002 Remedial Action Workplan (RAW) proposed nitrate injections to stimulate biological degradation of hydrocarbons in the groundwater. Based on the data collected in January 2003, additional remediation of soil was also recommended. An addendum to the RAW was submitted by SECOR in December 2003 proposing hydrogen peroxide injections for chemical oxidation of soils in addition to nitrate injections. The RAW addendum was approved by the ACHCSA in a letter to Bohannon dated December 15, 2003.

In May 2004, EFI initiated installation of the pilot groundwater remedial program. Injection and observation well installations were completed during May 2004 in accordance with the approved RAW. Initial chemical injections were completed during May/June 2004, with additional injections completed in July 2004 (Phase Two) and October 2004 (Phase Three). Following Phase Three injections, EFI conducted a dual-phase extraction test in the area of the former gasoline UST. The remedial activities and results of progress sampling are detailed in this report.

2.0 GROUNDWATER MONITORING FOR WELLS MW-1 to MW-7

Groundwater monitoring wells MW-1 through MW-7 were gauged for depth-to-water on December 2, 2004. Wells MW-3 through MW-7 were sampled following purging and gauging as detailed below. Wells MW-1 and MW-2 were previously sampled during the 2nd Semester 2004 (June and October 2004, respectively), and were not sampled again during the December 2004 sampling event.

2.1 Water Level Gauging

Prior to purging and sampling, the depth to groundwater was measured from the top of each well casing using a water-level indicator graduated to 0.01 foot. Depth to groundwater measurements and surveyed wellhead top-of-casing elevations were used to calculate groundwater surface elevations for each well. Table 1 presents historical groundwater elevation data for the Site.

2.2 Purging and Sampling

Each of the seven monitor wells were purged using a low-flow purging method consisting of dedicated tubing attached to a variable speed peristaltic pump set to extract groundwater at a rate of approximately 0.1 gallons per minute (gpm). Temperature, conductivity, pH, dissolved oxygen content, and oxidation-reduction potential were monitored using a flow-through cell during purging to confirm stable water conditions prior to sampling. Copies of the field data sheets are attached as Appendix A.

Samples were collected from each well using the dedicated tubing to eliminate the possibility of cross-contamination between wells. Samples were placed in laboratory supplied sample containers, capped, labeled, and stored on ice pending delivery to STL San Francisco, a California state-certified laboratory. The groundwater samples were analyzed for TPH-g by modified U.S. Environmental Protection Agency (EPA) Method 8015m, and for BTEX by EPA Method 8021B.

Well MW-1 has indicated non-detectable levels of hydrocarbon compounds since 2000. These data appeared inconsistent with analytical data prior to 2000. Prior to sampling of MW-1 in June 2004, EFI developed the well by surging and pumping until groundwater was visibly free of sediment. The well was then allowed to stabilize for approximately 24 hours prior to sampling using the low flow methods detailed above.

3.0 RESULTS FOR WELLS MW-1 TO MW-7

3.1 Groundwater Elevation Results

The average depth to water measurements taken at the Site on December 2, 2004 was 6.12 feet below the top of well casing, with an average water table elevation of 19.74 feet above mean sea level. Groundwater elevations decreased an average of 0.66 feet since the previous monitoring event in April 2004.

A potentiometric surface map illustrating the interpreted groundwater surface elevation and flow direction on December 2, 2004 is presented as Figure 3. The hydraulic gradient across the Site was approximately 0.0018 feet per foot (ft/ft) toward the west. These results are generally consistent with flow direction results obtained during the prior monitoring events. As noted in previous reports, the flow direction beneath the Site is potentially tidally influenced by the San Francisco bay to the west.

3.2 Groundwater Analytical Results

Table 2 presents historical groundwater laboratory analytical results for the Site including the December 2, 2004 event. Petroleum hydrocarbon chemical data for the December 2004 event are illustrated on Figure 4.

TPH-g and BTEX concentrations continued to be below the laboratory method reporting limits in off-site wells MW-5, MW-6, and MW-7. Following redevelopment, well MW-1 contained low concentrations of petroleum hydrocarbons consistent with historical data prior to 2000. Samples from wells MW-2, MW-3, and MW-4 indicate detectable concentrations of petroleum hydrocarbons. These wells are located in proximity to the on-going pilot remedial activities, and these data are further discussed in Section 4.

Copies of the laboratory analytical reports for groundwater samples are attached as Appendix B. The following two subsections provide a brief discussion of the analytical results.

3.2.1 BTEX

BTEX constituents were reported in samples collected from wells MW-1 through MW-4. Historical concentrations of benzene at wells MW-2 through MW-4 are shown on Figure 5 (MW-2 and MW-4) and Figure 6 (MW-3). During the December 2, 2004 event, benzene concentrations ranged from 1.5 µg/L in MW-1 to 2,400 µg/L in MW-3.

3.2.2 TPH-g

TPH-g was reported in samples collected from wells MW-1 through MW-4. Historical concentrations of TPH-g in wells MW-2 through MW-4 are shown on Figure 7 (MW-2 and MW-4) and Figure 8 (MW-3). During the December 2, 2004 event, the TPH-g concentrations ranged from 150 µg/L at MW-1 to 8,300 µg/L at MW-3.

4.0 REMEDIAL PILOT TESTING

The 1st Semester 2004 report provides details regarding the installation and initial operation of the pilot remedial system, including well installation and initial injections (Phase One and Phase Two) of peroxide and nitrate solutions. The pilot remedial system generally consists of chemical storage tanks, connecting valves, and flexible hosing. Chemical storage tanks are temporary rental equipment, provided by the chemical company and then removed following completion of the injection program. No permanent storage tanks are currently located at the Site.

The remedial pilot program consists of gravity injecting nitrate and peroxide solutions to the subsurface. Nitrate is being injected upgradient of well MW-4 to reduce concentrations of dissolved phase hydrocarbons in groundwater. The nitrate is intended to facilitate anaerobic degradation. Peroxide is being injected upgradient of well MW-3 to chemically oxidize petroleum hydrocarbons in soil and groundwater, including light non-aqueous phase liquids (LNAPL). The peroxide may also increase dissolved oxygen and ORP levels in the groundwater, thereby facilitating aerobic degradation.

4.1 Summary of Phase One and Two Injection Program

The Phase One and Phase Two injection program activities are detailed in the 1st Semester 2004 report (EFI, 2004). The following summarizes these activities, including the baseline sampling conducted prior to injections. Referenced injection and observation well locations are shown on Figure 2. Field data sheets and laboratory data for the baseline and Phase One progress sampling are provided in Appendices A and B, respectively, of the 1st Semester 2004 report.

Groundwater samples were collected in May 2004 from select injection and observation wells to provide a baseline for groundwater conditions prior to chemical/nitrate injections. These data, in addition to the April 2004 results for MW-3 and MW-4, provide a pre-injection baseline from which to evaluate remedial progress. The baseline data is summarized on Table 4.

Phase One injections were completed in late May 2004. Phase One of the chemical oxidation program generally consisted of injecting a total of 1,000 gallons of peroxide solution (7% by weight) into the four A Zone (PIW-A1 through -A4) and four B Zone (PIW-B-1 through -B4) injection wells. Phase One of the anaerobic degradation program consisted of injecting approximately 400 gallons of nitrate solution (approximately 260 mg/L total kjeldahl nitrogren - TKN) into the two A Zone (NIW-A1 and -A2) injection wells. Nitrate injections were not conducted for the B Zone wells because baseline data indicated the presence of nitrate.

Phase Two injections were completed in July 2004. Phase Two of the chemical oxidation program consisted of injecting 1,000 gallons of peroxide solution (7% by weight) into the four A Zone wells (PIW-A1 to -A4). No peroxide injections were completed for the four B Zone wells because the Phase One progress data suggested the initial injections significantly reduced hydrocarbon concentrations in this zone. Phase Two of the anaerobic degradation program

consisted of injecting approximately 2,500 gallons of nitrate solution (approximately 260 mg/L TKN) to the two A Zone wells (NIW-A1 and -A2). The Phase Two nitrate injections were conducted because observation well MW-4 did not indicate the presence of nitrate solution.

4.2 Phase Two Progress Sampling and Phase Three Injections

Phase Two remedial progress sampling was conducted in August 2004. These data are shown on Table 4, and suggested the following:

- Chemical oxidation in the A Zone successfully reduced hydrocarbon concentrations in injection wells. However, the radius of influence appears limited based on data for observation wells MW-3 and POBS-A1. Specifically, hydrocarbon concentrations in these two wells were higher than baseline data collected in May 2004.
- Chemical oxidation in the B Zone (Phase One only) significantly reduced hydrocarbon concentrations in the four injection wells and two observation wells (POBS-B1 and -B2). Concentrations at one of the two observations wells (POBS-B2) increased slightly between the Phase One and Two remedial progress sampling (June and August 2004, respectively), suggesting that additional chemical injections may be appropriate.
- Nitrate injections in the A Zone wells appeared to significantly reduce hydrocarbon concentrations in both the injection wells (NIW-A1 and -A2) and the observation well (MW-4). The hydrocarbon concentration detected at MW-4 was significantly lower than historical data since this well was installed in 2000. The nitrate analytical data (TKN and ammonia) suggested dilution of the nitrate solution from the injection wells (i.e., injection well concentrations were approximately 50% of the injection solution concentration). However, neither TKN nor ammonia was detected in the groundwater of MW-4.
- The relatively low hydrocarbon concentrations in the B Zone wells in the anaerobic degradation pilot remedial testing area (NIW-B1 and -B2 and NOBS-B1) were generally consistent with the May 2004 baseline data. No nitrate injections have been completed for the B Zone because the hydrocarbon concentrations are low, and because baseline sampling suggested the "natural" presence of nitrate without injections.

Based on the findings of the Phase Two progress sampling (August 2004), Phase Three injections were completed in late September 2004. The goals of the Phase Three injections were to further evaluate the potential for hydrocarbon mass destruction in the A Zone through chemical oxidation, and to determine if nitrate injections in the anaerobic remedial testing area (NIW-A1 and -A2) could extend to observation well MW-4 located approximately 35 feet downgradient of the injection area. Phase Three injections consisted of:

- Approximately 650 gallons of peroxide solution (7% by weight) and 350 gallons of sodium persulfate solution (7% by weight) were cumulatively injected into the four A Zone wells (PIW-A1 through –A4). The sodium persulfate was added to the remedial testing program to slow the chemical reaction of the peroxide, and to facilitate Fenton's reaction (i.e., reaction between the hydroxyl radical and hydrocarbons).
- Approximately 650 gallons of peroxide solution (7% by weight) and 350 gallons of sodium persulfate solution (7% by weight) were cumulatively injected into the four B Zone wells (PIW-B1 through –B4).
- Approximately 2,000 gallons of nitrate solution was injected into the two A Zone wells (NIW-A1 and -A2). The nitrate solution contained approximately 450 mg/L TKN. The TKN concentration was increased compared to Phases One and Two to facilitate movement of nutrients to observation well MW-4.

Phase One and Two oxidant injections were completed by gravity draining the chemical oxidant into the groundwater system. This method is preferred to high-pressure injection because lower pressure prevents "short-circuiting" along preferential flow paths. However, the low pressure created by the hydraulic head in the well casing (approximately 2 to 3 psi) did not appear to provide a significant radius of influence to move the oxidants into the clay and silt sediments of the A Zone. During Phase Three, the injection pressure was boosted using an air compressor. Injection pressures were still relatively low, ranging from approximately 3 to 10 pounds per square inch (psi). The injection process was conducted by filling the well casing with chemical oxidant, capping the well, and then applying air pressure as necessary to facilitate movement of the solutions into the soils and groundwater system. The EFI field personnel alternated between injecting the hydrogen peroxide and sodium persulfate solutions to facilitate mixing of the chemicals in the aquifer system.

During the Phase Three injections, field observations suggested an increase in the radius of influence of the chemical injections. Groundwater in A zone observation wells MW-3 and POBS-A1, and B zone observation wells POBS-B1 and -B2, was observed to bubble. This observation suggests movement of oxidant to these locations.

4.3 Phase Three Progress Sampling

Phase Three remedial progress sampling was completed in December 2004 coincident with the above-described 2nd Semester 2004 sampling event. The analytical results are summarized on Table 4. Field data sheets and analytical data are provided in Appendices A and B, respectively. The following summarizes the findings of the sampling:

Chemical Oxidant Remedial Test Area

- Hydrocarbon concentrations in A Zone peroxide injection wells were significantly lower than baseline levels. At one well (PIW-A1), concentrations were slightly higher than Phase Two progress results. In the other well sampled (PIW-A2), concentrations were the lowest detected since the remedial pilot program was initiated in May 2004.
- pH measurements collected from select A Zone and B Zone wells in the oxidant remedial area indicate acidic conditions. pH values less than 6.0 pH units were measured at each of the four A Zone oxidant injection wells (PIW-A1 through -A4) and two of the B Zone oxidant injection wells (PIW-B1 and -B2). These data suggest that the injection program has likely resulted in localized Fenton's chemical reactions in the immediate vicinity of the injection wells.
- Hydrocarbon concentrations in A Zone oxidant observation wells (MW-3 and POBS-A1) continued to be above the May 2004 baseline levels. As noted on Figures 6 and 8, hydrocarbon concentrations at well MW-3 have been steadily increasing during the remedial program. Although field observations (bubbling in observation well groundwater) suggest movement of oxidant to the observation well locations, the radius of "significant" chemical influence of the injections was likely not laterally significant.

Note that well MW-3 and peroxide injection well PIW-A3 were sampled on December 15, 2004 to further evaluate groundwater conditions in the oxidant injection area. Prior to sampling, both wells were purged of approximately 50 gallons of water to remove sediment and ensure collection of representative aquifer samples. The analytical data for this additional sampling event is provided on Table 4. The concentrations of TPH-g and BTEX at MW-3 were higher in the sample collected on December 15th than on December 2nd. The concentrations at PIW-A3, which is located approximately five (5) feet east of MW-3, were much lower than detected at MW-3. These data are consistent with samples from other injection wells, where the hydrocarbon concentrations are relatively low at the oxidant injection wells compared to nearby observation wells.

Hydrocarbon concentrations in B Zone injection and observation wells in the oxidant remedial area indicate much lower levels than the May 2004 baseline, the Phase One progress data, and the Phase Two progress data. Hydrocarbon compounds were slightly above laboratory method reporting limits (MRLs) at both injection wells sampled (PIW-B1 and - B3) and one observation well (POBS-B1), and less than MRLs at the other observation well (POBS-B2). These data represent a decrease in concentration by several orders of magnitude compared to the May 2004 baseline data.

Nitrate Injection Remedial Area

- Hydrocarbon concentrations in A Zone nitrate injection wells were significantly lower than baseline levels. At one well (NIW-A1), concentrations were approximately five times lower than the baseline levels. In the other well sampled (NIW-A2), concentrations were less than MRLs.
- Hydrocarbon concentrations at the A Zone nitrate observation well (MW-4) were approximately one-half to one-third of the May 2004 baseline levels. As shown on Figures 5 and 7, hydrocarbon concentrations at well MW-4 reached historical lows during the remedial program. The Phase Three progress concentrations were greater than the Phase Two progress data (August 2004).
- TKN and ammonia data indicate dilution and lateral migration of nitrate solutions from the injection wells to well MW-4. TKN concentrations at NIW-A1 (260 mg/L) and NIW-A2 (270 mg/L) are approximately one-half the injected concentration. TKN was not detected at A Zone observation well MW-4, but ammonia was detected at a concentration of 0.34 mg/L. These data suggest that the injected nitrate solution is spreading to MW-4. Additionally, the very low concentration of ammonia and absence of TKN at MW-4 suggest the microbial consumption of the nitrate.
- Hydrocarbon compounds in B Zone injection wells (NIW-B-1 and -B2) and observation well (NOBS-B1) in the nitrate injection area were less than MRLs, with the exception of 2.0 μg/L benzene at NOBS-B1. These data indicate a reduction in hydrocarbon concentrations compared to baseline data. Note that although nitrate solution was not injected directly into the B zone, TKN and ammonia were detected in B-Zone injection and observation wells. TKN was detected at NIW-B1 (94 mg/L), NIW-B2 (17 mg/L), and NOBS-B1 (4.3 mg/L). These data suggest vertical conductivity between the A and B Zones at the Site in the nitrate injection area. The significant reduction in hydrocarbon concentrations in the B Zone may be attributed to the indirect injection of nutrients into the groundwater of this zone.

4.3 Summary of Oxidant and Nutrient Pilot Remedial Studies

Based on field observations, field data, and laboratory analytical data, the following can be summarized for the initial three injection phases of the pilot remedial studies conducted at the Site.

- Nitrate solution injections have significantly reduced petroleum hydrocarbon concentrations in groundwater of the A and B Zones at the Site. The reduction in concentrations appears to be associated with anaerobic degradation. Microbial studies conducted by EFI prior to implementation of the pilot program identified abundant facultative bacteria in the groundwater of well MW-4. The nitrate solution has provided important nutrients for these existing bacteria to aggressively consume hydrocarbons.
- Injection of chemical oxidant has significantly reduced petroleum hydrocarbon concentrations in the B zone groundwater at the Site. The success of the oxidant injections can be attributed to the transmissive nature of the B Zone sand and gravel sediments, and the absence of clay and organic materials that consume the oxidant.
- Injection of chemical oxidant into the A zone has significantly reduced petroleum hydrocarbon concentrations at the injection wells. The injections have also facilitated localized Fenton's reactions (i.e., creation of the hydroxyl radical), which is critical for hydrocarbon mass reduction. However, the lateral influence for each injection well appears limited. The A Zone also contains abundant clays and organic matter, which may have consumed some of the injected oxidant.

4.4 Dual-Phase Extraction Pilot Test

Based on the findings of the pilot remedial studies, it has been determined that chemical oxidation of hydrocarbons in soil and groundwater of the A zone in the area of the former gasoline UST is not an appropriate remedy. Specifically, the volume of oxidant required and the spacing of injection wells would not be cost effective.

Dual-phase extraction (extraction of soil vapor and groundwater) has been selected for remedial evaluations to reduce benzene concentrations in groundwater. The general goal of the dual-phase extraction is to effectively dewater to zone of hydrocarbon impact, and then remove volatile hydrocarbons (such as benzene, primarily in the vapor phase). Continued groundwater extraction and management (treatment and discharge) is required during the remedial program to maintain the dewatering.

To initially evaluate this remedial approach, EFI provided direct oversight of a one-day test on February 3, 2005. The following summarizes the methods and findings of the test:

- A 25 horsepower (HP) liquid ring blower was used to extract groundwater and vapor from wells PIW-A1 through PIW-A4. The wells were connected to the unit using temporary flexible hoses and fittings.
- Measurements were collected at the wellhead and observations wells, including vacuum, vapor removal rate (feet per minute), and groundwater extraction rate (gallons per minute).
- Extracted vapors were treated using an on-Site thermal oxidation unit. The treated vapors will be discharged under a mobile treatment unit permit.

- Extracted groundwater was stored on-Site in 55-gallon drums. An estimated 900 gallons of groundwater were generated during the test.
- □ Wells PIW-A2 and −A4 yielded groundwater in excess of several gallons per minute (gpm) from each well. Groundwater would be more effectively removed from these wells using pumps rather than the vacuum system. These two wells were disconnected from the vacuum system after approximately one-half hour of testing.
- □ Vacuum at wells PIW-A1 and -A3 was significant throughout the test, ranging from approximately 25 to 28 inches of water.
- Vacuum at observation wells MW-3 and POBS-A1 were not greater than 0.5 inches of water. These data suggest that the applied vacuum did not develop a significant radius of influence during the test. Note that the test area was, and would was not expected to be, dewatered in the brief time period of the test. The radius of influence of the applied vacuum will not expand a significant distance from the vacuum extraction wells until dewatering is more advanced.
- Influent vapor samples to the treatment system were collected four times during the test. These data are presented on Table 3. Hydrocarbon concentrations as gasoline (TPH-g) ranged from approximately 0.17 to 0.97 milligrams per liter of air (mg/L_{air}).
- □ Vapor removal rates ranged from approximately 350 to 800 feet per minute. These data equate to approximately 17 to 39 standard cubic feet per minute (SCFM).
- Assuming 1.0 mg/L air and 39 SCFM, the dual-phase extraction system peak hydrocarbon removal rate for the single-day test is estimated at approximately 3.5 pounds of hydrocarbons per day in the vapor phase. The rate would likely increase significantly once the area is effectively dewatered, and air removal rate and concentration should both increase.
- The groundwater removal rate during the test is estimated at approximately 3.0 gpm. The removal rate would have been much higher if all four wells (PIW-A1 through PIW-A4) were connected to the extraction system throughout the test. Although the cumulative removal rate during the <u>initial</u> phase of full-scale application would be much higher than 3.0 gpm (estimated to be the first 12 to 36 hours), less than 1.5 gpm would likely be required once dewatering is complete.

In summary, data collected during the one-day test suggest the dual-phase remedial technology has the potential to remove the volatile hydrocarbons (TPH-g) from soil and groundwater in the area of the former gasoline UST. Additional evaluation is needed to develop a full-scale design.

A one-week dual-phase test is planned for the last week in April 2005. The test will consist of:

- Continuous dewatering from wells PIW-A1 through –A4 using pumps set with high-low switches (i.e., the pumps will turn on and off based on water levels in the wells).
- Continuous vapor removal from the four wells using a 25HP blower. The vapor will be treated using catalytic and thermal oxidation, and discharged under a mobile permit to operate issued by the air quality management district.
- Treatment of extracted groundwater using activated carbon, and discharge of the treated water to the sanitary sewer under appropriate permit from the sanitation district.
- Collection of measurements during the test, including extraction wellhead vacuum, observation wellhead vacuum, and system airflow in feet per minute.
- Daily influent vapor samples for laboratory analysis, including TPH-g and BTXE.

The results of the one-week test will be presented on the 1st Semester 2005 remedial progress report.

EFI will also continue to evaluate the progress of the anaerobic microbial remediation in the area of well MW-4. Groundwater samples will be collected from the injection and observation wells during the 1st Semester 2005. Additional nitrate solution may be added to the injection wells depending upon the results of the sampling.

Table 1
Historical Groundwater Elevation Data
575 Paseo Grande
San Lorenzo, California

Date Sampled	TOC	DTW	ELEV
-	(ft msl)	(ft bTOC)	(ft msl)
MW-1	, , , , , , , , , , , , , , , , , , ,	· · · · · ·	
5/17/1996	27.11	5.65	21.46
10/8/1996		7.47	19.64
4/1/1997		6.27	20.84
6/12/1997		6.90	20.21
9/10/1997		7.48	19.63
6/8/1999		6.44	20.67
9/13/1999		7.56	19.55
12/21/1999		7.41	19.70
3/17/2000		5.35	21.76
12/5/2000	26.98	6.99	19.99
2/28/2001		5.71	21.27
8/22/2001		7.39	19.59
5/22/2002		6.25	20.73
8/29/2002		7.23	19.75
12/2/2002		7.13	19.85
3/4/2003		5.77	21.21
12/18/2003		6.37	20.61
4/13/2004		6.13	20.85
12/2/2004		6.93	20.05
MW-2			
5/17/1996	26.73	5.56	21.17
10/8/1996		7.15	19.58
4/1/1997		6.61	20.12
6/12/1997		6.76	19.97
9/10/1997		7.19	19.54
6/8/1999		6.45	20.28
9/13/1999		7.46	19.27
12/21/1999		7.26	19.47
3/17/2000		5.56	21. 1 7
12/5/2000	26.73	7.01	19.72
2/28/2001		5.81	20.92
8/22/2001		7.42	19.31
5/22/2002		6.40	20.33
8/29/2002		7.26	19.47
12/2/2002		7.02	19.71
3/4/2003		5.91	20.82
12/18/2003		6.47	20.26
4/13/2004		6.28	20.45
12/2/2004		6.80	19.93

Table 1 Historical Groundwater Elevation Data 575 Paseo Grande San Lorenzo, California

Date Sampled	TOC	DTW	ELEV
	(ft msl)	(ft bTOC)	(ft msl)
MW-3			
5/17/1996	26.15	4.39	21.76
10/8/1996		6.82	19.33
4/1/1997		5.53	20.62
6/12/1997		6.18	19.97
9/10/1997		6.81	19.34
6/8/1999		5.74	20.41
9/13/1999		6.88	19.27
12/21/1999		6.66	19.49
3/17/2000		4.51	21.64
12/5/2000	26.55	6.84	19.71
2/28/2001		5.44	21.11
8/22/2001		7.29	19.26
5/22/2002		6.22	20.33
8/29/2002		7.26	19.29
12/2/2002		6.85	19.70
3/4/2003		5.72	20.83
12/18/2003		6.15	20.40
4/13/2004		5.97	20.58
12/2/2004		6.64	19.91
MW-4			
12/5/2000	25.87	6.28	19.59
2/28/2001		4.99	20.88
8/22/2001		6.73	19.14
5/22/2002		5.50	20.37
8/29/2002		6.55	19.32
12/2/2002		6.28	19.59
3/4/2003		5.28	20.59
12/18/2003		5.85	20.02
4/13/2004		5.50	20.37
12/2/2004		6.05	19.82
MW-5			· • ·
12/5/2000	25.77	6.25	19.52
2/28/2001		4.95	20.82
8/22/2001		6.69	19.08
5/22/2002		5.50	20.27
8/29/2002		6.54	19.23
12/2/2002	,	6.37	19.40
3/4/2003		5.41	20.36
12/18/2003		5.65	20.12
4/13/2004		5.37	20.40
12/2/2004		6.03	19.74

Table 1 Historical Groundwater Elevation Data 575 Paseo Grande San Lorenzo, California

Date Sampled	TOC	DTW	ELEV
	(ft msl)	(ft bTOC)	(ft msl)
MW-6			,
12/5/2000	24.89	5.68	19.21
2/28/2001		4.35	20.54
8/22/2001		6.15	18.74
5/22/2002		4.91	19. 9 8
8/29/2002		5.96	18.93
12/2/2002		5.70	19.19
3/4/2003		4.69	20.20
12/18/2003		5.05	19.84
4/13/2004		4.87	20.02
12/2/2004		5.42	19.47
MW-7			
12/5/2000	25.43	6.43	19.00
2/28/2001		4.76	20.67
8/22/2001		6.95	18.48
5/22/2002		5.55	19.88
8/29/2002		NM	
12/2/2002		6.43	19.00
3/4/2003		5.10	20.33
12/18/2003		5.65	19.78
4/13/2004		5.27	20.16
12/2/2004		6.15	19.28

Notes:

TOC = Top of casing

DTW ≈ Depth to water

ELEV = Water table elevation above mean sea level (msl)

ft msl = feet above msl

ft bTOC ≈ feet below TOC

NM = Not measured

Table 2 Historical Groundwater Analytical Data 575 Paseo Grande San Lorenzo, California

Date Sampled	TPH-g (μg/L)	Benzene (μg/L)	Toluene (μg/L)	Ethylbenzene (μg/L)	Total Xylenes (μg/L)	MTBE (μg/L)	Chromium (µg/L)	Dissolved Inorganic Lead (μg/L)
MW-1								
5/17/1996	1,100	<0.5	8.7	7.4	17	***	<10	<50
10/8/1996	120	<0.5	<0.5	2.7	<0.5			
4/1/1997	550	<0.5	<0.5	7.6	6.6			
6/12/1997	160	<0.5	<0.5	2.9	1.7			-
9/10/1997	640	2.2	3.8	7.4	16		₩.	
6/8/1999	<50	<0.5	<0.5	<0.5	<0.5	<10	<10	<20
								<5
9/13/1999	<50	<0.5	<0.5	<0.5	1.1			~ 5
12/21/1999	<50	<0.5	<0.5	<0.5	<0.5			
3/17/2000	<50	<0.5	<0.5	< 0.5	0.79	<5		<5
	<50	<0.5	<0.5	<0.5	<0.5			==
12/5/2000								
2/28/2001	<50	<0.5	<0.5	<0.5	<0.5			
8/22/2001	<50	<0.5	< 0.5	<0.5	< 0.5	<5		<5
5/22/2002	<50	<0.5	< 0.5	<0.5	< 0.5			
t .								
8/29/2002	<50	<0.5	<0.5	<0.5	<0.5	•-	_	_
12/2/2002	<50	<0.5	<0.5	<0.5	< 0.5			* ***
3/4/2003	<50	<0.5	< 0.5	< 0.5	<0.5	-		
Ł	<50	<0.5	<0.5	< 0.5	<0.5			==
12/18/2003								
4/13/2004	<50	<0.5	<0.5	<0.5	<1.0			-
6/18/2004	150	1.5	<0.5	2.7	2.4			~
MW-2								P-4
5/17/1996	23,000	900	330	650	1,500		<10	<50
10/8/1996	8,400	530	<50	400	360	_		-
4/1/1997	7,600	470	64	210	250		_	
6/12/1997	8,200	440	52	190	1 9 0			-
9/10/1997	8,5D0	390	51	220	240		_	-
6/8/1999	2,100	240	8	33	40	<10	<10	33
l .								
9/13/1999	1,300	120	<5	<5	15	***		
12/21/1999	1,400	110	5.6	11	17	_		<5
3/17/2000	1,200	180	19	28	31	<50	_	<5
	800	75	1.8	11	14			
12/5/2000						-		
2/28/2001	1,200	120	7.1	19	27		-	_
8/22/2001	990	7 5	3.5	8.9	8.1	<5		<5
5/22/2002	1,700	230	12	12	25			
l .					12			
8/29/2002	1,000	66	2.6	12				
12/2/2002	1,100	76	8.7	11	17			
3/4/2003	1,100	130	4.5	22	24			
12/18/2003	910	55	4.1	3.3	3.7			
l .								
4/13/2004	2,700	350	15	18	24			
10/5/2004	2,000	120	5.5	<2.5	8.3			-
				81				
MW-3	C 700	440	45	240	400		~40	~EA
5/17/1996	6,700	140	45	210	180		<10	<50
10/B/1996	1,800	2,700	240	910	970			
4/1/1997	27,000	520	50	520	450			me.
6/12/1997	29,000	2,700	160	940	500			
	•	,				_		
9/10/1997	290,000	1,800	3,200	2,800	6,900			
6/8/1999	1,700	320	6.4	15	<0.5	<10	<10	24
9/13/1999	5,400	1,000	<20	<20	<20			
l .		•			23			<5
12/21/1999	8,800	1,400	63	17		 	_	
3/17/2000	1,500	190	<5	7.6	<5	<50		<5
12/5/2000	5,400	798	20	7.4	10			
2/28/2001	3,600	850	15	25	10		M-r	
8/22/2001	8,100	1,600	28	44	17	<50	-	<5
5/22/2002	5,400	1,000	32	13	21	Leve		u.
8/29/2002	6,700	1,700	55	49	38			
	5,70D	650	17	37	33		L	
12/2/2002								
3/4/2003	5,000	650	18	42	27	_	-	
12/18/2003	5, 20 0	910	25	. 20	21			
4/13/2004	3,900	1,200	19	<5.0	<10			
				81	26			
6/18/2004	4,300	1,600	40					-
8/27/2004	6,900	2,10D	59	220	<50			
10/5/2004	9,800	2,500	52	160	38			***
l .	8 30D	2 400	47	200	29	H-		
12/2/2004 12/14/2004	8,300 15,000	2,400 3,600	41 140	200 560	29 210	₩=		-

Table 2 Historical Groundwater Analytical Data 575 Paseo Grande San Lorenzo, California

Date Sampled	TPH-g	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Chromium	Dissolved Inorganic Lea
	(μ g/L)	(μg/L)	(µg/L)	(μg/L)	(μ g /L)	(μg/L)	(μg/L)	(μ g/L)
/W-4			<u>,</u>				_	
12/5/2000	3,900	320	13	41	31	**		<5
2/28/2001	3,400	250	14	44	22			<5
8/22/2001	4,800	260	12	27	9	<50		<5
5/22/2002	5,100	320	29	74	50			
B/29/2002		260	~5	30	28			
12/2/2002	3,700 5,100	250 250	8.9	26	22			
	•		6.5 18	63	47		_	
3/4/2003	4,500	170		6.3 8	47 <5			
12/18/2003	2,900	160	8.3 29	110	100			
4/13/2004	7,400	290						
6/18/2004	2,700	140	12	36	16			
8/27/2004	460	19	1.2	1.1	1.5			
10/5/2004	460	19	<1.0	<1.0	<1.0			_
12/2/2004	2,800	120	5.4	8.3	5.3		****	Marie
MW-5				*				
12/5/2000	<50	<0.5	<0.5	<0.5	<0.5			<5
2/28/2001	<50	< 0.5	<0.5	<0.5	<0.5			<5
8/22/2001	<50	<0.5	< 0.5	<0.5	<0.5	<5		<5
5/22/2002	<50	<0.5	<0.5	<0.5	<0.5	-		_
8/29/2002	<50	<0.5	<0.5	<0.5	<0.5		_	_
12/2/2002	<50	<0.5	<0.5	<0.5	<0.5			
3/4/2003	<50	<0.5	<0.5	<0.5	<0.5			
12/18/2003	<50	<0.5	<0.5	<0.5	<0.5			
4/13/2004	<50	<0.5	<0.5	<0.5	<1.0			
12/2/2005	<50 <50	<0.5	<0.5	<0.5	<1.0	_		
			_					
MW-6								_
12/5/2000	<50	<0.5	<0.5	<0.5	<0.5			<5
2/28/2001	<50	<0.5	<0.5	<0.5	<0.5	-		<5
8/22/2001	<50	<0.5	<0.5	<0.5	<0.5	<5		<5
5/22/2002	<50	<0.5	<0.5	<0.5	<0.5	-		
8/29/2002	<50	<0.5	<0.5	< 0.5	<0.5			
12/2/2002	<50	<0.5	<0.5	<0.5	<0.5			
3/4/2003	<50	<0.5	<0.5	<0.5	<0.5	_		
12/18/2003	<50	<0.5	<0.5	<0.5	<0.5	•-		
4/13/2004	<50	<0.5	< 0.5	<0.5	<1.0			
12/2/2004	<50	<0,5	<0.5	<0.5	<1.0			•••
/W-7								
12/5/2000	<50	<0.5	<0.5	<0.5	1.5		_	<5
2/28/2001	<50	<0.5	<0.5	<0.5	6.7			- <5
8/22/2001	<50	<0.5	<0.5	<0.5	<0.5	<5	_	· <5
5/22/2002	<50	<0.5 <0.5	<0.5	<0.5	<0.5			
	<50	<0.5	<0.5	<0.5	<0.5			
12/2/2002 3/4/2003	<50 <50		<0.5	<0.5 <0.5	<0.5		_	_
		<0.5						
12/18/2003	<50	<0.5	<0.5	< 0.5	<0.5			••
4/13/2004	<50	<0.5	< 0.5	<0.5	<1.0	-		
12/2/2004	<50	<0.5	<0.5	<0.5	<1.0		<u></u>	

Notes:

TOC = Top of casing

DTW = Depth to water

ELEV= Water table elevation above mean sea level (msl)

ft msl = feet above msl

ft bTOC = feet below TOC

NM = Not measured

-- = water sample not analyzed for specified constituents

Table 3 February 2005 Soil Vapor Data Collected During Single-Day Dual-Phase Extraction Test

575 Paseo Grande San Lorenzo, California

Sample ID Number	Sample Date	Well(s) Under Vacuum	Sample Time	TPH gasoline	Вепzепе	Toluene	Ethylbenzene	Total Xylenes.
US	SEPA Lab Anal	ytical Methods			8	260B		All Silver
	Unit	S		micrograms per liter of air				
VS-1	02/03/05	PIW-A1, -A3	1044	760	21	1.8	4.5	8.0
VS-2	02/03/05	PIW-A1, -A3	1120	760	16	1.3	4.5	5.8
VS-3	02/03/05	PIW-A1	1400	170	3,3	<1.0	<1.0	2.4
VS-4	02/03/05	PIW-A3	1520	950	35	2.4	9.2	7.4

TPH = total petroleum hydrocarbons < = less than the laboratory method reporting limit as specified

Table 4 Groundwater Data for Pilot Remedial Program 575 Paseo Grande San Lorenzo, California

Well ID	Date Sampled	TPH-g	Benzene	Toluene	Ethylbenzene	Total Xylenes	Nitrate as NO ₃	Kjeldahl Nitrogen	Dissolved Oxygen (1)	ORP (1)
	Units	(<u>μ</u> g/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	mg/L	mg/L	mg/L	millivolts
Peroxide Treati	ment Area - A Zone Inj	iection Wel	ls							
PIW-A1	5/13/2004	6,800	460	50	31	300	NA	NA	0.10	99
	6/18/2004	240	10	2.1	4	11	NA	NA	25.42	213
	8/27/2004	220	14	1.2	2	5	NA	NA	20.11	NA
	10/5/2004	<50	<0.5	<0.5	<0.5	<1.0	NA	NA	NA	NA
	12/2/2004	640	63	12.0	15	29	NA	NA	3.72	294
PiW-A2	5/13/2004	20,000	1,500	460	760	2,600	NA	NA	1.23	99
	6/18/2004	2,800	150	14	6.5	90	NA	NA	12.57	267
	8/27/2004	500	34	3	4.4	12	NA	NA	19.58	NA
	12/2/2004	350	6.1	1.2	2.4	5.4	NA	NA	18.50	320
PIW-A3	12/14/2004	1,500	220	28	55	99	NA	NA	NA	NA
Peroxide Tre	atment Area - B Zone	Injection W	/ells					•		
PIW-B1	5/13/2004	1,900	28	<5.0	11	51	NA	[*] NA	1.30	103
	6/18/2004	270	22	1	2.2	2.7	NA	NA	19.87	243
	8/27/2004	230	11	0.85	1.7	4.3	NA	NA	18.69	NA
	12/2/2002	66	<0.5	<0.5	<0.5	<1.0	NA	NA	29.95	441
PIW-B3	5/13/2004	3,300	420	17	7.8	44	NA	NA	0.32	108
	6/18/2004	180	1.2	<0.5	< 0.5	2.4	NA	NA	15.50	302
	8/27/2004	230	20.0	0.93	3.3	2.9	NA	NA	19.12	NA
	12/2/2004	64	0.75	<0.5	<0.5	<1.0	NA	NA	26.96	335
Peroxide Tre	atment Area - A Zone	Observatio	n Wells							
POBS-A1	5/13/2004	16,000	2,200	220	480	980	NA	NA	0.71	126
	6/18/2004	11,000	2,200	150	120	820	NA	NA	1.09	92
	8/27/2004	23,000	2,900	140	180	470	NA	NA	0.15	NA
	10/5/2004	13,000	2,400	83	130	94	NA	NA	NA	NA
	12/2/2004	17,000	3,500	240	210	730	NA	NA	0.22	26
	12/14/2004	13,000	2,700	200	220	510	NA	NA	NA	NA
MW-3	5/13/2004	3,900	1,200	19	<5.0	<10	NA	NA	0.31	-121
	6/18/2004	4,300	1,600	40	81	26	NA	NA	1.19	-66
	8/27/2004	6,900	2,100	59	220	<50	NA	NA	0.33	NA
	10/5/2004	9,800	2,500	52	160	38	NA	NA	NA	NA
	12/2/2004	8,300	2,400	41	200	29	NA	NA	0.43	18
	12/14/2004	15,000	3,600	140	560	210	NA		NA	NA

Table 4 Groundwater Data for Pilot Remedial Program 575 Paseo Grande San Lorenzo, California

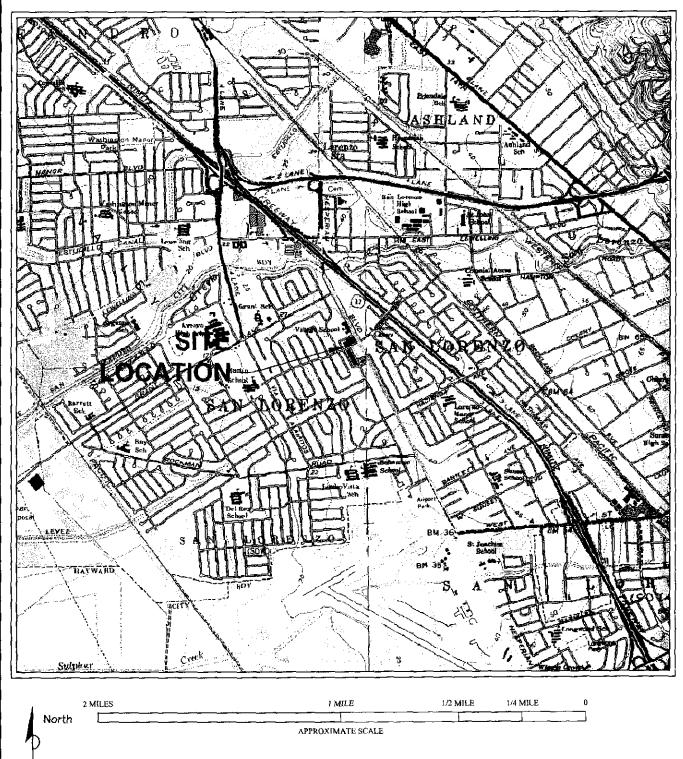
Well ID	Date Sampled	TPH-g	Benzene	Toluene	Ethylbenzene	Total Xylenes	Nitrate as NO ₃	Kjeldahi Nitrogen	Dissolved Oxygen (1)	ORP (1)
	Units	(μg/ L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	mg/L	mg/L	mg/L	millivolts
Peroxide Tre	atment Area - B Zone (Observatio	n Wells							
POBS-B1	5/13/2004	11,000	250	71	160	590	NA	NA	0.11	77
	6/18/2004	3,500	9.8	<0.5	0.8	13	NA	NA	1.61	132
	8/27/2004	500	1.4	<0.5	<0.5	<1.0	NA	NA	0.19	NA
	12/2/2004	190	2.6	<0.5	<0.5	<1.0	NA	NA	0.22	-21
POBS-B2	5/13/2004	4,500	150	23	11	120	NA	NA	0.21	92
	6/18/2004	97	7.4	8.0	1.6	1.7	NA	NA	7.95	266
	8/27/2004	240	36.0	1.6	6.7	4.2	NA	NA	7.33	NA
	12/2/2004	<50	<0.5	<0.5	<0.5	<1.0	NA	NA	10.80	280
Nitrate Inject	tion Area - A Zone Inje	ction Wells								
NIW-A1	5/13/2004	9,300	1,800	59	250	96	<1.0	NA	1.93	117
	6/18/2004	3,100	340	22	93	55	<2.0	NA	2.99	-34
	8/27/2004	250	13	1.4	6	5.7	<1.0	180	0.49	NA
	10/5/2004	1,700	150	<5.0	24	12	NA	120	NA	NA
	12/2/2004	1,400	28	6.2	10	23	NA	260	0.13	-1
NIW-A2	5/13/2004	970	18	<2.5	<2.5	4	<1.0	NA	0.53	112
	6/18/2004	200	6.4	1.7	2.1	3.5	<2.0	NA	1.96	-57
	8/27/2004	<500	6.3	<5.0	<5.0	<10	<1.0	180	0.35	NA
	12/2/2004	<50	< 0.5	<0.5	<0.5	<1.0	NA	270	0.21	29

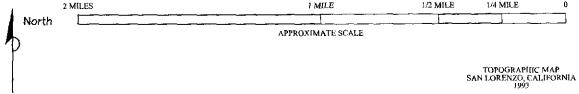
Table 4 Groundwater Data for Pilot Remedial Program 575 Paseo Grande San Lorenzo, California

Well ID	Date Sampled	TPH-g	Benzene	Toluene	Ethylbenzene	Total Xylenes	Nitrate as NO ₃	Kjeldahl Nitrogen	Dissolved Oxygen (1)	ORP ⁽¹⁾
	Units	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	mg/L	mg/L	mg/L	millivolts
Nitrate Inject	tion Area - B Zone Injed	ction Wells								
NIW-B1	5/13/2004	170	6.5	1.1	2.4	8.0	25	NA	0.37	120
	6/18/2004	160	2.9	0.7	2.6	2.5	26	NA	0.55	-76
	8/27/2004	110	6.9	<0.5	1.4	2.0	30	5	0.16	NA
	12/2/2004	<50	<0.5	<0.5	<0.5	<1.0	NA	94	0.18	43
NIW-B2	5/13/2004	260	8.9	1.5	4	8.4	35	NA	0.25	112
	6/18/2004	120	1.0	<0.5	1.1	<1	40	NA	0.35	-46
	8/27/2004	120	4.4	<0.5	1.1	1.6	39	10	0.31	NA
	12/2/2004	<50	<0.5	<0.5	<0.5	<1.0	NA	17	0.26	247
Nitrate Injec	tion Area - Observation	n Wells								
MW-4	5/13/2004	7,400	290	29	110	100	<1.0	NA	0.33	-52
	6/18/2004	2,700	140	12	36	16	<1.0	NA.	0.56	-63
	8/27/2004	460	19	1.2	1.1	1.5	<1.0	<0.40	0.38	NA
	10/5/2004	460	19	<1.0	<1.0	<1.0	NA	<0.40	NA	NA
	12/2/2004	2,800	120	5.4	8.3	5.3	NA	<0.40	0.25	-12
NOBS-B1	5/13/2004	120	4.6	0.8	2.3	5.4	35	NA	0.11	93
	6/18/2004	88	1.9	0.7	1.7	<1	34	NA NA	0.53	-76
	8/27/2004	180	5.5	0.53	0.99	1.6	38	1.7	0.30	NA
	12/2/2004	<50	2.0	<0.5	<0.5	<1.0	NA NA	4.3	0.27	12

Notes:

NA = water sample not analyzed for specified constituents
(1) - Field Measurement Using Flow Through Cell







Engineering and Fire Investigations

111 Deerwood road, Suite 195 San Ramon, California 94583 PH. (925) 820-9580 Fax (925) 820-9587

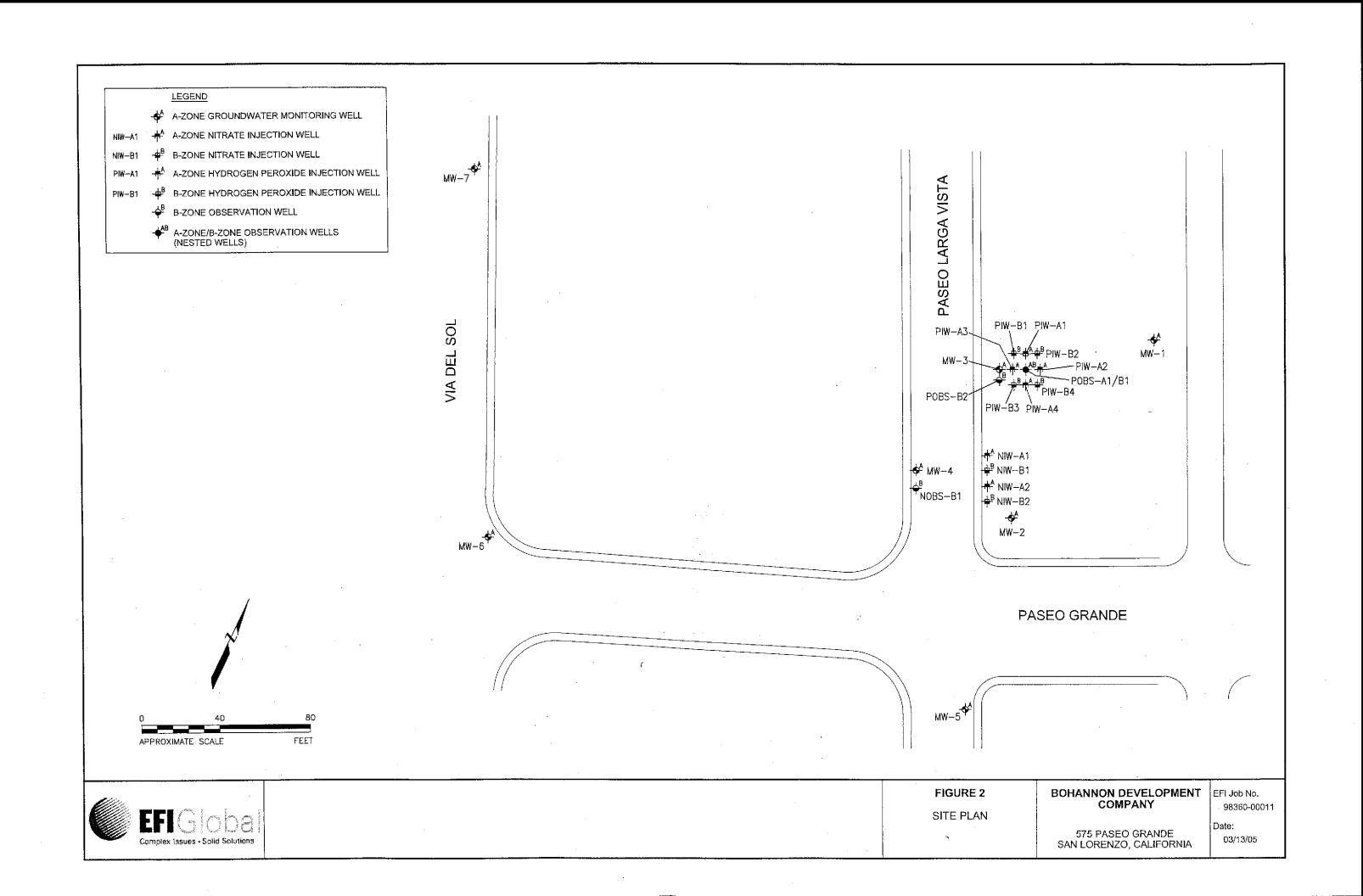
FIGURE 1

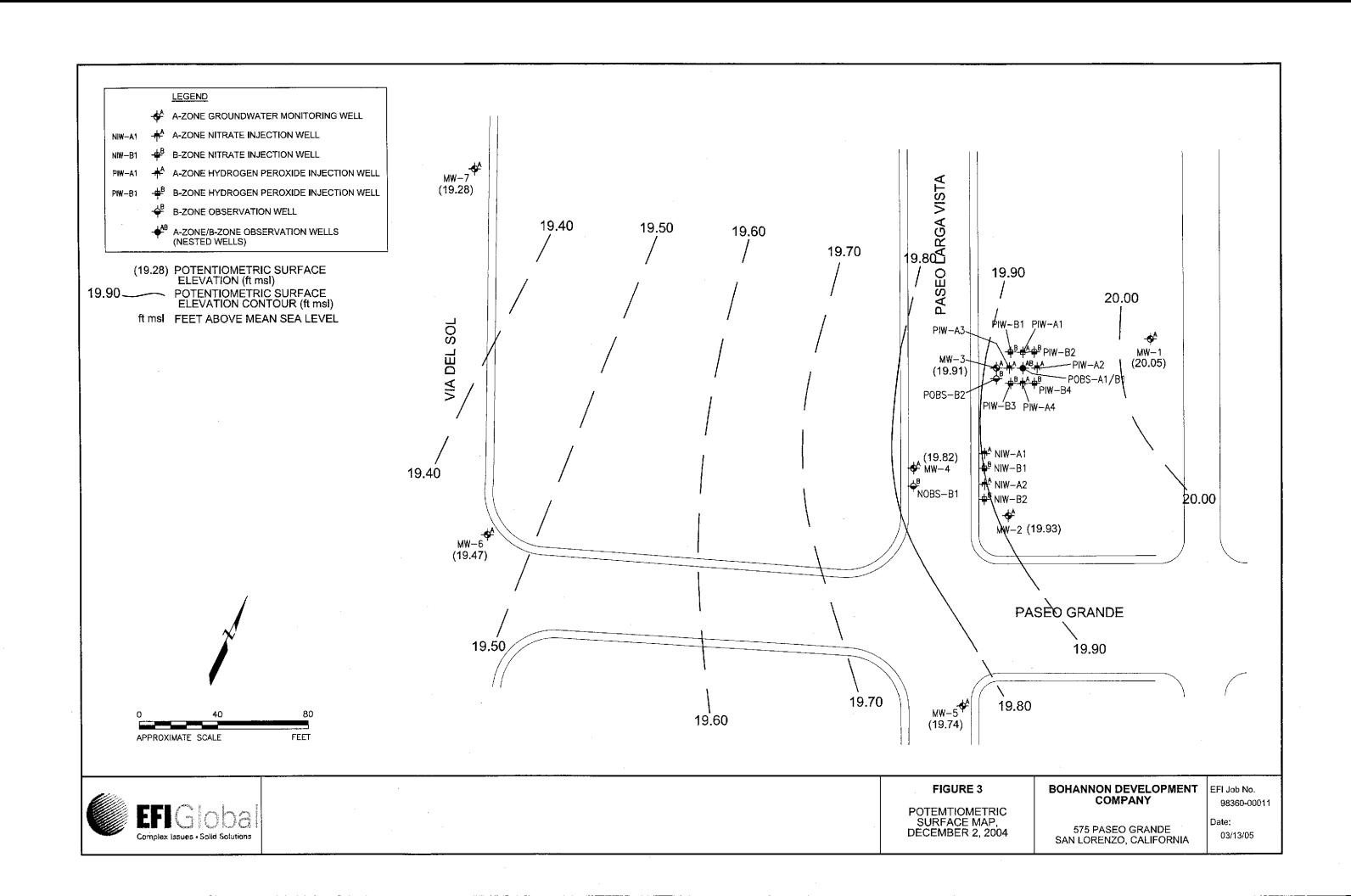
SITE LOCATION MAP

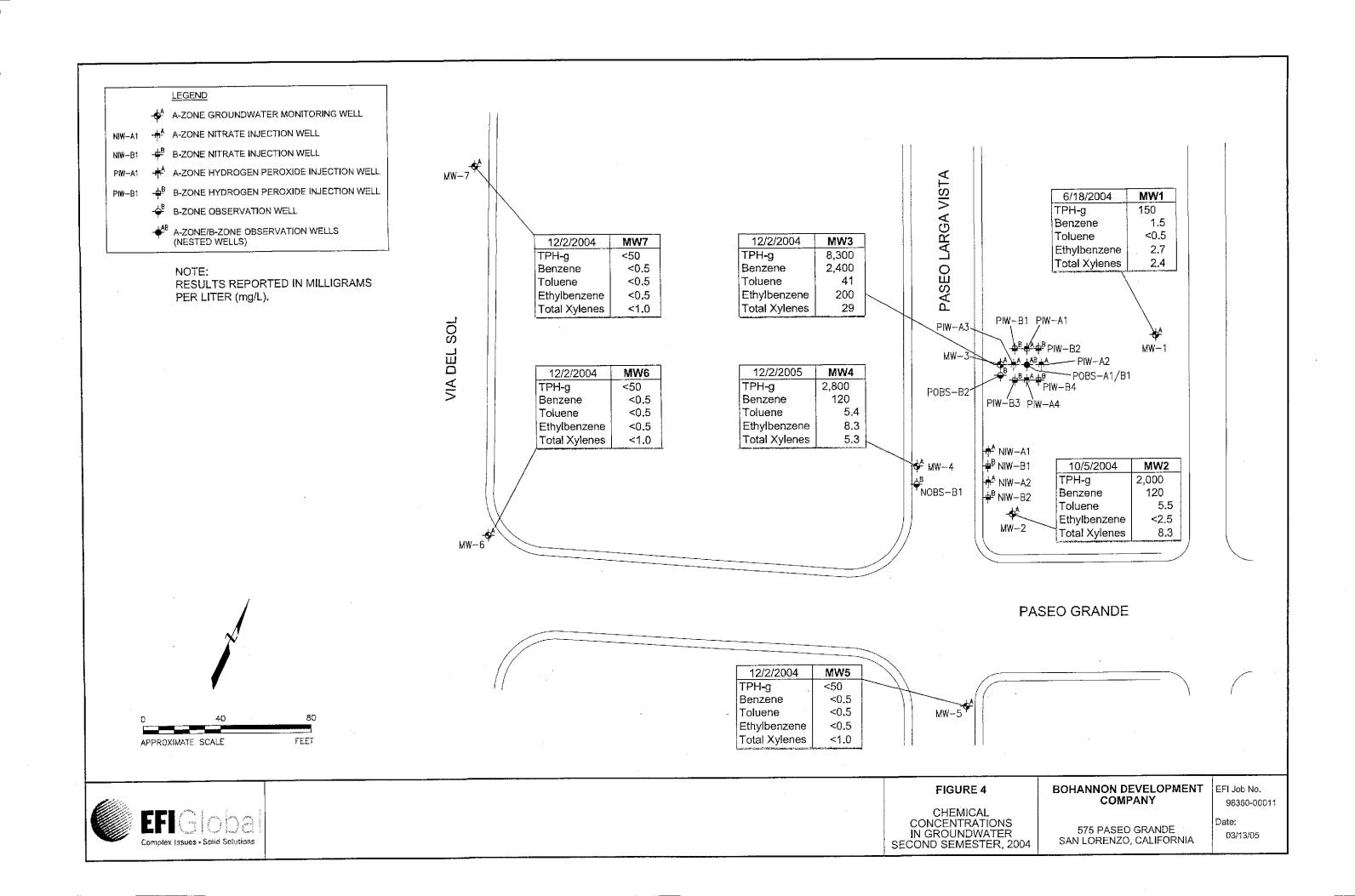
BOHANNON DEVELOPMENT COMPANY

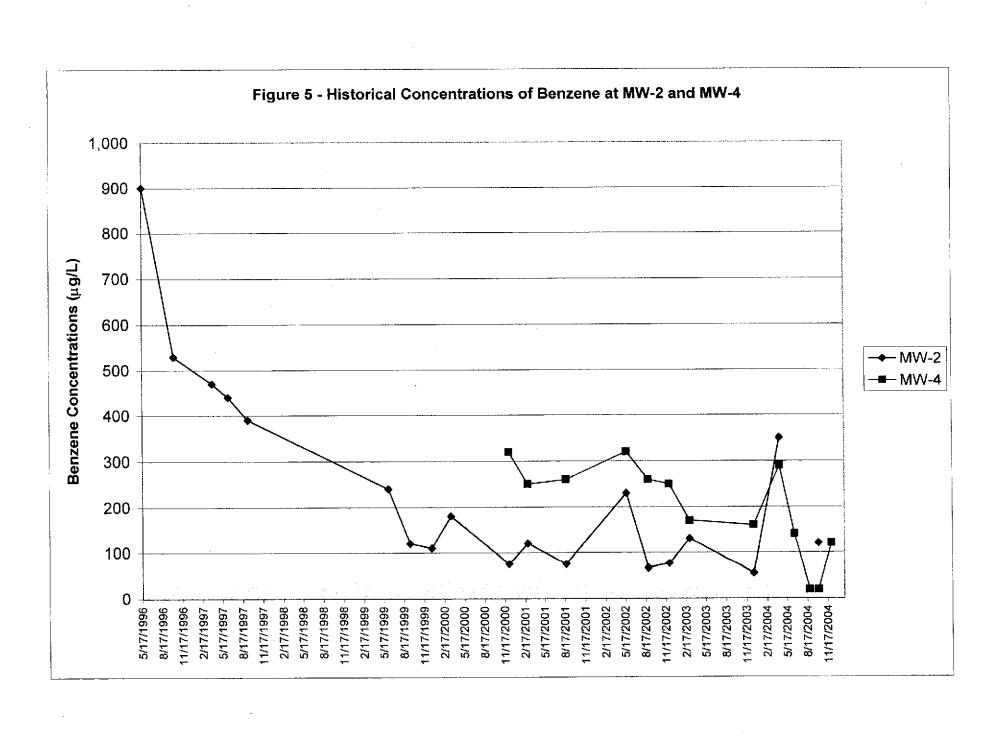
575 PASEO GRANDE SAN LORENZO, CALIFORNIA EFJ Job No. 98360.00001

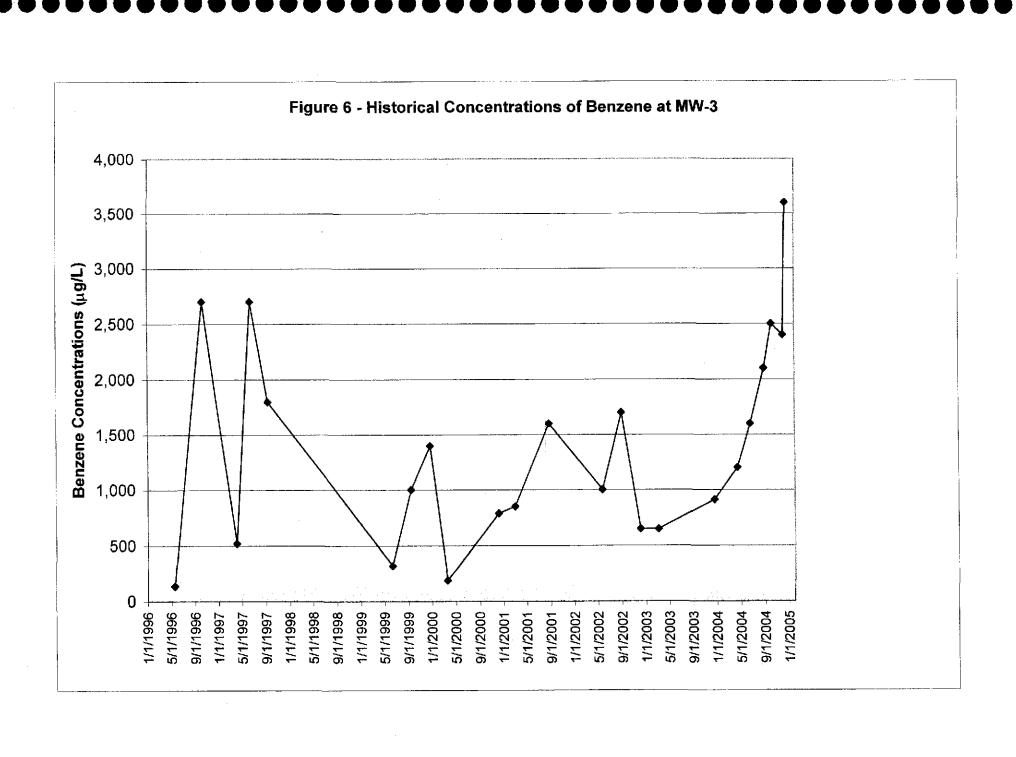
4/5/04

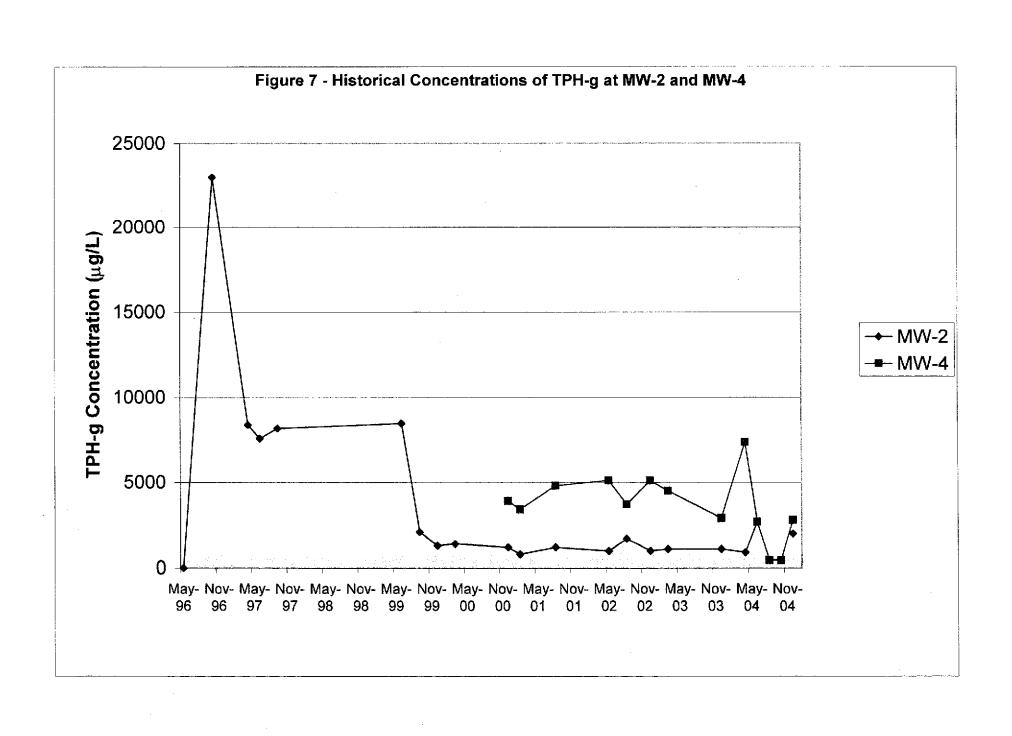


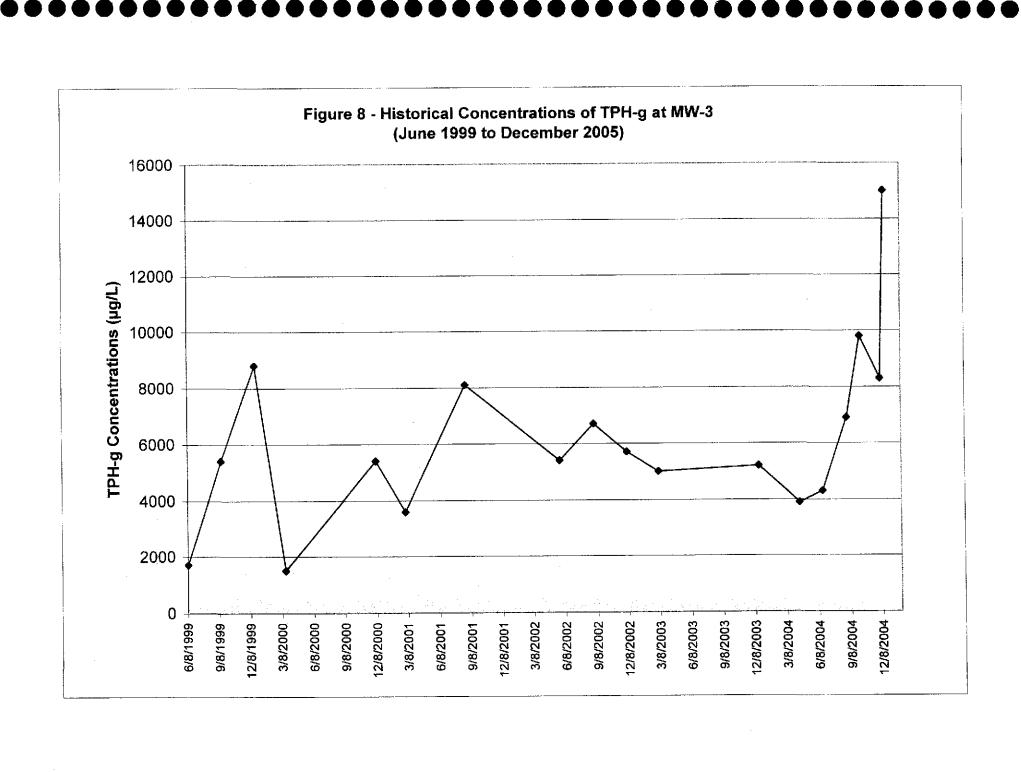












APPENDIX A FIELD DATA SHEETS



roject Number: ite Location: S Total Well Depth (ft)	an Lorenzo, C					ignation: <u>U</u>	''''			
Total Well	an Lorenzo, C	9			171 - 1 - 1 - 171	sonnel: <u>Mark</u>	Williams	<u> </u>		
										
					77 77 77 77	******		s. 25.	1,	orași i consti
			· \	VELL VOLU	IME CALCU	JEATION .	<u> </u>	3, 3% 277 - 1		. X7al
Depth (II)	Depth t	1 5	= _	Water	Casina Di	amatar Multin	liar /SCHD //			ng Volume e Quantity
	Water (11)	1 9	olumn (ft)		ameter Multip 4-inch	6-inc	and the second second	X =	e Quality
	-	=	=	ŀ	2-inch 0.16	0.64	1.44		$\frac{X-}{X}=$	~
	ł				0.10	0.04	1.44	1 2	<i>/</i>	
		T Dis	rge	Purge	Purge	Purge	Purge	Purg	re.	Purge
Param	eter	1	rge ple 1	Sample 2	Sample 3	Sample 4	Sample 5	Sampl		Sample 7
Time of Day		T 54111	P10 1	Dampie 2	Бинрис					
Volume Purged		-		_						
Purge Rate (gpn		+								
Femperature (°C		74	26	241.22	24.07					
ORP		2141		てに	215					
Dissolved Oxyg	gen	0,4	7	2.51	0.46					
р Н		659		6.59	7,00					
Specific Conduc	etivity							,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
(µmhos)	-	1 -			1.60					
Turbidity/Color		CLR	1,73 1.86	cher-	den					
Odor/Sheen										
Depth to Water	During									
Purge (ft)								<u> </u>		
Number of Casi	ng Volumes									
Removed		ļ								
Dewatered?										
Comments:			<u> </u>							
AMPLE DATA	A :									
tatic Water Level ater Level Dete urge Method: _ urge Depth: _ ampling Equipm ime of Sample 0	el:ermined By:nent:	Pe	rcent F	Recovery:		Depth to W	ater During Sa	ampling:		
SAMPLE DATA Static Water Level Vater Level Dete Purge Method: Purge Depth: Sampling Equipm Time of Sample Comments:	el:ermined By:nent:	Pe	rcent F	Recovery:		Depth to W	ater During Sa	ampling:		
tatic Water Level Vater Level Dete urge Method: _ urge Depth: ampling Equipm Time of Sample 0	el:ermined By:nent:	Per STACT	rcent F	Recovery:	Fie	Depth to W	ater During Sa	ampling:	thod	
tatic Water Level /ater Level Dete urge Method: urge Depth: ampling Equipn ime of Sample (comments:	el: ermined By: nent: Collection: No. of	Per STACT	rcent F	Recovery:	Fie	Depth to W	ater During Sa	ampling:	thod	
tatic Water Level later Level Dete urge Method: _ urge Depth: _ ampling Equipm ime of Sample Comments:	el: ermined By: nent: Collection: No. of	Per STACT	rcent F	Recovery:	Fie	Depth to W	ater During Sa	ampling:	thod	
tatic Water Level Vater Level Dete urge Method: _ urge Depth: ampling Equipm ime of Sample Comments:	el: ermined By: nent: Collection: No. of	Per STACT	rcent F	Recovery:	Fie	Depth to W	ater During Sa	ampling:	thod	
tatic Water Level Vater Level Detector Furge Method: _ Furge Depth: _ ampling Equipm Fime of Sample Comments:	el: ermined By: nent: Collection: No. of	Per STACT	rcent F	Recovery:	Fie	Depth to W	ater During Sa	ampling:	thod	



Date: August 27, 2004

roject Name: _						nation: N			
oject Number		-1		ŀ	ield Perso	nnel: <u>Mark</u>	Williams		<u>.</u>
e Location: _	San Lorenzo, (_a							
			WELL	VOLUME	CAT CIT	ATION			Deers and Beers
Total Well	Depth	· · · · · ·	WELL		CALCUL	2/3 1 1 () 1	<u></u>	C	ising Volume
	- Water		Column		sino Diar	neter Multin	lier (SCHD 4		arge Quantity
Depth (ft)	YV atci	(11)	Column		inch	4-inch	6-inc		
	-	=			0.16	0.64	1.44		
			•		7.10	0.04	1.,,	541	
		Purge	p.,,	rge P	urge	Purge	Purge	Purge	Purge
Para	meter	Sample	l l		nple 3	Sample 4	Sample 5	Sample	
ime of Day	1110001	Jampa	7 7 7 7 7 7 7		1				
olume Purge	-д	 	Z	7					
urge Rate (gr		1	1	1					
emperature (23/6/	23.4	al. 23	, দার				
RP		205	704						-
issolved Oxy		0,35	(2)3	-	25				
H	y <u>g</u> on	17 70	178 C	54 6	23 25	-			
n pecific Cond	uctivity	755 L	110 CD 3	· - 7 (G)	2-			 	***
•	deli vity	1.63	1	23 11.	77				
umhos) 'urbidity/Cole			b)~e.		يو ا		 		
	<u>)1</u>	Yolur	91-6	<i>5</i> 1	, <u> </u>		-	 	
Odor/Sheen Depth to Wate	Durina								
	a During								
urge (ft)	sing Volumes		-						
iumber of Ca temoved	sing volunies								
ewatered?		-							
Comments:								<u> </u>	
ater Level De	evel:etermined By: _				_				
rge Depth: _		Perce	nt Recover	y:		Depth to Wa	ater During S	ampling:	
	oment:								
me of Sample	e Collection:								
mments:	N	wulke + 1	<u>stev/gus</u>						
				<u></u>	_		. ,		
:	No. of	Contai	iner		Field	d T	Analy	tical Meth	od
Sample No.	Containers	Тур	e Pre	eservative .	Filtrat	ion	C	omments	
								-	
							····		
		1						· · · · · · · · · · · · · · · · · · ·	
								_	
IRGE WAT	ER DISPOSA	L:							
tal Discharge	e (gal):	~~ •	Disposal	Method:					
	tion(s)/Volume								
	CONDITION		10	· · · · · · · · · · · · · · · · · · ·		7 11 6	440 377	70 310	`
	Device Working					Vell Casing I	ntact?: YE	ES NO	,
	Head and Outer		ry?:	YES 1	10				
omments:									



Project Name: <u>Bohannon</u> Project Number: Site Location: <u>San Lorenzo</u> ,				VV PTI I JEST	ionation: 👠 🕽 i	N - DI			
				Field Pers	ignation: <u>Mark</u> sonnel: <u>Mark</u>	Williams			
				_ + 1210/ - 211					
		<u> </u>	WELL VOLU	ME CALCU	LATION			() t	
Total Well Dept	n to		Water	··········				Casi	ng Volume
Depth (ft) Wate		= C	olumn (ft)	Casing Dia	ameter Multip	lier (SCHD 40	0)		e Quantity
			Ī	2-inch	4-inch	6-inc		1X =	
-		=	-	0.16	0.64	1.44		3X =	
			······································			'		·	
]	Purge	Purge	Purge	Purge	Purge		ırge	Purge
Parameter	Sa	mple 1_	Sample 2	Sample 3	Sample 4	Sample 5	San	nple 6	Sample 7
Time of Day									
Volume Purged		1	2	3					
Purge Rate (gpm)		ì	4	3					
Temperature (°C)	23	NOB	23.60	23, 39					
ORP	70	1	2000	207					
Dissolved Oxygen	25	50,19	6,17	0.16			,		
pН		31	6,00	6,75		-			
Specific Conductivity		528							
(µmhos)	11	C) D	1.342	1.507	l				
Turbidity/Color	C)	Ler	سنجرل	de-					
Odor/Sheen	1								
Depth to Water During									
Purge (ft)									
Number of Casing Volumes									
THE PROPERTY OF CHARACTER & CHARACTER									
Removed									
Removed Dewatered? Comments:									
Removed Dewatered? Comments: AMPLE DATA: tatic Water Level: Vater Level Determined By: urge Method: urge Depth: ampling Equipment: Time of Sample Collection:		Percent F	Recovery:		Depth to W	ater During Sa	amplir	ng:	
Removed Dewatered? Comments: Cample DATA: Static Water Level: Vater Level Determined By: Purge Method: Campling Equipment: Cime of Sample Collection: Comments:		Percent F	Recovery:		Depth to Wa	ater During Sa	amplir	ng:	
Removed Dewatered? Comments: AMPLE DATA: tatic Water Level: Vater Level Determined By: Purge Method: Varge Depth: ampling Equipment: Vine of Sample Collection:	1 C	Percent F	Recovery:	Fie	Depth to Wa	ater During Sa	amplir	ng:	
Removed Dewatered? Comments: AMPLE DATA: tatic Water Level: Vater Level Determined By: turge Method: turge Depth: ampling Equipment: Comments: No. of	1 C	Percent F	Recovery:	Fie	Depth to Wa	ater During Sa	amplir	ng:	
Removed Dewatered? Comments: AMPLE DATA: tatic Water Level: Vater Level Determined By: urge Method: urge Depth: ampling Equipment: Comments: No. of	1 C	Percent F	Recovery:	Fie	Depth to Wa	ater During Sa	amplir	ng:	
Removed Dewatered? Comments: AMPLE DATA: tatic Water Level: Vater Level Determined By: urge Method: urge Depth: ampling Equipment: ime of Sample Collection: omments: No. of	1 C	Percent F	Recovery:	Fie	Depth to Wa	ater During Sa	amplir	ng:	



Project Name:		annon						gnation: <u>N</u> onnel: <u>Mar</u>		<u>82</u>	Date:	Augus	1 21, 2004
Project Number Site Location: _		Lorenzo C				r	icia refs	omer. <u>wan</u>	V AA III	idilla			
one Location: _	<u>san</u>	LOICHZO, C	<u>a</u>									-	
	2 1	** 1.			WELL VOL	UME	CALCI	LATION		4.54	Walter Jan	Ville Ja	
Total Well		Depth	to		Water					·			ng Volume
Depth (ft)	-	Water (= (Column (ft)	С	asing Dia	meter Multip	elier (S	SCHD 4	0)		e Quantity
	1			1			-inch	4-inch		6-inc		1X =	
	_		_	=	i		0.16	0.64		1.44	ļ	3X =	
	•	·····											
			I	Purge	Purge	I	urge	Purge	P	urge	4 -	urge	Purge
Para	mete	er		mple 1	Sample 2	Sa	mple 3	Sample 4	Sar	nple 5	San	nple 6	Sample 7
Time of Day													
Volume Purge	d			l	2	3							
Purge Rate (gr													
Temperature (°C)			181	24.80		1.85		<u> </u>				
ORP			20	NO	201	15			<u> </u>				ļ
Dissolved Oxy	ygen			32	0.30	0.7				_	ļ		
pН			(0)	63	6,30	En E	35 <u> </u>		4		<u> </u>		
Specific Cond	uctiv	ity/	17	23	1.07	,	1.1						
(µmhos)			1 -			1.	11		 		<u> </u>		
Turbidity/Cold	or		Cle	JC-/	Chear	Cla	<u> </u>		J				
Odor/Sheen			1			ļ			\downarrow			•••	
Depth to Wate	r Du	ring											
Purge (ft)			ļ						_				
Number of Ca	sing	Volumes											
Removed			-		 	+					 		
Dewatered?											<u> </u>		
Comments:					·								
SAMPLE DAT Static Water Le Water Level De Purge Method: Purge Depth: Sampling Equip Fime of Sample Comments:	eterm	nined By:	1		Recovery:				ater D	ouring S	amplir		
zoniniciis		10 11 5		<u> </u>	J							-15-	
		No. of	C	ontaine	r		Fie	ld		Analy	tical]	Method	
Sample No.	C	ontainers		Туре	Preserva	tive	Filtra	tion		·C	omme	ents	
	<u> </u>												
PURGE WAT: Total Discharge Drum Designat:	e (gal	l): s)/Volume: _											
Comments:			-										
WELL HEAD Well Security I Inside of Well I Comments:	Devic Head	e Working and Outer	as D	_			10 10	Well Casing l	Intact?	: YE	ES .	NO	



	· .			TY 11 TS	.	M-14	Date: Augus	st 27, 2004
roject Name: _ roject Number	Bohannon :			Well Des Field Per	ignation: <u> </u>	Williams		
ite Location:	San Lorenzo, C	:a			30111C1:1114[15			
		,	WELL VOLU	UME CALCU	JLATION.		2 3 3 3	
Total Well	Depth		Water	0 . 2.	. M. D.	11. 7000000 A	1	ng Volume
Depth (ft)	Water (1t)	Column (ft)		ameter Multip	lier (SCHD 4		e Quantity
	- 6,53	=	-	2-inch 0.16	4-inch 0.64	1.44		
	1 0133			0.10	0.04	1.77	321-	4
		Purge	Purge	Purge	Purge	Purge	Purge	Purge
Parai	meter	Sample 1		Sample 3	Sample 4	Sample 5	Sample 6	Sample 7
Time of Day			•					
Volume Purge		1	て	3				
urge Rate (gp								
Cemperature ('C)	21,95	71.11	2.15				
ORP		1672	159	138				
Dissolved Oxy oH	gen	661		0.3%				
on Specific Condu	uctivity	1.7	6161	6.67				
μmhos)	ichvity	1,196	1.170	11182			ļ	
Furbidity/Colo		Should you	el shanyan	er clear				
Odot/Sheen		boo	Slightsdow	Shaklada				
Depth to Wate	r During							
Purge (ft)							<u> </u>	
	sing Volumes							
Removed Dewatered?								
Comments:						1		
ater Level De irge Method: irge Depth: mpling Equip me of Sample	wel: (3,5 5) termined By: ment: Collection:	Percent	Recovery:			ater During Sa		
mments:	Natural	1BTUX/i	ერე					
Sample No.	No. of Containers	Containe Type	Preserva	Fie tive Filtra			tical Method	
		1						
		<u> </u>						<u> </u>
otal Discharge rum Designati	ER DISPOSAI (gal): on(s)/Volume:	I						
WELL HEAD	CONDITIONS Device Working	S: as Designed	?: YES		Well Casing I		s no	



Project Name:	Rob	annon				Ţ	Vell Dec	ignation: _	No	183-B	Date:	Augus	st 27, 2004
Project Name. Project Number		ашіОП				ر بر	ield Pers	sonnel: <u>M</u>	iark '	Williams			
Site Location:		Lorenzo, C	a			1							
					· · · · · · · · · · · · · · · · · · ·								
				7	VELL VOLU	JME	CALCU	JLATION		, in the second			
Total Well	_	Depth			Water								ng Volume
Depth (ft)		Water (ft)	_ C	olumn (ft)	С	using Dia			er (SCHD 4		-	ge Quantity
	_	1 1000		=	1		-inch	4-in		6-inc		1X =	
<u> </u>		(p:40).16	0.6	4	1.44		3X =	
			1 -	<u> </u>	T				-	D			
.				Purge	Purge		urge	Purge		Purge		urge	Purge
Para	mete	er	Sa	mple 1	Sample 2	Sa	mple 3	Sample	4	Sample 5	San	nple 6	Sample 7
Time of Day	1		ļ			7		1					
Volume Purge			ļ	<u> </u>	~~	(· · · · · · · · · · · · · · · · · · ·	-				
Purge Rate (g)			77.7	1.34	-7-7 111	7-7-7	76		-				
Temperature (ORP	<u>(U)</u>		17		77.41	179	.39		-				_
					0.29								
Dissolved Oxy	ygen		(D)	32 92	100	0.3	<u>७</u> ६७		\dashv				
рн Specific Cond	luctic	itsi	1	_	6.68				-		 		
Specific Cond (µmhos)	iuciiv	ıty	1.7	167	1.301	1.7	85						
(μππος) Turbidity/Col	or			ec v	Cher	cle	·				 	••••	
Odor/Sheen	ŲI		UK	سما سار	- UNERY	CIE							-
Depth to Wate	er Du	rinσ	+			+		-	\dashv		_		
Purge (ft)	ם כו	img				1.							
Number of Ca	sing	Volumes	 										
Removed	5	· Clumos						·					
Dewatered?						 							
Comments:			1			J		·			·		•
SAMPLE DATE Static Water Le Water Level De Purge Method: Purge Depth: Sampling Equip Time of Sample Comments:	evel: eterm	ined By:	I	Percent R	tecovery:	···				er During Sa			
				-									
	T	No. of	<u>C</u>	ontainer	<u>T</u>	-	Fie	ld		Amaly	ticel 1	Method	
Sample No.	1	no. or ontainers	"	онгашег Туре	Preserva	tive	Filtra				omme		
Bample 110.	1 0	Jinamicis	<u> </u>	турс	Treserva	1110	1 11111						
			 										······································
	+-		 										
	+						·········						
PURGE WAT Total Discharge Drum Designat Comments:	e (gal ion(s):)/Volume: ₋											
WELL HEAD Well Security I Inside of Well I Comments:	Devic Head	e Working and Outer	as De Casir	ig Dry?:	YES YES		10 V	Well Casin	g Int	tact?: YE	s	NO	



<u>- </u>	Casing Volume Purge Quantity Inch 1X = 3X = 44 3X =
WELL VOLUME CALCULATION	D 40 Purge Quantity
Total Well Depth to Depth to Depth (ft) Depth	D 40 Purge Quantity
Total Well Depth to Depth to Depth (ft) Depth	$\begin{array}{c cccc} D & 40 & Purge Quantity \\ \hline -inch & 1X = \\ 1.44 & 3X = \\ \hline & Purge & Purge \\ \end{array}$
Depth (ft) Water (ft) Column (ft) Casing Diameter Multiplier (SCH)	$\begin{array}{c cccc} D & 40 & Purge Quantity \\ \hline -inch & 1X = \\ 1.44 & 3X = \\ \hline & Purge & Purge \\ \end{array}$
Purge Purge Purge Purge Sample 3 Sample 4 Sample 5	1X =
Purge Purge Sample 3 Sample 4 Sample 6 Sample 7 Sample 8 Sample 9 Samp	Purge Purge
Parameter Sample 1 Sample 2 Sample 3 Sample 4 Sample 4 Cime of Day 701	1 0 1
Parameter Sample 1 Sample 2 Sample 3 Sample 4 Sample 4 Time of Day 701me Purged 1 7 3 Turge Rate (gpm) 1 23.33 23.30 Temperature (°C) 23.74 23.33 23.30 DRP 20.10 20.05 20.1 Dissolved Oxygen 20.10 20.05 20.1 H 1,20 2.75 6.77 pecific Conductivity armhos) 0.677 0.841 Turbidity/Color 0.677 0.841 Depth to Water During 0.007/Sheen	1 9 1
Cime of Day 7 3 Volume Purged 1 7 3 Purge Rate (gpm) 1 23.24 23.33 23.30 DRP 207 206 207 Dissolved Oxygen 2010 20.95 20.11 OH 6,20 6,77 6,77 Specific Conductivity 5.90 0,877 0,841 Furbidity/Color 0.67 0.841 0.87 Depth to Water During 0.87 0.841 0.87	5 Sample 6 Sample /
Volume Purged	1
Purge Rate (gpm) Cemperature (°C) 23.24 23.33 23.30 DRP 207 206 20:11 Dissolved Oxygen Collo 20.65 Collo 20:11 Collo 20:15 Collo 20:11 Collo 20:17 Collo 20:11 Collo 20:17 Collo 20:11 Collo 20:17 Collo 20:11 Collo 20:11	
Cemperature (°C) 23.24 23.37 23.30 ORP	
DRP 207 206 207 208	
Dissolved Oxygen	
pecific Conductivity umhos) Curbidity/Color Odor/Sheen Depth to Water During	
pecific Conductivity tumhos) Ourbidity/Color Odor/Sheen Depth to Water During	
Surbidity/Color Clear Chec Clear Clear Chec Clear Chec Clear Chec Chec Chec Chec Chec Chec Chec Chec	
Furbidity/Color (1etr Chec Chew) Odor/Sheen Depth to Water During	
Odor/Sheen Depth to Water During	
Depth to Water During	
dige (1t)	
Jumber of Casing Volumes Lemoved	
Dewatered?	
Comments:	
AMPLE DATA: atic Water Level: Description of Water Level Measurement Point: ater Level Determined By: urge Method: urge Depth: Percent Recovery: Depth to Water During umpling Equipment: me of Sample Collection: comments: /4.3	g Sampling:
No. of Container Field An Containers Type Preservative Filtration	alytical Method Comments
URGE WATER DISPOSAL: otal Discharge (gal): Disposal Method: rum Designation(s)/Volume:	
omments:	
WELL HEAD CONDITIONS: Vell Security Device Working as Designed?: Side of Well Head and Outer Casing Dry?: Very State of Well Head and Outer Casing Dry?: Very State of Well Head and Outer Casing Dry?: Very State of Well Head and Outer Casing Dry?: Very State of Well Head and Outer Casing Dry?: Very State of Well Head and Outer Casing Dry?: Very State of Well Head and Outer Casing Dry?:	



Project Name:						<i>M</i>	ell Des	ignation:	pin	I-AL	Date:	Augus	<u>st 27, 2004</u>
Project Number Site Location:	r:	Lorenzo C	' a			F	ield Pers	onnel: <u>M</u>	ark V	villiams			
oug Focation: -	San	Luienzo, C	-d										
English turbs			٠.	,	WELL VOL	UME	CALCU	LATION			<u>.</u>		
Total Well		Depth	to		Water		•					Casi	ng Volume
Depth (ft)	-	Water (= (Column (ft)	Ca	sing Dia	ımeter Mu	ltiplie	er (SCHD 4	0)	Purg	e Quantity
						2-	inch	4-inc	ch	6-inc	h	1X =	
				=		().16	0.6	4	1.44		3X =	
			F	urge	Purge		urge	Purge		Purge		urge	Purge
Para	mete	er	Sa	mple 1	Sample 2	Sai	nple 3	Sample	4	Sample 5	Sar	nple 6	Sample 7
Time of Day													
Volume Purge		- <u>-</u>		1	7_	3			_				
Purge Rate (g													
Temperature ((°C)		254		25.66	Z <u>5.</u>							
ORP			191		191	190	<u> </u>		\perp				
	Dissolved Oxygen				19.59	Y1.			-				-
pH					6.64	(cx	<u> </u>						<u> </u>
_	luctiv	/ity	0.6	h-	0.611	Die	1						
	pecific Conductivity umhos) 'urbidity/Color						<u>'</u>			<u>-</u>			
Odor/Sheen	υľ		Oe		Clear	احله	<u> </u>			J 1P	 		
Depth to Wate	or Di	lrin o	-		-								
Purge (ft)	טע בו	ung											
Number of Ca	eino	Volumes				+							
Removed	131116	7 Clumics											
Dewatered?						+			\top				-
G								l					
SAMPLE DA' Static Water Le Water Level Do Purge Method: Purge Depth: Sampling Equip Time of Sample Comments:	evel: eterm —— pmer e Col	nined By:	F		ption of Wate				Wate	er During Sa			
	1 .		T .~			 -	571			4 1	420-11	V[a4] 1	The second second
Commis No	L.	No. of	ł	ontainer	Preserva	45.00	Fie Fíltra				ucai i omme	Method	
Sample No.	<u> ~</u>	ontainers		Туре	Freserva	nve	LHHA	11011			.,,,,,,,,,,	ans	
			1										
	\vdash		-										
 	+-		1		_								
PURGE WAT Total Discharge Drum Designat Comments:	e (ga ion(s	l): s)/Vo l ume:											
WELL HEAD Well Security I Inside of Well Comments:	Devic Head	e Working and Outer	as De Casin	g Dry?:	YES		0 1	Well Casin	g Inta	act?: YE	S	NO	*****



	· · · · · · · · · · · · · · · · · · ·			WELL VOL	JME CALCU	LATION			.3-	Special Contract
Total Well	Depth	to		Water					Casi	ng Volume
Depth (ft)	Water		= (Column (ft)	Casing Dia	ameter Multip	lier (SCHD 4	0)		e Quantity
			=		2-inch	4-inch	6-inc		1X =	
					0.16	0.64	1.44	<u> </u>	3X =	· · · · · · · · · · · · · · · · · · ·
		T.	urge	Purge	Purge	Purge	Purge	Pu	rge	Purge
Para	meter		mple 1	Sample 2	Sample 3	Sample 4	Sample 5		iple 6	Sample 7
Time of Day		Dampie 1		Sample 2	Sumpre C					
Volume Purge	ed .	1	1	2	3					
Purge Rate (gr		1								
remperature (24:	73	Cu, 7)	24.72					
ORP		204		205	2:07					
Dissolved Oxy	ygen		,23	16,95	16,55			L		
ρΗ		(,,		6145	6.49					
Specific Cond	ecific Conductivity									
(µmhos)	mhos)			0.711	0.707					
Turbidity/Colo	Or	O	CC1	Clei	Acc-					
Odor/Sheen										
Depth to Wate	er During									
Purge (ft)						1				
		1					i			T =
Number of Ca	sing Volumes								-	
Number of Ca Removed	sing Volumes									
Number of Ca Removed Dewatered?		:								
Number of Ca Removed Dewatered? Comments:										
Number of Ca Removed Dewatered? Comments: AMPLE DAT tatic Water Level De targe Method: targe Depth: tampling Equip	FA: evel: etermined By:	I	Descri	ption of Wate	····	Depth to Wa	ater During Sa	amplin	g:	
Number of Ca Removed Dewatered? Comments: AMPLE DAT tatic Water Level Devater Level Devatered? Turge Method: Turge Depth: Tampling Equip	FA: evel: etermined By: pment: e Collection:	I	Descri	ption of Wate	····	Depth to Wa	ater During Sa	amplin	g:	
Number of Ca Removed Dewatered? Comments: AMPLE DAT tatic Water Le /ater Level De urge Method: urge Depth: ampling Equip ime of Sample omments:	FA: evel: etermined By: pment: e Collection:	- I	Descri	ption of Wate Recovery:	Fie	Depth to Wa	ater During Sa	amplin	g:	
Number of Ca Removed Dewatered? Comments: AMPLE DAT tatic Water Le /ater Level De urge Method: urge Depth: ampling Equip ime of Sample omments:	pment: Collection: No. of	- I	Descri	ption of Wate	Fie	Depth to Wa	ater During Sa	amplin	g:	
Number of Ca Removed Dewatered? Comments: AMPLE DAT tatic Water Level De urge Method: urge Depth: ampling Equip	pment: Collection: No. of	- I	Descri	ption of Wate	Fie	Depth to Wa	ater During Sa	amplin	g:	



Project Name: _						Well De	signation: <u> </u>	1W-A4	Date.	Augus	
Project Number	r:						rsonnel: <u>Mar</u>	k Williams			
Site Location: _	San :	Lorenzo, C	a								
						DATE OAT O	TIT LODGE			and Barry	
	•				WELL VOLU	JME CALC	ULATION				
Total Well	-	Depth t Water (:		= (Water Column (ft)	Casina D	iameter Multi	nlier (SCHD 4	10)		ng Volume e Quantity
Depth (ft)		vvalei (.	11)	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Zonamin (tc)	2-inch	4-inch			1X =	o Quantity
	-			=	-	0.16	0.64	1.4		3X =	
	J			ļ ļ		0.10	3.01		·		··· <u>-</u> .
			ער	urge	Purge	Purge	Purge	Purge	Pı	ırge	Purge
Para	mete	r		mple 1	Sample 2	Sample 3	_	Sample 5		iple 6	Sample 7
Time of Day	inicic	·1		mpre x	Jumpie 2	Sumpre				*	
Volume Purge	h			1	ı	3	-				
Purge Rate (g)			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		 			-			
Temperature (15	<u>05</u>	25111	75.16					
ORP	<u>. C)</u>		20.	7	706	200					<u>-</u>
	solved Oxygen			. 7	12.05	17.09					-
pH	المالات و			18	649	6.50					
<u> </u>	ecific Conductivity				100 11	YON JU		1	1		
(µmhos)	mhos)			ભપ <u>)</u>	0.873	0.898					
	mhos) urbidity/Color			24		clear	-	1			
Odor/Sheen			O.94) Clear	Cyesy	<u> </u>		-				
Depth to Wate	er Du	ring					 				
Purge (ft)		- ^6									
Number of Ca	sing	Volumes									
Removed	٥							<u> </u>			
Dewatered?											
Comments:											
SAMPLE DAT Static Water Le Water Level De Purge Method: Purge Depth: _ Sampling Equip	evel: . eterm	ined By:									
Time of Sample			^								
Comments:		السائلات	Cie	12 Qui	, mera-						
								_			
	i	No. of	ł	ontaine	1		ield			Method	
Sample No.	Co	ontainers	1	Type	Preserva	tive Filtr	ation		Comme	nts	<u>, i e Siegi, i e</u>
		- , 									
	ļ										
	1										
	1		L					· · · · · · · · · · · · · · · · · · ·			
NT TIN ZO TO XXX A 700	TOTAL T	NICDACAT	_								
PURGE WAT Fotal Discharge	EK I e (cel	MORUSAL N		D	ienoeal Metho	d·					
Otar Discharge Orum Designat											
Comments:											
			-								
WELL HEAD											
Well Security 1						NO	Well Casing	Intact?: Y.	ES	NO	
nside of Well			Casin	ig Dry?:	YES	NO					
Comments:									-		



roject Number ite Location: _						Field Per	sonnel: <u>M</u>	atk W	illiams			
						TATE OF LOS	T LONG N					
	_	D th. c.		 '	WELL VOLU	ME CALCU	LATION			, v .		ng Volume
Total Well Depth (ft)	-	Depth to Water (fi		ء ا ∍	Water Column (ft)	Casina Di	nmeter Mul	tiplie	r (SCHD 4	0)		ge Quantity
Depair (11)	+	vvater (1	·/			2-inch	4-inc		6-inc		1X =	
	-		=	=	ŀ	0.16	0.64		1.44		3X =	
	-		<u> </u>		<u>!</u>						<u> </u>	
Para	mete	r	Pu Sam	-	Purge Sample 2	Purge Sample 3	Purge Sample	4 8	Purge Sample 5		urge nple 6	Purge Sample 7
Time of Day												
Volume Purge	d				2	3						
Purge Rate (g												
Temperature (°C)		23.11		ひい	Z3.75						
ORP			218		217	216				ļ	···•	
Dissolved Ox	ygen		18.63 7.41 0,447 0200		18.72	18.69	1					
рН					7,44	7,45	<u> </u>					
Specific Cond	uctiv	ıty			0.439 CXE	ru27						
(µmhos) Turbidity/Cole						0,443		-				
Odor/Sheen	υı							+				
Depth to Wate	er Du	ring								 		
Purge (ft)												
Number of Ca	sing	Volumes										
Removed								_				
Dewatered?					<u> </u>							
Comments:												
AMPLE DATE tatic Water Level De Purge Method: Purge Depth: _ampling Equiportion of Sample Comments:	evel: _ eterm pmen e Col:	t:	Peı	cent F			Depth to	Water	r During Sa	amplii	ng:	3
C. J.N.		No. of		ainer		Fie				tical l	Method	
Sample No.	00	ntainers	1	pe	Preserva	tive Filtra	LIOII		<u> </u>	AKMIIII	.1163	
PURGE WAT Fotal Discharge Drum Designat Comments:	e (gal):)/Volume: _			· · · · · · · · · · · · · · · · · · ·							
WELL HEAD Well Security I nside of Well I	CO! Devic	NDITIONS: e Working a	: ıs Desi	gned?	: YES		Well Casin			S	NO	



roject Name: _ roject Number		annon				T'-1-1 D	gnation: Pronnel: Mark	W-182		Augus	(27, 2004
te Location: _		Lorenzo, C									
											
					WELL VOLU	U <mark>ME CALCU</mark>	LATION	12.73			
Total Well Depth (ft)	-	Depth Water (= (Water Column (ft)	Casing Dia	meter Multip	lier (SCHD 4	0)		ng Volume e Quantity
	1					2-inch	4-inch	6-inc	- T	1X =	
	-			=		0.16	0.64	1.44	. 1	3X =	•
<u></u>	1	1]				-			
Para	mete	r		Purge inple 1	Purge Sample 2	Purge Sample 3	Purge Sample 4	Purge Sample 5		rge ple 6	Purge Sample 7
ime of Day						1					
olume Purge	:d		1	1	2	7					
urge Rate (gr			1		T						
emperature (24	,50	24132	25 2445					
RP			221		225	222			Ľ_		
issolved Oxy	/gen		V.	33	19.05	18,99					
H	٠٠٠٠ پ			21	7,22	2,7,19			Ĭ.		
	cific Conductivity								1		
ımhos)	-				0.637	0.633					
urbidity/Colo	or Or		Cles		dec	Clear					
dor/Sheen			1								
epth to Wate	r Du	ring									
umber of Ca	sing	Volumes							· ·		
emoved	U										
ewatered?			1								
omments:			l								
ater Level De rge Method: rge Depth: _ mpling Equip me of Sample	vel: _eterm	t:lection:	I	Percent 1	Recovery:	r Level Measu	Depth to Wa		amplin		
mments:		witer	10	che pu	cms						
	T	No. of	C	ontaine		Fiel	d	Analy	tical M	1ethod	in the second second
Sample No.		ntainers	_ C.	Туре	Preserva	i i	1		ommei		
				-, 1-							
			 			 					
			 			· · · · · · · · · · · · · · · · · · ·					
um Designat	e (gal ion(s):)/Volume:				od;					
annicats.											
TELL HEAD Tell Security I Side of Well I Domments:	Devic Head	e Working and Outer	as Do Casir	ig Dry?:		NO V NO	Vell Casing I	ntact?: YE	ES	NO	



Well Sampling Log. doc

GROUNDWATER WELL – PURGE AND SAMPLE RECORD

roject Name: _						Well Des	signation:	- W-B	<u>3 </u>	: Augus	st 27, 2004
oject Number te Location: _						rieid Pei	sonnel: <u>Mar</u>	vv mman	19		
te Location: _	san .	<u>Lorenzo, C</u>	:!								
<u> </u>					VELL VOLU	IME CALC	ULATION			H_1 1.11	
Total Well		Depth t	.0	T -	Water		-			Casi	ng Volume
Depth (ft)	-	Water (. —	c	olumn (ft)	Casing D	iameter Multi	plier (SCF	HD 40)	Purg	e Quantity
				1		2-inch	4-inch		6-inch	1X =	
	-		=		F	0.16	0.64		1.44	3X =	
		·		<u></u>	<u></u>			'			
			Purg	e	Purge	Purge	Purge	Purp	e l	Purge	Purge
Para	mete	:r	Samp		Sample 2	Sample 3	Sample 4	Sampl		mple 6	Sample 7
Time of Day	/		1								
Volume Purge	d		1	-	2	3					
Purge Rate (gr			•								
Temperature (2417	1	Z4.65	24.63					
ORP	-		212		210	205					
Dissolved Oxy	/gen		14,50	,	7.15	19,12					
pH			7,19		7.15	7.18					
Specific Cond	uctiv	ity	0149	5)							
(µmhos)					0.466	0.469					
Turbidity/Cole)[Cleu		Clear	C1602					
Odor/Sheen											
Depth to Wate	r Du	ring						1			
Purge (ft)											
Number of Ca	sing	Volumes						1			
Removed							-				
Dewatered?		• •			<u>L</u> .	<u> </u>	.]				<u> </u>
Comments:											· · ·
AMPLE DAT tatic Water Le Vater Level De Purge Method: Purge Depth: _ ampling Equip Time of Sample Comments:	vel: .eterm	t:	Perc	ent F	Recovery:			ater Duri	ng Sampl	ing:	
		3									
						····					
		No. of	Conta		1		eld	A	nalytical		
Sample No.	Co	ontainers	Ту	pe	Preserva	live Filtr	ation		Comn	nents	
				···-							
		 									
											
			L								· · · · · · · · · · · · · · · · · · ·
PURGE WAT Total Discharge Drum Designati Comments:	e (gal ion(s	i):)/Volume: _[· · · · · · · · · · · · · · · · · · ·
WELL HEAD Well Security E nside of Well I Comments:	COI Devic Head	NDITIONS e Working and Outer	6: as Desig Casing D	ned?			Well Casing		YES	NO	

4/13/2004 6:19 AM



oject Name: _ oject Number						Well Des	signation: Property	W - BU	Date. Au	gust 27, 2004
e Location: _						Ticlu i ci	Source. Iviai	K VIIIIuiiis		
e Location	Dati 1	LOICHZO, C								
		4		. 1	VELL VOLU	IME CALC	JLATION	eri e eyelek		
Total Well	T 1	Depth 1	0		Water	AND CITAL				Casing Volume
Depth (ft)	-	Water (1	= C	olumn (ft)	Casing D	ameter Multi	plier (SCHD 4		urge Quantity
Dopar (16)		11 4103 ((10,	2-inch	4-inch			
	-			=	Ť	0.16	0.64	1.44		
	1 1					0.10				
	***		p	игде	Purge	Purge	Purge	Purge	Purge	Purge
Para	mete	r		nple 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample	
me of Day	-	<u> </u>	J	iipic 3	Gample 2	Bulling	- Daniel -			
olume Purge			 -			3				
irge Rate (gr				<u> </u>	2			+	-	
emperature (24,	L3	24,67	24.62		-		-
RP	<u></u>		22		2.25	227	-			
issolved Oxy	zmen.		211		21.05	21.01				
issorveu Oxy	8011				7,00	7,01	 			
ecific Cond	not	itv	کن <i>ط</i>		1,00	1,00				-
	uCtlV	ııy	0,6	હ6	0:677	0.672				ig T
mhos)			1	ecu	Clesin	·	-			
irbidity/Colo)I		_ CL	T.C -	مستفيعات ا	Clea-			-	
dor/Sheen	T	rina .	<u> </u>					+		
epth to Wate	r Du	ring					}			
irge (ft)	-i	Volumen					-			
umber of Ca	sıng	voiumes								
emoved ewatered?			-				 			
				-		J				
omments:										
ater Level De rge Method:	vel: _ eterm	t:	P	ercent R	Recovery:		Depth to W	t:	ampling: _	-
		No. of	C-	_ 1 = 2		TO:	eld	Analy	tical Metl	hod
omnio No	l	no. 01 Intainers		ntainer Type	Preserva		ation	-	omments	uou
ample No.		ontainers	<u> </u>	Type	11050144	THE PHE	ation		Offinition 13	
	 									
	ļ									
			ļ							
			1							
ım Designat	gal ion(s):)/Volume:								
mments:										
ELL HEAD ell Security I side of Well l	Devic Head	e Working	as De		: YES YES	NO NO	Well Casing	Intact?: YE	ES N	0



Project Name: Bohannon Project Number: Site Location: San Lorenzo, Co Total Well Depth Depth (ft) Water (to [ignation: <u> </u>	065-7B1	·Qc	585- F	t 27, 2004 N
Total Well Depth Depth (ft)	to			Field Per	sonnel: <u>Mark</u>	Williams			
Total Well Depth Depth (ft) Water (to								
Depth (ft) Water (T					<u>-</u>		
Depth (ft) Water (VELL VOL	IME CALCU	ILATION				
Depth (ft) Water (Water	MIE CAUCE	BATION			Casu	ng Volume
24 256		= C	olumn (ft)	Casing Dia	ameter Multip	lier (SCHD 4	0)		e Quantity
		-		2-inch	4-inch	6-inc		1X =	
_ '	;	=	-	0.16	0.64	1.44		3X =	
1716 7.47		<u></u>	<u> </u>						
	Pu	ırge	Purge	Purge	Purge	Purge	Pu	rge	Purge
Parameter	Sam	iple I	Sample 2	Sample 3	Sample 4	Sample 5	Sam	ple 6	Sample 7
Time of Day							ļ		
Volume Purged	1		2	3					
Purge Rate (gpm)									
Temperature (°C)	23.3	<u>ب</u>	23.41	22.44					
ORP		193		201					. <u></u>
Dissolved Oxygen	0.18	<u>></u>	0.17	0.15					
pН	6150)	6,49	6,50					
Specific Conductivity	1		1/6	سور)	1		1		
(µmhos)	1,60		1.68	1.65					
Turbidity/Color	C	\e-	aler	clev	1				_
Odor/Sheen	-								
Depth to Water During									
Purge (ft)	1			1					
	-								
_									
Removed									
Removed Dewatered?									
Removed Dewatered? Comments:									
Removed Dewatered? Comments: AMPLE DATA: tatic Water Level: Vater Level Determined By: urge Method: urge Depth: ampling Equipment: Time of Sample Collection:	Pe	ercent R	ecovery:		Depth to Wa	ater During Sa	mplin		
Number of Casing Volumes Removed Dewatered? Comments: SAMPLE DATA: Static Water Level: Water Level Determined By: Purge Method: Purge Depth: Sampling Equipment: Comments: Comments:	Pe	ercent R	ecovery:		Depth to Wa	ater During Sa	mplin		
Removed Dewatered? Comments: SAMPLE DATA: Static Water Level: Vater Level Determined By: Purge Method: Purge Depth: Sampling Equipment: Cime of Sample Collection: Comments: No. of	Pe Con	ercent R	ecovery:	Fie	Depth to Wa	ater During Sa	amplin	1ethod	
Removed Dewatered? Comments: AMPLE DATA: tatic Water Level: Vater Level Determined By: urge Method: urge Depth: ampling Equipment: Time of Sample Collection: Comments:	Pe Con	ercent R	ecovery:	Fie	Depth to Wa	ater During Sa	ampling	1ethod	
Removed Dewatered? Comments: AMPLE DATA: tatic Water Level: Vater Level Determined By: urge Method: urge Depth: ampling Equipment: ime of Sample Collection: comments:	Pe Con	ercent R	ecovery:	Fie	Depth to Wa	ater During Sa	ampling	1ethod	
Removed Dewatered? Comments: AMPLE DATA: tatic Water Level: Vater Level Determined By: urge Method: urge Depth: ampling Equipment: comments: Comments: No. of	Pe Con	ercent R	ecovery:	Fie	Depth to Wa	ater During Sa	ampling	1ethod	
Removed Dewatered? Comments: SAMPLE DATA: Static Water Level: Vater Level Determined By: Purge Method: Purge Depth: Sampling Equipment: Comments: No. of	Pe Con	ercent R	ecovery:	Fie	Depth to Wa	ater During Sa	ampling	1ethod	

4/13/2004 6:19 AM



Project Name:					Well Des	ignation: Q	683-At	Date: A	ugust 27, 2004 65-6)
Project Number					_ Field Per	sonnel: <u>Mark</u>	Williams		
Site Location: _	San Lorenzo, C	.a							
			<u> </u>	VELL VOLU	IME CALCI	ILATION		adaid kat	
Total Well	Depth	to.	 	Water	E CALECT	BRITAGI			Casing Volume
Depth (ft)	- Water (=	Column (ft)	Casing Di	ameter Multip	lier (SCHD 4		Purge Quantity
Copui (ity					2-inch	4-inch	6-inc		X =
1716	<u> </u>	\	=	ŀ	0.16	0.64	1.44		X =
74 J	7,56		<u> </u>						
F 1 10	1,30	_	Purge	Purge	Purge	Purge	Purge	Purg	e Purge
Para	meter		mple 1	Sample 2	Sample 3	Sample 4	Sample 5	Sampl	
Time of Day		1							
Volume Purge	ed		1	2	3				
Purge Rate (gr				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
Temperature (°C)	n	·3 ' 5	22.49	22,48				
ORP n	m1	20	3	LOS	257				
Dissolved Oxy	ygen m/L	0.7	12	0.21	019			ļ	
pН			760	6.77	6.75				
Specific Cond	uctivity	1	35		ا د دستور				
(µmhos)	ms/ein			1.344	1.351				
Turbidity/Cole	or	Cle	i =	C10-	Chair			-	
Odor/Sheen		ļ							
Depth to Water	er During								
Purge (ft)	. 37.1	-							
Number of Ca Removed	ising Volumes								
Dewatered?				1	1				
Comments:		. 1		!			L		
Commenta					24. 4				
Water Level De Purge Method: Purge Depth: _ Sampling Equip Time of Sample	etermined By:,]	Percent F	lecovery:			ater During Sa		
									
Sample No.	No. of Containers	C	ontainer Type	Preserva	Fie live Filtra			tical Metomments	thod
Total Discharge Drum Designat	ER DISPOSAI e (gal):ion(s)/Volume:					.			
Well Security I Inside of Well l	CONDITIONS Device Working Head and Outer	as D Casir	ng Dry?:	YES	NO	Well Casing I	ntact?: YE	4 2	NO

WellSamplingLog.doc 756 ZY 747 1716 4/13/2004 6:19 AM



roject Number: ite Location: <u>San Lorenzo. C</u>			_ well besi	gnation:	W - 2		
te Location: <u>San Lorenzo. C</u>			Field Pers	onnel: <u>Mark</u>	Williams		
	a	•					LATT.
	<u> </u>	VELL VOLU	JME CALCU	LATION		<u>, 1 14. 1</u>	i dispre, e e e e
Total Well Depth	to	Water					Casing Volume
Depth (ft) Water (Column (ft)	Casing Dia	meter Multip	lier (SCHD 4	0)	Purge Quantity
			2-inch	4-inch	6-inc		X =
1- 15-6-	[62] =	ļ	0.16	0.64	1.44	3	3X =
7.09	, , , , , , , , , , , , , , , , , , ,						
	Purge	Purge -	Purge	Purge	Purge	Purg	
Parameter	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Samp	le 6 Sample 7
Time of Day							
Volume Purged	<u> </u>	2	3				
Purge Rate (gpm)							
Temperature (°C)	24.75	てイ・ファ	24.75				
ORP	174	165	169 D133				
Dissolved Oxygen	0.35	0.31	0.33				
pH	6,59	(0,101	6,60				
Specific Conductivity	1,97	1 00					
(µmhos)	117	1.89	1.93				
Turbidity/Color	Clar	Clear	Clear				
Odor/Sheen	1						
Depth to Water During							
Purge (ft)					,		
Number of Casing Volumes							
-				ł		1	
Removed							1
Dewatered?							
Removed Dewatered? Comments:							
AMPLE DATA: tatic Water Level: Vater Level Determined By: urge Method: urge Depth: ampling Equipment: ime of Sample Collection:	Percent I	Recovery:	r Level Measu	Depth to Wa	ater During S	ampling:	
Dewatered? Comments: AMPLE DATA: tatic Water Level: Vater Level Determined By: urge Method: urge Depth: ampling Equipment: Time of Sample Collection: Comments:	Percent I	Recovery:		Depth to Wa	ater During S	ampling:	
Dewatered? Comments: AMPLE DATA: Itatic Water Level: Vater Level Determined By: Purge Method: Purge Depth: Itampling Equipment: Comments: No. of	Percent I	Recovery:	Fie	Depth to Wa	ater During S	ampling:	ethod
Dewatered? Comments: AMPLE DATA: tatic Water Level: Vater Level Determined By: urge Method: urge Depth: ampling Equipment: ime of Sample Collection: comments: No. of	Percent I	Recovery:	Fic	Depth to Wa	ater During S	ampling:	ethod
AMPLE DATA: tatic Water Level: Vater Level Determined By: _ urge Method: urge Depth: ampling Equipment: ime of Sample Collection: comments:	Percent I	Recovery:	Fie	Depth to Wa	ater During S	ampling:	ethod
Dewatered? Comments: AMPLE DATA: tatic Water Level: Water Level Determined By: urge Method: urge Depth: ampling Equipment: Comments: No. of	Percent I	Recovery:	Fie	Depth to Wa	ater During S	ampling:	ethod
Dewatered? Comments: CAMPLE DATA: Static Water Level: Vater Level Determined By: Urge Method: Urge Depth: Campling Equipment: Cime of Sample Collection: Comments: No. of	Percent I	Recovery:	Fie	Depth to Wa	ater During S	ampling:	ethod



Field Personnel: Mark Williams Field Personnel: Personnel: Mark Williams Field Personnel: Personnel: Mark Williams Field Personnel: Mark Williams Field Personnel: Personnel: Mark Williams Field Personnel: Per	Project Name: _	Bol	nannon					Ţ	Vell Des	ignatio	n: P	06 5 28	Date:	Augus 35 - 6 2	t 27, 2004 2
Total Well Depth to Depth to Water (ft) = Column (ft) Casing Diameter Multiplier (SCHD 40) Purge Quantity								F	ield Pers	onnel:	Mark	Williams	· · ·		
Total Well Depth to Depth to Depth to Depth to Water (ft) Column (ft) Casing Diameter Multiplier (SCHD 40) Purge Quantity				a	<u> </u>										
Total Well Depth to Depth to Depth to Depth to Water (ft) Column (ft) Casing Diameter Multiplier (SCHD 40) Purge Quantity						WE	III. VOLI	IME	CALCI	I.ATI	ON .	· ·	i janusijai	halka (a	
Depth (f) Water (f) Column (ft) Casing Dismeter Multiplier (SCHD 40) Purge Quantity	Total Well	T	Denth	10				J 17 I L	CALCE	/ 1.72 1.1 1	011			Casu	ng Volume
Purge Purge Purge Sample 1 Sample 2 Sample 3 Sample 4 Sample 5 Sample 6 Sample 7		-			=			C	asine Dia	imeter l	Multip	lier (SCHD 4	.0)	ſ	- 1
Parameter Sample 1 Sample 2 Sample 3 Sample 4 Sample 5 Sample 6 Sample 7 Sample 8 Sample 9 Purge Sample 9 Purge Sample 9	20pm (1)		1	-		5011						100000000000000000000000000000000000000			
No. of Container Sample 1 Sample 2 Sample 3 Sample 4 Sample 5 Sample 6 Sample 7		-	6,9	<u>ا</u> ــــــــــــــــــــــــــــــــــــ	=										
No. of Container Sample 1 Sample 2 Sample 3 Sample 4 Sample 5 Sample 6 Sample 7				1 .	D		n			D		Dunga	D.	I WOO	Durge
Time of Day Volume Purged Volume Purged Volume Purged Volume Purge Rate (gpm) Temperature (°C) CM71 ZM12 ZM12 ZM12 ZM12 ZM12 ZM12 ZM12 ZM1	Пама			1	-			1	_	*	_				
Volume Purged		mei	er	Sa	шрте	1 .	Sample 2	Dil	mpie 5	Sam	pic 4	Sample 3	Jan	ipie o	Sample 7
Purge Rate (gpm) Temperature (°C) ORP 191 Value		اد		1	3		5	1					-		
Temperature (°C)				-			L			-			 		
ORP Dissolved Oxygen 7:32 7:36 7:33 PH 6:20 6:82 6:82 6:83 Depth to Water During Purge (ft) Number of Casing Volumes Removed Dewatered? Comments: SAMPLE DATA: Static Water Level Determined By: Purge Mater Level Determined By: Purge Depth: Purge Purge Preservative Purge Depth: Sampling Equipment: Comments: Sample No. No. of Sample Collection: Comments: Container Type Preservative Field Analytical Method Filtration Comments PURGE WATER DISPOSAL: Total Discharge (gal): Disposal Method: Disposal Method: Disposal Method: Disposal Method: Devented Working as Designed?: VES NO Well Casing Intact?: YES NO				10	1.71	- -	7/5 17	72	F 2∪~	1					
Dissolved Oxygen 7,32 7,36 7,33 PH 6,80 6,80 6,81 Specific Conductivity (Linhos) 1,307 1,343 1,352 Turbidity/Color (Leaf Oder/Sheen Depth to Water During Purge (ft) Number of Casing Volumes Removed Dewatered? Comments: SAMPLE DATA: Static Water Level: Description of Water Level Measurement Point: Water Level Determined By: Purge Method: Purge Depth: Percent Recovery: Depth to Water During Sampling: Sampling Equipment: Time of Sample Collection: Comments: eq.(4)) [The Containers of Sample No. Containers Type Preservative Field Analytical Method Comments		<u>()</u>		! -									1		
pH Specific Conductivity (jumhos) 1/307 1/343 1/33Z Turbidity/Color Odor/Sheen Depth to Water During Purge (ft) Number of Casing Volumes Removed Dewatered? Comments: SAMPLE DATA: Static Water Level:							76								
Specific Conductivity (µmhos)		ygen		_									 	•	
Container Container Container Container Container Comments Containers Comments Co		المحدد	vity			14	2102	6,	01				1		
Turbidity/Color Odor/Sheen Depth to Water During Purge (ft) Number of Casing Volumes Removed Dewatered? Comments: SAMPLE DATA: Static Water Level: Description of Water Level Measurement Point: Water Level Determined By: Purge Method: Purge Depth: Percent Recovery: Depth to Water During Sampling: Sampling Equipment: Time of Sample Collection: Comments: QQD MADE Container Sample No. Containers Type Preservative Filed Analytical Method Comments PURGE WATER DISPOSAL: Total Discharge (gal): Disposal Method: Drum Designation(s)/Volume: Comments: Well Head and Outer Casing Dry?: YES NO Well Casing Intact?: YES NO Inside of Well Head and Outer Casing Dry?: YES NO Inside of Well Head and Outer	-	ucti'	vity	hi	307	1	, 343	1.7	337						
Odor/Sheen Depth to Water During Purge (ft) Number of Casing Volumes Removed Dewatered? Dewatered? Dewatered? Description of Water Level Measurement Point: Water Level Determined By: Purge Method: Purge Depth: Percent Recovery: Depth to Water During Sampling: Sampling Equipment: Time of Sample Collection: Comments: Sample No. No. of Container Type Preservative Field Analytical Method Comments PURGE WATER DISPOSAL: Total Disacharge (gal): Disposal Method: Drum Designation(s)/Volume: Comments: Well Recurity Device Working as Designed?: YES NO Well Casing Intact?: YES NO Inside of Well Head and Outer Casing Dry?: YES NO Inside of Well He		0.1		C3.	الديد ه					<u> </u>					
Depth to Water During Purge (ft) Number of Casing Volumes Removed Dewatered? Comments: SAMPLE DATA: Static Water Level: Description of Water Level Measurement Point: Water Level Determined By: Purge Method: Purge Depth: Percent Recovery: Depth to Water During Sampling: Sampling Equipment: Time of Sample Collection: Comments: Q42)	<u> </u>	UL		UM	<u> </u>	- '	<u> </u>	(M	-3-	ļ					
Purge (ft) Number of Casing Volumes Removed Dewatered? Comments: SAMPLE DATA: Static Water Level: Description of Water Level Measurement Point:			urina					-							
Number of Casing Volumes Removed Dewatered? Comments: SAMPLE DATA: Static Water Level: Description of Water Level Measurement Point: Water Level Determined By: Purge Method: Purge Depth: Percent Recovery: Depth to Water During Sampling: Sampling Equipment: Time of Sample Collection: Comments: eq.5) \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$		1.71	umg							Ì					
Removed Dewatered? Comments: SAMPLE DATA: Static Water Level: Description of Water Level Measurement Point: Water Level Determined By: Purge Method: Purge Depth: Percent Recovery: Depth to Water During Sampling: Sampling Equipment: Time of Sample Collection: Comments: Q43 }		isino	Volumes	-											
Dewatered? Comments: SAMPLE DATA: Static Water Level: Description of Water Level Measurement Point:		i3111E	, voidines												
SAMPLE DATA: Static Water Level: Description of Water Level Measurement Point: Water Level Determined By: Purge Method: Purge Depth: Percent Recovery: Depth to Water During Sampling: Sampling Equipment: Time of Sample Collection: Comments: Q(4)) To Container Sample No. Containers Type Preservative Filed Analytical Method Comments PURGE WATER DISPOSAL: Total Discharge (gal): Disposal Method: Drum Designation(s)/Volume: Comments: WELL HEAD CONDITIONS: Well Security Device Working as Designed?: YES NO Well Casing Intact?: YES NO Inside of Well Head and Outer Casing Dry?: YES NO Inside of Well Head and Outer Casing Dry?: YES NO													†		
SAMPLE DATA: Static Water Level: Description of Water Level Measurement Point: Water Level Determined By: Purge Method: Purge Depth: Percent Recovery: Depth to Water During Sampling: Sampling Equipment: Time of Sample Collection: Comments: e49) \$100 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$				1.		k		1				I <u>.</u>			
Static Water Level: Description of Water Level Measurement Point:							,								
Water Level Determined By: Purge Method: Purge Depth: Purge Depth: Percent Recovery: Depth to Water During Sampling: Sampling Equipment: Time of Sample Collection: Comments: Comments: Containers Type Preservative Filtration PURGE WATER DISPOSAL: Total Discharge (gal): Drum Designation(s)/Volume: Comments: WELL HEAD CONDITIONS: Well Security Device Working as Designed?: Well Security Device Working as Designed?: YES NO Unside of Well Head and Outer Casing Dry?: YES NO Unside of Well Head and Outer Casing Dry?: YES NO Unside of Well Head and Outer Casing Dry?: YES NO Unside of Well Head and Outer Casing Dry?: YES NO Verification Value								_							
Purge Method: Purge Depth: Purge Depth: Percent Recovery: Depth to Water During Sampling: Sampling Equipment: Time of Sample Collection: Comments: GAS SAMPLE No. of Container Type Preservative Filed Analytical Method Comments Field Filtration Comments Purge Water Disposal Method: Drum Designation(s)/Volume: Comments: WELL HEAD CONDITIONS: Well Security Device Working as Designed?: YES NO Well Casing Intact?: YES NO Inside of Well Head and Outer Casing Dry?: YES NO Inside of Well Head and Outer Casing Dry?: YES NO													·		
Purge Depth: Percent Recovery: Depth to Water During Sampling: Sampling Equipment: Time of Sample Collection: Comments: Q4> 1 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5															
Sampling Equipment: Time of Sample Collection: Comments: O(5) VICON Sample No. No. of Container Field Analytical Method Containers Type Preservative Filtration Comments PURGE WATER DISPOSAL: Total Discharge (gal): Disposal Method: Drum Designation(s)/Volume: Comments WELL HEAD CONDITIONS: Well Security Device Working as Designed?: YES NO Well Casing Intact?: YES NO Inside of Well Head and Outer Casing Dry?: YES NO No Verification Veri				1	n	. Das				Danth	10 W/s	otor During S	amplir	var.	
Time of Sample Collection: Comments: O(4) VIVIDA Sample No. No. of Container Preservative Field Analytical Method Comments PURGE WATER DISPOSAL: Total Discharge (gal): Disposal Method: Drum Designation(s)/Volume: Comments WELL HEAD CONDITIONS: Well Security Device Working as Designed?: YES NO Well Casing Intact?: YES NO Inside of Well Head and Outer Casing Dry?: YES NO Well Casing Intact?: YES NO Well Casing Intact? Well Casing Intact? Well Casing Intact? Well Casing I	–			[]]	Percen	it Kec	overy:			Deptr	I to wa	ater During 5	апри	ığ	
Comments: OGD No. of Container Preservative Field Analytical Method Comments				-											
Sample No. Of Container Type Preservative Field Analytical Method Filtration Comments PURGE WATER DISPOSAL: Total Discharge (gal): Disposal Method: Drum Designation(s)/Volume:	Time of Sample Commenter	e co	116011011.	π. /X	<u> </u>										
Sample No. Containers Type Preservative Filtration Comments PURGE WATER DISPOSAL: Total Discharge (gal): Disposal Method: Drum Designation(s)/Volume: Comments: WELL HEAD CONDITIONS: Well Security Device Working as Designed?: YES NO Well Casing Intact?: YES NO Inside of Well Head and Outer Casing Dry?: YES NO	Comments.		942 10	· · ·											
Sample No. Containers Type Preservative Filtration Comments PURGE WATER DISPOSAL: Total Discharge (gal): Disposal Method: Drum Designation(s)/Volume: Comments: WELL HEAD CONDITIONS: Well Security Device Working as Designed?: YES NO Well Casing Intact?: YES NO Inside of Well Head and Outer Casing Dry?: YES NO		I	N1 £'						Fia	1.1		Analy	rticol T	Mathad	
PURGE WATER DISPOSAL: Total Discharge (gal): Disposal Method: Drum Designation(s)/Volume: Comments: WELL HEAD CONDITIONS: Well Security Device Working as Designed?: YES NO Well Casing Intact?: YES NO Inside of Well Head and Outer Casing Dry?: YES NO	Samula Na	C		C			Procorva	tive							
Total Discharge (gal): Disposal Method:	Sample No.		ontaine 18	-	Type		1 (CSCI Ya	HYC	3. HE G	11011	<u> </u>		· · · · · · · · · · · · · · · · · · ·		
Total Discharge (gal): Disposal Method:		ļ													
Total Discharge (gal): Disposal Method:					<u>-</u>			-							
Total Discharge (gal): Disposal Method:		+													
Total Discharge (gal): Disposal Method:		1		!							·		· · · · · · · · · · · · · · · · · · ·		
Total Discharge (gal): Disposal Method:	PHRGE WAT	ER	DISPOSAT	, .											
Drum Designation(s)/Volume: Comments: WELL HEAD CONDITIONS: Well Security Device Working as Designed?: YES NO Well Casing Intact?: YES NO Inside of Well Head and Outer Casing Dry?: YES NO						Dispo	osal Metho	d:							
WELL HEAD CONDITIONS: Well Security Device Working as Designed?: YES NO Well Casing Intact?: YES NO Inside of Well Head and Outer Casing Dry?: YES NO															
WELL HEAD CONDITIONS: Well Security Device Working as Designed?: YES NO Well Casing Intact?: YES NO Inside of Well Head and Outer Casing Dry?: YES NO															
Well Security Device Working as Designed?: YES NO Well Casing Intact?: YES NO Inside of Well Head and Outer Casing Dry?: YES NO												_			
Well Security Device Working as Designed?: YES NO Well Casing Intact?: YES NO Inside of Well Head and Outer Casing Dry?: YES NO	33/17:1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		NINITE OAT	2.											
Inside of Well Head and Outer Casing Dry?: YES NO					eciona.	d9.	AEC	N	io v	Vell Ca	ssino Ir	ntact?· VI	25	NO	
										on Ca	லாபத் 11			110	
Comments:					_			`							

avestigations	GROUNDWATER WELL - I	PURGE AND SAMPLE RECORD	Date: 12/2/04
D 1 4 NT .	Bohannon Groundweth December	W-II Davis-ation MW-7	Date: • 2 / 2 / 0 1
Project Name: ₋ Project Number	98560-502-515	Field Personnel: Mark William	s / Chris, Marchall
Site Location: _	San Lorenzo, CA		
	•		

WELL-VOLUME CALCULATION									
Total Well		Depth to		Water		<u>.</u>		Casing Volume	
Depth (ft)	_	Water (ft)		Column (ft)	Casing Diam	neter Multiplier	(SCHD 40)	Purge Quantity	
		س. ا			2-inch	4-inch	6-inch	1X =	
	_	5	_	Ì	0.16	0.64	1.44	3X =	

Parameter	Purge Sample 1	Purge Sample 2	Purge Sample 3	Purge Sample 4	Purge Sample 5	Purge Sample 6	Purge Sample 7
Time of Day	11:40	11:43	11145	11:47			
Volume Purged							
Purge Rate (gpm)							
Temperature (°C)	18,47	18,47	1899	14.02			
ORP	272.5	268	263.4	2556			
Dissolved Oxygen Mult	0,5%	952	0.45	6.52			
pН	(6,84	(4,85	હ, છ<	6.65			
Specific Conductivity	, -			0.2%			
(µmhos) いち/しへ	629	820	320	950			
Turbidity/Color	Clear	Clace	Clear	(15e/			
Odor/Sheen	hul	Nun	nan-	now			
Depth to Water During							
Purge (ft)							
Number of Casing Volumes						}	
Removed						<u>.</u>	
Dewatered?				<u> </u>			
Comments:							

SAMPLE DATA: Static Water Level:	Description of Water Leve	el Measurement Point:	
Water Level Determined By:			
Purge Method:			
Purge Depth:	Percent Recovery:	Depth to Water During Sampling:	
Sampling Equipment:			
Time of Sample Collection:			
Comments:			

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analytical Method Comments

2 10 1 11 11 11	Disposal Method:									
Drum Designation(s)/Volume: Comments:										
WELL HEAD CONDITIONS:										
Well Security Device Working as Designed?: Inside of Well Head and Outer Casing Dry?:	YES YES	NO NO	Well Casing Intact?:	YES	NO					

Well Sampling Log. doc

Comments: _



Project Name: Project Numbe	Bohanna 1: 98360-00	2-615	170000	Field Per	signation: Mark	k WILLIAMS	/ Chris, Ma	enell	
lite Location:	San Loqu	120; CA							
			WELL VOL	UME CALC	ULATION	· '			
Total Well Depth (ft)	- Depth Water (I — I	Water Column (ft)	· Casina D	Casing V Casing Diameter Multiplier (SCHD 40) Purge Q				
Depto (10)			Committee (11)	2-inch	4-inch	6-inc		c Quality	
	- 5.42	=		0.16	0.64	1.44			
		Purge	Purge	Purge	Purge	Purge	Purge	Purge	
Para	ameter	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Sample 7	
Cime of Day		12:00	12.73	12:10	12:12				
/olume Purg	ed								
urge Rate (g		<u> </u>							
'emperature	(°C)	20.74	70.77	20.76	20.74				
ORP		249.7	2485	245.4	240				
Dissolved Ox	ygen	523 0.59		0.45	2,42				
H		6.79	676	6,74	6,79				
pecific Cond	luctivity	702	-7-A	1,07	696				
μmhos)		+	701	697					
urbidity/Col	or	Clo-Ly	Cleim	Cleu	clear				
dor/Sheen		novel	17020	rone	No-	-			
Depth to Wate	er During			•					
urge (ft)	ising Volumes			 	- 				
rumber of Ca Removed	ising volumes								
Dewatered?				+	ļ				
comments:					<u> </u>			·	
ater Level De rge Method: rge Depth: _	evel: etermined By:	Percent F	Recovery:				mpling:		
me of Sample	e Collection:								
mments:			·						
					· ·				
· · · · · · · · · · · · · · · · · · ·	No. of	Container	. (Fie	ld 1	Analyt	ical Method		
Sample No.	Containers	Туре	Preserva			Co	mments		
				İ		* * *			
			 						
፲ <u></u>	ER DISPOSAL								
otal Discharge rum Designat	e (gal): ion(s)/Volume: _	Di						<u> </u>	
minelits									
						•			
							•		
	CONDITIONS						•		
ell Security I	Device Working	as Designed?:	: YES		Well Casing In	tact?: YES	s NO		
ell Security I	Device Working : Head and Outer (as Designed?:	YES	NO NO	Well Casing In	tact?: YES	S NO		

Well Sampling Log. doc



-	3210 2114 1114	.,		Date: 12/2/04
Project Name:	Bohannon Groundweter	December	Well Designation: MW-5	Date, 121, 27, 5
Project Number	r: 98560 00-55		Field Personnel: Mark WILLIAM	is / Chris, Maxwell
Site Location:	San Loanzo, CA		-	
	-			

office and the second	Maria.			WELL VOL	UME CALCUI	LATION		
Total Well Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	Casing Dian	neter Multiplier	(SCHD 40)	Casing Volume Purge Quantity
		· ^			2-inch	4-inch	6-inch	1X =
	-	60.0	=		0.16	0.64	1.44	3X =

Parameter	Purge Sample 1	Purge Sample 2	Purge Sample 3	Purge Sample 4	Purge Sample 5	Purge Sample 6	Purge Sample 7
Time of Day	12-23	1225	1227	1229	1231		
Volume Purged							
Purge Rate (gpm)							
Temperature (°C)	21.64	21,90	21.98	22.0	31.44		
ORP	261.4	250.2	246.8	241.6	235 c		
Dissolved Oxygen	2.17	しょちも	1,12	0.33	0.74		
pH	4.58	L: 18	4,30	6.83	4.37		
Specific Conductivity						İ	
(µmhos)	850	359	873	852	836c_		
Turbidity/Color							
Odor/Sheen							
Depth to Water During							
Purge (ft)							
Number of Casing Volumes							
Removed							
Dewatered?							
Comments:							

SAMPLE DATA: Static Water Level:	Description of Water Leve	el Measurement Point:	
Water Level Determined By:			
Purge Method:			
Purge Depth:	Percent Recovery:	Depth to Water During Sampling:	
Sampling Equipment:			
Time of Sample Collection:			
Comments:			

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analytical Method Comments

PURGE WATER DISPOSAL: Total Discharge (gal):	Disposal Method:		
Drum Designation(s)/Volume:			
Comments:		 	
WELL HEAD CONDITIONS:			

Well Security Device Working as Designed?: Inside of Well Head and Outer Casing Dry?: YES NO Well Casing Intact?: YES NO YES NO

Comments:



PURGE WATER DISPOSAL:

WELL HEAD CONDITIONS:

Well Security Device Working as Designed?:

Inside of Well Head and Outer Casing Dry?:

Comments: _____

Drum Designation(s)/Volume: ____

GROUNDWATER WELL - PURGE AND SAMPLE RECORD

Investigations GROUNDWAILR WELL - 1	Date: 12/2/04
Project Name: Bohanner Groundwith December	Well Designation: Myd
Project Number: 98360 502-515	Field Personnel: Mark Williams / Chas, Marchet
Site Location: San Loanzo, CA	

				WELL VOL	UME CALCUI	LATION		
Total Well Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	Casing Diar	neter Multiplier	· (SCHD 40)	Casing Volume Purge Quantity
<u> </u>		<u> </u>			2-inch	4-inch	6-inch	IX=
	-	(0,05	=		0.16	0.64	1.44	3X =

Parameter	Purge Sample 1	Purge Sample 2	Purge Sample 3	Purge Sample 4	Purge Sample 5	Purge Sample 6	Purge Sample 7
Time of Day	10:52	10:54	11:01	11:63	11:05	H:0g	
Volume Purged							
Purge Rate (gpm)							
Temperature (°C)	20,89	2092	20.96	20,97	20,59	26,99	
ORP	3,9	+0.9	-6,4	_ { } }	_9.1	-122	
Dissolved Oxygen	0.55	0.39	0.29	0.27	0.25	0,25	
рН	6,44	6.46	(4)	6.39	(-139	6.31	
Specific Conductivity	6	_			*		
(µmhos)	940	990	994	995	946	999	
Turbidity/Color	Clear	Clear	Clear	Clear	Cle-	Creer	
Odor/Sheen	Shight	Stight	51,463	Shart	Slove	Slight	
Depth to Water During							
Purge (ft)							
Number of Casing Volumes							•
Removed							
Dewatered?							· · · · · · · · · · · · · · · · · · ·
Comments:							

SAMPLE DAT					
				el Measurement Poi:	nt:
Water Level De	termined By:				
Purge Method:					
Purge Depth: _		Percent Re	соvету:	Depth to V	Water During Sampling:
Sampling Equip	ment:				
Time of Sample	Collection:				
				· ·	
	No. of	Container		Field	Analytical Method
Sample No.	Containers	Type	Preservative	Filtration	Comments
				,	
	1		1	l l	

Comments:

YES

YES

Total Discharge (gal): _____ Disposal Method: _____

NO

NO

YES

NO

Well Casing Intact?:



Engineering and Fire Investigations	G	ROUNDWAT	TER WELL	– PURGE AN	ND SAMPLE	E RECORD	n 17 /2	104
Project Name:	Bohannan er: 98340-00	6 Roundwell	to Deceat	Well Desi	gnation: V	11W-\$3	Date:	-/ 0 1
roject Numbe	r: 98360 60	7-8-5		Field Pers	sonnel: Marl	k WILLIAMS	/ Lhois, Mi	cuell
ite Location:	San Loan	20,00						
		-		DATE OF A CALL	T APPLONI			
T. 4. MT11	Parata			UME CALCU	LATION			
Total Well Depth (ft)	- Depth water (·	Water olumn (ft)	Cacino Dia	meter Multin	lier (SCHD 4		ng Volume e Quantity
Depth (1t)	Water	11)	oranni (tt)	2-inch	4-inch	6-inc		,o Quantity
	- Wiley	=	ľ	0.16	0.64	1.44		
		Purge	Purge	Purge	Purge	Purge	Purge	Purge
	ameter	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Sample 7
Time of Day		1538	1542	1575			<u> </u>	
Volume Purg		ļ <u>-</u>		<u> </u>				
Purge Rate (g Femperature		22.88	2.3.10	23.04				
ORP	()	160.0	34.7	17.5				
Dissolved Ox	ygen	1.67	C. 7-1	©H3				
oH		4.25	6.30	4-28				
Specific Cond	ductivity							
μmhos)		23H	2419	2403		·		
Furbidity/Col	lor							
Odor/Sheen	- To .	oder	odo-	ZINA OGO.				
Depth to Wate Purge (ft)	er During	1						
	asing Volumes						· · · · · · · · · · · · · · · · · · ·	
Removed	-sing verames							
Dewatered?								
Comments:								
arge Method: arge Depth: _ ampling Equi ame of Sampl		Percent Re	ecovery:		Depth to Wa	iter During Sa		
Sample No.	No. of Containers	Container Type	Preservat	Field tive Filtrat		· ·	ical Method mments	
otal Discharge rum Designat	ER DISPOSAL e (gal): ion(s)/Volume: _	Dis						
Total Discharge Drum Designat Comments: WELL HEAD	e (gal):	Dis						
nside of Well I	Head and Outer (Casing Dry?:	YES	NO	Onothing III			

WellSamplingLog.doc



Comments: _

stigations	.	.	w.		DIC WEEL		0.2.111		E RECORD	Date: 1	2/2	/0H
oject Name: _ oject Number	100	nan non	<u>(612044)</u>	the F	- Decemb	We We	ell Desig	mation: <u>'</u>	11/1-9			
ject Number	r: <u> </u>	<u> </u>	ر - 5 کاری 			Fie	ld Perso	onnel: Mad	k WILLIAMS	/ L-h	15, Mai	الارزيان
Location:)(:	· HOWEN	2010									
				W	ELL VOLU	IME C	AT CITI	ATION				
Total Well		Depth t	10	, , , , , , , , , , , , , , , , , , , ,	Water	ONYLES C.	ALCUI	MIION	-		Casir	ıg Volume
Depth (ft)	-	Water (t		!	lumn (ft)	Casi	ing Diar	neter Multin	lier (SCHD 4	.0)		2 Quantity
Dopai (xo)	1					2-ir		4-inch	6-inc	i	1X =	
	-	ં (હ, ફેટ) =		-	0.2		0.64	1.44		3X =	
,		<u> </u>		L	_,_,,_,_,,_,							
			Purg	e	Purge	Pu	rge	Purge	Purge	Pu	rge	Purge
	mete	r	Sample	e 1	Sample 2	Sam	ple 3	Sample 4	Sample 5	Sam	ple 6	Sample
me of Day												
olume Purge						ļ				ļ <u> </u>		
rge Rate (g					· · · · · ·	ļ	-			ļ <u> </u>		
emperature (°C)		ļ							<u> </u>		
RP			ļ			-		······································				
ssolved Oxy	ygen											
I Cond		***				-						
ecific Cond	LICTIVI	ιy										
mhos)			-	-						-		
irbidity/Colo Ior/Sheen)I			-+		 				 		
or/sneen	r Dur	ino	<u> </u>							 		
rge (ft)	נוו עו	1116										
umber of Ca	sing V	Volumes										
emoved			ļ	-			1					
ewatered?					•			1				
omments:			1			•						
npling Equip	etermi	ned By:	Perce	nt Re	covery:			Depth to Wa	nter During Sa	ımpling	;	
ne of Sample												
		No. of	Contai		n	4:	Field		Analy			
ample No.	U01	ntainers	Тур	e	Preservat	uve	Filtrati	on	<u> </u>	ommen	LS	
					-							
	 				1		· ·····		· · · · · · · · · · · · · · · · · ·			
	e (gal)	;										

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EFI° Engineering and Fire Investigations GROUNDWATER WELL - PURGE AND SAMPLE RECORD Date: 12/2/04 12/3/07 Project Name: Bohannon Grandwater December Well Designation: NOBS-B1 Project Number: 98360 50 - 515 Field Personnel: Mark WILLIAMS / Chars, Marwell Site Location: Sen Locuzo, CA WELL VOLUME CALCULATION Casing Volume Water Total Well Depth to Casing Diameter Multiplier (SCHD 40) Purge Quantity Water (ft) Column (ft) Depth (ft) 4-inch 6-inch 1X =2-inch 5,94 1.44 3X =0.64 0.16 Purge Purge Purge Purge Purge Purge Purge Sample 7 Sample 4 Sample 5 Sample 6 Sample 1 Sample 2 Sample 3 Parameter 10143 10:37 10139 10:41 Time of Day 16133 Volume Purged Purge Rate (gpm) 20.75 Temperature (°C) 26,29 20,60 20,74 20.74 14.9 12.3 13.4 12.0 ORP 20.1 027 Own 0.30 Dissolved Oxygen 0.32 0.96 6.73 672 661 60,71 6,72 pΗ Specific Conductivity 1054 to 53 1043 Lo su 1654 (µmhos) Cleur سمعان check dea Turbidity/Color Clean سحيلين ١١٧ Odor/Sheen no Obov متعلف المعالم مستنتض متام No ober

SAMPLE DATA: Static Water Level: Water Level Determined By:									
Purge Method: Purge Depth: Sampling Equipment:	Percent Recovery:								
Time of Sample Collection: Comments:									

Depth to Water During

Number of Casing Volumes

Purge (ft)

Removed Dewatered? Comments:

Comments:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analytical Method Comments

PURGE WATER DISPOSAL: Total Discharge (gal): Disp Drum Designation(s)/Volume:	Disposal Method:									
Comments:										
WELL HEAD CONDITIONS:										
Well Security Device Working as Designed?:	YES	NO	Well Casing Intact?:	YES	NO					
Inside of Well Head and Outer Casing Dry?:	YES	NO	•							

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WELL HEAD CONDITIONS:

Comments: _

Well Security Device Working as Designed?:

Inside of Well Head and Outer Casing Dry?:

PURGE AND SAMPLE RECORD

Investigations	GROUNDWATER WELL - I	URGE AND SAMILES RECORD	Date: 12/2/04
Project Numbe	Bohannon Gronductor December 198560-502-615	Well Designation: Now-B2 Field Personnel: Mark WILLIAM	
Site Location:	San LORUZO, CA	OF CALCULATION	

WELL VOLUME CALCULATION											
Total Well Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	Casing Diar	neter Multiplier	(SCHD 40)	Casing Volume Purge Quantity			
1			1		2-inch	4-inch	6-inch	1X =			
	-		=		0.16	0.64	1.44	3X =			

Parameter	Purge Sample 1	Purge Sample 2	Purge Sample 3	Purge Sample 4	Purge Sample 5	Purge Sample 6	Purge Sample 7
Time of Day	1257	1244	1256	เวรร			
Volume Purged							
Purge Rate (gpm)							
Temperature (°C)	31,95	22.10	22.11	22.12			
ORP	264.6	293.6	250.0	24E.7			
Dissolved Oxygen	6,87	0.37	0.31	0.2h			
pH	6.95	6.59	(2.38	@.5 7			
Specific Conductivity		_					
(µmhos)	1138	1135	1135	1136			
Turbidity/Color							
Odor/Sheen							
Depth to Water During							
Purge (ft)							
Number of Casing Volumes							
Removed							
Dewatered?				<u></u>			<u></u>
Comments:			<u> </u>				

Water Level De	evel: etermined By:	Description of Water Level Measurement Point:								
Purge Method:		D Do		Depth to Water During Sampling:						
					vater During Sampring,					
Time of Sample	e Collection:									
Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analytical Method Comments					
	<u> </u>									
PURCE WAT	ER DISPOSAL	•								
			oosal Method:							
Comments:	•									

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NO

NO

Well Casing Intact?:

YES

NO

YES

YES



gineering and Fire vestigations		G	ROU	NDWA'	TER WELL	– PU	RGE AN	D SA	MPLE	RECORD	ъ.	12/2	104
roject Name: _ roject Number	201	าก ค.ศ.	60.	سنم کمل او	to Decemb	le v	Wall Daci	anatio:	. N	,W-B1			
oject Name: _	400	560 ba	- 5/	3	<i>D</i> 00-1-	<u> </u>	Geld Pers	onnel:	Made	WILLIAMS	101	105, Ma	ewill
oject Number te Location: _	500	h0:200	<u>. دد ۲</u>	\overline{c}		1	1010 1 015	Olimot.					
.e Location: _	Jerr		<i>u</i>						****				
11 (14.1)		u togili ti	13.7	. Parana V	VELL VOLU	ME	CALCU	LATI	ON 🕟		an ge		
Total Well		Depth t			Water							Casii	ng Volume
Depth (ft)	-	Water (f		= C	olumn (ft)	C	asing Dia	meter	Multipl	lier (SCHD 4	0)	Purg	e Quantity
25) 111 (10)							-inch		1-inch	6-inc		1X =	
	**			=	Ī		0.16	ļ	0.64	1.44	4	3X =	
		····				-	<u></u>						
	:		P	urge	Purge	I	urge		rge	Purge		urge	Purge
Para	meter			mple 1	Sample 2	Sa	mple 3	Sam	ple 4	Sample 5	San	nple 6	Sample 7
ime of Day			1:2	7	1:29	157	31						
olume Purge	:d												
urge Rate (gr	om)	•••											
'emperature (°C)		21	.હડ	41,93	21	90						
)RP			35	2,9	40	43	3.0						
Dissolved Oxy	/gen		C	142	90	0	.18						
Н			(ડેવ 13ું ખ	6.36	(<u>35, </u>				1		
Specific Cond	uctivi	ty	11	134	71281	7	67						
µmhos)				13 41		ļ		<u> </u>	_				
Turbidity/Cole	or		3.5	hty clock	/ Shight ! a	at,	9.54 JUL	٠٤,					
dor/Sheen		* * * * * * * * * * * * * * * * * * * *	,	7	,	*	,						
Depth to Wate	r Dur	ing											
urge (ft)													
Number of Ca	sing \	/olumes							-				
Removed						<u> </u>							
Dewatered?										- m-	<u> </u>		
omments:													
atic Water Le atic Water Le fater Level De irge Method: arge Depth: ampling Equip me of Sample comments:	vel: _ etermi	ned By:	F	Percent R				Depth	h to Wa	iter During S			
Sample No.		No. of ntainers		ontainer Type	Preserva	tive	Fiel Filtra				tical l	Method ents	
LID CIE WAM	ED IV	ISBUCYI											
URGE WAT otal Discharge rum Designat omments:	e (gal) ion(s).	: /Volume: _											
VELL HEAD Vell Security I nside of Well I)evice	Working	as De		YES YES		10 10 <i>1</i>	Vell Ca	asing Ir	ntact?: . YI	ES	NO	

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incering and Fire estigations		ROUNDWAT					Date: 172/1	2/04		
roject Number	Bohanner 98560 50	」~から	sa Decemb	Well Desi	ignation: Nad	W-AD K WICLIAMS				
oject Number: te Location: _	San Loau	120,00								
				JME CALCU	LATION		Con	ng Volume		
Total Well	Depth		Water	Ossissa Die	amatan Multir	olier (SCHD 4		ng volume ge Quantity		
Depth (ft)	Water ($\frac{(it)}{}$	olumn (ft)		4-inch	6-inc		30 Quantity		
	-			2-inch 0.16	0.64	1.44		, 		
	<u> </u>			0.10	0.04					
Parai	meter	Purge Sample 1	Purge Sample 2	Purge Sample 3	Purge Sample 4	Purge Sample 5	Purge Sample 6	Purge Sample 7		
Time of Day		1310	1512	1314	1314					
Jolume Purge	d									
urge Rate (gp		7304								
emperature (°		22.49	23.20	₹3.27	23.28			ļ		
ORP		210.0	49.1	35.9	29.2			ļ		
Dissolved Oxy	gen	0.45	0.27	0.20	6.21					
Н		う.にも	5.74	5.90	15.44			<u> </u>		
Specific Condu µmhos)		2300	3150	PFP1	1441					
Turbidity/Cole	or	14. blive	14. Vd 12_	H. W. M	17 MM	 	ļ	 		
Odor/Sheen	T .			· · · · · · · · · · · · · · · · · · ·	 		 	1		
Depth to Wate Purge (ft)							!			
Number of Cas	sing Volumes									
Removed							-	-		
Dewatered? Comments:					l	<u> </u>				
urge Depth:	vel:	Percent R	ecovery:	r Level Measi			ampling:			
	Collection:									
-										
Sample No.	No. of Containers		Preserva	Fie tive Filtra		Analytical Method Comments				
·										
otal Discharge rum Designat	ER DISPOSA e (gal): ion(s)/Volume:	Di								
Vell Security I nside of Well I	CONDITION Device Working Head and Outer	g as Designed?: r Casing Dry?:	YES YES	NO NO	Well Casing I	intact?: YF	ES NO			

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Engineering ond Fire Investigations		PURGE AND SAMPLE RECORD Date: 12/2/04
Project Number: 1	policina Grondwith December 18360-001-013 Jen Lorenzo, CA	Well Designation: NIW-A Field Personnel: Mark WILLIAMS / L-hois, Markett

Yan in the grant of the grant o	1.5	Diametric en	1.4.4	WELL VOL	UME CALCUI	ATION		
Total Well Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)		meter Multiplier	(SCHD 40)	Casing Volume Purge Quantity
	-		=		2-inch 0.16	4-inch 0.64	6-inch 1.44	$\frac{1X =}{3X =}$

Parameter	Purge Sample 1	Purge Sample 2	Purge Sample 3	Purge Sample 4	Purge Sample 5	Purge Sample 6	Purge Sample 7
Time of Day	1343	1347	1350	1352			
Volume Purged							
Purge Rate (gpm)							
Temperature (°C)	22.7/4_	73.02	22,48	22.49			
ORP	54.0	20.6	10.1	8101			
Dissolved Oxygen	0.25	0.16	0.14	0.13			-
pH	6.74	7.45	7.40	7.32		 	
Specific Conductivity (µmhos)	5300	3025	2979	2947			
Turbidity/Color	H. Wir	(+. b) st	H. blue	11.6100			
Odor/Sheen				<u> </u>			
Depth to Water During							
Purge (ft)						 	
Number of Casing Volumes							
Removed				 	<u> </u>	 	
Dewatered?					<u> </u>	L	<u> </u>
Comments:							

SAMPLE DATA: Static Water Level:	Description of Water Leve	el Measurement Point:
Water Level Determined By:		
Purge Method:		
Purge Depth:	Percent Recovery:	Depth to Water During Sampling:
Sampling Equipment:		
Time of Sample Collection:		
Comments:		

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analytical Method Comments

PURGE WATER DISPOSAL: Total Discharge (gal): Dispose Drum Designation(s)/Volume:	•	:				
Comments:	<u></u>					
WELL HEAD CONDITIONS: Well Security Device Working as Designed?:	YES	NO	Well Casing Intact?:	YES	NO	

YES

Inside of Well Head and Outer Casing Dry?:

Comments: _

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NO



	Date: 12/2/0'4
Project Name: Bohannen Groundweten Dewelle Project Number: 98360-301-515 Site Location: 5an Locales (CA	Well Designation: PCGS - BJ Date. Field Personnel: Mark WILLIAMS / Chas, Markett

			4.	WELL VOL	UME CALCUI	ATION		
Total Well Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	Casing Diar	neter Multiplier	(SCHD 40)	Casing Volume Purge Quantity
					2-inch	4-inch	6-inch	1X =
	-		=		0.16	0.64	1.44	3X =

Parameter	Purge Sample 1	Purge Sample 2	Purge Sample 3	Purge Sample 4	Purge Sample 5	Purge Sample 6	Purge Sample 7
Time of Day	3123	3175	3 2 3				
Volume Purged							
Purge Rate (gpm)						ļ	
Temperature (°C)	23,55	2243	22.61				
ORP	2-5-	279.3	2.50.C				
Dissolved Oxygen	7.02	7.95	10.80	***************************************			
pH	6.52	(2.57	(,55				
Specific Conductivity		1177	wwz				
(µmhos)	1142	1101					
Turbidity/Color	6/22-	con	, lear				
Odor/Sheen							
Depth to Water During							
Purge (ft)							
Number of Casing Volumes				1			
Removed						<u> </u>	
Dewatered?					<u> </u>		<u> </u>
Comments:							
				· · · · · · · · · · · · · · · · · · ·			

	vel:								
Sampling Equip Time of Sample	pment: e Collection:	Percent Recovery: Depth to Water During Sampling:							
Sample No.	No. of Containers	Container Type	Preservative	Field Filtration			nents		
Total Discharge Drum Designat	tion(s)/Volume: .	Disp							
Well Security I	CONDITIONS Device Working Head and Outer	as Designed?:		10 Well (Casing Intact?:	YES	NO		

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Comments:



· · · -	98360 00 500 LORN	20,00	- Lucium	·			7 Chois, Ma	
		_			- 1			es, see a magnine
		·	WELL VOLU)ME CALCU	LATION		Caci	ng Volume
Total Well	Depth t		Water	Casina Dis	meter Multip	lier (SCHD 4		ge Quantity
Depth (ft)	Water (1	(t)	Column (ft)		4-inch	6-inc		ge Quantity
	_	=	ŀ	2-inch	0.64	1.44		
				0.16	0.04	1.44	JA =	
		Purge	Purge	Purge	Purge	Purge	Purge	Purge
Para	meter	Sample 1		Sample 3	Sample 4	Sample 5	Sample 6	Sample 7
ime of Day		11:30	11:57	11734	<u>.</u>	<u> </u>		
olume Purge	d							
urge Rate (gr								
emperature (°C)	22.36	22.46	27,15				
)RP		- 22,3	-22	-21,1				<u> </u>
issolved Oxy	/gen	0,24	0,22	0.22				ļ
H	,	6,85	6,50	6,62				
pecific Cond	uctivity						•	
μmhos)	•	1179	1181	1150			<u> </u>	
urbidity/Cole	OT	Clev	Clar	Clean				
dor/Sheen								
epth to Wate	r During							
urge (ft)								}
	sing Volumes	7-7-		"				
							1	
	5						1	
Removed								
Removed Dewatered?								
AMPLE DAT atic Water Leater Level De arge Method:	FA: vel: etermined By:	Percent	ription of Wate		Depth to W	ater During S	ampling:	
AMPLE DAT atic Water Leater Level Dearge Method: umpling Equip	rA: vel: etermined By: oment:	Percent	Recovery:		Depth to W	ater During S.		
AMPLE DAT atic Water Leater Level Dearge Method: mpling Equipme of Sample	rA: evel: etermined By: ement: e Collection:	Percent	Recovery:		Depth to W	ater During S.		
AMPLE DAT atic Water Le ater Level De arge Method: arge Depth: _ ampling Equipme of Sample	rA: vel: etermined By: oment:	Percent	Recovery:		Depth to W	ater During S.		
AMPLE DAT atic Water Le ater Level De arge Method: arge Depth: _ ampling Equipme of Sample	rA: evel: etermined By: ement: e Collection:	Percent	Recovery:		Depth to W	ater During S.	V-78	
Removed Dewatered? Comments: AMPLE DAT atic Water Le ater Level De arge Method: arge Depth: ampling Equip me of Sample	rA: evel: etermined By: ement: e Collection:	Percent	Recovery:	Fie	Depth to W	ater During S. Analy	tical Method	
AMPLE DAT atic Water Leater Level Dearge Method: ampling Equipme of Sample comments:	oment:	Percent	Recovery:	Fie	Depth to W	ater During S. Analy	V-78	
AMPLE DAT atic Water Leater Level Dearge Method: mpling Equipme of Sample comments:	rA: vel: etermined By: coment: e Collection:	Percent	Recovery:	Fie	Depth to W	ater During S. Analy	tical Method	
AMPLE DAT atic Water Leater Level Dearge Method: mpling Equipme of Sample comments:	rA: vel: etermined By: coment: e Collection:	Percent	Recovery:	Fie	Depth to W	ater During S. Analy	tical Method	
AMPLE DAT atic Water Leater Level Dearge Method: ampling Equipme of Sample comments:	rA: vel: etermined By: coment: e Collection:	Percent	Recovery:	Fie	Depth to W	ater During S. Analy	tical Method	
Removed Dewatered? Comments: AMPLE DAT atic Water Le ater Level De arge Method: arge Depth: ampling Equipme of Sample comments:	rA: vel: etermined By: coment: e Collection:	Percent	Recovery:	Fie	Depth to W	ater During S. Analy	tical Method	
Removed Dewatered? Comments: AMPLE DAT atic Water Level De arge Method: arge Depth: ampling Equip ime of Sample omments: Sample No. URGE WAT otal Discharge rum Designat	No. of Containers ER DISPOSAL (gal): ion(s)/Volume:	Containe Type	er Preserva	fie Filtra	Depth to W	Analy	tical Method omments	
Removed Dewatered? Comments: AMPLE DAT atic Water Le fater Level De arge Method: arge Depth: ampling Equip me of Sample comments: Sample No. URGE WAT otal Discharge rum Designat	No. of Containers ER DISPOSALE (gal):	Containe Type	er Preserva	fie Filtra	Depth to W	Analy	tical Method omments	
AMPLE DATA atic Water Leater Level Designe Method: arge Depth: ampling Equipme of Sample comments: Cample No. URGE WAT otal Dischargerum Designat	No. of Containers ER DISPOSAL (gal): ion(s)/Volume:	Containe Type	er Preserva	fie Filtra	Depth to W	Analy	tical Method omments	

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Investigations	GROUNDWATER WE			Date: 12/2/04
Project Numbe	Bohannon Groundweth Dec 1: 98360-002-615 San Lorenzo, CA	Well Designation Field Personnel:	" 61M-RP	/Chas, Marwall
Site Location:	Jan 40-30100 (C)			

				WELL VOL	UME CALCUI	ATION		<u> </u>
Total Well Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	Casing Diar	neter Multiplies	(SCHD 40)	Casing Volume Purge Quantity
	1				2-inch	4-inch	6-inch	1X =
	-		=		0.16	0.64	1.44	3X =

Parameter	Purge Sample 1	Purge Sample 2	Purge Sample 3	Purge Sample 4	Purge Sample 5	Purge Sample 6	Purge Sample 7
Time of Day	3:11	3.13	3,1,15				
Volume Purged							
Purge Rate (gpm)							
Temperature (°C)	22.20	22,35	22,40				
ORP	7,35,9	334.9	334.9				
Dissolved Oxygen	12.6.90	2714	26,56				
pН	5,60	5.65	5.80				
Specific Conductivity (µmhos)	(,249	6266	L: 252				
Turbidity/Color	Class	Clear	chem				
Odor/Sheen							
Depth to Water During Purge (ft)							
Number of Casing Volumes Removed							
Dewatered?							!
Comments:							

SAMPLE DATA: Static Water Level:		evel Measurement Point	
Water Level Determined By: _			
Purge Method: Purge Depth: Sampling Equipment:	Percent Recovery:	•	ater During Sampling:
Time of Sample Collection:			
Comments:			
			, and the second
No. of	Container	Field	Analytical Method

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analytical Method Comments

PURGE WATER DISPOSAL: Total Discharge (gal): Drum Designation(s)/Volume: Comments:		:				
WELL HEAD CONDITIONS: Well Security Device Working as Designer Inside of Well Head and Outer Casing Dry	d?: YES ?: YES	NO NO	Well Casing Intact?:	YES	NO	

Comments: _ WellSamplingLog.doc

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Project Name:	Donano	ムー 1つ 最			·		100	N/A			/o4
roject Number: ite Location:					Well D	esignation: ersonnel:	1 (4) (4)	WILL WAS	16-hr	15 de	VALUE AL
ite Location:	46260 LON		7 🔨		Field F	ersonnei: 1	ILEY K	or (CC)		-37 70 00-	<u> </u>
	Jan 12.	CALL									
		N. J.	L^{-1}	WELL VOLU	UME CAL	CULATION	i e			+ 1 <u>.44</u>	
Total Well		th to	= _	Water	0.1	D:	م السالة	(CCIII) A	0)		ng Volume e Quantity
Depth (ft)	Wat	er (ft)	<u> </u>	olumn (ft)		Diameter Mu		6-inc		1X =	е Quantity
	-		=		2-inch		icn 54	1.44		$\frac{1X = 1}{3X = 1}$	
				<u> </u>	0.16	1		- BW	·	3A -	.
			pin	,	<u> </u>		• •	,,,,	Pur	-00	Purge
Paran	notor		Purge imple 1	Purge Sample 2	Purge Sample			Purge Sample 5	Samp		Sample 7
Time of Day	neter		.t°2	12/54	12:06	12:10		にいて	1271		<u> </u>
Volume Purged											
Purge Rate (gp)					-						
Temperature (°		2	حادة	22,34	22,44	27,65	, ,	22.64	22.	67	
ORP	<u>~/</u>	16		20.1	21.1			6015	6.16		
Dissolved Oxy	oen	17	.31	7,64	7,54	7.02		7105	7.0		
pH	<u>Б</u> СП		34	6.40	6.41	6,63		615 7135 6165	نادين		
pri Specific Condu	ıctivity					i	_				
(µmhos)		3	185	2928	2762	166	7 1	1666	166	3	
Turbidity/Colo	<u> </u>	ti.1	Cer	(18 com	Cleve	clar		Clear	Cic		
Odor/Sheen	<u> </u>	1 10/4		1 2	—			***	<u> </u>		
Depth to Water	- During			<u> </u>			$\neg \vdash$				
Purge (ft)									<u></u>		<u></u>
Number of Cas	ing Volume	s									
Removed											
Dewatered?									T		1
								****	<u></u>		
	A .										
AMPLE DAT. tatic Water Level Det turge Method: urge Depth: ampling Equipa	wel:	·	Percent F	Recovery:		Depth to) Wate	T During Sa	ampling	lethod	
AMPLE DAT. tatic Water Level Det turge Method: urge Depth: ampling Equipa	vel: termined By ment: Collection:	·	Percent I	Recovery:		Depth to) Wate	T During Sa	ampling	lethod	
AMPLE DAT. tatic Water Level Det urge Method: _ urge Depth: _ ampling Equipa ime of Sample comments:	wel:	·	Percent F	Recovery:		Depth to) Wate	T During Sa	ampling	lethod	
AMPLE DAT. tatic Water Level Det urge Method: _ urge Depth: _ ampling Equipa ime of Sample comments:	wel:	·	Percent F	Recovery:		Depth to) Wate	T During Sa	ampling	lethod	
AMPLE DAT. tatic Water Level Det urge Method: _ urge Depth: _ ampling Equipa ime of Sample Comments:	wel:	·	Percent F	Recovery:		Depth to) Wate	T During Sa	ampling	lethod	
	wel:	·	Percent F	Recovery:		Depth to) Wate	T During Sa	ampling	lethod	

Well Sampling Log. doc



·	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1			V	VELL VOLU	JME CALCU	LATION		<u> </u>			<u> </u>
Total Well		Depth to		= .	Water			. 1,	/0/OTTD: 4/	2)		ng Volume e Quantity
Depth (ft)		Water (fi)	C	olumn (ft)		meter Multi		6-inc		1X =	c Quantity
	_			=	į.	2-inch 0.16	4-inch	+	1.44	-	3X =	
						0.10	0.04					
			Pı	ırge	Purge	Purge	Purge		Purge		irge	Purge
Parar	neter	1		iple <u>1</u>	Sample 2	Sample 3	Sample 4	Sa	ample 5	Sam	ple 6	Sample 7
ime of Day				07	2:12	2:14		<u> </u>		<u></u>		<u> </u>
Jolume Purgeo	<u> </u>											
urge Rate (gp								_		<u> </u>		
l'emperature (°			22,	05	22,07	2.2.25					_	
ORP			44		435	441 29.95 5.71						
Dissolved Oxy	gen		29,	21	30.28	29.95				ļ. <u> </u>		
oH			5.6	e [5.78	2.71				ļ		ļ
Specific Condu	activity		10			1000						
(µmhos)			しど	, if T_	1/2/ 3 4	6900	ļ			<u> </u>	<u> </u>	
Turbidity/Colo)Ţ		Cle	. *	31.411/2/02	Shight 161	12/					
Odor/Sheen				_	,	<u> </u>	1	-		 		
Ononone							ì	1		1		1
	r During						1					
Depth to Wate	τ During	Ţ,										
Depth to Wate Purge (ft)								-	_,		<u></u>	
Depth to Wate Purge (ft) Number of Cas												
Depth to Wate Purge (ft) Number of Cas Removed Dewatered? Comments:	sing Vol	umes		11								
Depth to Wate Purge (ft) Number of Cas Removed Dewatered? Comments: AMPLE DAT tatic Water Le Vater Level De urge Method: urge Depth: ampling Equip inte of Sample	FA: evel: coment: _ e Collect	d By:	P	ercent l	Recovery:		Depth to	Water	During S	amplir	ng:	
Depth to Wate Purge (ft) Number of Cas Removed Dewatered? Comments: AMPLE DAT tatic Water Le Vater Level De Purge Method: Purge Depth: Campling Equip Time of Sample	FA: vel: etermine. oment: _ e Collect	d By:	P	ercent l	Recovery:		Depth to	Water	During S	amplir	ng:	
Depth to Wate Purge (ft) Number of Cas Removed Dewatered? Comments: CAMPLE DAT Static Water Le Vater Level De Purge Method: Campling Equip Cime of Sample Comments:	FA: vel: etermine. oment: _ e Collect	d By:	P	ercent l	Recovery:		Depth to	Water	During S	amplir	ng:	
Depth to Wate Purge (ft) Number of Cas Removed Dewatered? Comments: AMPLE DAT tatic Water Le Vater Level De Purge Method: Purge Depth: Campling Equip Time of Sample	FA: vel: coment: _ coment: _ No	d By:	_ P	ercent l	Recovery:	Fie	Depth to	Water	During S	amplir	ng:	
Depth to Wate Purge (ft) Number of Cas Removed Dewatered? Comments: AMPLE DAT tatic Water Le Vater Level De Purge Method: Purge Depth: Jampling Equip Time of Sample Comments:	FA: vel: coment: _ coment: _ No	d By:	_ P	ercent l	Recovery:	Fie	Depth to	Water	During S	amplin	ng:	1
Depth to Wate Purge (ft) Number of Cas Removed Dewatered? Comments: AMPLE DAT tatic Water Le Vater Level De Purge Method: Purge Depth: Jampling Equip Time of Sample Comments:	FA: vel: coment: _ coment: _ No	d By:	_ P	ercent l	Recovery:	Fie	Depth to	Water	During S	amplin	ng:	1
Depth to Wate Purge (ft) Number of Cas Removed Dewatered? Comments: AMPLE DAT tatic Water Le Vater Level De urge Method: urge Depth: ampling Equip ime of Sample Comments:	FA: vel: coment: _ coment: _ No	d By:	_ P	ercent l	Recovery:	Fie	Depth to	Water	During S	amplin	ng:	1
Depth to Wate Purge (ft) Number of Cas Removed Dewatered? Comments: AMPLE DAT tatic Water Le Vater Level De Purge Method: Purge Depth: Jampling Equip Time of Sample Comments:	No Conta	d By: ion: FOSAI	Co	ercent l	Recovery: Preserva	fite Filtra	Depth to	Water	During S Anal	amplir ytical	Methodents	

WellSamplingLog.doc 5/27/2004 9:39 PM

EFP	
Engineering and Fire	

lavestigations		Date: 12/2/04
Project Name:	Bohanna Groundweth December	Well Designation: PLBS At
Project Number	: 98560-00-015	Field Personnel: Mark Williams / Chris, Marwit
Site Location: _	San Lorenzo, CA	

aja a ajas	i e gener	TALER BOOK	1.0	WELL VOL	UME CALCUL	ATION		
Total Well Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	Casing Dian	neter Multiplier	(SCHD 40)	Casing Volume Purge Quantity
	-		=		2-inch 0.16	4-inch 0.64	6-inch 1.44	$\frac{1X =}{3X =}$

Parameter	Purge Sample 1	Purge Sample 2	Purge Sample 3	Purge Sample 4	Purge Sample 5	Purge Sample 6	Purge Sample 7
Time of Day	3159	Hich				<u> </u>	
Volume Purged							
Purge Rate (gpm)							<u> </u>
Temperature (°C)	21.50	22,6-1	22.76	22.25		<u></u>	
ORP	19.60	21,5	22.9	25,5			
Dissolved Oxygen	(234	0.27	0.25	0.12			
pН	6.27	6,3%	6.33	6.3r			
Specific Conductivity			- 1 100	1627			
(µmhos)	1723	1686	1665	1021			
Turbidity/Color							
Odor/Sheen	stant oca	Stant och	Shoul Same	ان الوراد			
Depth to Water During				-			
Purge (ft)							
Number of Casing Volumes							
Removed					<u> </u>		<u> </u>
Dewatered?	<u></u>	<u></u>			<u> </u>		L
Comments:							

urement Point:
Depth to Water During Sampling:

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	12.5	Analytical Method Comments

PURGE WATER DISPOSAL: Total Discharge (gal): Disp	osal Method	l :				
Drum Designation(s)/Volume:Comments:						
WELL HEAD CONDITIONS: Well Security Device Working as Designed?:	YES	NO	Well Casing Intact?:	YES	NO .	

Well Security Device Working as Designed?: Inside of Well Head and Outer Casing Dry?:

YES NO Well Casing Intact?:

Comments: _

YES NO



148211Aaus	Bohannan 1985eo oo San Loren	C - \	v N. t	- I UNGEA.	file Santi Et	Man (A)	Date: 12/	2/04	
Project Name: _	Donannes Gasentos	(2) (20) A&A.) - 5:5	eter Decert	Well Des	ignation: Y	k lace and	Lehris de	Almost Hal	
roject Number lite Location:	San Loan	20, (1		Fleid Fei	sonner.	K GALCETY	7 - 1 - 3/1/1		
100000000000000000000000000000000000000									
			WELL VOL	UME CALCU	JLATION		٠.		
Total Well	Depth t		Water	Casing Volume					
Depth (ft)	Water (ft)	Column (ft)			Iultiplier (SCHD 40)		Purge Quantity	
	-	=		2-inch	4-inch 0.64	6-inc		1X =	
	<u> </u>	Fr	7 (IW-A	0.16		N - FX4	134-	· · · · · ·	
		Purge	Purge	Purge	Purge	Purge	Purge	Purge	
Parameter		Sample 1	_	Sample 3	Sample 4	Sample 5	Sample 6	Sample 7	
Time of Day		11:56	11:55	\2\02	11:46	11:42	11.50	11:52	
Volume Purge		11.2.5	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1	1917-161	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
Purge Rate (g)									
Temperature (°C)		22.54	22,64	7.7.70	23.25	23.10	23,09	23.12	
ORP		38.6	41.5	€) 3,1	3615	33.2	3416	35.7	
Dissolved Oxygen		5,63	5.20	5:39	0.52	2,44	3,17		
pΗ		5,44	5.43	5.54	5,70	5.9%	514	6,00	
Specific Conductivity (µmhos)		10,615	10,649	10,673	7563	7052	7036	7009	
Turbidity/Color		Cleir	dem	(100	chool/	Char	سنعان	deen	
Odor/Sheen					j'				
Depth to Wate	r During								
Purge (ft)			<u> </u>						
Number of Ca	sing Volumes								
Removed			-						
Dewatered? Comments:	•					<u> </u>	1		
AMPLE DAT	vel:		iption of Wate	r Level Meası	irement Point	:			
	etermined By:			-,					
urge Method:		Desert	Danasa		Donth to W	oter During S	umpline:		
urge Deptn:	ment.	Percent	Recovery:		рерш ю м	ater During 3	mpmg		
ime of Sample	oment: Collection:								
_									
						·····		··-	
	No. of Container				Field Analytical Method				
Sample No.	Containers	Type Preserva							
								·····	
						····			
TIRGE WAT	ER DISPOSAL	,:							
	e (gal):		Disposal Metho	od:					
rum Designat	ion(s)/Volume:					· · · · · · · · · · · · · · · · · · ·		·	
								···	
· · · · · · · · · · · · · · · · · · ·		-	<u>.</u>						
ייינון אַ דקונ <u>א</u>	COMBITIONS	·							
	CONDITIONS Device Working		?: YES	NO	Well Casing I	ntact?: YE	S NO		
	Head and Outer			NO	on owning i		110		

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gineering and Fire vastigations	<i>n</i> :	GF	ROUI C	NDWA7	ER WELL	– PUR	GE AN	ID SAMPLE	RECORD	Date: 1'Z	12/2/	<u>сч</u>
vestigetions Project Name: _ Project Number	Cohe	۱۱۱۵۸ (دلان ۵	<u> </u>	ن پر کھیدی کا م	m Devent	<u>V</u> W∈	ll Desi ld Pers	gnation: <u>Y</u> onnel: <u>Mad</u>	c WILLIAMS	/ E-hois	Marci	will
ite Location: _	San	-0 QU	ا منرح	$C \wedge$								
a de la company de		esat i	e syr	ν	VELL VOLU	<u>ЈМЕ С</u>	<u>ALCU</u>	LATION :		<u> </u>		
Total Well		Depth to	5	==	Water							Volume
Depth (ft)	_ 1	Water (f	t)	= C	olumn (ft)	Cas	ing Dia	meter Multip	lier (SCHD 4			Quantity
						2-i	nch	4-inch	6-inc		X =	
	-		- 1	=	=	0.	16	0.64	1.44	32	X =	
		<u> </u>										
	. 24		P	urge	Purge	Pu	rge	Purge	Purge	Purg		Purge
Para	meter	• •		nple 1	Sample 2		ple 3	Sample 4	Sample 5	Sampl	e 6	Sample 7
Time of Day		=		53	1-159	14,16						
Volume Purge				. , -	1 1 2 2		<u>- i</u>					
Purge Rate (gr						1						
Temperature (· · · · · ·	2.14	22.27	2.7	.35					
ORP	<u></u>			29 29	319		0 4					
Dissolved Oxy	(Gen	_			19.01	18.3		· · · · · · · · · · · · · · · · · · ·				
pissoivea Oxy	Rell	_		1.47	ĺ	5.2						
	notinite.	_		1,40	5.01	7.5						
Specific Cond	ucuvity		17	1200	10 2 5-	9,5	an a					
μmhos)				·	10,300	1			 	-		
Furbidity/Cole	OT			LE Cin	clean	Clar	Δ			 		
Odor/Sheen		_							-			
Depth to Wate	r During					1					1	
Purge (ft)	. 11.1								·	 		
Number of Ca	sing Voi	umes										
Removed					-				<u> </u>	 	- 	
Dewatered?						.——-						
Comments:												
AMPLE DAT tatic Water Le Vater Level De urge Method: urge Depth: _ ampling Equip ime of Sample	vel: etermined oment: _	l By:	P	ercent R	ecovery:			Depth to W		ampling:		
-												
omments:					**							
								 -				
	No.	of	Co	ntainer			Fie	ld .	Analy	tical Me	thod	
Sample No.	Conta	and the second second	*	Туре	Preserva	tive	Filtra		Č	omment	S	
Sample 110.				J I -								
					- 	-						
												
												, , , , , , , , , , , , , , , , , , ,
-	L				1,							
URGE WAT otal Discharge rum Designat omments:	e (gal): _ tion(s)/Vo	olume: _										
VELL HEAD Vell Security I	Device W	orking	as De		YES YES	N(Well Casing I	ntact?: YE	ES I	NO	

Comments: We Il Sampling Log. doc

5/27/2004 9:39 PM



Comments: _

Investigations GROUNDWATER WELL - PUR	Date: 12/2/09
Project Name: Bohannon Grandweth December W Project Number: 98560-00-015 Fi Site Location: 5an Lorenzo, CA	Vell Designation: PLVV-F.1 ield Personnel: Mark Williams / L.hris, Maxwell

		1 1 1	-	WELL VOL	UME CALCUI	ATION		
Total Well Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	Casing Diar	neter Multiplier	r (SCHD 40)	Casing Volume Purge Quantity
	-		=		2-inch 0.16	4-inch 0.64	6-inch 1.44	$ \begin{array}{c} 1X = \\ 3X = \end{array} $

Parameter	Purge Sample 1	Purge Sample 2	Purge Sample 3	Purge Sample 4	Purge Sample 5	Purge Sample 6	Purge Sample 7
Time of Day	14:32	1435	1413 8	ا بنياط ا	1443		
Volume Purged							
Purge Rate (gpm)							
Temperature (°C)	21.94	22.04	22.22	22.23	22.12		
ORP	424	242-	320	300	294		
Dissolved Oxygen	3,12	3. 39	3.32	3.42	3.72		
pH	2.30	7.71	4,03	7.55	4.83		-
Specific Conductivity							
(µmhos)	18,100	14,300	15,200	14,500	14,430		
Turbidity/Color	13,W7.VV	Claudy	objection	. He Gu	: War		
Odor/Sheen							
Depth to Water During							
Purge (ft)							
Number of Casing Volumes							
Removed		.,			 		
Dewatered?	_			<u> </u>	<u> </u>	L	
Comments:							

SAMPLE DATA: Static Water Level: Water Level Determined By:	Description of Water Leve	el Measurement Point:
Purge Method:		
Purge Depth:	Percent Recovery:	Depth to Water During Sampling:
Sampling Equipment:		
Time of Sample Collection:		
Comments:		

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analytical Method Comments
·					

1					
e (e / 	sposal Method	•			
Drum Designation(s)/Volume:					
Comments:					
					····
WELL HEAD CONDITIONS:					
Well Security Device Working as Designed?	: YES	NO	Well Casing Intact?: YES	NO	
Inside of Well Head and Outer Casing Dry?:	YES	ИО	- '		

APPENDIX B

CHAIN OF CUSTODY RECORD AND ANALYTICAL DATA SHEETS



July 28, 2004

Engineering and Fire Investigations

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Attn.:

Mark Williams

Project#: 48360-00011

Project:

Bohannon

Dear Mr. Williams,

Attached is our report for your samples received on 07/16/2004 17:03 This report has been reviewed and approved for release. Reproduction of this report

is permitted only in its entirety.

Atanch. Salinpor

Please note that any unused portion of the samples will be discarded after 08/30/2004 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: asalimpour@stl-inc.com

Sincerely,

Afsaneh Salimpour Project Manager



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 48360-00011

Bohannon

Received: 07/16/2004 17:03

Samples Reported

Sample Name	Date Sampled	Matrix	Lab#	
NITRATE SOLUTION	07/16/2004	Water	1	



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 48360-00011

Bohannon

Received: 07/16/2004 17:03

Prep(s):

300.0/9056

Test(s):

300.0/9056

Sample ID: NITRATE SOLUTION

Lab ID:

2004-07-0536 - 1

07/16/2004 Sampled:

Extracted:

7/16/2004 18:00

Matrix:

Water

QC Batch#: 2004/07/16-01.41

Commonad	Conc.	RL	Unit	Dilution	Analyzed	_Flag _
Compound	1.3	1.0	mg/L		07/16/2004 22:19	
Nitrite Nitrate	1.7	1.0	mg/L	1.00	07/16/2004 22:19	



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 48360-00011

Bohannon

Received: 07/16/2004 17:03

Batch QC Report

Prep(s): 300.0/9056

MB: 2004/07/16-01.41-001

Method Blank

Water

Test(s): 300.0/9056

QC Batch # 2004/07/16-01.41

Date Extracted: 07/16/2004 06:00

Compound	Conc.	RL	Unit	Analyzed	Flag
Nitrite Nitrate	ND ND	1.0	mg/L mg/L	07/20/2004 06:31 07/20/2004 06:31	



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 48360-00011 Bohannon Received: 07/16/2004 17:03

Batch QC Report

Prep(s): 300.0/9056

Test(s): 300.0/9056

Laboratory Control Spike

Water

QC Batch # 2004/07/16-01.41

LCS

2004/07/16-01.41-002

Extracted: 07/16/2004

Analyzed: 07/16/2004 06:50

LCSD 2004/07/16-01.41-003

Extracted: 07/16/2004

Analyzed: 07/16/2004 07:09

	Conc.	mg/L	Exp.Conc.	Recov	⁄егу %	RPD	Ctrl.Lim	nits %	Fla	igs
Compound	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Nitrite Nitrate	19.2 18.8	19.2 18.8	20.0 20.0	96.0 94.0	96.0 94.0	0.0 0.0	80-120 80-120	20 20		



*STL SE reports 8015M from Ca.Ca. (industry norm). Default for 8015B is Ca...Ca.

STL San Francisco Chain of Custody

1220 Quarry Lane ● Pleasanton CA 94566-4756 Phone: (925) 484-1919 ● Fax: (925) 484-1096

Email: sflogin@stl-inc.com

Reference #: <u>\$7885</u>

Date <u>7/16/6~1</u> Page <u>1</u> of <u>1</u>

Analysis Request Report To Work WILLIAMS Fuel Tests £PA 8260B: □ Gas □ BTEX □ Five Oxyenates □ DCA, EDB □ Ethand DSOLDNO3DF 508 608 Low Level Metals by EPA 200.8/6020 ((CP-MS)) Metals: C Lead C LUFT C RCRA Volatile Organics GCMS (VOCs) □ EPA 8260B □ 624 Company: EFI Globel Hexavalent Chromium pH (24h hold time for H₂O) Alkalinity TDS 🗆 DYMMONIA TPH EPA - □ 8015/8021 □ 8260B □ Gas w/ □ BTEX □ MTBE ☐ Petroleum ☐ Total Purgeable Halocarbons (HVOCs) EPA 8021 by 8260B Purgeable Aromatics BTEX EPA - □ 8021 □ 8260B Address: 111 Decrucia R2 Sute 195 tated Witinger EPA 8081 EPA 8082 □ 8270 □ CAM17 Metals (EPA 601 0/7470/7471) Phone: 925457-738-/ Email: Semivolatiles GC/MS □ EPA 8270 □ 625 Number of Containers W.E.T (STLC) TCLP Spec Cond. TSS Sampled By: M EFT Global Oil and Grease (EPA1664) Pestades PCBs Attn: Makunus Phone: Sample ID Date Time 2 NAvde Soldier 7/16/04 SOJ.Pr. 1) Relinquished by: 2) Relinguished by: 3) Relinquished by: Project Info. Sample Receipt Project Name: # of Containers: REMONE Signature Time Signature Time 7/16/04 Project#: Head Space: Markwilliams 90360 -00011 Printed Name Printed Name Printed Name Date Date PO#: Temp: EFF Glob Company Company Company Credit Card#: Conforms to record: 2) Received by: 3) Received by: 48h 24h Other: Signature Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ State Tank Fund EDF Time Signature Time ☐ Global ID _____ Special Instructions / Comments: Printed Name Date Printed Name Date Company See Terms and Conditions on reverse



STL San Francisco

Sample Receipt Checklist

Container name: STL San Francisco Va Client: Not Present Stan Francisco Va Client: Sustady seels intact on shipping container/samples Yes No Present Schain of custody present? Chain of custody signed when relinquished and received? Yes No No Not Present Schain of custody signed when relinquished and received? Yes No No Not Not Not Not Not Not Not Not N	Submission #:2004- <u>07</u> - <u>0536</u>	
Sufficient sample volume for indicated test? Container/Temp Blank temperature in compliance (4° C ± 2)? Water - VOA vials have zero headspace? Water - VOA vials have zero headspace? Water - PH acceptable upon receipt? Water - VOA vials have zero headspace? Do De Present Yes No Water - PH acceptable upon receipt? Water - PH acceptable		Not /
Chain of custody present? Chain of custody signed when relinquished and received? Chain of custody agrees with sample labels? Samples in proper container/bottle? Sample containers intact? Sufficient sample volume for indicated test? All samples received within holding time? Container/Temp Blank temperature in compliance (4° C ± 2)? Water - VOA vials have zero headspace? No VOA vials submitted Yes No Water - pH acceptable upon receipt? Yes No Ph adjusted Preservative used: PhNO3 HCI H2SO4 NaOH ZnOAc Lot #(s) For any item check-listed "No", provided detail of discrepancy in comment section below: Comments: Project Management [Routing for instruction of indicated discrepancy(ies)] Project Manager: (initials)		
Chain of custody signed when relinquished and received? Chain of custody agrees with sample labels? Samples in proper container/bottle? Sample containers intact? Sufficient sample volume for indicated test? All samples received within holding time? Container/Temp Blank temperature in compliance (4° C ± 2)? Water - VOA vials have zero headspace? Water - pH acceptable upon receipt? Project Management [Routing for instruction of indicated discrepancy(ies)] Project Manager: (initials) Date://04 Client contacted: □ Yes □ No Summary of discussion:		YesNo
Chain of custody agrees with sample labels? Samples in proper container/bottle? Sample containers intact? Sufficient sample volume for indicated test? All samples received within holding time? Container/Temp Blank temperature in compliance (4° C ± 2)? Water - VOA viais have zero headspace? No VOA viais submitted Yes No Water - PH acceptable upon receipt?		Yes
Samples in proper container/bottle? Sample containers intact? Sufficient sample volume for indicated test? All samples received within holding time? Container/Temp Blank temperature in compliance (4° C±2)? Temp: 25° C Yes No_ lce Present Yes_No_ Water - VOA vials have zero headspace? No VOA vials submitted Yes_No_ (if bubble is present, refer to approximate bubble size and itemize in comments as \$ (small -O), M (medium - O) or L (large - O) Water - pH acceptable upon receipt?		YesNo
Sample containers intact? Sufficient sample volume for indicated test? All samples received within holding time? Container/Temp Blank temperature in compliance (4° C ± 2)? Temp: 25° C Yes No Le Present Yes		Yes No
Sufficient sample volume for indicated test? All samples received within holding time? Container/Temp Blank temperature in compliance (4° C ± 2)? Temp: ① C Yes No loc Present Yes No loc Present Yes No No VOA vials submitted Yes No No VOA vials submitted Yes No No VOA vials submitted Yes No No VOA vials submitted Yes No No VOA vials submitted Yes No No VOA vials submitted Yes No No VOA vials submitted Yes No No VOA vials submitted Yes No No VOA vials submitted Yes No No VOA vials submitted Yes No No VOA vials submitted Yes No No VOA vials submitted Yes No No VOA vials submitted Yes No No VOA vials submitted Yes No VOA vials submitte		Yes NoNo
All samples received within holding time? Container/Temp Blank temperature in compliance (4° C ± 2)? Temp: 25 ° C Yes No_ loe Present Yes_No_ No VOA vials submitted Yes_No_ Water - VOA vials have zero headspace? No VOA vials submitted Yes_No_ Water - pH acceptable upon receipt?		Yes No
Container/Temp Blank temperature in compliance (4° C ± 2)? Temp: 25 ° C Yes No_ loc Present Yes No_ loc Present Yes No_ loc Present Yes No_ No VOA vials submitted Yes No_ (if bubble is present, refer to approximate bubble size and itemize in comments as \$ (small ~O), \$ M (medium ~ O) or \$ L (large ~ O) \ \text{Water - pH acceptable upon receipt?} \ \text{ Pes} \ \ \text{ No} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		
Ice Present Yes		Temp: <u>25</u> °C Yes No
(if bubble is present, refer to approximate bubble size and itemize in comments as \$ (small ~O), \$ M (medium ~O) or \$ L (large ~O) \$ Water - pH acceptable upon receipt?	Sulfament emp Blank temperature is easipered.	Ice Present YesNo
Water - pH acceptable upon receipt?	Water - VOA vials have zero headspace?	No VOA vials submitted Yes No
Project Management [Routing for instruction of indicated discrepancy(ies)] Project Manager: (initials)	☐ pH adjusted − Preservative used: ☐ HNO ₃ ☐ HCl ☐ H ₂ SO ₄ ☐ Na	
Project Management [Routing for instruction of indicated discrepancy(ies)] Project Manager: (initials) Date: / / 04 Client contacted: □ Yes □ No Summary of discussion:		
Project Manager: (initials) Date: /	Comments:	
Project Manager: (initials) Date: /		
Project Manager: (initials) Date: /		dicated discrepancy(ies)]
Client contacted: ☐ Yes ☐ No Summary of discussion:		
Summary of discussion:		
	Client contacted: ☐ Yes ☐ No	
Corrective Action (per PM/Client):	Summary of discussion:	
Corrective Action (per PM/Client):		
Corrective Action (per PM/Client):		
	Corrective Action (per PM/Client):	



STL Chicago 2417 Bond Street University Park, IL 60466

Tcl: 708 534 5200 Fax: 708 534 5211 www.stl-inc.com

SEVERN TRENT LABORATORIES ANALYTICAL REPORT

JOB NUMBER: 228611

Prepared For:

Severn Trent Laboratories 1220 Quarry Lane Pleasanton, CA 94566-4756

Project: STL San Francisco

Attention: Afsanch Salimpour

Date: 07/28/2004

Name: Bonnie M. Stadelmann

Title: Project Manager

E-Mail: bstadelmann@stl-inc.com

STL Chicago

2417 Bond Street

University Park, IL 60466

PHONE: (708) 534-5200 FAX..: (708) 534-5211

This Report Contains

STL Chicago is part of Severn Trent Laboratories, Inc.

SAMPLE INFORMATION Date: 07/28/2004

Job Number.: 228611

Customer...: Severn Trent Laboratories Attn.....: Afsaneh Salimpour

Project Number.....: 20002032 Customer Project ID...: 2004-07-0536

Project Description...: STL San Francisco

Laboratory Sample ID	CUSTOME! Sample 3D	Sample Matrix	Care Sampled	fine Sampled	Dete Rece) Yed	Time Received
228611-1	NITRATE SOLUTION	Water	07/16/2004	12:00	07/20/2004	08:40
		:		,		
				1		
					:	

TEST RESULTS LABORATORY

Job Number: 228611

Date: 07/28/2004

CUSTOMER: Severn Trent Laborator(@6: PROJECT) 2004×07×0538

ATTH: Afsemen Satimpour

Laboratory Sample ID: 228611-1 Date Received.....: 07/20/2004 Time Received.....: 08:40

Customer Sample ID: NITRATE SOLUTION Date Sampled.....; 07/16/2004
Time Sampled.....: 12:00

i i me	Si	וסמופ	ea		•	٠	٠	• i		12:00
Sampl	e	Mat	rī.	χ.					:	Water

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING CIMIT	CHITS	DATE	TECH
350.2	Nitrogen, Ammonia (Dist./Nessler.) Ammonia(NH3+NH4), as N	120	10	mg/L	07/21/04	jmk
Calc. TKN-NH3	Nitrogen, Organic Nitrogen, Organic as N	140	0.20	mg/L	07/23/04	mtþ
351.3	Nîtrogen, Total Kjeldahl Nîtrogen, Total Kjeldahl as N (TKN)	260	40	mg/L	07/23/04	mtb
			}			
						ļ i

^{*} In Description = Dry Wgt.

STL Chicago is part of Severn Trent Laboratories, Inc.

Job	Number: 228611	LABORATO	RY CKF	i n o ș	CLE	Date: 0	7/28/2004		
USTOMER: Severn	Frent Laboratorius	280.	ECT: 2004-0	7-0536	Company of the selection of the selectio		TTN: Afsamen S	aLimpour	
	Client ID: NITRATE S DESCRIPTION Nitrogen, Ammonia (Dis	t./Nessler.)	Date Re RUN# 1 1	BATCH# 123768 123955	20/2004 PREP 8T 123768 123955 123953	#(\$)	Date: 07/16/20 DATE/TIME AN 07/21/2004 07/23/2004 07/23/2004	04 ALYZED 1605 1305 1225	DILUTION 50 100
•									

QUALITY CONTROL RESULTS

Job Number.: 228611

Report Date.: 07/28/2004

Te Me	st Method. Thad Descri	ption:: Ni	O.Z trogen, Am	ponja (Dist./We W4),es W	seler)	Batch Equipment Cod	le v	123768 spec1				processors become and become and become and become and become and become and processors processors becomes and becomes and b	Amalyst. Test Code	. F Ink	A The state of the
PE IC	rameter Lab ID	Reagent	Units	QC Result	QC Result	True Value	Orig.			Çalc.		*	Limits	Date	Tim
18 .CS	123768-004 123768-005	103KSTTK2	mg/L mg/L	0.13000 ນ 2.56300		2.50000	0.	13000 U	10	3		- -	80-120	07/21/2004 07/21/2004	
T (st Method. thod Descri		1.3 Trogen, To	al Kjeldahi al Kjeldahi as	A CONTRACTOR OF THE PROPERTY O	Batch. Equipment Coc		123953 SPEC1	e des réde d' de rece des de rece des de rece des des rece de de rece de de rece de			en en en en en en en en en en en en	Anelyst Test Code	mtb TKN	Compression
C.	Lab ID	Reagent	Units	DC Result	QC Result	True Value	Orig.			Celc.		*	Limits	Date	rim Tim
1B	123953-004 123953-005	103KSTTK2	mg/L mg/L	0.18000 U 2.97700		2,50000	0	18000 U			_	 %	80-120	07/23/2004 07/23/2004	

G-UALITY ASSURANCE METHODS

REFERENDES AND NOTES

Report Date: 07/28/2004

REPORT COMMENTS

1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

2) Soil, sediment and sludge sample results are reported on a "dry weight" basis except when analyzed for landfill disposal or incineration parameters. All other solid matrix samples are reported on an "as received" basis unless noted differently.

3) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

4) The test results for the noted analytical method(s) meet the requirements of NELAC. Lab Cert. ID# 100201
5) According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

Glossary of flags, qualifiers and abbreviations (any number of which may appear in the report) Inorganic Qualifiers (Q-Column)

Analyte was not detected at or above the stated limit.

Not detected at or above the reporting limit.

Result is less than the RL, but greater than or equal to the method detection limit.

B Result is less than the CROL/RL, but greater than or equal to the IDL/MDL.

Result was determined by the Method of Standard Additions.

AFCEE: Result is less than the RL, but greater than or equal to the method detection limit.

Inorganic Flags (Flag Column)

10V,CCV,ICB,CCB,ISA,ISB,CRI,CRA,MRL: Instrument related QC exceed the upper or lower control limits.

LCS, LCD, MD: Batch QC exceeds the upper or lower control limits.

MSA correlation coefficient is less than 0.995.

MS, MSD: The analyte present in the original sample is 4 times greater

than the matrix spike concentration; therefore, control limits are not applicable.

E SD: Serial dilution exceeds the control Limits.

MB, EB1, EB2, EB3: Batch QC is greater than reporting limit or had a

negative instrument reading lower than the absolute value of the reporting limit.

MS, MSD: Spike recovery exceeds the upper or lower control limits.

AS(GFAA) Post-digestion spike was outside 85-115% control limits.

Organic Qualifiers (Q - Column)

Analyte was not detected at or above the stated limit.

ND Campound not detected.

Result is an estimated value below the reporting limit or a tentatively

identified compound (TIC).

Result was qualitatively confirmed, but not quantified.

Pesticide identification was confirmed by GC/MS.

The chromatographic response resembles a typical fuel pattern.

The chromatographic response does not resemble a typical fuel pattern.

E Result exceeded calibration range, secondary dilution required.

F AFCEE:Result is an estimated value below the reporting limit or a tentatively identified compound (TIC) Organic Flags (Flags Column)

B MB: Batch QC is greater than reporting limit.

LCS, LCD, ELC, ELD, CV, MS, MSD, Surrogate: Batch QC exceeds the upper or lower control limits.

EB1, EB2, EB3, MLE: Batch QC is greater than reporting limit

A Concentration exceeds the instrument calibration range

a Concentration is below the method Reporting Limit (RL)

B Compound was found in the blank and sample.

D Surrogate or matrix spike recoveries were not obtained because the extract was diluted for

analysis; also compounds analyzed at a dilution will be flagged with a D.

H Alternate peak selection upon analytical review

Indicates the presence of an interfence, recovery is not calculated.

M Manually integrated compound.

P The lower of the two values is reported when the % difference between the results of two GC columns is

QUALITY ASSURANCE HETHOOS REFERENCES AND NOTES

Report Date: 07/28/2004

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greater than 25%.
Abbreviations
         Post Digestion Spike (GFAA Samples - See Note 1 below)
AS
         Designation given to identify a specific extraction, digestion, preparation set, or analysis set
Batch
         Capillary Column CCB Continuing Calibration Blank
CAP
         Continuing Calibration Verification
CCV
         Confirmation analysis of original
CF
         Confirmation analysis of Al or Di
C1
         Confirmation analysis of A2 or D2
C2
         Confirmation analysis of A3 or D3
C.3
         Low Level Standard Check - GFAA; Mercury
CRA
         Low Level Standard Check - ICP
CRI
         Calibration Verification Standard
CV
Dil Fac Dilution Factor - Secondary dilution analysis
D1
         Dilution 1
DΖ
         Dilution 2
         Dilution 3
D3
         Detection Limit Factor
DLFac
DSH
         Distilled Standard - Nigh Level
         Distilled Standard - Low Level
DSL
         Distitled Standard - Medium Level
DSM
₽81
         Extraction Blank 1
         Extraction Blank 2
FB2
EB3
         DI Blank
ELC
         Method Extracted LCS
         Method Extracted LCD
FLD
         Initial calibration
ICAL
ICB
         Initial Calibration Blank
         Initial Calibration Verification
ICV
         Instrument Detection Limit
IDL
ISA
         Interference Check Sample A - ICAP
         Interference Check Sample B - ICAP
158
         The first six digits of the sample ID which refers to a specific client, project and sample group
Job No.
         Lab ID An 8 number unique laboratory identification
         Laboratory Control Standard Duplicate
LCD
         Laboratory Control Standard with reagent grade water or a matrix free from the analyte of interest
LCS
ЖB
         Method Blank or (PB) Preparation Blank
MO
         Method Duplicate
HDL
         Method Detaction Limit
MLE
         Medium Level Extraction Blank
         Method Reporting Limit Standard
MRL
         Method of Standard Additions
MSA
MS
         Matrix Spike
         Matrix Spike Duplicate
MSD
ND
         Not Detected
         Proparation factor used by the Laboratory's Information Management System (LIMS)
PREPF
         Post Digestion Spike (ICAP)
PDS
RA
         Re-analysis of original
A1
         Re-analysis of D1
A2
         Re-analysis of D2
         Re-analysis of D3
A3
         Re-extraction of dilution
RD
RE
         Re-extraction of original
         Re-extraction Confirmation
RC
RL
         Reporting Limit
RPD
         Relative Percent Difference of duplicate (unrounded) analyses
RRF
         Relative Response Factor
RT
         Retention Time
```

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 07/28/2004

Retention Time Window Sample ID A 9 digit number unique for each sample, the first RTW six digits are referred as the job number Seeded Control Blank SCB Serial Dilution (Calculated when sample concentration exceeds 5D times the MDL) SD UCB Unseeded Control Blank Second Source Verification Standard ssV Solid Laboratory Control Standard(LCS) SLCS PH Calibration Check LCSP pH Laboratory Control Sample PKC pH Laboratory Control Sample Duplicate LCDP pH Sample Duplicate MDPH Flashpoint Sample Duplicate MDFP Flashpoint LCS LCFP Gelex Check Standard Range 0-1 Gl Gelex Check Standard Range 1-10 Ġ2 Gelex Check Standard Range 10-100 G3 Gelex Check Standard Range 100-1000 Note 1: The Post Spike Designation on Batch QC for GFAA is designated with an "S" added to the current abbreviation used. EX. LCS S=LCS Post Spike (GFAA); MSS=MS Post Spike (GFAA) Note 2: The MD calculates an absolute difference (A) when the sample concentration is less than 5 times the reporting limit. The control limit is represented as +/- the RL.

Date Shipped: 7/19/2004

SEVERN STL TRENT

Chain of Custody

2004-07-0536 - 1

From:

STL San Francisco (CL) 1220 Quarry Lane

Pleasanton, CA 94566-4756

To:

STL Chicago

2417 Bond Street

University Park, IL 60466

Project Manager: Phone:

(925) 464-1919

Afsaneh Salimpour

Ext: 107

(708) 534-5200 Phone:

(708) 534-5211

Contact: Bonnie

Stadelmann

Ext:

£mall:

Fax:

(925) 484-1096

asaijmpour@stl-inc.com

Phone:

2.

Fax:

(708) 534-5200

Ext: 154

CL Submission #:

2004-07-0536

Project#:

48360-00011

OLPO#

Project Name: Bohannon

5LPO#			-	and the state of the State of t	4 4 1 2 2 2	
OR THE HIP CARE			Saltan and Saltan and Saltan	La La Maria	4.7	war daye
	and the second s	er i describer de la Part. Part		The Paris of the State of the S	Internation of the	30) 14
NITRATE SOLUTION	1		12;00:00AM	Water	<u> </u>	
Subcontract - Ammonia	<u></u>			350,3	6	Day
Subcontract - TON			,,		5	Day
Subcontract - Total Kjeldahl Nitrogen				351.4	5	Day

PLEASE INCLUDE QC WITH FAXED AND HARD-COPY RESULTS

RELINQUISHED BY:	1.
Sycanor	15.00
Signature Bryan Thonas	7/19/04
Printed Name STL-ST	Date
Company	
RECEIVED BY:	1,
Signature	Time 84 0
Printed Name	Date 7 20/01
Company	

Signature	Time	
Printed Name	Date	
Company		
RECEIVED BY:		2.
Signature	Tlme	•
Printed Name	Date	
Company		

RELINQUISHED BY:

RELINQUISHED BY:		3.
Signature	∏me	
Printed Name	Date	
Сотрапу		
RECEIVED BY:		3.
Signature	Time	
Printed Namo	Date	
Company		



September 08, 2004

Engineering and Fire Investigations

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Attn.:

Mark Williams

Project#: 98360

Project:

Bohannon

Dear Mr. Williams,

Attached is our report for your samples received on 08/27/2004 15:09 This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 10/11/2004 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: asalimpour@stl-inc.com Sincerely,

Afsaneh Salimpour

Atsanch. Salinpor

Project Manager



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
NIW-B1	08/27/2004	Water	7



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Prep(s):

5030B

Test(s):

8260B

Sample ID: NIW-B1

Lab ID:

2004-08-0727 - 7

Sampled: 08/27/2004

Extracted:

9/8/2004 11:26

Matrix:

Water

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	110	50	ug/L	1.00	09/08/2004 11:26	
Benzene	6.9	0.50	ug/L	1.00	09/08/2004 11:26	
Toluene	ND	0.50	ug/L	1.00	09/08/2004 11:26	
Ethylbenzene	1.4	0.50	ug/L	1.00	09/08/2004 11:26	
Total xylenes	2.0	1.0	ug/L	1.00	09/08/2004 11:26	
Surrogate(s)						
1,2-Dichloroethane-d4	97.6	72-128	%	1.00	09/08/2004 11:26	
Toluene-d8	96.7	80-113	%	1.00	09/08/2004 11:26	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

MB: 2004/09/08-01.68-002

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Batch QC Report

Prep(s): 5030B Method Blank

Water

Test(s): 8260B

QC Batch # 2004/09/08-01.68

Date Extracted: 09/08/2004 07:02

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	09/08/2004 07:02	
Benzene	ND	0.5	ug/L	09/08/2004 07:02	
Toluene	ND	0.5	ug/L	09/08/2004 07:02	
Ethylbenzene	ND	0.5	ug/L	09/08/2004 07:02	
Total xylenes	ND	1.0	ug/L	09/08/2004 07:02	
Surrogates(s)			!		
1,2-Dichloroethane-d4	100.4	72-128	%	09/08/2004 07:02	
Toluene-d8	106.6	80-113	%	09/08/2004 07:02	

Page 3 of 4



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

2004/09/08-01.68-024

Water

QC Batch # 2004/09/08-01.68

LCS LCSD 2004/09/08-01.68-043 Extracted: 09/08/2004 Extracted: 09/08/2004 Analyzed: 09/08/2004 06:24 Analyzed: 09/08/2004 06:43

Compound	Conc.	ug/L	Exp.Conc.	Reco	very %	RPD	Ctrl.Lin	nits %	s % Flags	
Sumputation	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene Toluene	27.5 24.2	24.7 24.7	25.0 25.0	110.0 96.8	98.8 98.8	10.7 2.0	69-129 70-130	20 20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	448 475	457 471	500 500	89.6 95.0	91.4 94.2		72-128 80-113			



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
PIW-A1	08/27/2004	Water	1
PIW-A2	08/27/2004	Water	2
PIW-B1	08/27/2004	Water	3
PIW-B3	08/27/2004	Water	4
NIW-A1	08/27/2004	Water	5
NIW-A2	08/27/2004	Water	6
NIW-B2	08/27/2004	Water	8
POBS-A1	08/27/2004	Water	9
POBS-B1	08/27/2004	Water	10
NOBS-B1	08/27/2004	Water	11
MW-4	08/27/2004	Water	12
MW-3	08/27/2004	Water	13
POBS-B2	08/27/2004	Water	15

Tel 925 484 1919 Fax 925 484 1096 * www.stl-inc.com * CA DHS ELAP# 2496



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Prep(s):

5030B

Test(s):

8260B

Sample ID: PIW-A1

Lab ID:

2004-08-0727 - 1

Sampled: 08/27/2004 Extracted:

9/2/2004 12:13

Matrix:

Water

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	220	50	ug/L	1.00	09/02/2004 12:13	
Benzene	14	0.50	ug/L	1.00	09/02/2004 12:13	
Toluene	1.2	0.50	ug/L	1.00	09/02/2004 12:13	
Ethylbenzene	2.1	0.50	ug/L	1.00	09/02/2004 12:13	
Total xylenes	5.4	1.0	ug/L	1.00	09/02/2004 12:13	
Surrogate(s)						
1,2-Dichloroethane-d4	99.6	72-128	%	1.00	09/02/2004 12:13	
Toluene-d8	103.1	80-113	%	1.00	09/02/2004 12:13	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Prep(s):

5030B

Test(s):

8260B

Sample ID: PIW-A2

Lab ID:

2004-08-0727 - 2

Sampled: 08/27/2004

Extracted:

9/2/2004 12:35

Matrix:

Water

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	500	50	ug/L	1.00	09/02/2004 12:35	
Benzene	34	0.50	ug/L	1.00	09/02/2004 12:35	
Toluene	2.5	0.50	ug/L	1.00	09/02/2004 12:35	
Ethylbenzene	4.4	0.50	ug/L	1.00	09/02/2004 12:35	
Total xylenes	12	1.0	ug/L	1.00	09/02/2004 12:35	
Surrogate(s)					-	
1,2-Dichloroethane-d4	78.9	72-128	%	1.00	09/02/2004 12:35	
Toluene-d8	99.6	80-113	%	1.00	09/02/2004 12:35	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Prep(s):

5030B

Test(s):

8260B

Sample ID: PIW-B1

Lab ID:

2004-08-0727 - 3

Sampled: 08/27/2004 Extracted:

9/2/2004 12:57

Matrix:

Water

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	230	50	ug/L	1.00	09/02/2004 12:57	
Benzene	11	0.50	ug/L	1.00	09/02/2004 12:57	
Toluene	0.85	0.50	ug/L	1.00	09/02/2004 12:57	
Ethylbenzene	1.7	0.50	ug/L	1.00	09/02/2004 12:57	
Total xylenes	4.3	1.0	ug/L	1.00	09/02/2004 12:57	
Surrogate(s)						
1,2-Dichloroethane-d4	98.1	72-128	%	1.00	09/02/2004 12:57	
Toluene-d8	104.0	80-113	%	1.00	09/02/2004 12:57	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Prep(s):

5030B

Test(s):

8260B

Sample ID: PIW-B3

Lab ID:

2004-08-0727 - 4

Sampled: 08/27/2004

9/2/2004 14:04

Matrix:

Water

Extracted:

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	230	50	ug/L	1.00	09/02/2004 14:04	
Benzene	20	0.50	ug/L	1.00	09/02/2004 14:04	
Toluene	0.93	0.50	ug/L	1.00	09/02/2004 14:04	
Ethylbenzene	3.3	0.50	ug/L	1.00	09/02/2004 14:04	
Total xylenes	2.9	1.0	ug/L	1.00	09/02/2004 14:04	
Surrogate(s)		- 1				
1,2-Dichloroethane-d4	103.3	72-128	%	1.00	09/02/2004 14:04	
Toluene-d8	100.3	80-113	%	1.00	09/02/2004 14:04	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Prep(s):

Matrix:

5030B

Sample ID: NIW-A1

Sampled: 08/27/2004

Water

Test(s):

8260B

Lab ID:

2004-08-0727 - 5

Extracted:

9/2/2004 14:26

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	250	50	ug/L	1.00	09/02/2004 14:26	
Benzene	13	0.50	ug/L	1.00	09/02/2004 14:26	
Toluene	1.4	0.50	ug/L	1.00	09/02/2004 14:26	
Ethylbenzene	6.0	0.50	ug/L	1.00	09/02/2004 14:26	
Total xylenes	5.7	1.0	ug/L	1.00	09/02/2004 14:26	
Surrogate(s)	ŀ	1	1 1			
1,2-Dichloroethane-d4	81.8	72-128	%	1.00	09/02/2004 14:26	
Toluene-d8	101.3	80-113	%	1.00	09/02/2004 14:26	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Prep(s): 5030B

Test(s):

8260B

Sample ID: NIW-A2

Lab ID:

2004-08-0727 - 6

Sampled: 08/27/2004

Extracted:

9/2/2004 14:48

Matrix: Water

QC Batch#: 2004/09/02-01.62

Analysis Flag: Irn (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	500	ug/L	10.00	09/02/2004 14:48	
Benzene	6.3	5.0	ug/L	10.00	09/02/2004 14:48	
Toluene	ND	5.0	ug/L	10.00	09/02/2004 14:48	
Ethylbenzene	ND	5.0	ug/L	10.00	09/02/2004 14:48	
Total xylenes	ND	10	ug/L	10.00	09/02/2004 14:48	
Surrogate(s)						
1,2-Dichloroethane-d4	104.5	72-128	%	10.00	09/02/2004 14:48	
Toluene-d8	105.0	80-113	%	10.00	09/02/2004 14:48	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Prep(s):

5030B

Test(s):

8260B

Sample ID: NIW-B2

Lab ID:

2004-08-0727 - 8

Sampled: 08/27/2004 Extracted:

9/3/2004 14:32

Matrix:

Water

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	120	50	ug/L	1.00	09/03/2004 14:32	
Benzene	4.4	0.50	ug/L	1.00	09/03/2004 14:32	
Toluene	ND	0.50	ug/L	1.00	09/03/2004 14:32	
Ethylbenzene	1,1	0.50	ug/L	1.00	09/03/2004 14:32	
Total xylenes	1.6	1.0	ug/L	1.00	09/03/2004 14:32	
Surrogate(s)						
1,2-Dichloroethane-d4	115.1	72-128	%	1.00	09/03/2004 14:32	
Toluene-d8	105.4	80-113	%	1.00	09/03/2004 14:32	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Prep(s):

5030B

Test(s):

8260B

Sample ID: POBS-A1

Lab ID:

2004-08-0727 - 9

Sampled: 08/27/2004

Extracted:

9/3/2004 23:14

Matrix:

Water

QC Batch#: 2004/09/03-02.62

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	23000	2500	ug/L	50.00	09/03/2004 23:14	
Benzene	2900	25	ug/L	50.00	09/03/2004 23:14	
Toluene	140	25	ug/L	50.00	09/03/2004 23:14	
Ethylbenzene	180	25 ⋅	ug/L	50.00	09/03/2004 23:14	
Total xylenes	470	50	ug/L	50.00	09/03/2004 23:14	
Surrogate(s)						
1,2-Dichloroethane-d4	108.0	72-128	%	50.00	09/03/2004 23:14	
Toluene-d8	102.6	80-113	%	50.00	09/03/2004 23:14	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

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Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Prep(s):

5030B

Test(s):

8260B

Sample ID: POBS-B1

Lab ID:

2004-08-0727 - 10

Sampled: 08/27/2004

Extracted:

9/3/2004 18:57

Matrix:

Water

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	500	50	ug/L	1.00	09/03/2004 18:57	
Benzene	1.4	0.50	ug/L	1.00	09/03/2004 18:57	
Toluene	ND	0.50	ug/L	1.00	09/03/2004 18:57	
Ethylbenzene	ND	0.50	ug/L	1.00	09/03/2004 18:57	
Total xylenes	ND	1.0	ug/L	1.00	09/03/2004 18:57	
Surrogate(s)						
1,2-Dichloroethane-d4	120.1	72-128	%	1.00	09/03/2004 18:57	
Toluene-d8	105.8	80-113	%	1.00	09/03/2004 18:57	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Prep(s):

5030B

Test(s):

8260B

Sample ID: NOBS-B1

Lab ID:

2004-08-0727 - 11

Sampled: 08/27/2004

9/4/2004 09:28

Matrix:

Water

Extracted:

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	180	50	ug/L	1.00	09/04/2004 09:28	
Benzene	5.5	0.50	ug/L	1.00	09/04/2004 09:28	
Toluene	0.53	0.50	ug/L	1.00	09/04/2004 09:28	
Ethylbenzene	0.99	0.50	ug/L	1.00	09/04/2004 09:28	
Total xylenes	1.6	1.0	ug/L	1.00	09/04/2004 09:28	
Surrogate(s)						
1,2-Dichloroethane-d4	99.6	72-128	%	1.00	09/04/2004 09:28	
Toluene-d8	97.9	80-113	%	1.00	09/04/2004 09:28	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Prep(s):

5030B

Test(s):

8260B

Sample ID: MW-4

Lab ID:

2004-08-0727 - 12

Sampled: 08/27/2004

Extracted:

9/3/2004 19:31

Matrix:

Water

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	460	50	ug/L	1.00	09/03/2004 19:31	
Benzene	19	0.50	ug/L	1.00	09/03/2004 19:31	
Toluene	1.2	0.50	ug/L	1.00	09/03/2004 19:31	
Ethylbenzene	1.1	0.50	ug/L	1.00	09/03/2004 19:31	
Total xylenes	1.5	1.0	ug/L	1.00	09/03/2004 19:31	
Surrogate(s)						
1,2-Dichloroethane-d4	109.4	72-128	%	1.00	09/03/2004 19:31	
Toluene-d8	102.8	80-113	%	1.00	09/03/2004 19:31	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Prep(s):

5030B

Test(s):

8260B

Sample ID: MW-3

Lab ID:

2004-08-0727 - 13

Sampled: 08/27/2004

Extracted:

9/3/2004 19:53

Matrix: Water

QC Batch#: 2004/09/03-02.62

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	6900	2500	ug/L	50.00	09/03/2004 19:53	
Benzene	2100	25	ug/L	50.00	09/03/2004 19:53	
Toluene	59	25	ug/L	50.00	09/03/2004 19:53	
Ethylbenzene	220	25	ug/L	50.00	09/03/2004 19:53	
Total xylenes	ND	50	ug/L	50.00	09/03/2004 19:53	
Surrogate(s)	1					
1,2-Dichloroethane-d4	106.3	72-128	%	50.00	09/03/2004 19:53	
Toluene-d8	100.7	80-113	%	50.00	09/03/2004 19:53	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Prep(s):

5030B

Test(s):

8260B

Sample ID: POBS-B2

Lab ID:

2004-08-0727 - 15

Sampled: 08/27/2004

Extracted:

9/4/2004 09:06

Matrix:

Water

QC Batch#: 2004/09/04-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	240	50	ug/L	1.00	09/04/2004 09:06	
Benzene	36	0.50	ug/L	1.00	09/04/2004 09:06	
Toluene	1.6	0.50	ug/L	1.00	09/04/2004 09:06	
Ethylbenzene	6.7	0.50	ug/L	1,00	09/04/2004 09:06	
Total xylenes	4.2	1.0	ug/L	1.00	09/04/2004 09:06	
Surrogate(s)						
1,2-Dichloroethane-d4	93.6	72-128	%	1.00	09/04/2004 09:06	
Toluene-d8	99.4	80-113	%	1.00	09/04/2004 09:06	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Batch QC Report

Prep(s): 5030B Method Blank

Water

Test(s): 8260B QC Batch # 2004/09/02-01.62

MB: 2004/09/02-01.62-002

Date Extracted: 09/02/2004 11:02

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	09/02/2004 11:02	
Benzene	ND	0.5	ug/L	09/02/2004 11:02	
Toluene	ND	0.5	ug/L	09/02/2004 11:02	
Ethylbenzene	ND	0.5	ug/L	09/02/2004 11:02	
Total xylenes	ND	1.0	ug/L	09/02/2004 11:02	
Surrogates(s)]			
1,2-Dichloroethane-d4	102.0	72-128	%	09/02/2004 11:02	
Toluene-d8	102.8	80-113	%	09/02/2004 11:02	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

MB: 2004/09/03-01.64-016

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Batch QC Report

Prep(s): 5030B Method Blank

Water

Test(s): 8260B QC Batch # 2004/09/03-01.64

Date Extracted: 09/03/2004 07:16

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	09/03/2004 07:16	
Benzene	ND	0.5	ug/L	09/03/2004 07:16	
Toluene	ND	0.5	ug/L	09/03/2004 07:16	
Ethylbenzene	ND	0.5	ug/L	09/03/2004 07:16	
Total xylenes	ND	1.0	ug/L	09/03/2004 07:16	
Surrogates(s)					
1,2-Dichloroethane-d4	106.4	72-128	%	09/03/2004 07:16	
Toluene-d8	104.8	80-113	%	09/03/2004 07:16	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Batch QC Report

Prep(s): 5030B

Water

Test(s): 8260B

Method Blank
MB: 2004/09/03-02.62-003

QC Batch # 2004/09/03-02.62

Date Extracted: 09/03/2004 19:03

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	09/03/2004 19:03	
Benzene	ND	0.5	ug/L	09/03/2004 19:03	
Toluene	ND	0.5	ug/L	09/03/2004 19:03	
Ethylbenzene	IND	0.5	ug/L	09/03/2004 19:03	
Total xylenes	ND	1.0	ug/L	09/03/2004 19:03	
Surrogates(s)					
1,2-Dichloroethane-d4	100.8	72-128	%	09/03/2004 19:03	
Toluene-d8	106.2	80-113	%	09/03/2004 19:03	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

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Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Batch QC Report

Prep(s): 5030B

Method Blank

MB: 2004/09/03-02.64-027

Water

Test(s): 8260B

QC Batch # 2004/09/03-02.64

Date Extracted: 09/03/2004 18:27

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	09/03/2004 18:27	
Benzene	ND	0.5	ug/L	09/03/2004 18:27	
Toluene	ND	0.5	ug/L	09/03/2004 18:27	
Ethylbenzene	ND	0.5	ug/L	09/03/2004 18:27	
Total xylenes	ND	1.0	ug/L	09/03/2004 18:27	
Surrogates(s)					
1,2-Dichloroethane-d4	106.4	72-128	%	09/03/2004 18:27	
Toluene-d8	108.4	80-113	%	09/03/2004 18:27	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Batch QC Report

Prep(s): 5030B Method Blank

Water

Test(s): 8260B QC Batch # 2004/09/04-01.62

MB: 2004/09/04-01.62-004

Date Extracted: 09/04/2004 08:04

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	09/04/2004 08:04	
Gasoline	ND	50	ug/L	09/04/2004 08:04	
Benzene	ND	0.5	ug/L	09/04/2004 08:04	
Toluene	ND	0.5	ug/L	09/04/2004 08:04	
Ethylbenzene	ND	0.5	ug/L	09/04/2004 08:04	
Total xylenes	ND	1.0	ug/L	09/04/2004 08:04	
Surrogates(s)					
1,2-Dichloroethane-d4	98.4	72-128	%	09/04/2004 08:04	
Toluene-d8	109.0	80-113	%	09/04/2004 08:04	. =. =.



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

2004/09/02-01.62-043

Water

QC Batch # 2004/09/02-01.62

LCS LCSD 2004/09/02-01.62-040 Extracted: 09/02/2004

Analyzed: 09/02/2004 11:43

Analyzed: 09/02/2004 10:40 Extracted: 09/02/2004

Compound	Conc.	Conc. ug/L		Reco	Recovery %		Ctrl.Limits %		Flags	
Compound	LCS	LCSD		LÇS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene Toluene	25.1 26.9	25.3 25.6	25.0 25.0	100.4 107.6	101.2 102.4	0.8 5.0	69-129 70-130	20 20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	448 549	466 517	500 500	89.6 109.8	93.2 103.4		72-128 80-113			



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2004/09/03-01.64

LCS

2004/09/03-01.64-031

Extracted: 09/03/2004

Analyzed: 09/03/2004 06:31

LCSD 2004/09/03-01.64-053

Extracted: 09/03/2004

Analyzed: 09/03/2004 06:53

Compound	Conc. ug/L		Exp.Conc.	c. Recovery %		RPD	RPD Ctrl.Limits %		Flags	
Compound	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene Toluene	26.8 28.2	25.2 26.9	25.0 25.0	107.2 112.8	100.8 107.6	6.2 4.7	69-129 70-130	20 20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	542 531	542 537	500 500	108.4 106.2	108.4 107.4		72-128 80-113	1 1		



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2004/09/03-02.62

LCS LCSD 2004/09/03-02.62-019 2004/09/03-02.62-041 Extracted: 09/03/2004 Extracted: 09/03/2004 Analyzed: 09/03/2004 18:19 Analyzed: 09/03/2004 18:41

Compound	Conc.	Conc. ug/L		Exp.Conc. Recovery % R		RPD	RPD Ctrl.Limits %			Flags	
0011100110	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD	
Benzene Toluene	22.7 23.8	23.3 25.3	25.0 25.0	90.8 95.2	93.2 101.2	2.6	69-129 70-130	20 20			
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	457 516	451 536	500 500	91.4 103.2	90.2 107.2		72-128 80-113				



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2004/09/03-02.64

LCS

2004/09/03-02.64-042

Extracted: 09/03/2004

Analyzed: 09/03/2004 17:42

LCSD 2004/09/03

2004/09/03-02.64-004

Extracted: 09/03/2004

Analyzed: 09/03/2004 18:04

Compound	Conc.	Conc. ug/L		Exp.Conc. Recovery % RF		RPD	RPD Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene Toluene	23.1 25.5	24.3 25.1	25.0 25.0	92.4 102.0	97.2 100.4	5. 1 1.6	69-129 70-130	20 20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	441 528	515 529	500 500	88.2 105.6	103.0 105.8		72-128 80-113			



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2004/09/04-01.62

LCS

2004/09/04-01.62-020

Extracted: 09/04/2004

Analyzed: 09/04/2004 07:20

LCSD

2004/09/04-01.62-042

Extracted: 09/04/2004

Analyzed: 09/04/2004 07:42

Compound	Conc.	Conc. ug/L		Exp.Conc. Recovery % R		RPD	RPD Ctrl.Limits %			ags
Compound	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene Toluene	23.3 25.2	24.6 26.4	25.0 25.0	93.2 100.8	98.4 105.6	5.4 4.7	69-129 70-130	20 20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	502 520	443 549	500 500	100.4 104.0	88.6 109.8		72-128 80-113			



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS/MSD)

Water

QC Batch # 2004/09/02-01.62

P1W-B1 >> MS

Lab ID:

2004-08-0727 - 003

MS: 2004/09/02-01.62-019

Extracted: 09/02/2004

Analyzed:

09/02/2004 13:19

09/02/2004 13:42

MSD:

2004/09/02-01.62-042

Extracted: 09/02/2004

Dilution:

1.00

Analyzed: Dilution:

1.00

Compound	Conc.	цį	g/L	Spk.Level	R	ecovery	%	Limits	s %	FI	ags
Compound	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	мѕ	MSD
Benzene Toluene	34.9 27.2	35.2 26.6	10.7 0.846	25.0 25.0	96.8 105.4	98.0 103.0	1.2 2.3	69-129 70-130	20 20		
Surrogate(s) 1,2-Dichloroethane-d4 Toluene-d8	478 531	501 510		500 500	95.6 106.1	100.2 102.1		72-128 80-113			



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Legend and Notes

Analysis Flag

Irn

Reporting limits raised due to high level of non-target analyte materials.

0

Reporting limits were raised due to high level of analyte present in the sample.



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Samples Reported

Date Sampled	Matrix	Lab#
08/27/2004	Water	5
08/27/2004	Water	6
08/27/2004	Water	7
08/27/2004	Water	8
08/27/2004	Water	11
08/27/2004	Water	12
	08/27/2004 08/27/2004 08/27/2004 08/27/2004 08/27/2004	08/27/2004 Water 08/27/2004 Water 08/27/2004 Water 08/27/2004 Water 08/27/2004 Water 08/27/2004 Water



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Prep(s):

300.0/9056

Test(s):

300.0/9056

Sample ID: NIW-A1

Lab ID:

2004-08-0727 - 5

Sampled: 08/27/2004

Extracted:

8/27/2004 19:00

Matrix: Water

QC Batch#: 2004/08/27-03.41

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Nitrite	ND	1.0	mg/L	1.00	08/28/2004 12:11	
Nitrate	ND	1.0	mg/L	1.00	08/28/2004 12:11	



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Prep(s):

Compound

300.0/9056

Test(s):

300.0/9056

Dilution

Sample ID: NIW-A2

Lab ID:

2004-08-0727 - 6

Sampled: 08/27/2004

8/27/2004 19:00

Extracted:

QC Batch#: 2004/08/27-03.41

Matrix: Water

Conc.

Unit mg/L

Analyzed 08/28/2004 12:29 Flag

1.00 Nitrite ND 1.0 1.00 08/28/2004 12:29 ND 1.0 Nitrate mg/L

RL



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Prep(s):

300.0/9056

Test(s):

300.0/9056

Sample ID: NIW-B1

Lab ID:

2004-08-0727 - 7

Sampled: 08/27/2004

Extracted:

8/27/2004 19:00

Matrix: Water

QC Batch#: 2004/08/27-03.41

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Nitrite	ND	1.0	mg/L	1.00	08/28/2004 13:05	
Nitrate	30	1.0	mg/L	1.00	08/28/2004 13:05	



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Prep(s):

300.0/9056

Test(s):

300.0/9056

Sample ID: NIW-B2

Lab ID:

2004-08-0727 - 8

Sampled: 08/27/2004

8/27/2004 19:00

Matrix: Water Extracted: QC Batch#: 2004/08/27-03.41

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Nitrite	1.0	1.0	mg/L	1.00	08/28/2004 13:23	
Nitrate	39	1.0	mg/L	1.00	08/28/2004 13:23	



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

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Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Prep(s):

300.0/9056

Test(s):

300.0/9056

Sample ID: NOBS-B1

Lab ID:

2004-08-0727 - 11

Sampled: 08/27/2004

Extracted:

8/27/2004 19:00

Matrix: Water

QC Batch#: 2004/08/27-03.41

[Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
ī	Nitrite	ND	1.0	mg/L	1.00	08/28/2004 12:47	
ı	Nitrate	38	1.0	mg/L	1.00	08/28/2004 12:47	

Tel 925 484 1919 Fax 925 484 1096 * www.stl-inc.com * CA DHS ELAP# 2496



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

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Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Prep(s):

300.0/9056

Test(s):

300.0/9056

Sample ID: MW-4

Lab ID:

2004-08-0727 - 12

Sampled: 08/27/2004

Extracted:

8/27/2004 19:00

Matrix:

Water

QC Batch#: 2004/08/27-03.41

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Nitrite	ND	1.0	mg/L	1.00	08/28/2004 11:17	
Nitrate	ND	1.0	mg/L	1.00	08/28/2004 11:17	



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () ~

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Batch QC Report

Prep(s): 300.0/9056

MB: 2004/08/27-03.41-001

Method Blank

Water

Test(s): 300.0/9056 QC Batch # 2004/08/27-03.41

Date Extracted: 08/27/2004 19:00

Compound	Conc.	RL	Unit	Analyzed	Flag
Nitrite	ND	1.0	mg/L	08/28/2004 10:41	
Nitrate	ND	1.0	_mg/L	08/28/2004 10:41	



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Batch QC Report

Prep(s): 300.0/9056

Test(s): 300.0/9056

Laboratory Control Spike

Water

QC Batch # 2004/08/27-03.41

LCS

2004/08/27-03.41-002

Extracted: 08/27/2004

Analyzed: 08/28/2004 10:41

LCSD

2004/08/27-03.41-003

Extracted: 08/27/2004

Analyzed: 08/28/2004 10:59
Ctrl.Limits % Flags

Compound	Conc.	mg/L	Exp.Conc.	Reco	very %	RPD	Ctrl.Lin	nits %	Flá	ags
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Nitrite Nitrate	19.4 19.6	19.2 19.5	20.0 20.0	97.0 98.0	96.0 97.5	1.0 0.5	80-120 80-120	20 20		



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: () -

Project: 98360

Bohannon

Received: 08/27/2004 15:09

Batch QC Report

Prep(s):

300.0/9056

Matrix Spike (MS/MSD)

Water

QC Batch # 2004/08/27-03.41

MW-4 >> MS

2004/08/27-03.41-004

Extracted: 08/27/2004

Lab ID: Analyzed: 2004-08-0727 - 012 08/28/2004 11:35

Test(s): 300.0/9056

Dilution:

1.00

MS:

MSD: 2004/08/27-03.41-005

Extracted: 08/27/2004

Analyzed:

08/28/2004 11:53

Dilution:

1.00

Compound Nitrite Nitrate	Conc.	mg	/L	Spk.Level	R	ecovery	%	Limits	%	Fl	ags
	мѕ	MSD	Sample	mg/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
1	19.2 19.5	19.3 19.5	ND ND	20.0 20.0	96.0 97.5	96.5 97.5	0.5 0.0	80-120 80-120	20 20		



STL Chicago 2417 Bond Street University Park, IL 60466

Tel: 708 534 5200 Fax: 708 534 5211 www.stl-inc.com

SEVERN TRENT LABORATORIES ANALYTICAL REPORT

JOB NUMBER: 229783

Prepared For:

Severn Trent Laboratories 1220 Quarry Lane Pleasanton, CA 94866-4756

Project: STL San Francisco

Attention: Afsanch Salimpour

Date: 09/07/2004

Signature

Name: Bonnie M. Stadelmann

Title: Project Manager

E-Mail: bstadelmann@stl-inc.com

09/07/04

Dota

STL Chicago 2417 Bond Street

University Park, IL 60466

PHONE: (708) 534-5200 FAX..: (708) 534-5211

This Report Contains (14) Pages

STL Chicago is part of Severn Trent Laboratories, Inc.

SAMPLE IMPORMATION

Data: 09/07/2004

Job Number.: 229783 Customer...: Severn Trent Laboratories

Attn..... Afsaneh Salimpour

Project Number.....: 20002032 Customer Project ID...: 2004-08-0727 Project Description...: STL San Francisco

Laboratory Customer Sample Date j ime Date Time Sampled Received: Received Sample ID Matrix Sampled Sample ID 229783-1 N1W-A1 Water 08/27/2004 12:00 08/31/2004 08:40 08:40 08/31/2004 229783-2 08/27/2004 12:00 N1M-A2 Water 12:00 08:40 229783-3 08/27/2004 08/31/2004 N1W-B1 Water 229783-4 N1W-B2 08/27/2004 12:00 08/31/2004 08:40 Water 08:40 12:00 08/31/2004 229783-5 NDBS-B1 Water 08/27/2004 229783-6 MW-4 Water 08/27/2004 12:00 08/31/2004 08:40

LABORATORY TEST RESULTS

Job Number: 229783

Date: 09/07/2004

CUSTOMER: Severn Trent Laboratories

PROJECTA 2004-08-0727 ATTN: Aféaneh Selimpour

Customer Sample ID: N1W-A1
Date Sampled....: 08/27/2004
Time Sampled....: 12:00
Sample Matrix...: Water

Laboratory Sample ID: 229783-1
Date Received.....: 08/31/2004
Time Received.....: 08:40

EST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	Ŧ
350.2	Nitrogen, Ammonia (Dist./Nessler.) Ammonia(NH3+NH4),as N	779	10	mg/L	09/03/04	mi
351.3	Nitrogen, Total Kjeldahl Nitrogen, Total Kjeldahl as N (TKN)	180	20	mg/l.	09/03/04	m
	,					
				· · · · · · · · · · · · · · · · · · ·		
			•			

^{*} In Description = Dry Wgt.

LABORATORY TEST RESULTS

Job Number: 229783 Date: 09/07/2004

CUSTOMER: Severn Trent Laboratories PROJECT: 2004-08-0727 ATTW: Afsanen Satimpour

PARAMETER/TEST DESCRIPTION

Customer Sample ID: N1W-A2
Date Sampled.....: 08/27/2004
Time Sampled.....: 12:00
Sample Matrix....: Water

TEST METHOD

Laboratory Sample ID: 229783-2 Date Received.....: 08/31/2004 Time Received.....: 08:40

UNITS

DATE

TECH

SAMPLE RESULT REPORTING LIMIT

350.2 Nitrogen, Ammonia (Dist./Nessler.)
Ammonia (NH3+NH4), as N (TKN) 70 10 mg/L 09/03/04 mtb

Nitrogen, Total Kjeldahl Nitrogen, Total Kjeldahl as N (TKN) 180 20 mg/L 09/03/04 mtb

^{*} In Description = Dry Wgt.

RESULIS LABORATORY TEST

Job Number: 229783

Date: 09/07/2004

CUSTOMER: Seven: Trent Laboratonies. PROJECT: 2004-08-0727 ATTN: Afsaneh Satimpour

Customer Sample ID: N1W-B1 Date Sampled....: 08/27/2004 Time Sampled....: 12:00 Sample Matrix....: Water

Laboratory Sample 10: 229783-3 Date Received.....: 08/31/2004

Time Received.....: 08:40

ST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LINIT	UNITS	PATE	ŢΕ
50.2	Nitrogen, Ammonia (Dist./Nessler.) Ammonia(NH3+NH4),as N	3.2	0.20	mg/L	09/03/04	mt
31.3	Nitrogen, Total Kjeldahl Nitrogen, Total Kjeldahl as N (TKN)	4.8	0.80	mg/L	09/03/04	mı
				,		

^{*} In Description = Dry Wgt.

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TEST RESULTS LABORATORY

Job Number: 229783

Date: 09/07/2004

CUSTOMER; Severn Trent Laboratoriés PROJECT: 2004-08-0727

ATTM: Afsaneh Salimpour

Customer Sample ID: N1W-82
Date Sampled....: 08/27/2004

Time Sampled....: 12:00 Sample Matrix....: Water

Laboratory Sample 1D: 229783-4
Date Received.....: 08/31/2004
Time Received.....: 08:40

ST NETROD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	1
350.2	Witrogen, Ammonia (Dist./Nessler.) Ammonia(NH3+NH4),as N	5,7	0.40	mg/L	09/03/04	m
51.3	Nitrogen, Total Kjeldahl Nitrogen, Total Kjeldahl as N (TKN)	10	2.0	mg/L	09/03/04	П
		:				
a						
					{ ! !	

^{*} In Description = Dry Wgt.

LABORATORY RESULTS TEST

Job Number: 229783

Date: 09/07/2004

PROJECT: 2004-08-0727 ATTN: Afsaneh Salimpour CUSTOMER: Severn Trent Laboratories

Customer Sample ID: NDBS-B1 Date Sampled....: 08/27/2004
Jime Sampled....: 12:00
Sample Matrix....: Water Laboratory Sample ID: 229783-5 Date Received....: 08/31/2004 Time Received....: 08:40

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
350.2	Nîtrogen, Ammonia (Dist./Nessler.) Ammonia(NH3+NH4),as N	<0.20	0.20	mg/L	09/03/04	mtb
351.3	Nîtrogen, Total Kjeldahl Nîtrogen, Total Kjeldahl as N (TKN)	3.7	0.40	mg/L	09/03/04	mtb
		ì				
					,	
					;	
		;				
				ì		

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LABORATORY TEST RESULTS

Job Number: 229783 Date: 09/07/2004

CUSTOMER) Severn Trent Laboratories PROJECT: 2004-08-0727: ATTN: Afsanch Selimpout

Customer Sample ID: HW-4
Date Sampled.....: 08/27/2004

Time Sampled....: 12:00 Sample Matrix...: Water Laboratory Sample ID: 229783-6 Date Received.....: 08/31/2004 Time Received.....: 08:40

350.2 351.3	Nitrogen, Ammonia (Dist./Nessler.) Ammonia(NH3+NH4),as N Nitrogen, Total Kjeldahl	<0.20	0.20			Γ
51.3	 Witrogen, Total Kjeldahl		0.20	mg/L	09/03/04	m
	witrogen, Total Kjeldahl Nitrogen, Total Kjeldahl as N (TKN)	<0.40	0.40	mg/L	09/03/04	, m
				•		
				ii		

Job	Number: 229783	LABORATOR	ү сн	RONI	CLE	Dete:	09/07/2004		
CUSTOMER: Severn	Trent Laboratories	PROJE	7: 2004×0	28+0727	es e protechence de glas en el companyon de companyon de companyon de companyon de companyon	esta monarcia esta en francia gante a esta esta esta esta gante a esta esta esta esta esta gante a esta esta esta esta esta gante esta esta esta esta esta esta esta es	ATTW: Afsameh	Selimpou	
Lab ID; 229783-1	•						e Date: 08/27/2		
METHOD	DESCRIPTION		RUN#		PREP BT	* (\$)			DILUTION
350.2	Nitrogen, Ammonia (Dist./	Nessier.)	1		128088		09/03/2004	1403	50 50
	Nitrogen, Total Kjeldahl		1	128091	128091		09/03/2004	1440	5U
PKG INO (NC)	PKG INO (WET CHEMISTRY)		1						
Leb ID: 229783-2	Client ID: N1W-A2		Date Re	ervd: 08.	/31/2004	Sample	e Date: 08/27/2	004	
METHOD	DESCRIPTION				PREP BT		DATE/TIME AL		DILUTION
350.2	Nitrogen, Ammonia (Dist./	Weecler 1	1		128088	2(0)	09/03/2004	1403	50
351.3	Mitrogen, Total Kjeldehl		í		128091		09/03/2004		50
33113	recognition of the second		•	120077			***, ***, = ** * *		
Lab 10: 229783-3	Client ID: N1W-B1		Date Re	ecvd; 08;	/31/2004	Sample	e Date: 08/27/2	004	
METHOD	DESCRIPTION		RUN#	BATCH#	PREP BT		DATE/TIME A		DILUTION
350.2	Nitrogen, Ammonia (Dist./	Nessler.)	1	128088	128088		09/03/2004	1404	
351.3	Nitrogen, Total Kjeldahl	•	1	128091	128091		09/03/2004	1451	2
	ALCOHOLDS MAIL AT		D. A. D.		/7 1 / hnn/	D1	- N-+ 09/27/2/	nn/	
Lab ID: 229783-4					/31/2004 PREP BT		Date: 08/27/20 DATE/TIME AL		DILUTION
METHOD	DESCRIPTION	Hannian 3	KUN#		128088	#(2)	09/03/2004	1405	2
350.2	Nitrogen, Ammonia (Dist./	NCSS(GF.)	ļ		128091			1452	5
351-3	Nitrogen, Total Kjeldehl		1	IEDUAI	ICOUYI		09/03/2004	1432	3
1 sh In- 220783-5	Client (D: NDBS-B1		Date Re	ecvd- AA.	/31/2004	Sample	Date: 08/27/26	004	
METHOD	DESCRIPTION				PREP BT				DILUTION
350-2	Nitrogen, Ammonia (Dist./	Neggler \	1		128088		09/03/2004		
351.3	Nitrogen, Total Kieldahl	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	i		128091		09/03/2004		
W-7 14W	t. again, rotal njeladni		'				***, ***, *** *		
Lab 10: 229783-6	Client ID: MW-4		Date Re	cvd: 08	/31/2004	Sample	: Date: 08/27/20	004	
METHOD	DESCRIPTION				PREP BT				DILUTION
350.2	Nitrogen, Ammonia (Dist./	Nessler.)	1		128088	•	09/03/2004	1407	
351.3	Nitrogen, Total Kjeldahl	r	i	128091	128091		09/03/2004	1454	
	<u> </u>								

Jab Number.: 229783 QUALITY CONTROL RESULTS Report Date.: 09/07/2004 CUSTOMER: Severn Trent Laboratories PROJECT: 2004:08:0727 ATTH: Afsanch Salimpour

) N P	est Method. ethod Descr arameter	iptionNi	id.2 Trogen, Am Monia(NH3+	monia (Dist./Nes NH4),es N	isfer.)	Batch Equipment Coc	E.	128088 SPEC1		Control of the contro		Anelyst. Test Code	,; mtb ,; NH3	Sign region of the second second of the second second open second second open second second open second second open second second open second second second open second second second open second second second open second second second open second second second second open second second second second open second second second second second open second second second second second second open second second second second second second second second open second seco
ec ec	iab ID	Reagent	Units	QC Result	OC Result	True Value	Orig.	Value	QC Calc.		*	Limits	Date	Tin
MB LCS	128088-004 mg/L 0.13000 U 128088-005 I04HSTTK2 mg/L 2.33900		2.50000			94		x	80-120	09/03/2004 09/03/2004				
l M	ethoc Descr	iption.: Ni	trogen, To	tal Kjeldahl tal Kjeldahl as	n (jkn)	BatchEguipment Coc		128091 SPEC1	And the digital of the distance of the distanc			Analyst Test Code	. mtb .: TRN	Autor House Let in District Let in London Signature House Let London Let
DÇ.	Lab 18	Reagent	Units	QC Result	QC Result	True Value			QC Calc.		*	Limits	Date	Tim
MB LCS MS	229783-1	104HSTTK2 104HSTTK2 104HSTTK2	mg/L mg/L mg/L mg/L	0.18000 U 2.74800 184.15000 170.05000	184.15000	2,50000 125,00000 125,00000	183 .	.18000 U .90000	110 10 -554	4 4	 * * *	80-120 75-125 75-125	09/03/2004 09/03/2004 09/03/2004 09/03/2004	144 144

DUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 69/07/2004

REPORT COMMENTS

- 1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
- 2) Soil, sediment and sludge sample results are reported on a "dry weight" basis except when analyzed for landfill disposal or incineration parameters. All other solid matrix samples are reported on an "as received" basis unless noted differently.
- Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
- 4) The test results for the noted analytical method(s) meet the requirements of NELAC. Lab Cert. ID# 100201
- 5) According to 40CFR Part 136.3, pH, Chlorina Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

Glossary of flags, qualifiers and abbreviations (any number of which may appear in the report) Inorganic Qualifiers (Q-Column)

- Analyte was not detected at or above the stated limit.
- Not detected at or above the reporting limit.
- Result is less than the RL, but greater than or equal to the method detection limit.
- Result is less than the CRDL/RL, but greater than or equal to the IDL/MDL. В
- Result was determined by the Method of Standard Additions.
- AFCEE: Result is less than the RL, but greater than or equal to the method detection limit. Inorganic Flags (Flag Column)
- ICV,CCV,ICB,CCB,ISA,ISB,CRI,CRA,MRL: Instrument related QC exceed the upper or lower control limits.
- LCS, LCD, MD: Batch QC exceeds the upper or lower control limits.
- MSA correlation coefficient is less than 0.995.
- MS, MSD: The analyte present in the original sample is 4 times greater
- than the matrix spike concentration; therefore, control limits are not applicable.
- SD: Serial dilution exceeds the control limits.
- MB, EB1, EB2, E83: Batch QC is greater than reporting limit or had a
- negative instrument reading lower than the absolute value of the reporting limit.
- MS, MSD: Spike recovery exceeds the upper or lower control limits.
- AS(GFAA) Post-digestion spike was outside 85-115% control limits.
- Organic Qualifiers (Q Column)
- Analyte was not detected at or above the stated limit.
- ND Compound not detected.
- Result is an estimated value below the reporting limit or a tentatively J identified compound (TIC).
 - Result was qualitatively confirmed, but not quantified.
- Pesticide identification was confirmed by GC/MS.
- The chromatographic response resembles a typical fuel pattern.
- The chromatographic response does not resemble a typical fuel pattern.
- Result exceeded calibration range, secondary dilution required.
- AFGEE:Result is an estimated value below the reporting limit or a tentatively identified compound (TIC) Organic Flags (Flags Column)
- MB: Batch QC is greater than reporting limit.
- LCS, LCD, ELC, ELD, CV, MS, MSD, Surrogate: Batch QC exceeds the upper or lower control limits. EB1, EB2, EB3, MLE: Batch QC is greater than reporting Limit
- Concentration exceeds the instrument calibration range A
- Concentration is below the method Reporting Limit (RL)
- В Compound was found in the blank and sample.
- Surrogate or matrix spike recoveries were not
- obtained because the extract was diluted for
 - analysis; also compounds analyzed at a dilution will be flagged with a D.
- Н Alternate peak selection upon analytical review
- Indicates the presence of an interfence, recovery is not calculated.
- М Manually integrated compound.
- The lower of the two values is reported when the % difference between the results of two GC columns is

QUALITY ASSURANCE NETHODS: REFERENCES AND MOTES

Report Date: 09/07/2004

```
greater than 25%.
Abbreviations
         Post Digestion Spike (GFAA Samples - See Note 1 below)
AS
         Designation given to identify a specific extraction, digestion, preparation set, or analysis set
Betch
CAP
         Capillary Column CCB Continuing Calibration Blank
CCV
         Continuing Calibration Verification
         Confirmation analysis of original
CF
C1
         Confirmation analysis of A1 or D1
         Confirmation analysis of A2 or D2
€2
         Confirmation analysis of A3 or D3
с3
CRA
         Low Level Standard Check - GFAA; Mercury
         Low Level Standard Check - ICP
CRI
         Calibration Verification Standard
CV
         Dilution Factor - Secondary dilution analysis
Dil Fac
         Dilution 1
DΖ
         Dilution 2
03
         Dilution 3
DLFac
         Detection Limit Factor
DSH
         Distilled Standard - High Level
         Distilled Standard - Low Level
DSL
         Distilled Standard - Medium Level
DSM
         Extraction Blank 1
EB1
E82
         Extraction Blank 2
         DI Blank
F93
         Method Extracted LCS
ELC
ELD
         Method Extracted LCD
ICAL
         Initial calibration
         Initial Calibration Blank
ICB
1 CV
         Initial Calibration Verification
IDL
         Instrument Detection Limit
         Interference Check Sample A - ICAP
ISA
         Interference Check Sample B - ICAP
J SB
         The first six digits of the sample ID which refers to a specific client, project and sample group
Job No.
         Lab 10 An 8 number unique Laboratory identification
LCD
         Laboratory Control Standard Duplicate
         Laboratory Control Standard with reagent grade water or a matrix free from the enalyte of interest
LCS
MB
         Nethod Blank or (PB) Preparation Blank
MD
         Mcthod Duplicate
MDL
         Method Detection Limit
MLE
         Medium Level Extraction Blank
MRL
         Method Reporting Limit Standard
         Method of Standard Additions
MSA
         Matrix Spike
MS
MSD
         Matrix Spike Duplicate
         Not Detected
PREPF
         Preparation factor used by the Laboratory's Information Management System (LIMS)
PDS
         Post Digestion Spike (ICAP)
         Re-analysis of original
RA
A1
         Re-enalysis of D1
A2
         Re-analysis of D2
A3
         Re-analysis of D3
RD
         Re-extraction of dilution
RÉ
         Re-extraction of original
         Re-extraction Confirmation
RÇ
RŁ
         Reporting Limit
         Relative Percent Difference of duplicate (unrounded) enalyses
RPD
RRF
         Relative Response Factor
RŢ
         Retention Time
```

QUALITY ASSURANCE HETHODS REFERENCES AND NOTES

Report Date: 09/07/2004

Retention Time Window Sample ID A 9 digit number unique for each sample, the first RTW six digits are referred as the job number Seeded Control Blank \$CB Serial Dilution (Calculated when sample concentration exceeds 50 times the MDL) SD UCB Unseeded Control Blank Second Source Verification Standard SSV Solid Laboratory Control Standard(LCS) SLCS pH Calibration Check LCSP pH Laboratory Control Sample PHC pH Laboratory Control Sample Duplicate LCDP HOPH pH Sample Duplicate MDFP Flashpoint Sample Duplicate Flashpoint LCS LCFP Getex Check Standard Range D-1 G1 **G**2 Gelex Check Standard Range 1-10 Gelex Check Standard Range 10-100 **63** Gelex Check Standard Range 100-1000 Note 1: The Post Spike Designation on Batch QC for GFAA is designated with an "S" added to the current abbreviation used. EX. LCS S=LCS Post Spike (GFAA); MSS=MS Post Spike (GFAA) Note 2: The MD calculates an absolute difference (Å) when the sample concentration is less than 5 times the reporting limit. The control limit is represented as +/- the RL.

Date Shipped: 8/27/2004

SEVERN STL

Chain of Custody

2004-08-0727 - 1

From:

STL San Francisco (CL) 1220 Quarry Lane

Pleasanton, CA 94566-4756

To:

STL Chicago

2417 Bond Street

University Park, IL 60466

Project Manager:

CL Submission #:

(925) 484-1919

Afsaneh Salimpour

Ext: 107

Phone: Fax:

Phone:

(708) 534-5200 (708) 534-5211

(708) 534-5200

Ext:

Fax:

(925) 484-1096

Contact: Bonnie

■ Stadelmann

Ext: 154

Email:

Phone:

asalimpour@stl-inc.com 2004-08-0727

Project #:

98360

Rohandon

CL PO #:			roject Name:			
						/
	H					
N1W-A1	5	8/27/2004	12:00:00AM	Water		
Subcontract - Ammonia	•			350,3	5	Day
Subcontract - Total Kjeldahl Nitrogen				351.4	5	Day
N1W-A2	6	8/27/2004	12:00:00AM	Water		
Subcontract - Ammonia				350.3	6	Day
Subcontract - Total Kjeldahl Nitrogen				351.4	5	Day
N1W-B1	7	8/27/2004	12:00:00AM	Water		
Subcontract - Ammonia	· · · · · · · · · · · · · · · · · · ·			350.3	. 5	Day
Subcontract - Total Kjeldahl Nitrogen				351.4	5	Day
N1W-B2	8	8/27/2004	12:00:00AM	Water		
Subcontract - Ammonia				350.3	5	Day
Subcontract - Total Kjeldahi Nitrogen				351.4	5	Day
NDBS-B1	11	8/27/2004	12:00:00AM	Water		
Subconfract - Ammonia				350.3	5	Day
Subcontract - Total Kjeldahl Nitrogen				351.4	5	Day
MVV-4	12	8/27/2004	12:00:00AM	Water		
Subcontract - Ammonia				350.3	5	Day
Subcontract - Total Kjeldahl Nitrogen				351.4	5	Day

RELINQUISHED BY	7 1320
Printed Name	7/30/04
5765/F Company	
RECEIVED BY:	1.
RECEIVED BY:	1. Time 8840
	1. Time 840 Date 8(31 04

KETINGOISHED BA:		2.
Signature	Time	
Printed Name	Date	
Сотрапу		
RECEIVED BY:		2,
Signature	Time	
Printed Name	Date	

RELINQUISHED BY:	_	3.
Signature	Time	~
Printed Name	Date	- *
Company		
RECEIVED BY:	· · · · · · · · · · · · · · · · · · ·	3.
RECEIVED BY: Signature	Time	3.
	Time Dale	3.



Chain of Custody

Date Shipped: 8/27/2004

2004-08-0727 - 1

From:		То:	
STL San Francisco (CL) 1220 Quarry Lane Pleasanton, CA 94566-4756		STL Chicago 2417 Bond Street University Park, IL 60466	
Project Manager: Phone: (925) 484-1919	Afsaneh Salimpour Ext: 107	Phone: (708) 534-5200 Fax: (708) 534-6211	Ext
Fax: Email:	(925) 484-1096 asalimpour@stl-inc.com	Contect: Bonnie Phone: (708) 534-5200	Stadelmann Ext; 154
CL Submission #; CL PO #:	2004-08-0727	Project #: 98360 Project Name: Bohannor	
Chair Sangle ID			
was series as and market as a series in the market			
RELINOISHED BY	1. RELINQUISHED BY:	2. RELINQUISHED E	eY; 3.

Stignature Time U.F. Tool of 7/3c/47 Printed Name Date	Signature Printed Name	Time Date	Signature Printed Name	Time Date
STL-SF Company	Company	<u>, </u>	Company	
REÇEIVED BY: 1.	RECEIVED BY:	2	RECEIVED BY:	3.
Signature X Time 0840	Signature	Time	Signature	Time
Printed Name Date 8 31 69	Printed Name	Date	Printed Name	Dạte
Company	Company		Company	

STL San Francisco Chain of Custody 1220 Quarry Lane • Pleasanton CA 94566-4756

Reference #: 90439

Company

571 Phone: (925) 484-1919 • Fax: (925) 484-1096 Email: sflogin@stl-inc.com Date 8/27/24 Page 1 of Z Analysis Request Whate williams 608 608 Company: CFT-Globe.1 Low Level Metals by EPA 200.8/6020 (ICP-MS): Metals; ☐ Lead ☐ LUFT ☐ RCRA ☐ Other: Hexavalent Chromium pH (24h hold time for H₂O) OSO, BONOS (Address: 111 Occios Saite 195 John Withersen NHY ARMONE Phone: W.E.T (STLC) TCLP Bill To: Sampled By: Wyrkwikani Allie Medic Willer Phone: Sample ID Date Time PIW-Ai BIZZIN PIW-AZ 乂 PIW-BI X PIW-B3 N 1A-win \mathcal{F} Ø 124-WIG × **پر** NIW-KI × NIW-BE X ∞ POBS-A1 Ø DORS-BI X Project Info. Sample Receipt 1) Relinquished by: 3:09(p/4) Relinquished by: 3) Relinguished by: 6/27/34 Project Name: # of Containers: Signature Time. Signature Project#: Mark williams Head Space: Printed Name Printed Name PO#: Date Printed Name Temp: Date Credit Card#: Сотрапу Company Company 2) Received by: 3) Received by: Other: Report: 🗆 Routine 🗆 Level 3 🗆 Level 4 🗀 EDD 🗀 State Tank Fund EDF Signature Time Signature Special Instructions / Comments: Printed Name Date Printed Name Date

STL San Francisco Chain of Custody

1220 Quarry Lane • Pleasanton CA 94566-4756

Rev 10/03

Reference #: 90439

Date 812101 Page 7 of 2 2004: 08 • 072 Femail: sflogin@stl-inc.com Report To Analysis Request Attn: Fuel Tests EPA 8260B: □ Gas □ BTEX □ Five Oxyenates □ DCA, EDB □ Ethanol 608 608 Low Level Metals by EPA 200.8/6020 (ICP-MS): Metals: ☐ Lead ☐ LUFT ☐ RCRA ☐ Other: Hexavalent Chromium pH (24h hold time for H₂O) Alkalinity TDS 🗆 Company: OSO, BNO3 1 TEPH EPA 8015M □ Silica G □ Diesel □ Motor Oil □ Other Purgeable Halocarbons (HVOCs) EPA 8021 by 8260B Aromatics . - 🖂 8021 🖒 82608 Ammoric .8081 8082 Address: Number of Containers Phone: Email: W.E.T (STLC) TCLP EPA (Spec Cond. TSS Oil and Grease (EPA 1664) Bill To: Sampled By: ភ្ល Semivolatiles (☐ EPA 8270 Pesticides PCBs TPH EPA -**X**JGas w/ ŝ Attn: Phone: CAM1 (EPA Sample ID Date Time 8127/44 X NOBS- SI X mw-4 mw-3 MW-1 S 1) Relinguished by: 2) Relinquished by: 3) Relinquished by: Project Info. Sample Receipt # of Containers: Project Name: Signature Signature Time Signature Time Markunziam BIZ7/W Project#: Head Space: Printed Name Printed Name Date Printed Name Date PO#: Temp: Credit Card#: Company Company Conforms to record: Company 2) Received by: 3) Received by: 5 72h 48h 24h Other: Day Signature Time Signature Time Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ State Tank Fund EDF Special Instructions / Comments: ☐ Global ID Printed Name Date Printed Name Date Company Company

SEVERN	CTI
THE RIVER	DIL

STL San Francisco

STL San Francisco	Sample Receipt Cl	necklist	/2
Submission #:2004	0727	,	
Checklist completed by: (initials)	Date: 8 127 104		
Courier name: 🗆 STL San Francisco 🕊 Cli	nt		Not
Custody seals intact on shipping container/s	amples	Yes	No Present
Chain of custody present?			Yes No
Chain of custody signed when relinquished a	nd received?		Yes No
Chain of custody agrees with sample labels'			Yes No
Samples in proper container/bottle?			YesNo
Sample containers intact?			YesNo
Sufficient sample volume for indicated test?			YesNo
All samples received within holding time?			Yes No
Container/Temp Blank temperature in comp Potential reason for > 6°C - Ice melted □ ↓ li Sampled < 4hr ago ★ lice not required (e	e in bags □ Not enough ice □	Not enough blue ice □ Sai	°C Yes
Water - VOA vials have zero headspace?		No VOA vials submitted_	Yes No
(if bubble is present, refer to approximate bu	oble size and itemize in comment	s as S (small ~O), M (medium	$\sim O) \text{ or L (large } \sim O)$
Water - pH acceptable upon receipt? □	′es □ No		
□ pH adjusted— Preservative used: □	HNO3 ☐ HCI ☐ H2SO4 ☐ NaOH ☐	I ZnOAc –Lot #(s)	
For any item check-listed "No", provide Comments: To DISC. Cot ID: 1			3 - VSING POCES
u:	POBS-B2	V : POBS-;	2B- V
2) DID NOT REA	EIVE YOML VIA	965 FOR MW-	·/
Project Management [Routing			<u> </u>
Project Manager: (initials) [ate:/04	Client contacted: Yes	□ No
•	Bishould be	orand on	NICRE-RI
Not Presh	lod inc. 1	NW-1	
- 1402 XIMY	The state of the s		· · · · · · · · · · · · · · · · · · ·
Corrective Action (per PM/Client):		Carrier Carrie	

2004-08-0727-CHECKLIST AIR BUBBLES

RTY DESC PIW-AI I VIAL WAINY AIR BUBBLE PIW-AZ 2/ SMALL -B1 2/ SMALL V-B3 1/ SMALL 2/ MEDIUM - 3/SMALL OF /TINY NIW-AI - 1/LARGE & /TIM - 3/SMALL & /MEDIUM -B1 -BZ- 1/MED. 4 /TINY 1/Lg, 2 SMALL 0 1/110 68/27 POBS - AI I/MED, - BI THIS MALL & VMED NDBS-BI 1/ Small & 1/MED. MW4 -3/SMALL & VMED. MW3-3 SMALL P0B5-B2



Engineering and Fire Investigations

November 03, 2004

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Attn.:

Mark Williams

Site:

San Lorenzo, CA

Abaneh. Salinger

Dear Mr. Williams,

Attached is our report for your samples received on 10/22/2004 17:16

This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 12/06/2004 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: asalimpour@stl-inc.com

Sincerely,

Afsaneh Salimpour Project Manager



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project:

Received: 10/22/2004 17:16

Site: San Lorenzo, CA

Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
PRODUCT	10/22/2004 16:30	Water	1



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project:

Received: 10/22/2004 17:16

Site: San Lorenzo,CA

Prep(s):

300.0/9056

Test(s):

300.0/9056

Sample ID: PRODUCT

Lab ID:

2004-10-0728 - 1

Sampled: 10/22/2004 16:30

Extracted:

10/23/2004 10:14

Matrix: Water

QC Batch#: 2004/10/23-01.41

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Nitrite	ND	100	mg/L	100.00	10/25/2004 20:36	L4
Nitrate	ND	1.0	mg/L	1.00	10/23/2004 10:14	



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project:

Received: 10/22/2004 17:16

Site: San Lorenzo, CA

Batch QC Report

Prep(s): 300.0/9056 Method Blank

Water

Test(s): 300.0/9056 QC Batch # 2004/10/23-01.41

MB: 2004/10/23-01.41-001

Date Extracted: 10/23/2004 21:22

Compound	Conc.	RL	Unit	Analyzed	Flag
Nitrite	ND	1.0	mg/L	10/23/2004 09:22	
Nitrate	ND	1.0	mg/L	10/23/2004 09:22	



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project:

Received: 10/22/2004 17:16

Site: San Lorenzo, CA

Batch QC Report

Prep(s): 300.0/9056

Test(s): 300.0/9056

Laboratory Control Spike

Water

QC Batch # 2004/10/23-01.41

LCS LCSD 2004/10/23-01.41-002 2004/10/23-01.41-003 Extracted: 10/23/2004 Extracted: 10/23/2004 Analyzed: 10/23/2004 21:39 Analyzed: 10/23/2004 21:57

Compound	Conc.	mg/L	Exp.Conc.	Recov	ery %	RPD	Ctrl.Lim	Ctrl.Limits %		ags
Compound	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Nitrite Nitrate	19.4 19.7	19.5 19.7	20.0 20.0	97.0 98.5	97.5 98.5	0.5 0.0	80-120 80-120	20 20	_	

Page 4 of 6



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project:

Received: 10/22/2004 17:16

Site: San Lorenzo, CA

Batch QC Report

Prep(s):

300.0/9056

Test(s): 300.0/9056

Matrix Spike (MS/MSD)

Water

QC Batch # 2004/10/23-01.41

MS/MSD

Lab ID:

2004-10-0472 - 001

MS:

2004/10/23-01.41-004

Extracted: 10/24/2004

Analyzed:

10/24/2004 01:10

Dilution:

1.00

MSD:

2004/10/23-01.41-005

Extracted: 10/25/2004

Analyzed:

10/25/2004 00:52

Dilution:

1.00

Compound	Сопс.	m	g/L	Spk.Level	R	ecovery	%	Limits	%	Fi	ags
Compound	MS	MSD	Sample	mg/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Nitrite Nitrate	21.1 19.7	21.2 20.0	ND ND	20.0 20.0	105.5 98.5	106.0 100.0	0.0 0.0	80-120 80-120	20 20		



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project:

Received: 10/22/2004 17:16

Site: San Lorenzo, CA

Legend and Notes

Result Flag

L4

Reporting limits were raised due to matrix interference.



STL Chicago 2417 Bond Street University Park, IL 60466

Tel: 708 534 5200 Fax: 708 534 5211 www.stl-inc.com

SEVERN TRENT LABORATORIES ANALYTICAL REPORT

JOB NUMBER: 231373

Prepared For

Severn Trent Laboratories 1220 Quarry Lane Pleasanton, CA 94566 4756

Project: STL San Francisco

Attention: Afsaneh Salimpour

Date: 11/01/2004

Signature

Name: Bonnie M. Stadelmann

Title: Project Manager

E-Mail: bstadelmann@stl-inc.com

Date Molos

STL Chicago

2417 Bond Street

University Park, IL 60466

PHONE: (708) 534-5200 FAX..: (708) 534-5211

This Report Contains (

8

Pages

STL Chicago is part of Severn Trent Laboratories, Inc.

SAMPLE INFORMATION

Date: 11/01/2004

Job Number.: 231373

Customer...: Severn Trent Laboratories Attn.....: Afsaneh Salimpour

Project Number.....: 20002032 Customer Project 10...: 2004-10-0728 Project Description...: STL San Francisco

Laboratory Sample ID	Customer Sample ID	Sample Metrix	Date Sampled	Time Sampled	Date Received	ine Received
231373-1	PRODUCT	Water	10/22/2004	16:30	10/26/2004	09:00
:						
					i	
				,		
·				}		

STL Chicago is part of Severn Trent Laboratories, Inc.

TEST RESULTS LABORATORY

Date: 11/01/2004 Job Number: 231373

ATTN: Afsaneh Salimpout CUSTOMER: Severn Trent Laboratories PROJECT: 2004:10:0728

Customer Sample ID: PRODUCT Date Sampled....: 10/22/2004 Time Sampled....: 16:30 Sample Matrix....: Water

Laboratory Sample ID: 231373-1 Date Received.....: 10/26/2004 Time Received.....: 09:00

Nitrogen, Ammonia (Dist./Nessler.) Ammonia (MH5+NH4), as N 220 20 mg/L 351.3 Nitrogen, Total Kjeldahl as N (TKN) 520 80 mg/L	10/39/04 ms
Nitrogen, Total Kjeldahl as N (TKN) 520 80 mg/L	10/29/04 m

SIL Chicago is part of Severn Trent Laboratories, Inc.

Job	Number: 231373	LABORATO	RY CHI	C N 1	CLE	Date: 1	1/01/2004		
JSTOMER: Severo	Frent Laboratories	PRO L	EDT: 2004+1)-0728			TTN: Afsameh S	ial impour	
ab IO: 231373-1 NETHOD 350.2 351.3 PKG INO (VC)	Client ID: PRODUCT DESCRIPTION Witrogen, Ammonia (Dist Witrogen, Total Kjeldah PKG INO (WET CHEMISTRY)	11	Date Re RUN# 1 1 1	BATCH# 132718	26/2004 PREP BT 132718 132625	#(S)	Date: 10/22/20 DATE/TINE AF 10/30/2004 10/29/2004	004 NALYZED 1046 0858	DILUTIO 100 200

QUALITY CONTROL RESULTS

Jab Number.: 231373

Report Date.: 11/01/2004

Ta Me	st Met thod D	hod. esc	ption,: Ni	D.2 trogen, Amn	ion (a	(Dist./Nes	slei	Control of the Contro	Batch. Equipm	ent Cod		132718 \$PEC1		generalisation di sino			Analyst Test Code	.: mtb .: NH3	
P) C	ramete Lab I		Reagent	monia(NH3≇K Units		s N Result		Result		Value		Value		Calc.		*	Limits	Date	Τíπ
B CS	132718	-004 -005	104HSTTK2	mg/L mg/L mg/L		0.13000 U 2.40000 0.13000 U			2	2.50000		.13000 L	1 9	96		 *	80-120	10/30/2004 10/30/2004 10/30/2004	102
Te Mo	et Met thed D	hod. eser		1.3 trogen, Tol	al K	eldent eldent as	V	ERN'S	Batch. Equipm	ient Cod	ery Loi	132625 SPEC1		And the second of the second o	Property of the control of the contr	Acceptants of the control of the con	Ahalystı Test Code	y/ Mtb	Control of the contro
	Lab I		Reagent	Ųnits		Result		Result		Value		Value		Calc.	_	*	Limits	Date	Tír
B C5	132625 132625		104HSTTK2	mg/L mg/L		0.18000 U 2.52600				.50000		.18000 U	10	1		*	80-120	10/29/2004 10/29/2004	

QUALLIY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 11/01/2004

REPORT COMMENTS

1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

 Soil, sediment and sludge sample results are reported on a "dry weight" basis except when analyzed for landfill disposal or incineration parameters. All other solid matrix samples are reported on an "as received" basis unless noted differently.

3) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable,

4) The test results for the noted analytical method(s) meet the requirements of NELAC. Lab Cert. ID# 100201 5) According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g.

pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt. Glossary of flags, qualifiers and abbreviations (any number of which may appear in the report)

Inorganic Qualifiers (Q-Column)

U Analyte was not detected at or above the stated limit.

Not detected at or above the reporting limit.

J Result is less than the RL, but greater than or equal to the method detection limit.

B Result is less than the CRDL/RL, but greater than or equal to the IDL/MDL.

S Result was determined by the Method of Standard Additions.

F AFCEE: Result is less than the RL, but greater than or equal to the method detection limit.

Inorganic flags (Flag Column)

1CV,CCV,ICB,CCB,ISA,ISB,CRI,CRA,MRL: Instrument related QC exceed the upper or lower control limits.

LCS, LCD, MD: Batch QC exceeds the upper or lower control limits.

MSA correlation coefficient is less than 0.995.

4 MS. MSD: The analyte present in the original sample is 4 times greater

than the matrix spike concentration; therefore, control limits are not applicable.

E SD: Serial dilution exceeds the control limits.

MB, EB1, EB2, EB3: Batch QC is greater than reporting limit or had a

negative instrument reading lower than the absolute value of the reporting limit.

N MS, MSD: Spike recovery exceeds the upper or lower control limits.

AS(GFAA) Post-digestion spike was outside 85-115% control limits.

Organic Qualifiers (Q - Column)

Analyte was not detected at or above the stated limit.

ND Compound not detected.

Result is an estimated value below the reporting limit or a tentatively

identified compound (TIC).

Q Result was qualitatively confirmed, but not quantified.

C Pesticide identification was confirmed by GC/MS.

Y The chromatographic response resembles a typical fuel pattern.

The chromatographic response does not resemble a typical fuel pattern.

E Result exceeded calibration range, secondary dilution required.

F AFCEE:Result is an estimated value below the reporting limit or a tentatively identified compound (TIC) Organic Flags (Flags Column)

B MB: Batch QC is greater than reporting limit.

LCS, LCD, ELC, ELD, CV, MS, MSD, Surrogate: Betch QC exceeds the upper or lower control limits.

* EB1, EB2, EB3, MLE: Batch QC is greater than reporting Limit

A Concentration exceeds the instrument calibration range

Concentration is below the method Reporting Limit (RL)

8 Compound was found in the blank and sample.

Surrogate or matrix spike recoveries were not obtained because the extract was diluted for

analysis; also compounds analyzed at a dilution will be flagged with a D.

H Alternate peak selection upon analytical review

Indicates the presence of an interfence, recovery is not calculated.

M Manually integrated compound.

The lower of the two values is reported when the % difference between the results of two GC columns is

OUALITY ASSURANCE METHODS REFERENCES AND NOTES

Report Date: 13/01/2004

```
greater than 25%.
Abbreviations
2A
         Post Digestion Spike (GFAA Samples - See Note 1 below)
         Designation given to identify a specific extraction, digestion, preparation set, or analysis set
Batch
         Capillary Column CCB Continuing Calibration Blank
CAP
CCV
         Continuing Calibration Verification
         Confirmation analysis of original
CF
         Confirmation analysis of A1 or D1
c1
Ċ2
         Confirmation analysis of A2 or D2
         Confirmation analysis of A3 or D3
С3
         Low Level Standard Check - GFAA; Nercury
CRA
         Low Level Standard Check - ICP
CRI
         Calibration Verification Standard
CV
Dil Fac Dilution Factor - Secondary dilution enalysis
D1
         Dilution 1
02
         Dilution 2
         Dilution 3
D3
DLFac
         Detection Limit Factor
         Distilled Standard - High Level
DSH
         Distilled Standard - Low Level
DSL
DSM
         Distilled Standard - Medium Level
         Extraction Blank 1
EB1
         Extraction Blank 2
EB2
EB3
         DI Blank
         Method Extracted LCS
ELC
ELD
         Method Extracted LCD
         Initial calibration
ICAL
         Initial Calibration Blank
ICB
ICV
         Initial Calibration Verification
IDL
         Instrument Detection Limit
         Interference Check Sample A - ICAP
ISA
         Interference Check Sample B - ICAP
I SB
         The first six digits of the sample ID which refers to a specific client, project and sample group
Job No.
         Lab ID An B number unique laboratory identification
LCD
         Laboratory Control Standard Duplicate
         Laboratory Control Standard with reagent grade water or a matrix free from the analyte of interest
LCS
         Method Blank or (PB) Preparation Blank
NB
MD
         Method Duplicate
         Method Detection Limit
MDL
         Medium Level Extraction Blank
MLE
MRL
         Method Reporting Limit Standard
         Method of Standard Additions
MSA
         Matrix Spike
MS
MSD
         Matrix Spike Duplicate
ND
         Not Detected
PREPF
         Preparation factor used by the Laboratory's Information Management System (LIMS)
         Post Digestion Spike (ICAP)
PD$
         Re-analysis of original
RA
         Re-analysis of Di
A1
         Re-analysis of D2
ΑZ
         Re-analysis of D3
ΑJ
         Re-extraction of dilution
RĐ
RΕ
         Re-extraction of original
         Re-extraction Confirmation
RC
RL
         Reporting Limit
         Relative Percent Difference of duplicate (unrounded) analyses
RPD
RRF
         Relative Response Factor
         Retention Time
```

QUALITY ASSERARCE METHODS

REFERENCES AND NOTES

Report Date: 11/01/2004

Retention Time Window Sample 1D A 9 digit number unique for each sample, the first RTW six digits are referred as the job number Seeded Control Blank SCB Serial Dilution (Calculated when sample concentration exceeds 50 times the MDL) SD Unseeded Control Blank UCB Second Source Varification Standard SSV SLCS Solid Laboratory Control Standard(LCS) pH Calibration Check LCSP pH Laboratory Control Sample PHC pH Laboratory Control Sample Duplicate LCDP MDPH pH Sample Duplicate Flashpoint Sample Duplicate Flashpoint LCS MDFP 1CFP G1 Gelex Check Standard Range 0-1 Gelex Check Standard Range 1-10 G2 Gelex Check Standard Range 10-100 **G3** Gelex Check Standard Range 100-1000 G4 Note 1: The Post Spike Designation on Batch OC for GFAA is designated with an "S" added to the current abbreviation used. EX. LCS S=LCS Post Spike (GFAA); MSS=MS Post Spike (GFAA) Note 2: The MD calculates an absolute difference (A) when the sample concentration is less than 5 times the reporting limit. The control limit is represented as +/- the RL.

SEVERN STL

Chain of Custody

Date Shipped: 10/22/2004

351.4

2004-10-0728 - 1

5

Day

From: To: STL Chicago STL San Francisco (CL) 1220 Quarry Lane 2417 Bond Street Pleasanton, CA 94566-4756 University Park, IL 60466 Afsaneh Salimpour Project Manager: Phone: (708) 534-5200 Ext: 107 (925) 484-1919 Ext: Phone: Fax: (708) 534-5211 Fax: (925) 484-1096 Contact: Bonnie Stadelmann Email: asalimpour@sti-inc.com Phone: Ext: 154 (708) 534-5200 CL Submission #: 2004-10-0728 Project #: CLPQ#; Project Name: Cier Sample III Seinbleo PRODUCT 10/22/2004 4:30:00PM Water Subcontract - Ammonia 350.3 Day

PLEASE INCLUDE QC WITH FAXED AND HARD-COPY RESULTS

Subcontract - Total Kjeldahl Nitrogen

RELINQUISHED BY: 1.	RELINQUISHED BY:		2. RELINQUISHED BY:	3.
Signature Time Bryan homes 10/25/64	Signature	Time	Signature	'Firrae
Printed Name Date	Printed Name	Date	Printed Name	Date
Company	Company		Company	
RECEIVED BY: 1.	RECEIVED BY:	2	REÇEIVED BY:	3.
Signature MA Time	Signature	Time	Signature	Time
Printed Name Date 1-124/04	Printed Name	Date	Printed Name	Date
Сатряпу	Сотралу		Сотрапу	

TORRENT LABORATORY, INC. 7004 -10 - 0726 CHAIN OF CUSTODY

95002	
LAR WORK ORDER	N

LAB WORK ORDER NO

483 Sinclair Frontage Road, Milpitas, CA 9	5035	
	^	
Dhon-104-767-5258 . EAY- 109-269-829	.3	

iddress: /// Opprises RE 55	Fire Investigation	<u>~</u>		ļ.	on of San	pling:).	, <u>L</u>	<u> つべへ</u> (20, C	A		 			-
iddress: 111 (Jearwood Re US	WE 142			Purpo	se:											_
Sity: Sen Remor	State: CA	Zip Code: C	HS93	Specia	al Instruct	ions / C	ommer	nts:								
Telephone: 0.25 US7-7384	FAX: 925 0,20-	4280 -			was		- A i		<u></u>							-
REPORT TO: MAJE WILLIAM	S SAMPLER: Well	(WILLION	<u> </u>	P.O. #	# 9 8	360	. (50h	ころう	γ ` Ε	MAIL:						
TURNAROUND TIME: 10 Working Days 7 Working Days 2 Working Day 5 Working Day 24 Hours	SAMPL S 2 - 8 Hours S Other SAMPL S Substitute S SAMPL S Substitute S SAMPL S Substitute S SAMPL S SAMPL	LE TYPE: orm Water 1 aste Water ound Water	Other	QC L EDF Exce	/ EDD		No. of the second		AI	NALYS	SIS RE	QUES	TED	 	TODDENES	
CLIENT'S SAMPLE I.D.	DATE/TIME SAMPLED	SAMPLE TYPE	# OF CONT	CONT TYPE	/3	5/2 Z		<u>\$</u>					_	_	TORRENT'S SAMPLE I.D.	
1. Product	व्याम मर्गायाचा	Water	4	pl/					140							
2.								ACAMAN .								
3.																
4.					1											- 41
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7.																
8.													-			
9.							.			<u> </u>		-	-			
10.								-	1							
1 Relinquished By:	Date: 10/2	2/24		pm	Receiv	161	M	il	le			Date Date:	zzlo	4	Time:	3
Relinquished By:	Date:		Time:	' 6	Receiv	ed By:/	•					Date:	· :		1	
Were Samples Received in Good Condit		Samples on Id				d of Ship						Samr	le seals	intact?	Yes NO	2



STL San Francisco

Sample Receipt Checklist Submission #:2004 Checklist completed by: (initials) Courier name:

STL San Francisco

Client Not Present Custody seals intact on shipping container/samples Chain of custody present? Chain of custody signed when relinquished and received? Chain of custody agrees with sample labels? Samples in proper container/bottle? Sample containers intact? Sufficient sample volume for indicated test? All samples received within holding time? Container/Temp Blank temperature in compliance (4° C ± 2)? Potential reason for > 6°C - Ice melted □ lice in bags □ Not enough ice □ Not enough blue ice □ Samples in boxes □ Sampled < 4hr. ago tce not required (e.g. air or bulk sample) □ No VOA vials submitted Water - VOA vials have zero headspace? (if bubble is present, refer to approximate bubble size and itemize in comments as S (small \sim O), M (medium \sim O) or L (large Water - pH acceptable upon receipt? ☐ Yes ☐ No ☐ HNO₃ ☐ HCI H₂SO₄ ☐ NaOH ☐ ZnOAc -Lot #(s) ☑ bH adjusted- Preservative used: For any item check-listed "No", provided detail of discrepancy in comment section below: Comments: Project Management [Routing for instruction of indicated discrepancy(ies)] Project Manager: (initials) _____ Date: ____/04 Client contacted: ☐ Yes ☐ No Summary of discussion: Corrective Action (per PM/Client):



Engineering and Fire Investigations

October 15, 2004

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Attn.:

Mark Williams

Project#: 98360-000.05

Project:

Bohannon

Dear Mr. Williams,

Attached is our report for your samples received on 10/06/2004 09:23

This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 11/20/2004 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: asalimpour@stl-inc.com

Sincerely,

Afsaneh Salimpour

Atanah. Salinipee

Project Manager



Gas/BTEX by 8015M/8021

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000.05

Bohannon

Received: 10/06/2004 09:23

Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
MW-2	10/05/2004	Water	1
MW-3	10/05/2004	Water	2
MW-4	10/05/2004	Water	3
P1W-A1	10/05/2004	Water	4
POBS-A1	10/05/2004	Water	5
N1W-A1	10/05/2004	Water	6



Gas/BTEX by 8015M/8021

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000.05

Bohannon

Received: 10/06/2004 09:23

Prep(s):

Matrix:

5030

5030

Test(s):

8015M

8021B

Sample ID: MW-2

Lab ID:

2004-10-0150 - 1

Sampled: 10/05/2004

Extracted:

10/8/2004 17:18

Water

QC Batch#: 2004/10/08-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	2000	250	ug/L	5.00	10/08/2004 17:18	
Benzene	120	2.5	ug/L	5.00	10/08/2004 17:18	
Toluene	5.5	2.5	ug/L	5.00	10/08/2004 17:18	
Ethyl benzene	ND	2.5	ug/L	5.00	10/08/2004 17:18	
Xylene(s)	8.3	2.5	ug/L	5.00	10/08/2004 17:18	
Surrogate(s)						
Trifluorotoluene	107.6	58-124	%	5.00	10/08/2004 17:18	
4-Bromofluorobenzene-FID	87.3	50-150	%	5.00	10/08/2004 17:18	



Gas/BTEX by 8015M/8021

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000.05

Bohannon

Received: 10/06/2004 09:23

Prep(s):

5030

5030

Test(s):

8015M

8021B

Sample ID: MW-3

Lab ID:

2004-10-0150 - 2

Sampled: 10/05/2004

Extracted:

10/7/2004 21:24

Matrix: Water

QC Batch#: 2004/10/07-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	9800	2500	ug/L	50.00	10/07/2004 21:24	
Benzene	2500	25	ug/L	50.00	10/07/2004 21:24	
Toluene	52	25	ug/L	50.00	10/07/2004 21:24	
Ethyl benzene	160	25	ug/L	50.00	10/07/2004 21:24	
Xylene(s)	38	25	ug/L	50.00	10/07/2004 21:24	
Surrogate(s)						
Trifluorotoluene	95.7	58-124	%	50.00	10/07/2004 21:24	
4-Bromofluorobenzene-FID	85.5	50-150	%	50.00	10/07/2004 21:24	



Gas/BTEX by 8015M/8021

Engineering and Fire Investigations

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111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000.05

Bohannon

Received: 10/06/2004 09:23

Prep(s):

Matrix:

5030

5030

Test(s):

8015M

8021B

Sample ID: MW-4

Lab ID:

2004-10-0150 - 3

Sampled: 10/05/2004

Extracted:

10/8/2004 17:51

Water

QC Batch#: 2004/10/08-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	460	100	ug/L	2.00	10/08/2004 17:51	
Benzene	19	1.0	ug/L	2.00	10/08/2004 17:51	
Toluene	ND	1.0	ug/L	2.00	10/08/2004 17:51	
Ethyl benzene	ND	1.0	ug/L	2.00	10/08/2004 17:51	
Xylene(s)	ND	1.0	ug/L	2.00	10/08/2004 17:51	
Surrogate(s)						
Trifluorotoluene	100.0	58-124	%	2.00	10/08/2004 17:51	
4-Bromofluorobenzene-FID	88.6	50-150	%	2.00	10/08/2004 17:51	



Gas/BTEX by 8015M/8021

Engineering and Fire Investigations

Attn.: Mark Williams

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Project: 98360-000.05

Bohannon

Received: 10/06/2004 09:23

Prep(s):

Matrix:

5030

5030

Sample ID: P1W-A1

Water

Sampled: 10/05/2004

Test(s):

8015M

8021B

Lab ID:

2004-10-0150 - 4

Extracted:

10/7/2004 22:29

QC Batch#: 2004/10/07-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	10/07/2004 22:29	
Benzene	ND	0.50	ug/L	1.00	10/07/2004 22:29	
Toluene	ND	0.50	ug/L	1.00	10/07/2004 22:29	
Ethyl benzene	ND	0.50	ug/L	1.00	10/07/2004 22:29	
Xylene(s)	ND	0.50	ug/L	1.00	10/07/2004 22:29	
Surrogate(s)						
Trifluorotoluene	91.3	58-124	%	1.00	10/07/2004 22:29	
4-Bromofluorobenzene-FID	86.6	50-150	%	1.00	10/07/2004 22:29	



Gas/BTEX by 8015M/8021

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Project: 98360-000.05

Bohannon

Received: 10/06/2004 09:23

Prep(s):

Matrix:

5030

5030

Sample ID: POBS-A1 10/05/2004

Sampled:

Water

Test(s):

8015M 8021B

Lab ID:

2004-10-0150 - 5

Extracted: 10/7/2004 23:02

QC Batch#: 2004/10/07-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	13000	2500	ug/L	50.00	10/07/2004 23:02	
Benzene	2400	25	ug/L	50.00	10/07/2004 23:02	
Toluene	83	25	ug/L	50.00	10/07/2004 23:02	
Ethyl benzene	130	25	ug/L	50.00	10/07/2004 23:02	
Xylene(s)	94	25	ug/L	50.00	10/07/2004 23:02	
Surrogate(s)						
Trifluorotoluene	95.8	58-124	%	50.00	10/07/2004 23:02	
4-Bromofluorobenzene-FID	84.7	50-150	%	50.00	10/07/2004 23:02	



Gas/BTEX by 8015M/8021

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000.05

Bohannon

Received: 10/06/2004 09:23

Prep(s):

Matrix:

5030

5030

Sample ID: N1W-A1

Sampled: 10/05/2004

Water

Test(s):

8015M

8021B

Lab ID:

2004-10-0150 - 6

Extracted:

10/8/2004 18:23

QC Batch#: 2004/10/08-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	1700	500	ug/L	10.00	10/08/2004 18:23	
Benzene	150	5.0	ug/L	10.00	10/08/2004 18:23	
Toluene	ND	5.0	ug/L	10.00	10/08/2004 18:23	
Ethyl benzene	24	5.0	ug/L	10.00	10/08/2004 18:23	
Xylene(s)	12	5.0	ug/L	10.00	10/08/2004 18:23	
Surrogate(s)						
Trifluorotoluene	108.6	58-124	%	10.00	10/08/2004 18:23	
4-Bromofluorobenzene-FID	91.3	50-150	%	10.00	10/08/2004 18:23	



Gas/BTEX by 8015M/8021

Engineering and Fire Investigations

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Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000.05

Bohannon

Received: 10/06/2004 09:23

Batch QC Report

Prep(s): 5030 5030

Method Blank

MB: 2004/10/07-01.05-001

Water

Test(s): 8015M

8021B

QC Batch # 2004/10/07-01.05

Date Extracted: 10/07/2004 07:03

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	10/07/2004 07:03	
Benzene	ND	0.5	ug/L	10/07/2004 07:03	
Toluene	ND	0.5	ug/L	10/07/2004 07:03	
Ethyl benzene	ND	0.5	ug/L	10/07/2004 07:03	
Xylene(s)	ND	0.5	ug/L	10/07/2004 07:03	
Surrogates(s)					
Trifluorotoluene	112.4	58-124	%	10/07/2004 07:03	
4-Bromofluorobenzene-FID	106.4	50-150	%	10/07/2004 07:03	

Page 8 of 15



Gas/BTEX by 8015M/8021

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000.05

Bohannon

Received: 10/06/2004 09:23

Batch QC Report

Prep(s): 5030

5030

100

Test(s): 8015M

8021B

Method Blank

Water

QC Batch # 2004/10/08-01.05

MB: 2004/10/08-01.05-003

Date Extracted: 10/08/2004 08:00

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	10/08/2004 08:00	
Benzene	ND	0.5	ug/L	10/08/2004 08:00	
Toluene	ND	0.5	ug/L	10/08/2004 08:00	
Ethyl benzene	ND	0.5	ug/L	10/08/2004 08:00	
Xylene(s)	ND	0.5	ug/L	10/08/2004 08:00	
Surrogates(s)					
Trifluorotoluene	113.0	58-124	%	10/08/2004 08:00	
4-Bromofluorobenzene-FID	103.0	50-150	%	10/08/2004 08:00	



Gas/BTEX by 8015M/8021

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000.05

Bohannon

Received: 10/06/2004 09:23

Batch QC Report

Prep(s): 5030

LCS

Test(s): 8021B

Laboratory Control Spike

2004/10/07-01.05-002

Water

QC Batch # 2004/10/07-01.05

LCSD

Extracted: 10/07/2004

Analyzed: 10/07/2004 07:36 Analyzed: 10/07/2004 08:08

2004/10/07-01.05-003

Extracted: 10/07/2004

Ctrl.Limits % RPD Flags Rec. RPD LCS LCSD 5.2 77-123 20 20 78-122 3.9



Gas/BTEX by 8015M/8021

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000.05

Bohannon

Received: 10/06/2004 09:23

Batch QC Report

Prep(s): 5030

Test(s): 8015M

Laboratory Control Spike

Water

QC Batch # 2004/10/07-01.05

LCS

2004/10/07-01.05-004

Extracted: 10/07/2004

Analyzed: 10/07/2004 08:41

LCSD

2004/10/07-01.05-005

Extracted: 10/07/2004

Analyzed: 10/07/2004 09:13

Compound	Conc.	ug/L	Exp.Conc.	Recovery %		ery % RPD		Ctrl.Limits %		igs
35	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Gasoline	248	265	250	99.2	106.0	6.6	75-125	20		
Surrogates(s) 4-Bromofluorobenzene-FID	509	510	500	101.8	102.0		50-150		•	



Gas/BTEX by 8015M/8021

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000.05

Bohannon

Received: 10/06/2004 09:23

Batch QC Report

Prep(s): 5030

Test(s): 8021B

Laboratory Control Spike

2004/10/08-01.05-004

Water

QC Batch # 2004/10/08-01.05

LCS LCSD 2004/10/08-01.05-005 Extracted: 10/08/2004 Extracted: 10/08/2004

Analyzed: 10/08/2004 08:32 Analyzed: 10/08/2004 09:05

RPD Ctrl.Limits % Flags ug/L Exp.Conc. Recovery % Conc. Compound RPD LCSD LCS LCSD Rec. LCS LCSD LCS 48.8 96.8 97.6 0.8 77-123 20 48.4 50.0 Benzene 78-122 20 50.0 96.2 97.6 1.4 48.1 48.8 Toluene 70-130 20 92.2 92.8 0.6 46.1 46.4 50.0 Ethyl benzene 75-125 20 92.0 93.3 1.4 Xylene(s) 138 140 150 Surrogates(s) 500 113.4 114.4 58-124 Trifluorotoluene 567 572



Gas/BTEX by 8015M/8021

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000.05

Bohannon

Received: 10/06/2004 09:23

Batch QC Report

Prep(s): 5030

Test(s): 8015M

Laboratory Control Spike

Water

QC Batch # 2004/10/08-01.05

LCS

2004/10/08-01.05-006

Extracted: 10/08/2004

Analyzed: 10/08/2004 09:37

LCSD 2004/10/0

2004/10/08-01.05-007

Extracted: 10/08/2004

Analyzed: 10/08/2004 10:10

Compound	Conc.	ug/L	Exp.Conc.	Recov	ery %	RPD	Ctrl. Lin	nits %	Fla	igs
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Gasoline	262	270	250	104.8	108.0	3.0	75-125	20		ĺ
Surrogates(s)										
4-Bromofluorobenzene-FID	509	507	500	101.8	101.4		50-150			



Gas/BTEX by 8015M/8021

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000.05

Bohannon

Received: 10/06/2004 09:23

Batch QC Report

Prep(s): 5030

Test(s): 8021B

Matrix Spike (MS/MSD)

2004/10/07-01.05-030

2004/10/07-01.05-031

Water

QC Batch # 2004/10/07-01.05

MW-3 >> MS

Lab ID: 2004-10-0150 - 002

....

MSD:

Extracted: 10/07/2004

Analyzed:

10/07/2004 23:34

10/08/2004 00:07

Extracted: 10/08/2004

Dilution:

50.00

Analyzed: Dilution:

50.00

Сотроила	Conc.	<u> </u>	ıg/L	Spk.Level	F	Recovery	%	Limits	s %	FI:	ags
o o title o o title o	MS	MSD	Sample	ug/L	мѕ	MSD	RPD	Rec.	RPD	MS	MSD
Benzene	4900	4780	2460	2500	97.6	92.8	5.0	65-135	20		
Toluene	2310	2230	51.5	2500	90.3	87.1	3.6	65-135	20		
Ethyl benzene	2390	2280	159	2500	89.2	84.8	5.1	65-135	20		
Xylene(s)	6920	6590	47.3	7500	91.6	87.2	4.9	65-135	20		
Surrogate(s)										!	
Trifluorotoluene	480	482		500	96.0	96.4		58-124			



Gas/BTEX by 8015M/8021

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000.05

Bohannon

Received: 10/06/2004 09:23

Batch QC Report

Prep(s): 5030 Test(s): 8015M

Matrix Spike (MS / MSD) Water QC Batch # 2004/10/07-01.05

MW-3 >> MS Lab ID: 2004-10-0150 - 002

MS: 2004/10/07-01.05-032 Extracted: 10/08/2004 Analyzed: 10/08/2004 00:39

Dilution: 50.00

MSD: 2004/10/07-01.05-033 Extracted: 10/08/2004 Analyzed: 10/08/2004 01:11 Dilution: 50.00

Limits % Flags Recovery % Conc. ug/L Spk.Level Compound MSD Rec. RPD MS MSD MS MSD Sample ug/L MS RPD 65-135 20 79.5 80.3 19700 19800 9760 12500 1.0 Gasoline Surrogate(s) 50-150 4-Bromofluorobenzene-FiD 479 435 500 95.8 87.0



STL Chicago 2417 Bond Street University Park, IL 60466

Tel: 708 534 5200 Fax: 708 534 5211 www.stl-inc.com

SEVERN TRENT LABORATORIES ANALYTICAL REPORT

JOB NUMBER: 230853

Prepared For

Severn Trent Laboratories 1220 Quarry Lane Pleasanton, CA 94566-4756

Project: STL San Francisco

Attention: Afsareh Salimpour

Date: 10/14/2004

Signature

Name: Bonnie M. Stadelmann

Title: Project Manager

H-Mail: bstadelmann@stl-inc.com

Date 10 //4/04

STL Chicago

2417 Bond Street

University Park, IL 60466

PHONE: (708) 534-5200 FAX..: (708) 534-5211

This Report Contains (10) Pages

STL Chicago is part of Severn Trent Laboratories, Inc.

Job Number.: 230853 Customer...: Severn Trent Laboratories Project Number.....: 20002032 Customer Project 10...: 2004-10-0150

Attn.....: Afsaneh Salimpour

Project Description...: STL San Francisco

Laboratory Sample 1D	Customer Sample ID	Sample Metrix	Date Sampled	Time Sampled	Date Received	Time Received
230853-1 NW-	Account to the second of the s	Water	10/05/2004	00:00	10/07/2004	09:15
230853-2 MW-	-4	Water	10/05/2004	00:00	10/07/2004	09:15
23085 3-3 N1W	r-A1	Water	10/05/2004	00:00	10/07/2004	09:15
	1					
				:		
1						
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SIL Chicago is part of Severn Trent Laboratories, Inc.

RESULIS LABORATORY TEST

Date: 10/14/2004 Job Number: 230853

CUSTOMER: Severn Trent Laboratories PROJECT: 2004-10-0150 ATTN: Afsamen Salimpour

Customer Sample ID: MW-2
Date Sampled....: 10/05/2004
Time Sampled....: 00:00
Sample Matrix....: Water

Laboratory Sample ID: 230853-1 Date Received.....: 10/07/2004

Time Received.....: 09:15

EST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	Į
351.3	Nitrogen, Total Kjeldahl Nitrogen, Total Kjeldahl as N (TKN)	<0.40	0.40	mg/L	10/12/04	mi
					=	
						Ì
	·					
						l
					!	
			1			

LABORATORY TEST RESULTS

Job Number: 230853

Date: 10/14/2004

CUSTOMER: Severn Trent Laboratories: PROJECT: 2004-10-0150

ATTM: Afseneh Salimpour

Customer Sample ID: MW-4 Date Sampled....: 10/05/2004 Time Sampled....: BD:00 Sample Matrix....: Water

Laboratory Sample ID: 230853-2 Date Received.....: 10/07/2004 Time Received.....: 09:15

ST WETHOD	PARAMETER/TEST GESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	3E
51.3	Nitrogen, Total Kjeldahl Nitrogen, Total Kjeldahl as N (TKN)	<0.40	0,40	mg/L	10/12/04	mt
				i		

^{*} In Description = Dry Wgt.

STL Chicago is part of Severn Trent Laboratories, Inc.

LABORATORY TEST $\textbf{R} \; \textbf{E} \; \textbf{S} \; \textbf{U} \; \textbf{L} \; \textbf{T} \; \textbf{S}$

Job Number: 230853

Date: 10/14/2004

CUSTOMER: Severn Trent Laboratories PROJECT: 2004-10-0150

ATTH: Afsoneh Selimpour

Customer Sample ID: N1W-A1 Date Sampled....: 10/05/2004 Time Sampled....: 00:00 Sample Matrix....: Water

Laboratory Sample ID: 230853-3 Date Received.....: 10/07/2004 Time Received.....: 09:15

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TEC
351,3	Nitrogen, Total Kjeldahl Nitrogen, Total Kjeldahl as N (TKN)	120	20	mg/L	10/12/04	mtb
				T.		
		-				
		1				

	b Number: 230853	LABORATORY CHRONICLE Date: 10/14/2004
CUSTOMER: Severn	frent Laboratories	PROJECT: 2004-10-8150 ATTN: Afsaneh Salimpour.
Lab 10: 230853-1 METHOD 351.3 PKG INO (WC)	Client ID: MW-2 DESCRIPTION Nitrogen, Total Kjeldahl PKG INO (WET CHEMISTRY)	Date Recvd: 10/07/2004 Sample Date: 10/05/2004 RUN# BATCH# PREP BT #(\$) DATE/TIME ANALYZED DILUTION 1 131076 131076 10/12/2004 1318 1
Lab ID: 230853-2 METHOD 351.3	Client ID: MW-4 DESCRIPTION Nitrogen, Total Kjeldahl	Date Recvd: 10/07/2004 Sample Date: 10/05/2004 RUN# BATCH# PREP BT #(S) DATE/TIME ANALYZED DILUTION 1 131076 131076 10/12/2004 1322
Lab ID: 230853-3 METHOD 351.3	Client ID: N1W-A1 DESCRIPTION Nitrogen, Total Kjeldahl	Date Recyd: 10/07/2004 Sample Date: 10/05/2004 RUN# BATCH# PREP BT #(S) DATE/TIME ANALYZED DILUTION 1 131076 131076 10/12/2004 1323 50

QUALITY CONTROL RESULTS

Job Number.: 230853

Report Date.: 10/14/2004

CUSTOMER: Severn Trent Laboratories PROJECT: 2004-10-0150 ATTN: Afseneh Salimpour

,))	Test Method, Method Descrip Parameter	otion : Ni	1,3 trogen, Tot trogen, Tot	at Kjeldahl st Kjeldahl ss	CHAT) N	Betch Equipment Cod	: 131076 e,: SPEC1		Analyst Test Code	mid 3 TKN
		Reagent	Units	QC Result	qC Result	True Value	Orig. Value	QC Calc. F	* Limits	Date Time
)		104HSTTK2 104HSTTK2 104HSTTK2	mg/L mg/L mg/L mg/L	0.18000 U 2.66400 2.81100 2.89500	2.81100	2.50000 2.50000 2.50000	0.18000 U 0.28900 B 0.28900 B	112	% 80-120 % 75-125 % 75-125 R 20	10/12/2004 1303 10/12/2004 1305 10/12/2004 1320 10/12/2004 1321

QUALITY ASSERABLE METHODS

REEEREWEES AND NOTES

Report Date: 10/14/2004

REPORT COMMENTS

- 1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
- 2) Soil, sediment and studge sample results are reported on a "dry weight" basis except when analyzed for landfill disposal or incineration parameters. All other solid matrix samples are reported on an "as received" basis unless noted differently.
- 3) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
- 4) The test results for the noted analytical method(s) meet the requirements of NELAC. Lab Cert. ID# 100201
- 5) According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

Glossary of flags, qualifiers and abbreviations (any number of which may appear in the report) Inorganic Qualifiers (Q-Column)

- U Analyte was not detected at or above the stated limit.
- Not detected at or above the reporting limit.
- Result is less than the Ri, but greater than or equal to the method detection limit.
- B Result is less than the CRDL/RL, but greater than or equal to the IDL/MDL.
- Result was determined by the Method of Standard Additions.
- F AFCEE: Result is less than the RL, but greater than or equal to the method detection limit.

Inorganic Flags (Flag Column)

- ICV,CCV,ICB,CCB,ISA,ISB,CRI,CRA,MRL: Instrument related QC exceed the upper or lower control limits.
- LCS, LCD, MD: Batch QC exceeds the upper or lower control limits.
- MSA correlation coefficient is less than 0.995.
 - MS, MSD: The analyte present in the original sample is 4 times greater
- than the matrix spike concentration; therefore, control limits are not applicable.
- E SD: Serial dilution exceeds the control limits.
- H MB, EB1, EB2, EB3: Batch QC is greater than reporting limit or had a
 - negative instrument reading lower than the absolute value of the reporting limit.
- N MS, MSD: Spike recovery exceeds the upper or lower control limits.
- W AS(GFAA) Post-digestion spike was outside 85-115% control limits.

Organic Qualifiers (Q - Column)

- U Analyte was not detected at or above the stated limit.
- ND Compound not detected.

Ð

- J Result is an estimated value below the reporting limit or a tentatively identified compound (TIC).
- Result was qualitatively confirmed, but not quantified.
- C Pesticide identification Was confirmed by GC/MS.
- Y The chromatographic response resembles a typical fuel pattern.
- Z The chromatographic response does not resemble a typical fuel pattern.
- E Result exceeded calibration range, secondary dilution required.
- F AFCEE:Result is an estimated value below the reporting limit or a tentatively identified compound (TIC) Organic Flags (Flags Column)
- B MB: Batch QC is greater than reporting limit.
- * LCS, LCD, ELC, ELD, CV, MS, MSD, Surrogate: Batch QC exceeds the upper or lower control limits.
- * EB1, EB2, EB3, MLE: Batch QC is greater than reporting Limit
- A Concentration exceeds the instrument calibration range
- Concentration is below the method Reporting Limit (RL)
- B Compound was found in the blank and sample.
- Surrogate or matrix spike recoveries were not obtained because the extract was diluted for
 - analysis; also compounds analyzed at a dilution will be flagged with a D.
- H Alternate peak selection upon analytical review
- I Indicates the presence of an interfence, recovery is not calculated.
- M Manually integrated compound.
- The lower of the two values is reported when the % difference between the results of two GC columns is

QUALITY ASSURBACE METHODS

REFERENCES AND NOTES

Report Date: 10/14/2004

```
greater than 25%.
Abbreviations
AS
         Post Digestion Spike (GFAA Samples - See Note 1 below)
         Designation given to identify a specific extraction, digestion, preparation set, or analysis set
Batch
         Capillary Column CCB Continuing Calibration Blank
CAP
CCV
         Continuing Calibration Verification
         Confirmation analysis of original
CF
         Confirmation analysis of A1 or D1
C1
ÇŽ
         Confirmation analysis of A2 or D2
         Confirmation analysis of A3 or D3
€3
         Low Level Standard Check - GFAA; Mercury
ČRA
CRI
         Low Level Standard Check - ICP
         Calibration Verification Standard
C۷
Dil Fac Dilution Factor - Secondary dilution analysis
Dì
         Dilution 1
D2
         Dilution 2
         Dilution 3
D3
DLFec
         Detection Limit Factor
         Distilled Standard - High Level
DSH
         Distilled Standard - Low Level
DSL
DSM
         Distilled Standard - Medium Level
         Extraction Blank 1
EB1
         Extraction Blank 2
ER2
EB3
         DI Blank
         Method Extracted LCS
ELC
         Method Extracted LCD
ELD
[ CAL
         Initial calibration
         Initial Calibration Blank
I CB
         Initial Calibration Verification
ΙÇV
IDL
         Instrument Detection Limit
ISA
         Interference Check Sample A - ICAP
         Interference Check Sample B - ICAP
IS8
Jab No.
         The first six digits of the sample ID which refers to a specific client, project and sample group
         Lab 10 An 8 number unique laboratory identification
LCD
         Laboratory Control Standard Duplicate
LĆS
         Laboratory Control Standard with reagent grade water or a matrix free from the analyte of interest
         Method Blank or (PB) Preparation Blank
ΜВ
         Method Duplicate
MO
MDL
         Method Detection Limit
MLE
         Medium Level Extraction Blank
MRI
         Method Reporting Limit Standard
MSA
         Method of Standard Additions
MŞ
         Matrix Spike
         Natrix Spike Duplicate
MSD
ND
         Not Detected
PREPF
         Preparation factor used by the Laboratory's Information Management System (LIMS)
PD$
         Post Digestion Spike (ICAP)
         Re-analysis of original
RΑ
         Re-analysis of D1
Αſ
٨2
         Re-analysis of D2
Α3
         Re-analysis of D3
RD
         Re-extraction of dilution
RF
         Re-extraction of original
RC
         Re-extraction Confirmation
RL
         Reporting Limit
RPD
         Relative Percent Difference of duplicate (unrounded) analyses
         Relative Response Factor
RRE
RT
         Retention Time
```

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 10/14/2004

RTW Retention Time Window Sample ID A 9 digit number unique for each sample, the first six digits are referred as the job number SCB Seeded Control Blank Serial Dilution (Calculated when sample concentration exceeds 50 times the MDL) SD Unseeded Control Blank ŲÇB SSV Second Source Verification Standard SLCS Solid Laboratory Control Standard(LCS) pH Calibration Check LCSP pH Laboratory Control Sample PHC LCDP pH Laboratory Control Sample Duplicate HDPH pH Sample Duplicate Flashpoint Sample Duplicate MDFP Flashpoint LCS LCFP Ġ1 Gelex Check Standard Range 0-1 G2 Gelex Check Standard Range 1-10 Gelex Check Standard Range 10-100 63 Gelex Check Standard Range 100-1000 Note 1: The Post Spike Designation on Batch QC for GFAA is designated with an "S" added to the current abbreviation used. EX. LCS S=LCS Post Spike (GFAA); MSS=MS Post Spike (GFAA) Note 2: The MD calculates an absolute difference (A) when the sample concentration is less than 5 times the reporting limit. The control limit is represented as +/- the RL.

Date Shipped: 10/6/2004

351.4

2004 40 0450 ...4

Day

TREAL		Chain of Cus	stody	2004	-10-0150 - 1
From:			To:		
STL San Francisco (CL) 1220 Quarry Lane Pleasanton, CA 94566-4756			STL Chicago 2417 Bond Street University Park, IL	60466 23) <u>8</u> 53
Project Manager: Phone: (925) 484-1919	Afsaneh Salimpour Ext: 107		Phone: (708) 534 Fax: (708) 534		
Fax: Email:	(925) 484-1096 asalimpour@stl-inc.com		Contact: Bonnie Phone: (708) 534		imann 154
CL Submission #: CL PO #:	2004-10-0150		,	360-000.05 Shannon	
Wilding Samp at C					
MW-2 Subcontract - Tota	al Kjeldahl Nitrogen	11	10/5/2004 12:00:00AM	Water 351.4	6 Day
MW-4		3	10/5/2004 12:00:00AM	Water	
Subcontract - Tota	ıl Kjeldahl Nitrogen			351.4	6 Day
N1W-A1		6	10/5/2004 12:00:00AM	Water	

PLEASE INCLUDE QC WITH FAXED AND HARD-COPY RESULTS

Subcontract - Total Kjeldahl Nitrogen

RELINATION BY 1330 1.	RELINQUISHED BY:	2.	RELINQUISHED BY;	3.
Printed Name STL 3F Company	Printed Name	Date	Printed Name	Date
	RECEIVED BY:	2.	RECEIVED BY:	3.
Signature Signature	Signature	Time	Signature	Time
Printed Name / Pate 7-09	Printed Name	Date	Printed Name	Oate
Company SR- W	Company		Company	



STL San Francisco Chain of Custody

1220 Quarry Lane • Pleasanton CA 94566-4756 Phone: (925) 484-1919 • Fax: (925) 484-1096

Email: sflogin@stl-inc.com

Reference #: 89510

2004-10-0758

Date 10/6/04 Page 1 of ___ Report To Analysis Request Attn: Mark WILLIAMS Fuel Tests EPA 82608: ☐ Gas ☐ BTEX ☐ Five Oxyenales ☐ DCA, EDB ☐ Ethanol 608 608 Low Level Metals by EPA 200.8/8020 (ICP-MS): Company: EFI TEPH EPA 8015M* □ Silica Gel □ Diesel □ Motor Oil □ Other___ Metals: 🖸 Lead 🖰 LUFT 🖸 RCRA Volatile Organics GC/MS (VOCs) ā Hexavalent Chromium pH (24h hold time for H₂O) O SO, O NO, O helica hiteogen Address: 111 Records R& Supe 195 94583 EPA 8081 EPA 8082 Phone 425 457-739 Email CAM17 Metals (EPA 6010/7470/7471) Semivolatiles GC/MS © EPA 8270 © 625 Number of Containers W.E.T (STLC) TCLP пα Spec Cond. TSS Bill To: Sampled By: Oil and Grease (EPA 1664) 교 Chrismichell Pesticides PCBs Anions: 0 NAs by Phone: Attn: Pres Sample ID Date Time MW-2 بدلكان 3 MW-3 MW-M PIW-A1 POBS-AI X 11- WID 70 1) Relinquished by: Project Info. 2) Relinquished by: 3) Relinquished by: Sample Receipt Project Name: # of Containers: Signature Time Signature Time Project#: Mark Wicham 10/6/on Printed Name Date Head Space: 987,0-00-05 Printed Name Date Printed Name Date Temp: Credit Card#: Company Company Conforms to record: 1) Received by: 2) Received by: 3)(Received by: 72h 48h 24h Other: Time Report: □ Routine □ Level 3 □ Level 4 □ EDD □ State Tank Fund EDF Signature Time Signature Special Instructions / Comments: ☐ Global ID D. Hawington 09 Printed Name Printed Name Date Printed Name Date Company Company *STL SF reports 8015M from C₉-C₂₄ (industry norm). Default for 8015B is C₁₀-C₂₈,



STL San Francisco

Sample Receipt Checklist

Nich
Not Yes No Present
Yes_ V No
Yes_ ✓ No
Yes No
YesNo
YesNo
YesNo
Yes No
Temp <u> </u>
Ice Present Yes_ No_
No VOA vials submitted YesNo
s S (small \sim O), M (medium \sim O) or L (large \sim O)
nOAc -Lot #(s)
section below:
d discrepancy(ies)]
ient contacted: ☐ Yes ☐ No
,



Engineering and Fire Investigations

November 03, 2004

111 Deerwood Road, ๖.e 195 San Ramon, CA 94583

Attn.:

Mark Williams

Site:

San Lorenzo,CA

Dear Mr. Williams,

Attached is our report for your samples received on 10/22/2004 17:16 This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 12/06/2004 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: asalimpour@stl-inc.com

Sincerely,

Afsaneh Salimpour

Atsanch. Salinger

Project Manager



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project:

Received: 10/22/2004 17:16

Site: San Lorenzo,CA

Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
PRODUCT	10/22/2004 16:30	Water	11



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project:

Received: 10/22/2004 17:16

Site: San Lorenzo, CA

Prep(s):

300.0/9056

Test(s):

300.0/9056

Sample ID: PRODUCT:

Lab ID:

2004-10-0728 - 1

Sampled: 10/22/2004 16:30

Extracted:

10/23/2004 10:14

Matrix:

Water

QC Batch#: 2004/10/23-01.41

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Nitrite	ND	100	mg/L	100.00	10/25/2004 20:36	L4
Nitrate	ND	1.0	mg/L	1.00	10/23/2004 10:14	



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project:

Received: 10/22/2004 17:16

Site: San Lorenzo, CA

Batch QC Report

Prep(s): 300.0/9056

Method Blank

Water

Test(s): 300.0/9056

QC Batch # 2004/10/23-01.41

MB: 2004/10/23-01.41-001 Da

Date Extracted: 10/23/2004 21:22

Compound	Conc.	RL	Unit	Analyzed	Flag
Nitrite	ND	1.0	mg/L	10/23/2004 09:22	
Nitrate	ND	1.0	mg/L	10/23/2004 09:22	<u> </u>



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project:

Received: 10/22/2004 17:16

Site: San Lorenzo,CA

Batch QC Report

Prep(s): 300.0/9056

Test(s): 300.0/9056

Laboratory Control Spike

Water

QC Batch # 2004/10/23-01.41

LCS LCSD 2004/10/23-01.41-002

Extracted: 10/23/2004 Extracted: 10/23/2004 Analyzed: 10/23/2004 21:39 Analyzed: 10/23/2004 21:57

LCSD 2004/10/23-01.41-003			Extracted: 10/23/2004					Analyzed: 10/23/2004 21:57						
	Cor	ic. mg/	/L Exp	.Conc.	Recov	ery %	RPD	Ctrl.Lim	nits %	Fla	gs			
Compound	LCS	LCS	SD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD			
Nitrite Nitrate	19.4 19.7	. 19. 19.	-	_	97.0 98.5	97.5 98.5	0.5	80-120 80-120	20 20					



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project:

MS:

Received: 10/22/2004 17:16

Site: San Lorenzo,CA

Batch QC Report

Test(s): 300.0/9056 300.0/9056 Prep(s):

Matrix Spike (MS / MSD) Water QC Batch # 2004/10/23-01.41

MS/MSD 2004/10/23-01.41-004

Extracted: 10/24/2004

2004-10-0472 - 001 Lab ID:

Analyzed: Dilution:

10/24/2004 01:10

1.00

MSD: 2004/10/23-01.41-005 Extracted: 10/25/2004

Analyzed:

10/25/2004 00:52

Dilution:

1.00

	Conc.	mg	/L	Spk.Level	R	ecovery	%	Limits	s %	FI	ags
Compound	MS	MSD	Sample	mg/L	MS	MSD	RPD	Rec.	RPD	MS	MSD_
Nitrite Nitrate	21.1 19.7	21.2 20.0	ND ND	20.0 20.0	105.5 98.5	106.0 100.0	0.0 0.0	80-120 80-120	20 20		



Misc Anions by Ion Chromatograph

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project:

Received: 10/22/2004 17:16

Site: San Lorenzo,CA

Legend and Notes

Result Flag

L4

Reporting limits were raised due to matrix interference.



STL Chicago 2417 Bond Street University Park, IL 60456

Tel: 708 534 5200 Fax: 708 534 5211 www.stl-inc.com

SEVERN TRENT LABORATORIES ANALYTICAL REPORT

JOB NUMBER: 231373

Prepared For:

Severn Trent Laboratories 1220 Quarry Lane Pleasanton, CA 94566 4756

Project: STL San Francisco

Attention: Afsaneh Salimpour

Date: 11/01/2004

Name: Bonnic M. Stadelmann

Title: Project Manager

E-Mail: bstadelmann@stl-inc.com

Date Molloy

STL Chicago 2417 Bond Street

University Park, IL 60466

PHONE: (708) 534-5200 FAX.,: (708) 534-5211

This Report Contains (



STL Chicago is part of Severn Trent Laboratories, Inc.

SAMPLE INFORMATION Date: 11/01/2004

Job Number.: 2313**73**

Customer...: Severn Trent Leboretories

Attn....: Afsaneh Salimpour

Project Number.....: 20002032 Customer Project 1D....: 2004-10-0728 Project Description...: STL San Francisco

Laboratory Sample 10	Customer Sample ID	Sample Metrix	Date Sampled	Time Sampled	Date Received	Time Received
231373-1	PRODUCT	Water	10/22/2004	16:30	10/26/2004	09:00
		:				
				l.		
				·		

LABORATORY TEST RESULIS

Job Number: 231373

Date: 11/01/2004

CUSTOMER: Severn Trent Laboratories

PROJECT: 2004-10-0728

ATTN: Afsaneh Sallmpour

Customer Sample ID: PRODUCT

Date Sampled....: 10/22/2004 Time Sampled....: 16:30 Sample Matrix....: Water

Laboratory Sample ID: 231373-1 Date Received.....: 10/26/2004 Time Received.....: 09:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
350.2	Nitrogen, Ammonia (Dist./Nessler.) Ammonia(NH3+NH4),as N	220	20	mg/L	10/30/04	mtb
351.3	Nitrogen, Total Kjeldahl Nitrogen, Total Kjeldahl as N (TKN)	520	60	mg/L	10/29/04	mtb
:		,				
		<u>,</u>				
			<u> </u>			
					1	
	,					

^{*} In Description = Dry Wgt.

STL Chicago is part of Severn Trent Laboratories, Inc. CHRONICLE LABORATORY Date: 11/01/2004 Job Number: 231373 ATIN: Afsanah Salimpour PROJECT - 2004-10-0728 GUSTOMER: Severo Trent Laboratories Date Recvd: 10/26/2004 | Sample Date: 10/22/2004 Lab ID: 231373-1 Cilent ID: PRODUCT DILUTION DATE/TIME ANALYZED RUN# BATCH# PREP BT #(S) DESCRIPTION METHOD . 10/30/2004 1046 10/29/2004 0858 100 132718 132718 132625 132625 Nitrogen, Ammonia (Dist./Messler.) 1 350.2 200 Witrogen, Total Kjeldahl PKG IND (WET CHEMISTRY) 351.3 PKG INO (WC)

QUALITY CONTROL RESULTS

Job Number.: 231373

Report Date.: 11/01/2004

te M€	st Me thod	thod Descri	ption: Ni	0.2 trogen, Amm	non1a	(Dist./Mes	is (ef.)	Batch Equipment Cod		: 132/18 : SPEC1				Test Code		
ıc Pe	ranci Lab		Reagent	moniaunnass Units		Result	QC Result	True Value	Orig	. Value	QC Calc	. F	*	Limits	Date	Tim
AB LCS	13271 13271	18 - 004	104HSTTKZ	mg/L mg/L mg/L		0.13000 U 2.40000 0.13000 U		2.50000		0.13000 0	. 96		*	80-120	10/30/2004 10/30/2004 10/30/2004	1024
Tê Mê	et Me thod	thod Desc	35 prion : Ni	1.3 trogen, To trogen, To	al K	joidani Jeldani es	M (TKH)	Batch Equipment Cod	erone.	132625 : SPEC1				Analyst. Test Code	el arb	
an C	Leb		Reagent	Units		Result	QC Result	True Value	Orig	. Value	QC Calc	. F	¥	Limits	Date	Tim
IB CS	13262	25-004	104HSTTK2	mg/L mg/L		0.18000 U 2.52600		2.50000		0.18000	u 101		*	80-120	10/29/2004 10/29/2004	083 083

OUALITY ASSURANCE METHODS

REFERENCES AND WOTES

Report Date: 11/01/2004

REPORT COMMENTS

- 1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
- 2) Soil, sediment and sludge sample results are reported on a "dry weight" basis except when analyzed for landfill disposal or incineration parameters. All other solid matrix samples are reported on an "as received" basis unless noted differently.
- 3) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable. 4) The test results for the noted analytical method(s) meet the requirements of NELAC. Lab Cert. 10# 100201
- 5) According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen enalyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

Glossary of flags, qualifiers and abbreviations (any number of which may appear in the report) Inorganic Qualifiers (Q-Column)

- Analyte was not detected at or above the stated limit.
- Not detected at or above the reporting limit.
- Result is less than the RL, but greater than or equal to the method detection limit.
- Result is less than the CRDL/RL, but greater than or equal to the IDL/MDL.
- Result was determined by the Method of Standard Additions.
- AFCEE: Result is less than the RL, but greater than or equal to the method detection limit.
- Inorganic flags (flag Column)
- 1CV,CCV,1CB,CCB,1SA,ISB,CRI,CRA,MRL: Instrument related QC exceed the upper or lower
- control limits.
- LCS, LCD, ND: Batch QC exceeds the upper or lower control limits.
- MSA correlation coefficient is less than 0.995.
- MS. MSD: The analyte present in the original sample is 4 times greater
 - than the matrix spike concentration; therefore, control limits are not applicable.
- SD: Serial dilution exceeds the control limits. £
- MB, EB1, EB2, EB3: Batch QC is greater than reporting limit or had a
 - negative instrument reading lower than the absolute value of the reporting limit.
- MS, MSD: Spike recovery exceeds the upper or lower control limits.
 - AS(GFAA) Post-digestion spike was outside 85-115% control limits.
- Organic Qualifiers (Q Column)
- Analyte was not detected at or above the stated limit.
- Compound not detected. ND
 - Result is an estimated value below the reporting limit or a tentatively
- identified compound (TIC).
- Result was qualitatively confirmed, but not quantified.
- Pesticide identification was confirmed by GC/MS.
- The chromatographic response resembles a typical fuel pattern.
- The chromatographic response does not resemble a typical fuel pattern.
- Result exceeded calibration range, secondary dilution required.
- AFCEE: Result is an estimated value below the reporting limit or a tentatively identified compound (TIC) Organic Flags (Flags Column)
- MB: Batch QC is greater than reporting limit.
- LCS, LCD, ELC, ELD, CV, MS, MSD, Surrogate: Batch QC exceeds the upper or lower control limits. EB1, EB2, EB3, MLE: Batch QC is greater than reporting limit
- Concentration exceeds the instrument calibration range
- Concentration is below the method Reporting Limit (RL)
- Compound was found in the blank and sample.
- Surrogate or matrix spike recoveries were not D obtained because the extract was diluted for
 - analysis; also compounds analyzed at a dilution will be flagged with a D.
- Alternate peak selection upon analytical review
- Indicates the presence of an interfence, recovery is not calculated.
- Manually integrated compound.
- The lower of the two values is reported when the % difference between the results of two GC columns is

QUALLIY ASSURANCE METHODS

REPERENCES AND NOTES

Report Date: 11/01/2004

```
greater than 25%.
Abbreviations
         Post Digestion Spike (GFAA Samples - See Note 1 below)
AS.
         Designation given to identify a specific extraction, digestion, preparation set, or analysis set
Batch
         Capillary Column CCB Continuing Calibration Blank
CAP
         Continuing Calibration Verification
CCV
         Confirmation analysis of original
CF
         Confirmation analysis of A1 or D1
C1
¢2
         Confirmation analysis of A2 or D2
         Confirmation analysis of A3 or D3
7.3
         Low Level Standard Check - GFAA; Mercury
CRA
         Low Level Standard Check - ICP
CRI
         Calibration Verification Standard
CV
        Ditution Factor - Secondary dilution analysis
Dil Fac
D1
         Dilution 1
         Dilution 2
D2
D3
         pilution 3
         Detection Limit Factor
DiFac
         Distilled Standard - High Level
DSH
         Distilled Standard - Low Level
DSL
         Distilled Standard - Medium Level
DSM
         Extraction Blank 1
FR1
         Extraction Blank 2
E62
EB3
         DI Blank
         Method Extracted LCS
ELC
ELD
         Method Extracted LCD
         Initial calibration
ICAL
         Initial Calibration Blank
ICB
         Initial Calibration Verification
ICV
         Instrument Detection Limit
IDL
         Interference Check Sample A - ICAP
ISA
         Interference Check Sample B - ICAP
ISB.
         The first six digits of the sample ID which refers to a specific client, project and sample group
Job No.
         Lab ID An 8 number unique laboratory identification
LCD
         Laboratory Control Stendard Duplicate
         Laboratory Control Standard with reagent grade water or a matrix free from the analyte of interest
LCS
         Method Blank or (PB) Preparation Blank
MB
         Method Duplicate
MD
         Method Detection Limit
MD
         Medium Level Extraction Blank
MLE
         Method Reporting Limit Standard
MRL
         Method of Standard Additions
MSA
         Matrix Spike
MS
MSD
         Matrix Spike Duplicate
ND
         Not Detected
         Preparation factor used by the Laboratory's Information Management System (LIMS)
PREPE
         Post Digestion Spike (ICAP)
PDS
         Re-analysis of original
RA
         Re-analysis of D1
A1
         Re-analysis of D2
A2
         Re-analysis of D3
A3
         Re-extraction of dilution
RΦ
RΕ
         Re-extraction of original
         Re-extraction Confirmation
RC
         Reporting Limit
ЯL
         Relative Percent Difference of duplicate (unrounded) analyses
RPD
RRF
         Relative Response Factor
         Retention Time
RΤ
```

OUALITY ASSURANCE METHOUS

REFERENCES AND NOTES

Report Date: 11/01/2004

Retention Time Window Sample ID A 9 digit number unique for each sample, the first RTW six digits are referred as the job number Seeded Control Blank SÇB Serial Dilution (Calculated when sample concentration exceeds 50 times the MDL) SD Unseeded Control Blank UCB Second Source Verification Standard SSV Solid Laboratory Control Standard(LCS) SLCS pH Calibration Check LCSP pH Laboratory Control Sample PHC pH Laboratory Control Sample Duplicate LCDP MDPH pK Sample Duplicate Flashpoint Sample Duplicate MDFP Flashpoint LCS LCFP Gelex Check Standard Range 0-1 G1 Gelex Check Standard Range 1-10 GΖ Gelex Check Standard Range 10-100 G3Gelex Check Standard Range 100-1000 Note 1: The Post Spike Designation on Batch GC for GFAA is designated with an "S" added to the current abbreviation used. EX. LCS S=LCS Post Spike (GFAA); MSS=MS Post Spike (GFAA) Note 2: The MD calculates an absolute difference (A) when the sample concentration is less than 5 times the reporting limit. The control limit is represented as +/- the RL.

SEVERN STL

ļ

Chain of Custody

Date Shipped: 10/22/2004

2004-10-0728 - 1

From:			To:					
STL Sán Francisco (CL) 1220 Quarry Lane Pleasanton, CA 94566-4756			=	cago nd Street sy Park, IL	604 8 6			
Project Manager: Phone: (925) 484-1919	Afsaneh Salimpour Ext: 107		Phone: Fax:	(708) 534 (708) 534		Ext:		
Fax: Email:	(925) 484-1096 asalimpour@stl-inc.com	•	Contact: Phone:	Bonnie (708) 534	I-5200 	Stadel Ext:	mann 154	
CL Submission #: CL PO #;	2004-10-0728	-	Project Project			WWW.Same	aa ee ee aa ii	aparereiii in ann
Clies sample to								
PRODUCT		1	10/22/2004 4:30	0:00PM	Water			
Subcontract - Am	monia				350.3		5	Day
Subcontract - Total	al Kieldahl Nitrogen				351.4		5	Day

PLEASE INCLUDE QC WITH FAXED AND HARD-COPY RESULTS

RELINQUISHED BY: 1.	RELINQUISHED BY:	2.	RELINQUISHED BY;	3.
Sign-ture Time	Signature	Time	Signature	Time
Brighthomes 10/25/04 Printed Name Date STL-SF	Printed Name	Date	Printed Name	Date
Company	Company		Company	
RECEIVED BY: 1.	RECEIVED BY:	2.	RECEIVED BY:	3.
Signature Time	Signature	Time	Signature	Time
Printed Name Date 124/04	Printed Name	Date	Printed Name	Date
Сатрелу	Сотралу		Company	

TORRENT LABORATORY, INC. 2004 -10 - UTZO CHAIN OF CUSTODY

483 Sinclair Frontage Road, Milpitas, CA 95035

Phone: 408:263.5258 • FAX: 498:269:8293

www.torrentlab.com ... email: analysis@torrentlab.com

• NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY •

4	1500C	
•	LAB WORK ORDER NO	
i C osta		

Company Name: Company Name:	Fire Tourshirting	~	Location of S	ampling: S	an Lore	120 CA		- Marie
Address: \\\ Chaccase R2 ds	nk 195		Purpose:					
Company Name: Crypned Ty F Address: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	State: CA	Zip Code: 4593	Special Instr	uctions / Comm	ents:			
Telephone: (A) < (X / X / X / X / X / X / X / X / X / X	TAA. YA LEN QU/(350)	1300			<u></u>			
REPORT TO: MANY WILLIAM	S SAMPLER: Work	MILLIONS	P.O. #: 9	8360 - B	hannon	EMAIL:	· · · · · · · · · · · · · · · · · · ·	
TURNAROUND TIME:	SAMPL	E TYPE:	REPORT FORM	AT:		ANALYSIS I	REQUESTED	
☐ 10 Working Days ☐ 3 Working Days ☐ 7 Working Days ☐ 2 Working Days ☐ 5 Working Days ☐ 24 Hours ☐ 24 Hours ☐ 24 Hours ☐ 24 Hours ☐ 25 Working Days ☐ 24 Hours ☐ 26 Hours ☐ 26 Hours ☐ 27 Hours ☐ 28	Other Gro	m Water 🙀 Other ste Water und Water	QC Level II EDF Excel / EDD		5			
CLIENT'S SAMPLE I.D.	DATE/TIME SAMPLED	SAMPLE # OF TYPE CONT	CONT TYPE					TORRENT'S SAMPLE I.D.
1. Produt	10/22/04 4130	Witer 4	ps/					<u> </u>
2.			3					3 5
3.								TORRENT
								2
4.								
5.								
6.								
7.								
8.								
9.								
10.	Date: 10/27	Time:	Rec	TOO By:	alle		Date 10/22/6	74 V716 7
Relinquished By:	Date:	Time:	Mec	eived By:		, 1	Date:	Time:
Were Samples Received in Good Condition NOTE: Samples are discarded by the	on? Yes NO s	Samples on Ice? Y		thod of Shipment ents are made.		Dollar .	•	Is intact? Yes NO



STL San Francisco Sample Receipt Checklist Submission #:2004 Checklist completed by: (initials) (Courier name:
STL San Francisco
Client Not Custody seals intact on shipping container/samples Present Chain of custody present? Yes Chain of custody signed when relinquished and received? Chain of custody agrees with sample labels? Samples in proper container/bottle? Sample containers intact? Sufficient sample volume for indicated test? All samples received within holding time? Container/Temp Blank temperature in compliance (4º C ± 2)? Potential reason for > 6°C - Ice melted □ □ Ice in bags. □ Not enough ice □ Not enough blue ice □ Samples in boxes □ Sampled < 4hr. ago 🎾 ice not required (e.g. air or bulk sample) 🛘 Water - VOA vials have zero headspace? No VOA vials submitted (if bubble is present, refer to approximate bubble size and itemize in comments as S (small \sim O), M (medium \sim O) or L (large \sim Water - pH acceptable upon receipt? ☐ Yes ☐ No pH adjusted– Preservative used: ☐ HNO₃ ☐ HCI bLH₂SO₄ ☐ NaOH ☐ ZnOAc **–Lot #(s)** For any item check-listed "No", provided detail of discrepancy in comment section below: Comments: Project Management [Routing for instruction of indicated discrepancy(ies)] Project Manager: (initials) _____ Date: ____/04 Client contacted: ☐ Yes ☐ No Summary of discussion: Corrective Action (per PM/Client):



December 13, 2004

Engineering and Fire Investigations

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Attn.:

Mark Williams

Project#: 98360-000-15

Project:

Bohcnnon

Site:

San Lorenzo, CA

Ataneh. Salinpor

Dear Mr. Williams,

Attached is our report for your samples received on 12/03/2004 13:24 This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 01/17/2005 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: asalimpour@stl-inc.com

Sincerely,

Afsaneh Salimpour

Project Manager



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
MW-3	12/02/2004	Water	3
MW-4	12/03/2004	Water	4
MW-5	12/02/2004	Water	5
MW-6	12/02/2004	Water	6
MW-7	12/02/2004	Water	7



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohonnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Prep(s):

5030B

Test(s):

8260B

Sample ID: MW-3

Lab ID:

2004-12-0121 - 3

Sampled: 12/02/2004 Extracted:

12/10/2004 13:13

Matrix:

Water

QC Batch#: 2004/12/10-01.62

Analysis Flag: L2 (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	8300	1300	ug/L	25.00	12/10/2004 13:13	
Benzene	2400	13	ug/L	25.00	12/10/2004 13:13	
Toluene	41	13	ug/L	25.00	12/10/2004 13:13	
Ethylbenzene	200	13	ug/L	25.00	12/10/2004 13:13	
Total xylenes	29	25	ug/L	25.00	12/10/2004 13:13	
Surrogate(s)	1					
1,2-Dichloroethane-d4	101.3	73-130	%	25.00	12/10/2004 13:13	
Toluene-d8	107.0	81-114	%	25.00	12/10/2004 13:13	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Prep(s):

5030B

Test(s):

8260B

Sample ID: MW-4

Lab ID:

2004-12-0121 - 4

Sampled: 12/03/2004

Extracted:

12/10/2004 13:36

Matrix: Water

QC Batch#: 2004/12/10-01.62

Analysis Flag: L2 (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	2800	100	ug/L	2.00	12/10/2004 13:36	
Benzene	120	1.0	ug/L	2.00	12/10/2004 13:36	
Toluene	5.4	1.0	ug/L	2.00	12/10/2004 13:36	
Ethylbenzene	8.3	1.0	ug/L	2.00	12/10/2004 13:36	
Total xylenes	5.3	2.0	ug/L	2.00	12/10/2004 13:36	
Surrogate(s)						
1,2-Dichloroethane-d4	111.5	73-130	%	2.00	12/10/2004 13:36	
Toluene-d8	100.7	81-114	%	2.00	12/10/2004 13:36	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Prep(s):

5030B

Test(s):

8260B

Sample ID: MW-5

Lab ID:

2004-12-0121 - 5

Sampled:

12/02/2004

Extracted:

12/9/2004 15:55

Matrix:

Water

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/09/2004 15:55	
Benzene	ND	0.50	ug/L	1.00	12/09/2004 15:55	
Toluene	ND	0.50	ug/L	1.00	12/09/2004 15:55	
Ethylbenzene	ND	0.50	ug/L	1.00	12/09/2004 15:55	
Total xylenes	ND	1.0	ug/L	1.00	12/09/2004 15:55	
Surrogate(s)						
1,2-Dichloroethane-d4	98.0	73-130	%	1.00	12/09/2004 15:55	
Toluene-d8	97.4	81-114	%	1.00	12/09/2004 15:55	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohonnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Prep(s):

Matrix:

5030B

Test(s):

8260B

Sample ID: MW-6

Lab ID:

2004-12-0121 - 6

Sampled: 12/02/2004

Extracted:

12/9/2004 16:17

Water

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/09/2004 16:17	
Benzene	ND	0.50	ug/L	1.00	12/09/2004 16:17	
Toluene	ND	0.50	ug/L	1.00	12/09/2004 16:17	
Ethylbenzene	ND	0.50	ug/L	1.00	12/09/2004 16:17	
Total xylenes	ND	1.0	ug/L	1.00	12/09/2004 16:17	
Surrogate(s)						
1,2-Dichloroethane-d4	97.5	73-130	%	1.00	12/09/2004 16:17	
Toluene-d8	97.1	81-114	%	1.00	12/09/2004 16:17	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Prep(s):

5030B

Test(s):

8260B

Sample ID: MW-7

Lab ID:

2004-12-0121 - 7

Sampled: 12/02/2004

Extracted:

12/9/2004 16:39

Matrix:

Water

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/09/2004 16:39	
Benzene	ND	0.50	ug/L	1.00	12/09/2004 16:39	
Toluene	ND	0.50	ug/L	1.00	12/09/2004 16:39	
Ethylbenzene	ND	0.50	ug/L	1.00	12/09/2004 16:39	
Total xylenes	ND	1.0	ug/L	1.00	12/09/2004 16:39	
Surrogate(s)						
1,2-Dichloroethane-d4	100.6	73-130	%	1.00	12/09/2004 16:39	
Toluene-d8	93.0	81-114	%	1.00	12/09/2004 16:39	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Batch QC Report

Prep(s): 5030B Method Blank

Water

Test(s): 8260B

QC Batch # 2004/12/09-01.64

MB: 2004/12/09-01.64-013

Date Extracted: 12/09/2004 09:13

				The state of the s	
Compound	Conc.	RL.	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/09/2004 09:13	
Benzene	ND	0.5	ug/L	12/09/2004 09:13	
Toluene	ND	0.5	ug/L	12/09/2004 09:13	
Ethylbenzene	ND	0.5	ug/L	12/09/2004 09:13	
Total xylenes	ND	1.0	ug/L	12/09/2004 09:13	
Surrogates(s)					
1,2-Dichloroethane-d4	88.4	73-130	%	12/09/2004 09:13	
Toluene-d8	95.4	81-114	%	12/09/2004 09:13	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Batch QC Report

Prep(s): 5030B Method Blank

MB: 2004/12/10-01:62-050

Water

Test(s): 8260B

QC Batch # 2004/12/10-01.62

Date Extracted: 12/10/2004 07:50

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/10/2004 07:50	
Benzene	ND	0.5	ug/L	12/10/2004 07:50	
Toluene	ND	0.5	ug/L	12/10/2004 07:50	
Ethylbenzene	ND	0.5	ug/L	12/10/2004 07:50	İ
Total xylenes	ND	1.0	ug/L	12/10/2004 07:50	
Surrogates(s)					
1,2-Dichloroethane-d4	102.8	73-130	%	12/10/2004 07:50	
Toluene-d8	104.8	81-114	%	12/10/2004 07:50	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2004/12/09-01.64

LCS

2004/12/09-01.64-050

Extracted: 12/09/2004

Analyzed: 12/09/2004 08:50

LCSD

Compound	Conc.	Conc. ug/L Exp		Exp.Conc. Recovery %		RPD	RPD Ctrl Limits %			Flags		
Compound	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD		
Benzene Toluene	24.6 23.7		25.0 25.0	98.4 94.8			69-129 70-130	20 20				
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	441 484		500 500	88.2 96.8			73-130 81-114					



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2004/12/10-01.62

LCS

2004/12/10-01.62-028 Extracted: 12/10/2004

Analyzed: 12/10/2004 07:28

LCSD

Compound	Conc.	ug/L	Exp.Conc.	Recovery %		Recovery %		Recovery %		RPD	Ctrl.Lim	nits %	Fla	ags
Compound	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD				
Benzene Toluene	21.3 20.9		25.0 25.0	85.2 83.6			69-129 70-130	20 20		ţ				
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	494 515		500 500	98.8 103.0			73-130 81-114			1				



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohonnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Batch QC Report

Prep(s): 5030B Test(s): 8260B

Matrix Spike (MS/MSD)

Water

QC Batch # 2004/12/09-01.64

MS/MSD

2004-12-0174 - 001 Lab ID:

Extracted: 12/09/2004

Analyzed:

12/09/2004 10:20

Dilution:

1.00:

MSD:

MS:

2004/12/09-01.64-042

2004/12/09-01.64-020

Extracted: 12/09/2004

Analyzed:

12/09/2004 10:42

Dilution:

1.00

Compound	Conc.	Conc. ug/L		Spk.Level	Spk.Level Recovery %			Limit	s %	Flags	
Compound	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Benzene Toluene	25.0 24.7	24.5 23.9	ND ND	25.0 25.0	100.0 98.8	98.0 95.6	2.0 3.3	69-129 70-130	20 20	i	
Surrogate(s) 1,2-Dichloroethane-d4 Toluene-d8	444 489	450 466		500 500	88.8 97.8	90.0 93.2		73-130 81-114			



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Batch QC Report

Prep(s):

5030B

Test(s): 8260B

Matrix Spike (MS/MSD)

Water

QC Batch # 2004/12/10-01.62

MS/MSD

.

Lab ID:

2004-12-0228 - 001

MS:

2004/12/10-01.62-007

Extracted: 12/10/2004

Analyzed:

12/10/2004 09:07

Dilution:

1.00

MSD:

2004/12/10-01.62-029

Extracted: 12/10/2004

Analyzed:

12/10/2004 09:29

Dilution:

1.00

Compound	Conc.	Conc. ug/L		Spk.Level Recovery %			Limits %		Flags		
Compound	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Benzene Toluene	24.4 25.8	25.0 25.2	ND 0.538	25.0 25.0	97.6 101.0	100.0 98.6	2.4 2.4	69-129 70-130	20 20		
Surrogate(s) 1,2-Dichloroethane-d4 Toluene-d8	448 522	453 520		500 500	89.6 104.4	90.6 104.0		73-130 81-11 4			_



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohonnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Legend and Notes

Analysis Flag

L2

Reporting limits were raised due to high level of analyte present in the sample.



STL Chicago 2417 Bond Street University Park, IL 60466

Tel: 708 534 5200 Fax: 708 534 5211 www.sti-inc.com

SEVERN TRENT LABORATORIES ANALYTICAL REPORT

JOB NUMBER: 232516

Prepared For:

Severn Tront Laboratories 1220 Quarry Lane Pleasanton, CA 94566-4756

Project: STL San Francisco

Attention. Afsanch Salimpour

Date: 12/13/2004

Signature

Namo: Bonnie M. Stadelmann

Title: Project Manager

E-Mail: bstadelmann@stl-inc.com

Date

STL Chicago

2417 Bond Street

12/13/04

University Park, IL 60466

PHONE: (708) 534-5200 FAX.: (708) 534-5211

This Report Contains (

(<u>8</u>)

Pages

STL Chicago is part of Severn Trent Laboratorics, Inc.

SAMPLE INFORMATION Date: TZ/13/2004

Job Number,: 232516

Customer...: Severn Trent Laboratories Attn..... Afsaneh Salimpour

Project Number.....: 20002032 Customer Project 1D...: 2004-12-0121 Project Description...: STL San Francisco

Laboratory Sample 10	Çüştemer Şample ID	Sample Metrix	Date Sampled	Time Sampled	Datc Received	Time Received
232516-1	MW-4	Water	12/03/2004	12:00	12/07/2004	10:00
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SIL Chicago is part of Severn Trent Laboratories, Inc.

LABORATORY TEST RESULTS

Job Number: 232516 Date: 12/13/2004

CUSTOMER: Severn Trent Laboratories PRDJECT: 2004-12-0121 ATTW: Afsaneh Salimpour

Customer Sample ID: MW-4
Date Sampled.....: 12/03/2004
Time Sampled.....: 12:00
Sample Matrix....: Water

Laboratory Sample ID: 232516-1
Date Received.....: 12/07/2004
Time Received.....: 10:00

CONTEM 12	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	7.
350.2	Nītrogen, Ammonis (Dist./Nessler.) Ammonis(NH3+NH4),as N	0.34	0,20	mg/L	12/09/04	<u>ز</u>
51.3	Nītrogen, Total Kjeldahl Nītrogen, Total Kjeldahl as N (TKN)	<0.40	0.40	mg/L	12/09/04	m
	1					
		:				
			-	į		

SIL Chicago is part of Severn Trent Laboratories, Inc. LABORATORY CHRONICLE Date: 12/13/2004 Job Number: 232516 PROJECT: 2004-12-0121 ATTN: Afsaneh Salimpour CUSTOMER: Severn Trent Laboratories Lab 10: 232516-1 Client ID: MW-4 Date Recvd: 12/07/2004 Sample Date: 12/03/2004 RUN# BATCH# PREP BT #(S) 1 136662 136662 DATE/TIME ANALYZED DILUTION METHOD DESCRIPTION 350.2 12/09/2004 1255 Nitrogen, Ammonia (Dist./Nessler.) 12/09/2004 136672 136672 Nitrogen, Total Kjeldahl 1210 351.3 PKG IND (WC) PKG IND (WET CHEMISTRY)

QUALITY CONTROL RESULTS

Job Number.: 232516

Report Date.: 12/13/2004

CUSTOMER: Severn Trent Laboratories

PROJECT: 2004-12-0121

ATTN: Afsanch Salimpour

	I ala ID	Dangent	Unite	Of Becult	OC Pacult			oc calc. F * L		Time
- 1	Pafameter	Am	mon i a CNH3+l	NH4), 83 N			24 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	An Te		
ij	Method Descr	iption: Ni	trogen, Am	monia (Địst /N	éssler.:)	Equipment Co	de SPEC1		st Code NH3	d Harri
	Test Method.	35	0.2			. Batchy		14561614141414149	alyst ink	99444
					and the second of		4 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -			

QC	Lab ID	Reagent	Units	QC Result	QC Result	True Value	Drig. Value	qc cate.	} *	Limits	pate) ime
	136662-004 136662-005		mg/L mg/L	0.13000 U 2.32400		2.50000	0.13000 บ	93	*	80-120	12/09/2004 12/09/2004	

Test Method
Test Method 351.3 Batch
Test method: Salary and 30 120
Method Description : Nitrogen, Lotal Kjeldahl Equipment Code : SPEC1 Test Code : IKN
Total Visitarian Total Visitable - No TPHY
Test Method 351-2 Method Description : Nitrogen, Total Kjeldehl Equipment Code SPEC1 Test Code . TKN Panameter Nitrogen, Total Kjeldehl as N (TKN)
Panameter (itrogen, Total Kjeldahl as N. (TKN)

QC	Lab 10	Reagent	Units	QC Result	QC Result	True Value	Orig, Value	QC Calc.	F *	Limits	Date	Time
LCS MS		104HSTTK2 104HSTTK2 104HSTTK2	mg/L	0.18000 U 2.21100 2.01700 1.96400	2.01700	2.50000 2.50000 2.50000	0.18000 U 0.18000 U 0.18000 U	81	* * * *	75-125	12/09/2004 12/09/2004 12/09/2004 12/09/2004	1150 1212

OUALLICE YEARS UNAMEDE OMENT HODS

REFERENCES AND NOTES

Report Date: 12/13/2004

REPORT COMMENTS

- 1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
- Soil, sediment and studge sample results are reported on a "dry weight" basis except when analyzed for landfill disposal or incineration parameters. All other solid matrix samples are reported on an "as received" basis unless noted differently.
- 3) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
- 4) The test results for the noted analytical method(s) meet the requirements of NELAC. Lab Cert. ID# 100201
- 5) According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

Glossery of flags, qualifiers and abbreviations (any number of which may appear in the report) Inorganic Qualifiers (Q-Column)

- U Analyte was not detected at or above the stated limit.
- Not detected at or above the reporting limit.
- J Result is tess than the RL, but greater than or equal to the method detection limit.
- Result is less than the CRDL/RL, but greater than or equal to the IDL/MDL.
- Result was determined by the Method of Standard Additions.
- F AFCEE: Result is less than the RL, but greater than or equal to the method detection (imit.

Inorganic Flags (Flag Column)

- ICY,CCV,ICB,CCB,1SA,ISB,CRI,CRA,MRL: Instrument related QC exceed the upper or lower control limits.
- LCS, LCD, MD: Batch QC exceeds the upper or lower control limits.
- MSA correlation coefficient is less than 0.995.
- 4 MS, MSD: The analyte present in the original sample is 4 times greater
 - than the matrix spike concentration; therefore, control limits are not applicable.
- E SD: Serial dilution exceeds the control limits.
 - MB, EB1, EB2, EB3: Batch QC is greater than reporting limit or had a
 - negative instrument reading lower than the absolute value of the reporting limit.
- N MS, MSD: Spike recovery exceeds the upper or lower control limits.
- AS(GFAA) Post-digestion spike was outside 85-115% control limits.

Organic Qualifiers (Q - Column)

- U Analyte was not detected at or above the stated limit.
- ND Compound not detected.
- J Result is an estimated value below the reporting limit or a tentatively identified compound (TIC).
- Result was qualitatively confirmed, but not quantified.
- C Pesticide identification was confirmed by GC/MS.
- Y The chromatographic response resembles a typical fuel pattern.
- Ine chromatographic response does not resemble a typical fuel pattern.
- E Result exceeded calibration range, secondary dilution required.
- F AFCEE:Result is an estimated value below the reporting limit or a tentatively identified compound (TIC) Organic Flags (Flags Column)
- B MB: Batch QC is greater than reporting limit.
- LCS, LCD, ELC, ELD, CV, MS, MSD, Surrogate: Batch QC exceeds the upper or lower control limits.
- EB1, EB2, EB3, MLE: Batch QC is greater than reporting Limit
- Concentration exceeds the instrument colibration range
- a Concentration is below the method Reporting Limit (RL)
- B Compound was found in the blank and sample.
 - Surrogate or matrix spike recoveries were not obtained because the extract was diluted for
 - analysis; also compounds analyzed at a dilution will be flagged with a D.
- H Alternate peak selection upon analytical review
- Indicates the presence of an interfence, recovery is not calculated.
- Manually integrated compound.

D

P The lower of the two values is reported when the % difference between the results of two GC columns is

OUALITY ASSURANCE METHODS.

REFERENCES AND NOTES.

Report Date: 12/13/2004

```
greater than 25%.
Abbreviations
AS
         Post Digestion Spike (GFAA Samples - See Note 1 below)
         Designation given to identify a specific extraction, digestion, preparation set, or analysis set
Batch
         Capillary Column CCB Continuing Calibration Blank
CAP
CCV
         Continuing Calibration Verification
CF
         Confirmation analysis of original
         Confirmation analysis of A1 or D1
Ç1
02
         Confirmation analysis of AZ or DZ
C3
         Confirmation analysis of A3 or D3
         Low Level Standard Check - GFAA; Mercury
CRA
         Low Level Standard Check - ICP
ÇRI
CV
         Calilbration Verification Standard
Dit Fac
        Dilution Factor ~ Secondary dilution analysis
         Dilution 1
D1
b2
         Dilution 2
D3
         Dilution 3
         Detection Limit Factor
PLFac
         Distilled Standard - High Level
         Distilled Standard - Low Level
DŠL
DSM
         Distilled Standard - Mcdium Level
EB1
         Extraction Blank 1
FB2
         Extraction Blank 2
EB3
         DI Blank
ELC
         Method Extracted LCS
         Method Extracted LCD
FLD
ICAL
         Initial calibration
         Initial Calibration Blank
1CB
1CV
         Initial Calibration Verification
IDL
         Instrument Detection Limit
ISA
         Interference Check Sample A - ICAP
ISB
         Interference Check Sample B • ICAP
         The first six digits of the sample ID which refers to a specific client, project and sample group
Job No.
         Lab 10 An 8 number unique laboratory identification
LCD
         Laboratory Control Standard Duplicate
LCS
         Laboratory Control Standard with reagent grade water or a matrix free from the analyte of interest
MR
         Method Blank or (PB) Preparation Blank
MD
         Method Duplicate
MDL
         Method Detection Limit
MLE
         Medium Level Extraction Blank
MRL
         Method Reporting Limit Standard
MSA
         Method of Standard Additions
MS
         Matrix Spike
MSD
         Matrix Spike Duplicate
ND
         Not Detected
PREPE
         Preparation factor used by the Laboratory's Information Management System (LIMS)
PDS
         Post Digestion Spike (ICAP)
RA
         Re-analysis of original
         Re-analysis of D1
Α1
ΑZ
         Re-analysis of D2
AЗ
         Re-analysis of D3
RD
         Re-extraction of dilution
RE
         Re-extraction of original
RC
         Re-extraction Confirmation
RI
         Reporting Limit
RPD
         Relative Percent Difference of duplicate (unrounded) analyses
RRF
         Relative Response Factor
         Retention lime
```

QUALT THE ASSOCRANCE NETHODS

REFERENCES AND MOTES

Report Date: 12/13/2004

Retention Time Window Sample 1D A 9 digit number Unique for each sample, the first RTW six digits are referred as the job number SCB Seeded Control Blank Serial Dilution (Calculated when sample concentration exceeds 50 times the MDL) SĎ UCB Unseeded Control Blank Second Source Verification Standard SSV Solid Laboratory Control Standard(LCS) \$LCS PHC pH Calibration Check LCSP pH Laboratory Control Sample pH Laboratory Control Sample Duplicate LCDP MOPH pH Sample Duplicate MDFP Flashpoint Sample Duplicate LCFP Flashpoint LCS G1 Gelex Check Standard Range D-1 G2 Gelex Check Standard Range 1-10 G3 Gelex Check Standard Range 10-100 Gelex Check Standard Range 100-1000 64 Note 1: The Post Spike Designation on Batch QC for GFAA is designated with an "S" added to the current abbreviation used. EX. LCS S=LCS Post Spike (GFAA); MSS=MS Post Spike (GFAA) Note 2: The MD calculates an absolute difference (A) when the sample concentration is less than 5 times the reporting limit. The control limit is represented as +/- the RL.

Day

Day

5

5

SEVERN TRINI

MW-4

Chain of Custody

Date Shipped: 12/4/2004

2004-12-0121 - 1 From: To: STL Chicago STL San Francisco (CL) 2417 Bond Street 1220 Quarry Lane Pleasanton, CA 94566-4756 University Park, IL 60466 Project Manager Afsaneh Salimpour Phone: (708) 534-5200 Ext: (925) 484-1919 107 Phone: Ext. Fax: (708) 534-5211 (925) 484-1096 Contact: Bonnie Fax: Stadelmann Email: asalimpour@stl-inc.com Phone: (708) 534-5200 Ext: 98360-000-15 CL Submission #: 2004-12-0121 Project #: CL PO #: Bohonnon Project Name: and the cient Cample ID Wethoo

12/3/2004 12:00:00AM

Water

350.3

351.4

PLEASE INCLUDE QC WITH FAXED AND HARD-COPY RESULTS

Subcontract - Ammonia

Subcontract - Total Kjeldahl Nitrogen

REUNOUISHED BY: 1.	RELINQUISHED BY:	2.	RELINQUISHED BY:	3.
-SigNature Time	Signature	Time	Signaturo	Time
Printed Name Dale	Printed Name	Dale	Printed Name	Date
Company	Company		Company	
RECEIVED BY: 1.	RECEIVED BY:	2.	RECEIVED BY:	3.
Signatur Time	Signature	Time	Signature	Time
Printed Name Date 12/7/64	Printed Name	Date	Printed Name	Date
Сотрапу	Сотрапу		Company	



CHAIN OF CUSTODY 2004-/2-017-1

Page _	<u>1</u> _ of	_1
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Lab: STC

TAT: 5-day

Engineering	and	Fire
Investigatio	ns	

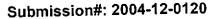
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		Sampled	Media	Conts.	8015m/8020 TPH-g	ব	→ ²							Sample		Comments	Preservative
	12104		Witer	Ч	$\tilde{\mathbf{x}}$									notta	ken -	DSH	
MW-2					\setminus									not to	hen .	- OSH	
MW-3	7			1	\sqrt{\omega}		ヿ	一		╅				1000 (- 5			\neg
MW-4 12	. 3/09			6	V	V	$\overline{\mathbf{x}}$		-+	+-			+		····		
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	12/04		 	 	-					+		-		 			
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STL San Francisco

Sample Receipt Checklist

Sample Receipt Che Submission #:2004- <u>/&</u> - <u>0/2/</u>			
Checklist completed by: (initials) DH Date: 12 / 06 /04			
Courier name: 🛘 STL San Francisco 🗘 Client			Not /
Custody seals intact on shipping container/samples	Yes	_ No	Present
Chain of custody present?	·	Yes	
Chain of custody signed when relinquished and received?		Yes	No
Chain of custody agrees with sample labels?		Yes	No
Samples in proper container/bottle?		Yes	No
Sample containers intact?			No
Sufficient sample volume for indicated test?		Yes	No
All samples received within holding time?			No
Container/Temp Blank temperature in compliance (4º C ± 2)? Potential reason for > 6°C - Ice melted □ - Ice in bags . □ . Not enough ice. □ .	Temp:—≦ Not enough blue ice: □ Sai	de filmin Sing	No No
Sampled < 4hr: ago?□ lice not required (e.g. air or bulk sample) □	ice Pres	ent Yes	Zijios zijios ili
Water - VOA vials have zero headspace?	No VOA vials submitted_	Ye:	s No
(if bubble is present, refer to approximate bubble size and itemize in comments a	as S (small \sim O), M (medium	~ O) o	r L (large ~ 0)
□ pH adjusted- Preservative used: □ HNO₃ □ HCl □ H₂SO₄ □ NaOH □ Z	ZnOAcL ot #(s)		
For any item check-listed "No", provided detail of discrepancy in commen	it section below:		
Comments: Samples MW-1 & MW-2 Wat			•
Octimiono.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-	
Project Management [Routing for instruction of indicate Project Manager: (initials) Detailed Date: 12 106 104 Commander of discussion: Samples Mw-1 + Mw-1	ed discrepancy(ies)] Client contacted: Yes 2 Mot Samo	□ No (mark Williams
mark Williams			
Corrective Action (per PM/Client):			





Engineering and Fire Investigations

December 13, 2004

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Attn.:

Mark Williams

Project#: 98360-000-15

Project:

Bohennon

Site:

San Lorenzo, CA

Dear Mr. Williams,

Attached is our report for your samples received on 12/03/2004 13:24 This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 01/17/2005 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: asalimpour@stl-inc.com

Sincerely, Atanch. Salinpoe

Afsaneh Salimpour

Project Manager



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
POBS-B1 POBS-B2 NOBS-B1	12/02/2004 12/03/2004 12/03/2004 12/03/2004	Water Water Water Water	1 2 3 4



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohonnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Prep(s):

5030B

Test(s):

8260B

Sample ID: POBS-A1

Lab ID:

2004-12-0120 - 1

12/02/2004

Extracted:

12/9/2004 15:55

Sampled: Matrix:

Water

QC Batch#: 2004/12/09-01.62

Analysis Flag: L2 (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline Benzene Toluene Ethylbenzene	17000 3500 240 210 730	1300 13 13 13 25	ug/L ug/L ug/L ug/L ug/L	25.00 25.00 25.00 25.00 25.00	12/09/2004 15:55 12/09/2004 15:55 12/09/2004 15:55 12/09/2004 15:55 12/09/2004 15:55	
Total xylenes Surrogate(s) 1,2-Dichloroethane-d4 Toluene-d8	105.6 102.7	73-130 81-114	% %	25.00 25.00		



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohonnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Prep(s):

5030B

Test(s):

8260B

Sample ID: POBS-B1

Lab ID:

2004-12-0120 - 2

Sampled: 12/03/2004 Extracted:

12/9/2004 16:17

Matrix: Water

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	190	50	ug/L	1.00	12/09/2004 16:17	Q6
Benzene	2.6	0.50	ug/L	1.00	12/09/2004 16:17	
Toluene	ND	0.50	ug/L	1.00	12/09/2004 16:17	
Ethylbenzene	ND	0.50	ug/L	1.00	12/09/2004 16:17	
Total xylenes	ND	1.0	ug/L	1.00	12/09/2004 16:17	
Surrogate(s)						
1,2-Dichloroethane-d4	107.6	73-130	%	1.00	12/09/2004 16:17	
Toluene-d8	105.1	81-114	%	1.00	12/09/2004 16:17	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Prep(s):

5030B

Test(s):

8260B

Sample ID: POBS-B2

Lab ID:

2004-12-0120 - 3

Sampled: 12/03/2004

Extracted:

12/9/2004 18:50

Matrix: V

Water

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/09/2004 18:50	
Benzene	ND	0.50	ug/L	1.00	12/09/2004 18:50	
Toluene	ND	0.50	ug/L	1.00	12/09/2004 18:50	
Ethylbenzene	ND	0.50	ug/L	1.00	12/09/2004 18:50	
Total xylenes	ND	1.0	ug/L	1.00	12/09/2004 18:50	
Surrogate(s)						
1,2-Dichloroethane-d4	115.4	73-130	%	1.00	12/09/2004 18:50	
Toluene-d8	103.4	81-114	%	1.00	12/09/2004 18:50	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohonnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Prep(s):

Matrix:

5030B

Water.

Test(s):

8260B

Sample ID: NOBS-B1

Lab ID:

2004-12-0120 - 4

Sampled:

12/9/2004 19:12

12/03/2004

Extracted:

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/09/2004 19:12	
Benzene	2.0	0.50	ug/L	1.00	12/09/2004 19:12	
Toluene	ND	0.50	ug/L	1.00	12/09/2004 19:12	
Ethylbenzene	ND	0.50	ug/L	1.00	12/09/2004 19:12	
Total xylenes	ND	1.0	ug/L	1.00	12/09/2004 19:12	
Surrogate(s)						
1,2-Dichloroethane-d4	112.6	73-130	%	1.00	12/09/2004 19:12	
Toluene-d8	105.9	81-114	%	1.00	12/09/2004 19:12	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Batch QC Report

Prep(s): 5030B

Method Blank

Water

Test(s): 8260B QC Batch # 2004/12/09-01.62

Date Extracted: 12/09/2004 09:24

MB: 2004/12/09-01.62-024

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/09/2004 09:24	
Benzene	, ND	0.5	ug/L	12/09/2004 09:24	
Toluene	ND	0.5	ug/L	12/09/2004 09:24	
Ethylbenzene	ND	0.5	ug/L	12/09/2004 09:24	
Total xylenes	ND	1.0	ug/L	12/09/2004 09:24	
Surrogates(s)		İ			
1,2-Dichloroethane-d4	95.2	73-130	%	12/09/2004 09:24	
Toluene-d8	100.0	81-114	%	12/09/2004 09:24	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Batch QC Report

Prep(s): 5030B Method Blank

Test(s): 8260B

Water

QC Batch # 2004/12/09-02.62

MB: 2004/12/09-02.62-017

Date Extracted: 12/09/2004 18:17

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/09/2004 18:17	
Benzene	ND	0.5	ug/L	12/09/2004 18:17	
Toluene	ND	0.5	ug/L	12/09/2004 18:17	
Ethylbenzene	l ND	0.5	ug/L	12/09/2004 18:17	
Total xylenes	ND	1.0	ug/L	12/09/2004 18:17	
Surrogates(s)					
1,2-Dichloroethane-d4	94.0	73-130	%	12/09/2004 18:17	
Toluene-d8	100.8	81-114	%	12/09/2004 18:17	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2004/12/09-01.62

LCS

2004/12/09-01.62-001

Extracted: 12/09/2004

Analyzed: 12/09/2004 09:01

LCSD

Compound	Conc.	Conc. ug/L. Exp.0		. Recovery %		RPD	RPD Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene Toluene	24.4 24.0		25.0 25.0	97.6 96.0			69-129 70-130	20 20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	468 514		500 500	93.6 102.8			73-130 81-114			



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2004/12/09-02.62

LCS

2004/12/09-02.62-055

Extracted: 12/09/2004

Analyzed: 12/09/2004 17:55

LCSD

Compound	Conc.	ug/L	Exp.Conc.	Reco	very %	RPD	Ctrl.Lin	nits %	Fla	ags
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene Toluene	23.5 22.6		25.0 25.0	94.0 90.4			69-129 70-130	20 20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	494 529		500 500	98.8 105.8			73-130 81-114			



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Batch QC Report

Prep(s):

5030B

Test(s): 8260B

Matrix Spike (MS/MSD)

Water

QC Batch # 2004/12/09-01.62

MS/MSD

MS:

Extracted: 12/09/2004

Lab ID:

2004-12-0155 - 004

12/09/2004 11:26

Analyzed: Dilution:

1.00

MSD: 2

2004/12/09-01.62-048

2004/12/09-01.62-026

Extracted: 12/09/2004

Analyzed:

12/09/2004 11:48

Dilution:

1.00

Сотроила	Conc.	ug	/L	Spk.Level	R	ecovery	%	Limit	s %	FI	ags
Composite	MS	MSD	Sample	ug/L	мѕ	MSD	RPD	Rec.	RPD	MS	MSD
Benzene	26.3	26.6	1.59	25.0	98.8	100.0	1.2	69-129	20		
Toluene	31.5	32.8	8.27	25.0	92.9	98.1	5.4	70-130	20		
Surrogate(s)		ļ									
1,2-Dichloroethane-d4	493	510		500	98.6	102.0		73-130			
Toluene-d8	529	526		500	105.8	105.2		81-114			



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohonnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Batch QC Report

Prep(s):

5030B

Test(s): 8260B

Matrix Spike (MS/MSD)

Water

QC Batch # 2004/12/09-02.62

MS/MSD

Lab ID:

2004-12-0224 - 007

MS:

MSD:

2004/12/09-02.62-042

2004/12/09-02.62-004

Extracted: 12/09/2004

Extracted: 12/09/2004

Analyzed:

12/09/2004 20:42

Dilution:

1.00 12/09/2004 21:04

Analyzed: Dilution:

1.00

Compound	Conc.	U	g/L	Spk.Level	R	ecovery	%	Limits	5 %	Flags		
Compound	мѕ	M\$D	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD	
Benzene Toluene	25.9 25.9	29.3 27.6	ND ND	25.0 25.0	103.6 103.6	117.2 110.4	12.3 6.4	69-129 70-130	20 20			
Surrogate(s) 1,2-Dichloroethane-d4 Toluene-d8	545 515	562 538		500 500	109.0 103.0	112.4 107.6		73-130 81-114				



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo, CA

Legend and Notes

Analysis Flag

L2

Reporting limits were raised due to high level of analyte present in the sample.

Result Flag

Q6

The concentration reported reflect(s) individual or discrete unidentified peaks not matching a typical fuel pattern.



STL Chicago 2417 Bond Street University Park, IL 60466

Tel: 708 534 5200 Fax: 708 534 5211 www.stl-inc.com

SEVERN TRENT LABORATORIES ANALYTICAL REPORT

JOB NUMBER: 232514

Propared For:

Severn Frent Laboratories 1220 Quarry Lane Pleasanton, CA 94566-4756

Project: STL San Francisco

Attention: Afsaneb Salimpour

Date: 12/13/2004

Signature

Name: Bonnie M. Stadelmann

Title: Project Manager

E-Mail: bstadelmann@stl-inc.com

Stadiman

12/13/04

Date

STL Chicago

2417 Bond Street

University Park, 1L 60466

PHONE: (708) 534-5200 FAX..: (708) 534-5211

This Report Contains (____) Pages

SAMPLE INFORMATION Date: 12/13/2004

Job Number.: 232514

Customer...: Severn Trent Laboratories

Attn....: Afsaneh Salimpour

Project Number....: 20002032 Customer Project ID...: 2004-12-0120 Project Description...: STL San Francisco

....Time... Sample: Time. Customer Date Date :: Laboratory Sampled Received Rece | ved Sample [D. Sample ID Matrix. Samoled 10:00 232514-1 NOBS-B1 12/03/2004 12:00 12/07/2004 Water

LABORATORY TEST RESULTS

Job #umber: 232514

Date: 12/13/2004

CUSTOMER: Severn Frent Laboratories PROJECT: 2004-12-0120 ATTW: Afsoneh Salimpout

Customer Sample ID: NOBS-B1 Date Sampled....: 12/03/2004 Time Sampled....: 12:00

Laboratory Sample ID: 232514-1

Sample Matrix....: Water

Date Received.....: 12/07/2004 Time Received.....: 10:00

ST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TEC
350.2	Nitrogen, Ammonia (Dist./Nessler.) Ammonia(NH3+NH4),as N	0.54	0.20	mg/L	12/09/04	jmk
351.3	Nitrogen, Total Kjeldahl Nitrogen, Total Kjeldahl as N (TKN)	4.3	0.40	mg/L	12/09/04	mtt
				<u>.</u>		
				:		
•						
				[

^{*} In Description = Dry Wgt.

Job	Number: 232514	LABORATOF	ty ch	RONI	CLE	Date: 1	2/13/2004		
USTOMER: Severn	frent Luboratories	PROJE	CT: 2004-1	2-0120	301 301	i i i i a	TTN: Afsaneh S	satimpou	A STATE OF THE STA
ab 10: 232514-1 METHOD 350.2 351.3 PKG INO (WE)	Client ID: NOBS-B1 DESCRIPTION Nitrogen, Ammonia (Dist. Nitrogen, Total Kjeldah) PKG INO (WET CHEMISTRY)	l ,	Date Re RUN# 1 1	BATCH# 136662	07/2004 PREP BT 136662 136672	Sample #(S)	Date: 12/03/20 DATE/TIME AM 12/09/2004 12/09/2004	004 FALYZED 1243 1209	DILUTIO
									ü
	1								
·									
		,							

Job Number.: 232514	QUALITY	CONTROL	RESULTS	Report Date.: 12/13/2004	
EUSTOMER: Sevenn frent Laboratories	PROJECT	÷ 2004-12-0120		ATTN: Afsameh Sa(Impour	

	lest Nethor Param	Method d Descri Metero	ption, (Nit	.2 rogen, Amo onia(NH3+N	onia (Dist./Ne: H4),as N	ster.)	Batch Equipment Cod	136662 de SPEC1		Analyst Test Code	ink NH3	
Q	C La	dl de	Reagent	Units	QC Result	OC Result	True Value	Orig. Value	OC Calc. F *	Limits	Date	Time

-				•					
M8 136662-004 LCS 136662-005 104HSTTK2	· · • · ·	0.13000 U 2.32400	2-50000	0.13000 U	93	*	80-120	12/09/2004 12/09/2004	

OC	lab ID i	Reagent	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc	. F *	Limits	Date	Time
	136672-004		mg/L	0.18000 U					i		12/09/2004	1148
LCS	136672-005 10	04HSTTK2	mg/L	2.21100		2.50000	0.1B000 U	88	×	80-120	12/09/2004	1150

QUALITY ASSURANCE METRODS

REFERENCES AND MOTES

Report Date: 12/13/2004

REPORT COMMENTS

- 1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
- Soil, sediment and sludge sample results are reported on a "dry weight" basis except when analyzed for landfill disposal or incineration parameters. All other solid matrix samples are reported on an "as received" basis unless noted differently.
- 3) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
- 4) The test results for the noted analytical method(s) meet the requirements of NELAC. Lab Cert. ID# 100201
- 5) According to 400FR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

Glossary of flags, qualifiers and abbreviations (any number of which may appear in the report) Inorganic Qualifiers (Q-Column)

- U Analyte was not detected at or above the stated limit.
- Not detected at or above the reporting limit.
- J Result is less than the RL, but greater than or equal to the method detection limit.
- Result is less than the CRDL/RL, but greater than or equal to the IDL/MDL.
- S Result was determined by the Method of Standard Additions.
- F AFCEE: Result is less than the RL, but greater than or equal to the method detection limit.

 Inorganic Flags (Flag Column)
 - ICV,CCV,ICB,CCB,ISA,ISB,CRI,CRA,MRL: Instrument related QC exceed the upper or lower control limits.
- * LCS, LCD, ND: Batch QC exceeds the upper or lower control limits.
- MSA correlation coefficient is less than 0.995.
- 4 MS, MSD: The analyte present in the original sample is 4 times greater
- than the matrix spike concentration; therefore, control limits are not applicable.
- E SD: Serial dilution exceeds the control limits.
- MB, EB1, EB2, EB3: Batch QC is greater than reporting limit or had a
 - negative instrument reading lower than the absolute value of the reporting limit.
- N MS, MSD: Spike recovery exceeds the upper or lower control limits.
- W AS(GFAA) Post-digestion spike was outside 85-115% control limits.
- Organic Qualifiers (Q Column)
- U Analyte was not detected at or above the stated limit.
- ND Compound not detected.
- J Result is an estimated value below the reporting limit or a tentatively identified compound (TIC).
- Result was qualitatively confirmed, but not quantified.
- C Pesticide identification was confirmed by GC/MS.
- Y The chromatographic response resembles a typical fuel pattern.
- The chromatographic response does not resemble a typical fuel pattern.
- E Result exceeded calibration range, secondary dilution required.
- F AFCEE:Result is an estimated value below the reporting limit or a tentatively identified compound (710) Organic flags (flags Column)
- B MB: Batch QC is greater than reporting limit.
- * LCS, LCD, ELC, ELD, CV, MS, MSD, Surrogate: Batch DC exceeds the upper or lower control limits.
- EB1, EB2, EB3, MLE: Batch QC is greater than reporting Limit
- A Concentration exceeds the instrument calibration range
- a Concentration is below the method Reporting Limit (RL)
- B Compound was found in the blank and sample.
- Surrogate or matrix spike recoveries were not obtained because the extract was diluted for
 - analysis; also compounds analyzed at a dilution will be flagged with a D.
- # Alternate peak sclention upon analytical review
- I Indicates the presence of an interfence, recovery is not calculated.
- M Manually integrated compound.
- P The lower of the two values is reported when the % difference between the results of two GC columns is

DUALITY ASSURANCE WETHODS

REFERENCES AND NOTES

Report Date: 12/13/2004

```
greater than 25%.
Abbreviations
         Post Digestion Spike (GFAA Samples - See Note 1 below)
AS
         Designation given to identify a specific extraction, digestion, preparation set, or analysis set
Batch
PA2
         Capillary Column CCB Continuing Calibration Blank
CCV
         Continuing Calibration Verification
         Confirmation analysis of original
CF
C1
         Confirmation analysis of A1 or D1
         Confirmation analysis of AZ or DZ
C2
         Confirmation analysis of A3 or D3
c3
CRA
         Low Level Standard Check - GFAA; Mercury
CRI
         Low Level Standard Check - ICP
         Calibration Verification Standard
CV
Dil Fac Dilution Factor - Secondary dilution analysis
D1
         Dilution 1
         Dilution 2
DZ
Ω3
         Dilution 3
DLFac
         Detection Limit Factor
         Distilled Standard - High Level
DSH
         Distilled Standard - Low Level
DSL
DSM
         Distilled Standard - Medium Level
EB1
         Extraction Blank 1
EB2
         Extraction Blank 2
EB3
         DI Blank
         Method Extracted LCS
FLC
ELD
         Method Extracted LCD
         Initial calibration
ICAL
         Initial Calibration Blank
ICB
ICV
         Initial Calibration Verification
IDL
         Instrument Detection Limit
ISA
         Interference Check Sample A - ICAP
         Interference Check Sample B - ICAP
ISB
         The first six digits of the sample 1D which refers to a specific client, project and sample group
Job No.
         Lab ID An 8 number unique laboratory identification
LCD
         Laboratory Control Standard Duplicate
LCS
         Laboratory Control Standard with reagent grade water or a matrix free from the analyte of interest
MR
         Method Blank or (PB) Preparation Blank
MD
         Method Duplicate
MDL
         Method Detection Limit
         Medium Level Extraction Blank
MLE
MR1
         Method Reporting Limit Standard
         Method of Standard Additions
MSA
MS
         Matrix Spike
         Matrix Spike Duplicate
MSD
NP
         Not Detected
         Preparation factor used by the Laboratory's Information Management System (LIMS)
PREPE
         Post Digestion Spike (ICAP)
201
RΑ
         Re-analysis of original
A1
         Re-enalysis of D1
A2
         Re-analysis of D2
A3
         Re-analysis of D3
RD
         Re-extraction of dilution
RE
         Re-extraction of original
ŔĊ
         Re-extraction Confirmation
RL
         Reporting Limit
RPD
         Relative Percent Difference of duplicate (unrounded) analyses
RRF
         Relative Response Factor
RT
         Retention Time
```

OUALT TY ASSURANCE NETHODS.

REFERENCES AND NOTES

Report Date: 12/13/2004

six digits are referred as the job number SCB Seeded Control Blank Serial Dilution (Calculated when sample concentration exceeds 50 times the MDL) SD UCB Unseeded Control Blank SSV Second Source Verification Standard Solid Laboratory Control Standard(LCS) SLCS pH Calibration Check LCSP pH Laboratory Control Sample PHC LCDP pH Laboratory Control Sample Duplicate MDPH pH Sample Duplicate MDFP Flashpoint Sample Duplicate LCFP Flashpoint LCS Gelex Check Standard Range 0-1 G1 Gelex Check Standard Range 1-10 G2 G\$ Gelex Check Standard Range 10-100 Gelex Check Standard Range 100-1000 G4 Note 1: The Post Spike Designation on Batch QC for GFAA is designated with an "S" added to the current abbreviation used. EX. LCS S=LCS Post Spike (GFAA); MSS=MS Post Spike (GFAA)

Retention Time Window Sample ID A 9 digit number unique for each sample, the first

RTW

Chain of Custody

Date Shipped: 12/4/2004

2004-12-0120 - 1

									_
From:	-		To:						
STL San Francisco (CL) 1220 Quarry Lane Pleasanton, CA 94566-4756		1	STL Chic 2417 Bor University	nd Street					
Project Manager: Phone: (925) 484-1919	Afsaneh Salimpour Ext: 107		Phone: Fax:		534-5200 534-5211	Ext:			
Fax: Email:	(925) 484-1096 asalimpour@stl-inc.com		Contact: Phone:	Bonnie (708)	534- 520 0	Stade Ext:	imann 154		
CL Submission #: CL PO #:	2004-12-0120			Name:	98360-000- Bohennon	15	10-10-10-1	and how the sta	đo
Aralyais								<i>j</i>	× ×
NOBS-B1		4 •	12/3/2004 12:00	:00AM	Water				_
Subcontract - Ami	monia				350.3	<u> </u>	5	Day	_
Subcontract - Tota	al Kjeldahl Nitrogen				351.4		5	Day	_

PLEASE INCLUDE QC WITH FAXED AND HARD-COPY RESULTS

RELINQUISHED BY:	1.	RELINQUISHED BY:		2.	RELINQUISHED BY:		3.
Signature	14160 Time 12.16/04	Signature	Time		Signature	Time	
Printed Name	0ate	Printed Name	Date		Printed Name	Date	
STI -SF Company		Сотралу			Company		
RECEIVED BY:	1.	RECEIVED BY:		2.	RECEIVED BY:		3.
Signature V.	Time	Signature	Time		Signature	Time	
Printed Name	Date 2-7-04	Printed Name	Date		Printed Name	Date	
Company		Company			Company		



CHAIN OF CUSTODY 2004-12-0120

Page	1	of	1	

96260

Lab: STL

TAT: 5-de,

Engineering and Fire

Investigations																		IAI		/		
Report results to:																						
Name	Mark Will	iams												F	² roje	ct Infor	mation	ì		,		
Company	Engineeri	ng and Fire	Investigation	on	_											ct No.	CHS	1360	ر دهی. در	15		
Mailing Address	111 Deer	wood Road	, Suite 195		_									N	lame	Э	Rey	JUNNO				
City, State, Zip	San Ram	on, Califorr	ia 94583		_									L	.oca1	tion	Ber	יור ביל ו	173 C	,		
Telephone No.	(925) 820	-9580			-														······································			
Fax No.	(925) 820	-9587	.				-	4na	lyse	s Re	que	stec	i									
mark_williams@efiglol	bal.com																					
					X		یا															
Special instructions and/or s	specific regulate	ory requireme	nts:		H	nia	nitrogen total kjeldahl									÷						
5-241	7A				8015m/8020 TPH-g	ammonia	tal k															
- 1					L P	n a	n tc															
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	Date	Time	Matrix/	No. of	걟	δ	(0)				ŀ					Sample	. Cond	ition/	Commer	nts	<u>6</u>	
Sample Identification	Sampled	Sampled	Media	Conts.	8	350.	351						ľ			Çampic	00		5011111101		Preservative	
POBS-A1	12/2/04		With	۲)	7																	
POBS-B1	12/3/04		1	4	X																	
POBS-B2	12/2/04			И	2																	
NOBS-B1	12/3/04		/	7.	V	V	V							•								
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Collected by:	Murkon	LLIAMS	Date/Time	12/3/	icu			Co	llect	or's	Sigi	natu	re:		<u> </u>	lex			Date/Ti	me <u>12/</u>	12/04	
Relinquished by:	Mark WI	LYANI	_ Date/Time	1213) <i>Pr</i> ~	Jia	54.PV						<u>.</u>	1377	n	Mu I C	0.40			me 🔼		32'
Relinquished by:		<u> </u>	Date/Time		•	•			ceiv				7-	<i>T U (</i> \	· ·	· · · · · · · · · · · · · · · · · · ·	~~\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			me		
Method of Shipment:							•		mple			on.	on P	?cet·		7	mp	7		- Paret-reside		
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STL San Francisco

Sample Receipt Checklist

Submission #:2004/_	2 - 0/2	0					
Checklist completed by: (initials)	M Date: /2	104	//04				
Courier name: ☐ STL San Francisc	o Client						Not ,
Custody seals intact on shipping cor	ntainer/samples				Yes	No	Present
Chain of custody present?						Yes	No
Chain of custody signed when reling	uished and receive	:d?				Yes	No
Chain of custody agrees with sample	e labels?					Yes	No
Samples in proper container/bottle?						Yes	No
Sample containers intact?						Yes	_1_No
Sufficient sample volume for indicate	ed test?					Yes	No
All samples received within holding	time?					Yes	_ <u>i_</u> No
Container/Temp Blank femperature Potential reason for > 6°C - Ice mell Sampled < 4hr. ago? : Ice not rec	ed □ lce in bags	□ Not		☑ Not enough blu	Temp: 3 e ice ⊞ Sa ice Pres		
Water - VOA vials have zero heads	pace?	ili i Addibi Abuluk kerenguni a	ng saaba kalamata sa mara da makaa	No VOA via	s submitted_	Ye:	No
(if bubble is present, refer to approx	imate bubble size a	and itemiz	e in comm	ents as S (small ~O)), M (medium	n~ O) o	r L (large ~ 0)
Water - pH acceptable upon recei	pt? □ Yes □ No	1					
☐ pH adjusted— Preservative used	d: □ HNO₃ □ H	CI □ H₂S	O₄ □ NaOl	H □ ZnOAc –Lot #(s)	<u></u>	
For any item check-listed "No",	provided detail of	discrepa	ncy in con	nment section belo	w:		
Comments:							
		÷					
Project Management [Ro	outing for inst	ruction	of indi	cated discrepa	ncy(ies)]		
Project Manager: (initials)		·		Client contacte			
Summary of discussion:							
Guillilary of disoussism.							
	<u> </u>						
Corrective Action (per PM/Client):	····	,	-	, , , , , , , , , , , , , , , , , , ,	<u>* - 8 * 11</u>		
	<u></u>			·			
							<u> </u>



Engineering and Fire Investigations

December 13, 2004

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Attn.:

Mark Williams

Project#: 98360-000-15

Project:

Bohcnnon

Site:

San Lorenzo

Dear Mr. Williams,

Attached is our report for your samples received on 12/03/2004 13:24 This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 01/17/2005 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: asalimpour@stl-inc.com

Abarch. Salinpoe

Sincerely,

Afsaneh Salimpour Project Manager



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo

Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
PIW-A1	12/02/2004	Water	1
PIW-A2	12/02/2004	Water	2
PIW-B1	12/02/2004	Water	3
PIW-B3	12/02/2004	Water	4
NIW-A1	12/02/2004	Water	5
NIW-A2	12/02/2004	Water	6
NIW-B1	12/02/2004	Water	7
NIW-B2	12/02/2004	Water	8



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo

Prep(s):

5030B

Test(s):

8260B

Sample ID: PIW-A1

Lab ID:

2004-12-0117 - 1

Sampled:

12/02/2004

Extracted:

12/9/2004 12:55

Matrix:

Water

QC Batch#: 2004/12/09-01 62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	640	50	ug/L	1.00	12/09/2004 12:55	
Benzene	63	0.50	ug/L	1.00	12/09/2004 12:55	
Toluene	12	0.50	ug/L	1.00	12/09/2004 12:55	
Ethylbenzene	15	0.50	ug/L	1.00	12/09/2004 12:55	
Total xylenes	29	1.0	ug/L	1.00	12/09/2004 12:55	
Surrogate(s)						
1,2-Dichloroethane-d4	105.1	73-130	%	1.00	12/09/2004 12:55	
Toluene-d8	99.5	81-114	%	1.00	12/09/2004 12:55	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohonnon

Received: 12/03/2004 13:24

Site: San Lorenzo

Prep(s):

5030B

Sample ID: PIW-A2

Test(s):

8260B

Lab ID:

2004-12-0117 - 2

Sampled: 12/02/2004 Extracted:

12/9/2004 13:18

Matrix:

Water

QC Batch#: 2004/12/09-01.62

Compound	Conc.	RL.	Unit	Dilution	Analyzed	Flag
Gasoline	350	50	ug/L	1.00	12/09/2004 13:18	
Benzene	6.1	0.50	ug/L	1.00	12/09/2004 13:18	
Toluene	1.2	0.50	ug/L	1.00	12/09/2004 13:18	
Ethylbenzene	2.4	0.50	ug/L	1.00	12/09/2004 13:18	
Total xylenes	5.4	1.0	ug/L	1.00	12/09/2004 13:18	
Surrogate(s)						
1,2-Dichloroethane-d4	94.6	73-130	%	1.00	12/09/2004 13:18	
Toluene-d8	107.6	81-114	%	1.00	12/09/2004 13:18	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohonnon

Received: 12/03/2004 13:24

Site: San Lorenzo

Prep(s): 5030B

Matrix:

Sample ID: PIW-B1

Sampled: 12/02/2004

Water

Test(s):

Lab ID: 2004-12-0117 - 3

8260B

Extracted:

12/10/2004 12:28

QC Batch#: 2004/12/10-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	66	50	ug/L	1.00	12/10/2004 12:28	Q6
Benzene	ND	0.50	ug/L	1.00	12/10/2004 12:28	
Toluene	ND	0.50	ug/L	1.00	12/10/2004 12:28	
Ethylbenzene	ND	0.50	ug/L	1.00	12/10/2004 12:28	
Total xylenes	ND	1.0	ug/L	1.00	12/10/2004 12:28	
Surrogate(s)						
1,2-Dichloroethane-d4	107.8	73-130	%	1.00	12/10/2004 12:28	
Toluene-d8	85.3	81-114	%	1.00	12/10/2004 12:28	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo

Prep(s):

Sampled:

Matrix:

5030B

Sample ID: PIW-B3

12/02/2004

Water

Test(s):

8260B

Lab ID:

2004-12-0117 - 4

Extracted:

12/9/2004 14:03

QC Batch#: 2004/12/09-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	64	50	ug/L	1.00	12/09/2004 14:03	Q6
Benzene	0.75	0.50	ug/L	1.00	12/09/2004 14:03	
Toluene	ND	0.50	ug/L	1.00	12/09/2004 14:03	
Ethylbenzene	ND	0.50	ug/L	1.00	12/09/2004 14:03	
Total xylenes	ND	1.0	ug/L	1.00	12/09/2004 14:03	
Surrogate(s)						
1,2-Dichloroethane-d4	100.2	73-130	%	1.00	12/09/2004 14:03	
Toluene-d8	94.5	81-114	%	1.00	12/09/2004 14:03	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo

Prep(s):

5030B

Test(s):

8260B

Sample ID: NIW-A1

Lab ID:

2004-12-0117 - 5

Sampled: 12/02/2004 Extracted:

12/10/2004 12:51

Matrix:

Water

QC Batch#: 2004/12/10-01.62

Analysis Flag: L2 (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	1400	250	ug/L	5.00	12/10/2004 12:51	
Benzene	28	2.5	ug/L	5.00	12/10/2004 12:51	
Toluene	6.2	2.5	ug/L	5.00	12/10/2004 12:51	
Ethylbenzene	10	2.5	ug/L	5.00	12/10/2004 12:51	
Total xylenes	23	5.0	ug/L	5.00	12/10/2004 12:51	
Surrogate(s)						
1,2-Dichloroethane-d4	108.0	73-130	%	5.00	12/10/2004 12:51	
Toluene-d8	102.4	81-114	%	5.00	12/10/2004 12:51	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohennon

Received: 12/03/2004 13:24

Site: San Lorenzo

Prep(s): 5030B

Test(s):

8260B

Sample ID: NIW-A2

Lab ID:

2004-12-0117 - 6

Sampled:

Matrix:

12/02/2004

Extracted:

12/9/2004 14:47

Water

QC Batch#: 2004/12/09-01.62

Flag Conc. RL Unit Dilution Analyzed Compound 1.00 12/09/2004 14:47 ND 50 ug/L Gasoline 1.00 12/09/2004 14:47 Benzene ND 0.50 ug/L 1.00 12/09/2004 14:47 0.50 ug/L Toluene ND ND 0.50 ug/L 1.00 12/09/2004 14:47 Ethylbenzene 12/09/2004 14:47 1.00 Total xylenes ND 1.0 ug/L Surrogate(s) % 1.00 12/09/2004 14:47 1,2-Dichloroethane-d4 95.3 73-130 81-114 % 1.00 12/09/2004 14:47 101.7 Toluene-d8



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohonnon

Received: 12/03/2004 13:24

Site: San Lorenzo

Prep(s):

5030B

Test(s):

8260B

Sample ID: NIW-B1

Lab ID:

2004-12-0117 - 7

Matrix:

Sampled: 12/02/2004

Extracted:

12/9/2004 15:10

Water

QC Batch#: 2004/12/09-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/09/2004 15:10	
Benzene	ND	0.50	ug/L	1.00	12/09/2004 15:10	
Toluene	ND	0.50	ug/L	1.00	12/09/2004 15:10	
Ethylbenzene	ND	0.50	ug/L	1.00	12/09/2004 15:10	
Total xylenes	ND	1.0	ug/L	1.00	12/09/2004 15:10	
Surrogate(s)						
1,2-Dichloroethane-d4	98.0	73-130	%	1.00	12/09/2004 15:10	
Toluene-d8	104.3	81-114	%	1.00	12/09/2004 15:10	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohonnon

Received: 12/03/2004 13:24

Site: San Lorenzo

Prep(s):

Matrix:

5030B

Sample ID: NIW-B2

Sampled: 12/02/2004

Water

Test(s):

(s): 8260B

Lab ID:

2004-12-0117 - 8

Extracted:

12/9/2004 15:32

QC Batch#: 2004/12/09-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/09/2004 15:32	
Benzene	ND	0.50	ug/L	1.00	12/09/2004 15:32	
Toluene	ND	0.50	ug/L	1.00	12/09/2004 15:32	
Ethylbenzene	ND	0.50	ug/L	1.00	12/09/2004 15:32	
Total xylenes	ND	1.0	ug/L	1.00	12/09/2004 15:32	
Surrogate(s)						
1,2-Dichloroethane-d4	99.7	73-130	%	1.00	12/09/2004 15:32	
Toluene-d8	105.1	81-114	%	1.00	12/09/2004 15:32	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo

Batch QC Report

Prep(s): 5030B Method Blank

Water

Test(s): 8260B

MB: 2004/12/09-01.62-024

QC Batch # 2004/12/09-01.62
Date Extracted: 12/09/2004 09:24

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/09/2004 09:24	
Benzene	ND	0.5	ug/L	12/09/2004 09:24	
Toluene	ND	0.5	ug/L	12/09/2004 09:24	
Ethylbenzene	ND	0.5	ug/L	12/09/2004 09:24	
Total xylenes	ND	1.0	ug/L	12/09/2004 09:24	
Surrogates(s)					
1,2-Dichloroethane-d4	95.2	73-130	%	12/09/2004 09:24	
Toluene-d8	100.0	81-114	%	12/09/2004 09:24	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo

Batch QC Report

Prep(s): 5030B Method Blank

Water

Test(s): 8260B

QC Batch # 2004/12/10-01.62

MB: 2004/12/10-01.62-050 Date Extracted: 12/10/2004 07:50

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/10/2004 07:50	
Benzene	ND	0.5	ug/L	12/10/2004 07:50	
Toluene	ND	0.5	ug/L	12/10/2004 07:50	
Ethylbenzene	ND	0.5	ug/L	12/10/2004 07:50	
Total xylenes	ND	1.0	ug/L	12/10/2004 07:50	
Surrogates(s)		1			
1,2-Dichloroethane-d4	102.8	73-130	%	12/10/2004 07:50	
Toluene-d8	104.8	81-114	%	12/10/2004 07:50	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2004/12/09-01.62

LCS

2004/12/09-01.62-001

Extracted: 12/09/2004

Analyzed: 12/09/2004 09:01

LCSD

Compound	Conc.	ug/L	Exp.Conc.	Reco	very %	RPD	Ctrl.Lin	nits %	Fla	ags
Compound	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene Toluene	24.4 24.0		25.0 25.0	97.6 96.0			69-129 70-130	20 20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	468 514		500 500	93.6 102.8			73-130 81-114	1 1		



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2004/12/10-01.62

LCS LCSD 2004/12/10-01.62-028

Extracted: 12/10/2004

Analyzed: 12/10/2004 07:28

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
Compound	LCS	LCSD		LCS	LCSD	%	Re <u>c</u> .	RPD	LCS	LCSD
Benzene	21.3		25.0	85.2			69-129	20		
Toluene	20.9		25.0	83.6			70-130	20		
Surrogates(s)					1					
1,2-Dichloroethane-d4	494	İ	500	98.8			73-130			
Toluene d8	515		รกก	103.0	1		81-114			l



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohonnon

Received: 12/03/2004 13:24

Site: San Lorenzo

Batch QC Report

Prep(s):

5030B

Test(s): 8260B

Matrix Spike (MS/MSD)

Water

QC Batch # 2004/12/09-01.62

MS/MSD

_

Lab ID:

2004-12-0155 - 004

Extracted: 12/09/2004

Analyzed:

12/09/2004 11:26

Dilution:

1.00

MSD:

MS:

2004/12/09-01.62-048

2004/12/09-01.62-026

Extracted: 12/09/2004

Analyzed:

12/09/2004 11:48

Dilution:

1.00

Compound	Сопс.	Conc. ug/L		Spk.Level Recovery %			Limits %		Flags		
Compound	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Benzene Toluene	26.3 31.5	26.6 32.8	1.59 8.27	25.0 25.0	98.8 92.9	100.0 98.1	1.2 5.4	69-129 70-130	20 20		
Surrogate(s) 1,2-Dichloroethane-d4 Toluene-d8	493 529	510 526		500 500	98.6 105.8	102.0 105.2		73-130 81-114			



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15

Bohcnnon

Received: 12/03/2004 13:24

Site: San Lorenzo

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS/MSD)

Water

QC Batch # 2004/12/10-01.62

MS/MSD

.....

QO Daten # 2004/12/10 01102

MOUNT

2004/12/10-01.62-007 Extracte

Extracted: 12/10/2004

Analyzed:

2004-12-0228 - 001

Dilution:

Lab ID:

12/10/2004 09:07

MSD:

MS:

2004/12/10-01.62-029

Extracted: 12/10/2004

Analyzed:

12/10/2004 09:29

Dilution:

1.00

Campaind	Conc.	Conc. u		Spk.Level	Recovery %		Limits %		Flags		
Compound	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Benzene Toluene	24.4 25.8	25.0 25.2	ND 0.538	25.0 25.0	97.6 101.0	100.0 98.6	2.4 2.4	69-129 70-130	20 20		
Surrogate(s) 1,2-Dichloroethane-d4 Toluene-d8	448 522	453 520		500 500	89. 6 104.4	90.6 104.0		73-130 81-114			



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-000-15 Bohonnon Received: 12/03/2004 13:24

Site: San Lorenzo

Legend and Notes

Analysis Flag

L2

Reporting limits were raised due to high level of analyte present in the sample.

Result Flag

Q6

The concentration reported reflect(s) individual or discrete unidentified peaks not matching a typical fuel pattern.



STL Chicago 2417 Bond Street University Park, IL 60466

Tel: 708 534 5200 Fax: 708 534 5211 www.stl-inc.com

SEVERN TRENT LABORATORIES ANALYTICAL REPORT

JOB NUMBER: 232511

Prepared For:

Severn Trent Laboratorius 1220 Quarry Lane Pleasanton, CA 94566-4756

Project: STL San Francisco

Attention: Afsanch Salimpour

Date: 12/13/2004

Signature / Man

Name: Bonnie M. Stadelmann

Title: Project Manager

Mail: bstadelmann@stl-inc.com

12/13/04

Date

STL Chicago

2417 Bond Street

University Park, IL 60466

PHONE: (708) 534-5200 FAX..: (708) 534-5211

This Report Contains (_____) Pages

SAMPLE LNFORMATION Date: 12/13/2004

Job Number.: 232511

Customer...: Severn Trent Laboratories

Attn..... Afsaneh Salimpour

Project Number...... 20002032 Customer Project ID...: 2004-12-0117 Project Description...: STL San Francisco

Laboratory Sample ID	Customer Sample 15	Sample Matrix	Date Sampled	Time Sampled	Date Received	lime Received
232511-1	NIW-A1	Water	12/02/2004	12:00	12/07/2004	10:00
232511-2	NIW-AZ	Water	12/02/2004	12:00	12/07/2004	10:00
232511-3	NIW-61	Water	12/02/2004	12:00	12/07/2004	10:00
232511-4	NIW-BZ	Water	12/02/2004	12:00	12/07/2004	10:00
		/				
					ii	

LABORATORY TEST RESULTS

Job Number: 232511 Date: 12/13/2004

CUSTOMER: Severn Trent Laboratories PROJECT: 2004-12-0117 ATTN: Afsanch Salimpour

Customer Sample ID: NIW-A1 Date Sampled....: 12/02/2004 Time Sampled....: 12:00 Sample Matrix....: Water

Laboratory Sample 10: 232511-1 Date Received....: 12/07/2004 Time Received...... 10:00

EST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TEC
350.2	Nitrogen, Ammonia (Dist./Nessler.) Ammonia(NH3+NH4),as N	200	20	mg/L	12/09/04	jmk
351.3	Nitrogen, Total Kjeldahl Nitrogen, Total Kjeldahl as N (TKN)	260	40	mg/L	12/09/04	mtk
					,	
			·			

^{*} In Description = Dry Wgt.

TEST RESULTS LABORATORY

Date: 12/13/2004 Job Number: 232511

CUSTOMER: Severn Trent Laboratories PROJECT: 2004-12-0117 ATTN: Afsatieh Salimpour

Customer Sample ID: NIW-AZ Date Sampled....: 12/02/2004 Time Sampled....: 12:00 Sample Matrix....: Water

Laboratory Sample ID: 232511-2 Date Received.....: 12/07/2004 Time Received.....: 10:00

EST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TEC
350.2	Nitrogen, Ammonia (Dist./Nessler.) Ammonia(NH3+NH4),ss N	100	10	mg/L	12/09/04	jmk
351.3 ·	Nitrogen, Total Kjeldahl Nitrogen, Total Kjeldahl as N (TKN)	270	40	mg/L	12/09/04	mtl
			, , , , , , , , , , , , , , , , , , ,			

LABORATORY RESULTS TEST

Job Number: 232511

Date: 12/13/2004

CUSTOMER: Severn Trent Laboratories PROJECT: 2004-12-0117 ATIM: Afsameh Salimpour

Customer Sample ID: NIW-B1 Date Sampled....: 12/02/2004 Time Sampled....: 12:00

Laboratory Sample ID: 232511-3 Date Received.....: 12/07/2004 Time Received.....: 10:00

Sample Matrix....: Water

ST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TE
350.2	Nītrogen, Ammonia (Dist./Nessler.) Ammonia(NH3+NH4),as N	77	10	mg/L	12/09/04	jml
351.3	Nitrogen, Total Kjeldahl Nitrogen, Total Kjeldahl as N (TKN)	9 4	10	mg/L	12/09/04	, mtł
			{			

^{*} In Description = Dry Wgt.

LABORATORY TEST RESULTS

Date: 12/13/2004 Job Number: 232511

ATTN: Afsameh Salimpour CUSTOMER: Severn Trent Laboratories PROJECT: 2004-12-0117

Customer Sample ID: NIW-B2 Date Sampled....: 12/02/2004 Time Sampled....: 12:00 Sample Matrix....: Water

Laboratory Sample ID: 232511-4
Date Received.....: 12/07/2004
Time Received.....: 10:00

ST: METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	JE
350.2	Nitrogen, Ammonia (Dist./Nessler.) Ammonia(NH3+NH4),as N	16	1.0	mg/L	12/09/04	jn
51.3	Nitrogen, Total Kjeldahl Nitrogen, Total Kjeldahl as N (TKN)	17	2.0	mg/L	12/09/04	ur.
					}	
			;			
						}

1ор	LABORATOI Number: 232511	RY CHRONICLE Date: 12/13/2004
custoMER: Severn	Trent Laboratories PROJ	ECT: 2004-12-0117 ATTN: Afsanch Salimpour
Lab ID: 232531-1 METHOD 350.2 351.3 PKG INO (WC)	Client ID: NIW-A1 DESCRIPTION Nitrogen, Ammonia (Dist./Nessler.) Nitrogen, Total Kjeldahl PKG INO (WET CHEMISTRY)	Date Recvd: 12/07/2004 Sample Date: 12/02/2004 RUN# BATCH# PREP BT #(\$) DATE/TIME ANALYZED DILUTION 1 136662 136662 12/09/2004 1244 100 1 136665 136665 12/09/2004 1112 100
Lab ID: 232511-2 METHOD 350.2 351.3	Client ID: NIW-A2 DESCRIPTION Nitrogen, Ammonia (Dist./Nessler.) Nitrogen, Total Kjeldahl	Date Recvd: 12/07/2004 Sample Date: 12/02/2004 RUN# BATCH# PREP BT #(S) DATE/TIME ANALYZED DILUTION 1 136662 136662 12/09/2004 1245 50 1 136665 136665 12/09/2004 1113 100
Lab 10: 232511-3 METHOD 350.2 351.3	Client ID: NIW-B1 DESCRIPTION Nitrogen, Ammonia (Dist./Nessler.) Nitrogen, Total Kjeldahl	Date Recvd: 12/07/2004 Sample Date: 12/02/2004 RUN# BATCH# PREP BY #(S) DATE/TIME ANALYZED DILUTION 1 136665 136662 12/09/2004 1245 50 1 136665 136665 12/09/2004 1114 25
Lab ID: 232511-4 METHOD 350.2 351.3	Client 1D: N1W-B2 DESCRIPTION Nitrogen, Ammonia (Dist./Nesaler.) Nitrogen, Total Kjeldahl	Date Recvd: 12/07/2004 Sample Date: 12/02/2004 RUN# BATCH# PREP BT #(\$) DATE/TIME ANALYZED DILUTION 1 136662 136662 12/09/2004 1246 5 1 136665 136665 12/09/2004 1115 5

QUALITY CONTROL RESULTS

Jab Number.: 232511

Report Date.: 12/13/2004

Cl	JSTOMER: Sev	ern Trent	(abonatori	25	PROJECT: 20	D4-12-0117	, j			ATTN:	Afs	anc	h Satimpoi		
M.	est Method. Thod Descr	ptionNi	trogen, Am	moria (Dist./Nea NH4),as N	s(erv)	Batch Equipment Cod	e	: 13666 : SPEC1					Analyst Test Code	ink N13	- 44 11 4 - 41 11 4 - 1 1 1 4 - 1 1 1 1 1 - 1 1 1 1 1 1 - 1 1 1 1 1 1 - 1 1 1 1 1 1 - 1 1 1 1 1 1
3C	Lab ID	Reagent	Units	OC Result	QC Result	True Value	Orig	g. Value	6	C Calc.	F	*	Limits	Date	Tim
AB .CS	136662-004 136662-005	104HSTTK2	mg/L mg/L	0.13000 U 2.32400		2.50000		0.13000	υ υ	93		*	80-120	12/09/2004 12/09/2004	
N	est Method: ethod Descr arameter	iption : Ni	trogen, Ta	täl Kjeldahl tal Kjeldahl as	n (tkn)	Batch Equipment Cod	eren Eren	: 13666 : SPEC1			11 - 2 - 12 - 12 - 12 - 12 - 12 - 12 -		Analyst. Tost Code		
10	Lab ID	Resgent	Units	QC Result	OC Result	True Value	Ori	g. Value	Ç	OC Calc.	. F	*	Limits	Date	Tím
48 .CS 48 4SD	136665-004 136665-005 232511-4 232511-4	104#STTK2 104#STTKZ 104#STTKZ	mg/L ng/L mg/L	0.18000 U 2.16100 18.57000 18.11500	18.57000	2.50000 12.50000 12.50000		0.18000 17.08000 17.08000	U	86 60 41 37.6	4 4 *	% % % R	80-120 75-125 75-125 20	12/09/2004 12/09/2004 12/09/2004 12/09/2004	111 111

Q U A-LITTY WAS STUR A NICE OF METER ONES

REFERENCES AND NOTES

Report Date: 12/13/2004

REPORT COMMENTS

- 1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
- 2) Soil, sediment and sludge sample results are reported on a "dry weight" basis except when analyzed for landfill disposal or incineration parameters. All other solid matrix samples are reported on an "as received" basis unless noted differently.
- 3) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
 4) The test results for the noted analytical method(s) meet the requirements of NELAC. Lab Cert. ID# 100201
- 5) According to 40cfR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

Glossary of flags, qualifiers and abbreviations (any number of which may appear in the report) Inorganic Qualifiers (Q-Column)

- Analyte was not detected at or above the stated limit.
 - Not detected at or above the reporting limit.
- Result is less than the RL, but greater than or equal to the method detection limit.
- Result is less than the ERDL/RL, but greater than or equal to the IDL/MDL.
- Result was determined by the Method of Standard Additions.
- AFCEE: Result is less than the RL, but greater than or equal to the method detection limit. Inorganic Flags (Flag Column)
- ICV,CCV,ICB,CCB,ISA,ISB,CRI,CRA,MRL: Instrument related QC exceed the upper or lower control limits.
- ICS, LCD, MD: Batch QC exceeds the upper or lower control limits.
- MSA correlation coefficient is less than 0.995.
- MS, MSD: The analyte present in the original sample is 4 times greater
 - than the matrix spike concentration; therefore, control limits are not applicable.
- SD: Serial dilution exceeds the control limits. Ε
- MB, EB1, EB2, EB3: Batch QC is greater than reporting limit or had a
 - negative instrument reading lower than the absolute value of the reporting limit.
- MS, MSD: Spike recovery exceeds the upper or lower control limits.
- AS(GFAA) Post-digestion spike was outside 85-115% control limits.
- Organic Qualifiers (Q Column)
- 11 Analyte was not detected at or above the stated limit.
- ND Compound not detected.
- j Result is an estimated value below the reporting limit or a tentatively identified compound (TIC).
- Result was qualitatively confirmed, but not quantified.
- Ĉ Posticide identification was confirmed by GC/MS.
- The chromatographic response resembles a typical fuel pattern.
- Z The chromatographic response does not resemble a typical fuel pattern.
 - Result exceeded calibration range, secondary dilution required.
- Ε AFCEE: Result is an estimated value below the reporting limit or a tentatively identified compound (TIC) Organic Flags (Flags Column)
- MB: Batch QC is greater than reporting limit.
- LCS, LCD, ELC, ELD, CV, MS, MSD, Surrogate: Betch QC exceeds the upper or lower control limits.
- E61, E82, EB3, MLE: Batch QC is greater than reporting Limit
- Α Concentration exceeds the instrument calibration range
 - Concentration is below the method Reporting Limit (RL)
- В Compound was found in the blank and sample.
- D Surrogate or matrix spike recoveries were not obtained because the extract was diluted for
- analysis; also compounds analyzed at a dilution will be flagged with a D.
- Alternate peak selection upon analytical review
- Indicates the presence of an interfence, recovery is not calculated. 1
- М Manually integrated compound.
- The lower of the two values is reported when the % difference between the results of two GC columns is

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/13/2004

```
greater than 25%.
Abbreviations
         Post Digestion Spike (GFAA Samples - Sec Note 1 below)
AS
         Designation given to identify a specific extraction, digestion, preparation set, or analysis set
Batch
         Capillary Column CCB Continuing Calibration Blank
CAP
CCV
         Continuing Calibration Verification
¢F
         Confirmation analysis of original
C1
         Confirmation analysis of A1 or D1
         Confirmation analysis of A2 or D2
0.2
C3
         Confirmation analysis of A3 or D3
CRA
         Low Level Standard Check - GFAA; Mercury
         Low Level Standard Check - ICP
CRI
         Calibration Verification Standard
Cν
Dil Fac Dilution Factor - Secondary dilution analysis
         Dilution 1
D1
D2
         Dilution 2
D3
         Dilution 3
         Detection Limit Factor
DLFac
         Distilled Standard - High Level
DSH
         Distilled Standard - Low Level
DSL
         Distilled Standard - Medium Level
DSM
EB1
         Extraction Blank 1
         Extraction Blank Z
EBZ
EB3
         DI Blank
ELC
         Method Extracted LCS
ELD
         Method Extracted LCD
ICAL
         Initial calibration
[ CB
         Initial Calibration Blank
1EV
         Initial Calibration Verification
IDL
         Instrument Detection Limit
         Interference Check Sample A - ICAP
ISA
         Interference Check Sample B - ICAP
ISB
         The first six digits of the sample ID which refers to a specific client, project and sample group
Job No.
         Lab ID An 8 number unique laboratory identification
LCD
         Laboratory Control Standard Duplicate
LC$
         Laboratory Control Standard with reagent grade water or a matrix free from the analyte of interest
         Method Blank or (PB) Preparation Blank
MB
MD
         Method Duplicate
MDL
         Methad Detection Limit
MLE
         Medium Level Extraction Blank
MRL
         Method Reporting Limit Standard
MSA
         Method of Standard Additions
         Matrix Spike
MS
MSD
         Matrix Spike Duplicate
ND
         Not Detected
PREPF
         Preparation factor used by the Laboratory's Information Management System (LIMS)
PDS
         Post Digestion Spike (ICAP)
RA
         Re-analysis of original
         Re-analysis of D1
A1
A2
         Re-analysis of D2
АЗ
         Re-analysis of D3
RD.
         Re-extraction of dilution
ŘΕ
         Re-extraction of original
RC
         Re-extraction Confirmation
RL
         Reporting Limit
RPD
         Relative Percent Difference of duplicate (unrounded) analyses
RRE
         Relative Response Factor
         Retention Time
```

QUALITY ASSURANCE METHODS.

REFERENCES AND NOTES

Report Date: 12/13/2004

Retention Time Window Sample ID A 9 digit number unique for each sample, the first RTW six digits are referred as the job number Seeded Control Blank SCB Seriel Dilution (Calculated when sample concentration exceeds 50 times the MDL) SD UCB Unseeded Control Blank Second Source Verification Standard SSV Solid Laboratory Control Standard(LCS) SLCS pH Calibration Check LCSP pH Laboratory Control Sample PHC pH Laboratory Control Sample Duplicate LCDP pH Sample Duplicate MOPH Flashpoint Sample Duplicate MDFP Flashpoint LCS LCFP Gelex Check Standard Range 0-1 G1 Gelex Check Standard Range 1-10 G2 Gelex Check Standard Range 10-100 63 Gelex Check Standard Range 100-1000 G4 Note 1: The Post Spike Designation on Batch OC for GFAA is designated with an "5" added to the current abbreviation used. EX. LCS S=LCS Post Spike (GFAA); MSS=MS Post Spike (GFAA) Note 2: The MD calculates an absolute difference (A) when the sample concentration is less than 5 times the reporting limit. The control limit is represented as +/- the RL.

Date Shipped: 12/4/2004

350.3

351.4

SEVERN STL

Chain of Custody

2004-12-0117 - 1

To: From: STL Chicago STL San Francisco (CL) 2417 Bond Street 1220 Quarry Lane University Park, IL 60466 Pleasanton, CA 94566-4756 Ext: Phone: (708) 534-5200 Afsaneh Salimpour Project Manager: Fax: (708) 534-5211 (925) 484-1919 Ext: 107 Phone: Contact: Bonnie Stadelmann (925) 484-1096 Fax: (708) 534-5200 Ext: 154 Phone: Email: asalimpour@stl-inc.com Project #: 98360-000-15 2004-12-0117 CL Submission #: Bohonnon Project Name: CL PO #: Sampled ... Matrix Analysis 12/2/2004 12:00:00AM Water NIW-A1 Day 350.3 5 Subcontract - Ammonia 5 351.4 Day Subcontract - Total Kjeldahl Nitrogen 12/2/2004 12:00:00AM Water NIW-A2 350.3 5 Day Subcontract - Ammonia Day 351.4 5 Subcontract - Total Kjeldahl Nitrogen Water 12/2/2004 12:00:00AM NIW-B1 350.3 5 Day Subcontract - Ammonia Subcontract - Total Kjeldahl Nitrogen 351.4 5 Day 12/2/2004 12:00:00AM Water NIW-B2 8

PLEASE INCLUDE QC WITH FAXED AND HARD-COPY RESULTS

Subcontract - Ammonia

Subcontract - Total Kjeldahl Nitrogen

RELINQUISHED BY:	1.	RELINQUISHED BY:		2.	RELINQUISHED BY:	3.
Signature	14 : 60 Time	Signature	Time		Signature	`lime
Printed Name STL - ST	12/6/04 Date	Printed Name	Date		Printed Name	Date
Company		Company			Company	
RECEIVED BY:	1.	RECEIVED BY:		2.	RECEIVED BY:	3.
Signature W.	Time IV o O	Signature	Time		Signature	Time
Printed Name	門2-7-04	Printed Name	Date		Printed Name	Date
Company		Company			Сипралу	

Day

Day

5



2004-12-0117

Page	_1_	of	1

Lab: STL

TAT. 5-20,

Engineer			Fire
Investig	atio	ns	

Investigations										•						IAI	: <u> </u>	/		
Report results to:																				
Name	Mark Will				_								Pro	ect Info	rmatior	1 .				
Company		ing and Fire			_									ect No.	ć.	3836	00-00°	-15		
Mailing Address	111 Deer	wood Road	, Suite 195										Nan	ne	B)Nenn	24 En 23			
City, State, Zip	San Ram	on, Californ	nia 94583		-								Loca	ation	56	n Lon	en io			
Telephone No.	(925) 820)-9580			-															
Fax No.	(925) 820)-9587	_					Analys	es Re	que	sted									
mark_williams@efiglo	bal.com																			
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Special instructions and/or	specific regulat	ory requireme	nts:		‡ ETI	nia	nitrogen total kjeldahl													
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5-day TA	2)		٠		TPH-g	an l	tg.								,					
j					ļ	Je l	Je l		ŀ							_				
					802	nitrogen	ğ							·					live	
			106 Pilling sternesse		Ē	2 2	3 ni								_		_		rva	
Sample identification	Date Sampled	Time Sampled	Matrix/ Media	No. of Conts.	8015m/8020	350.2	351.							Sampl	e Cond	lition/	Comment	S	Preservative	
PIW-A1	12/2/04		wite	4	人															
PIW-A2				15	λ															
PIW-B1				17	×															
PIW-B3				V	X	1						1	1 1							
NIW-A1				6	λ_0	V o	V		1											
NIW-A2				15	X	W.	∞													
NIW-B1				17	V	∇	V													
NIW-B2	W			1	X	V	X													
				 						 	T	 								
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Collected by:	Markwie	77/5/7.7 	Date/Time	12/2/	64	L		Collec	ctor's	Siar	L		\	Jery.	\sim	$\overline{\Box}$	Date/Tim	e 12/2	7/09	
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Relinguished by:	I HOLL ON TO	/-1 - /	Date/Time			,, _	r.,	Recei				<u></u>	LOU	W WW	<u>LXXX</u>	41	Date/Tim			
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																•				



STL San Francisco

Sample Receipt Checklist

Sample Receipt C	HECKIIST
Submission #:2004- 12 - 0117	
Checklist completed by: (initials) Date: 12/04/04	
Courier name: STL San Francisco Client	
Custody seals intact on shipping container/samples	YesNoPresent
Chain of custody present?	Yes_ <u>\</u> No
Chain of custody signed when relinquished and received?	Yes No
Chain of custody agrees with sample labels?	YesNo
Samples in proper container/bottle?	Yes_VNo
Sample containers intact?	YesNo
Sufficient sample volume for indicated test?	YesNo
All samples received within holding time?	YesNo
Container/Temp Blank temperature in compliance $(4^0 \text{ C} \pm 2)$? Potential reason for $\geq 6^\circ\text{C}$ - Ice melted \square like in bags \square Not enough ice \square Sampled $<$ 4hr. ago? \square like not required (e.g. air or bulk sample) \square	Temp: 3 °C Yes L No □ Not enough blue ice □ Samples in boxes □ □ (ce Present Yes No
Water - VOA vials have zero headspace?	No VOA vials submittedYesVo
(if bubble is present, refer to approximate bubble size and itemize in comment water - pH acceptable upon receipt? ☐ Yes ☐ No☐ pH adjusted— Preservative used: ☐ HNO₃ ☐ HCl ☐ H₂SO₄ ☐ NaOH ☐ For any item check-listed "No", provided detail of discrepancy in comment	⊐ ZnOAc –Lot #(s)
Comments:	
Project Management [Routing for instruction of indica	ited discrepancy(ies)]
Project Manager: (initials) Date:/04	Client contacted: ☐ Yes ☐ No
Summary of discussion:	
Cummary of discussion.	
O	
Corrective Action (per PM/Client):	



December 20, 2004

Engineering and Fire Investigations

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Attn.:

Chris Maxwell

Dear Mr. Maxwell,

Attached is our report for your samples received on 12/15/2004 11:20 This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 01/29/2005 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: asalimpour@stl-inc.com

Sincerely,

Afsaneh Salimpour Project Manager

Abareh. Salimpor



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Chris Maxwell

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-6187 Fax: (925) 820-9587

Project:

Received: 12/15/2004 11:20

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
PIW-A3	12/14/2004 16:00	Water	1
POBS-A1	12/14/2004 15:30	Water	2
MW-3	12/14/2004 15:45	Water	3



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Chris Maxwell

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-6187 Fax: (925) 820-9587

Project:

Received: 12/15/2004 11:20

Prep(s):

5030B

Test(s):

8260B

Sample ID: PIW-A3

Lab ID:

2004-12-0545 - 1

Sampled: 12/14/2004 16:00

Extracted: 12/19/2004 14:28

Matrix:

Water

QC Batch#: 2004/12/19-01.66

Analysis Flag: L2 (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	1500	100	ug/L	2.00	12/19/2004 14:28	
Benzene	220	1.0	ug/L	2.00	12/19/2004 14:28	
Toluene	28	1.0	ug/L	2.00	12/19/2004 14:28	
Ethylbenzene	55	1.0	ug/L	2.00	12/19/2004 14:28	
Total xylenes	99	2.0	ug/L	2.00	12/19/2004 14:28	
Surrogate(s)]	
1,2-Dichloroethane-d4	96.0	73-130	%	2.00	12/19/2004 14:28	
Toluene-d8	81.2	81-114	%	2.00	12/19/2004 14:28	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Chris Maxwell

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-6187 Fax: (925) 820-9587

Received: 12/15/2004 11:20

Prep(s): 5030B

Test(s):

8260B

Sample ID: POBS-A1

Lab iD:

2004-12-0545 - 2

Sampled: 12/14/2004 15:30

Extracted:

12/20/2004 12:55

Matrix:

Water

QC Batch#: 2004/12/20-01.68

Analysis Flag: L2 (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	13000	1300	ug/L	25.00	12/20/2004 12:55	
Benzene	2700	13	ug/L	25.00	12/20/2004 12:55	
Toluene	200	13	ug/L	25.00	12/20/2004 12:55	
Ethylbenzene	220	13	ug/L	25.00	12/20/2004 12:55	
Total xylenes	510	25	ug/L	25.00	12/20/2004 12:55	
Surrogate(s)						
1,2-Dichloroethane-d4	87.2	73-130	%	25.00	12/20/2004 12:55	
Toluene-d8	86.9	81-114	%	25.00	12/20/2004 12:55	



Fuel Oxygenates by 8260B

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Attn.: Chris Maxwell

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-6187 Fax: (925) 820-9587

Project:

Received: 12/15/2004 11:20

Prep(s):

5030B

Test(s):

8260B

Sample ID: MW-3

Lab ID:

2004-12-0545 - 3

Sampled: 12/14/2004 15:45

Extracted:

12/19/2004 14:50

Water

QC Batch#: 2004/12/19-01.66

Matrix:

Analysis Flag: L2 (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	15000	1000	ug/L	20.00	12/19/2004 14:50	•
Benzene	3600	10	ug/L	20.00	12/19/2004 14:50	
Toluene	140	10	ug/L	20.00	12/19/2004 14:50	
Ethylbenzene	560	10	ug/L	20.00	12/19/2004 14:50	
Total xylenes	210	20	ug/L	20.00	12/19/2004 14:50	
Surrogate(s) 1,2-Dichloroethane-d4	88.3	73-130	%	20.00	12/19/2004 14:50	
Toluene-d8	81.3	81-114	%	20.00	12/19/2004 14:50	



Fuel Oxygenates by 8260B

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111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-6187 Fax: (925) 820-9587

Project:

Received: 12/15/2004 11:20

Batch QC Report

Prep(s): 5030B Method Blank

MB: 2004/12/19-01.66-018

Water

Test(s): 8260B

er QC Batch # 2004/12/19-01.66

Date Extracted: 12/19/2004 08:18

		·	·		
Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/19/2004 08:18	
Benzene	ND	0.5	ug/L	12/19/2004 08:18	
Toluene	ND	0.5	ug/L	12/19/2004 08:18	
Ethylbenzene	ND	0.5	ug/L	12/19/2004 08:18	
Total xylenes	ND	1.0	ug/L	12/19/2004 08:18	
Surrogates(s)					
1,2-Dichloroethane-d4	83.2	73-130	%	12/19/2004 08:18	
Toluene-d8	87.9	81-114	%	12/19/2004 08:18	



Fuel Oxygenates by 8260B

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111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-6187 Fax: (925) 820-9587

Project:

Received: 12/15/2004 11:20

Batch QC Report

Prep(s): 5030B Method Blank

Water

Test(s): 8260B QC Batch # 2004/12/20-01.68

Date Extracted: 12/20/2004 07:33

MB: 2004/12/20-01:68-033

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/20/2004 07:33	
Benzene	ND	0.5	ug/L	12/20/2004 07:33	
Toluene	l nd	0.5	ug/L	12/20/2004 07:33	
Ethylbenzene	ND	0.5	ug/L	12/20/2004 07:33	
Total xylenes	ND	1.0	ug/L	12/20/2004 07:33	
Surrogates(s)					
1,2-Dichloroethane-d4	89.2	73-130	%	12/20/2004 07:33	
Toluene-d8	86.8	81-114	%	12/20/2004 07:33	



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Chris Maxwell

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-6187 Fax: (925) 820-9587

Project:

Received: 12/15/2004 11:20

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2004/12/19-01.66

LCS 2004/12/19-01.66-040

Extracted: 12/19/2004

Analyzed: 12/19/2004 08:40

LCSD

Compound	Conc.	Conc. ug/L		Recovery %		RPD Ctrl.Limits %			Flags		
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD	
Benzene Toluene	24.0 24.8		25.0 25.0	96.0 99.2			69-129 70-130	20 20			
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	411 441		500 500	82.2 88.2			73-130 81-114	1 1			



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

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111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-6187 Fax: (925) 820-9587

Project:

Received: 12/15/2004 11:20

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2004/12/20-01.68

LCS

2004/12/20-01.68-016

Extracted: 12/20/2004

Analyzed: 12/20/2004 07:16

LCSD

Compound	Conc.	Conc. ug/L		Recovery %		RPD	Ctrl.Limits %		Flags	
Compound	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene Toluene	25.1 26.2		25.0 25.0	100.4 104.8			69-129 70-130	20 20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	371 451		500 500	74.2 90.2			73-130 81-114			



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Chris Maxwell

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-6187 Fax: (925) 820-9587

Project:

Received: 12/15/2004 11:20

	Batch QC Report	
Prep(s): 5030B		Test(s): 8260B
Matrix Spike (MS / MSD)	Water	QC Batch # 2004/12/19-01.66
MS/MSD		Lab ID: 2004-12-0409 - 004
MS: 2004/12/19-01.66-013	Extracted: 12/19/2004	Analyzed: 12/19/2004 12:13 Dilution: 1.00
MSD: 2004/12/19-01.66-035	Extracted: 12/19/2004	Analyzed: 12/19/2004 12:35 Dilution: 1.00

Compound	Conc.	Conc. ug/L		Spk.Level Recovery %				Limits	5 %	Flags	
	MS	MSD	Sample	ug/L	мѕ	MSD_	RPD	Rec.	RPD	MS	MSD
Benzene Tolueпe	30.1 30.9	26.6 27.4	ND ND	25.0 25.0	120.4 123.6	106.4 109.6	12.3 12.0	69-129 70-130	20 20		
Surrogate(s) 1,2-Dichloroethane-d4 Toluene-d8	397 414	402 421		500 500	79.4 82.7	80.3 84.1	!	73-130 81-114			



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Chris Maxwell

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-6187 Fax: (925) 820-9587

Project:

Received: 12/15/2004 11:20

	Batch QC Report	
Prep(s): 5030B		Test(s): 8260B
Matrix Spike (MS / MSD)	Water	QC Batch # 2004/12/20-01.68
MS/MSD	est.	Lab ID: 2004-12-0448 - 003
MS: 2004/12/20-01.68-056	Extracted: 12/20/2004	Analyzed: 12/20/2004 09:56 Dilution: 1.00
MSD: 2004/12/20-01.68-019	Extracted: 12/20/2004	Analyzed: 12/20/2004 10:19 Dilution: 1.00

Compound	Compound Conc. ug/L S		Spk.Level	Spk.Level Recovery %			Limit	s %	Flags		
o o mpositio	MS	MSD	Sample	ug/L	MS_	MSD	RPD	Rec.	RPD	MS	MSD
Benzene Toluene	22.8 31.7	27.5 35.5	2.59 9.46	25.0 25.0	80.8 89.0	99.6 104.2	20.8 15.7	69-129 70-130	20 20		R4
Surrogate(s) 1,2-Dichloroethane-d4 Toluene-d8	384 454	386 443		500 500	76.8 90.8	77.2 88.6		73-130 81-114			



Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Chris Maxwell

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-6187 Fax: (925) 820-9587

Project:

Received: 12/15/2004 11:20

Legend and Notes

Analysis Flag

L2

Reporting limits were raised due to high level of analyte present in the sample.

Result Flag

R4

RPD exceeded method control limit; % recoveries within limits.

483 Sinclair Frontage Road, Milpitas, CA 95035 Phone: 408 263.5258 • FAX: 408.263 8293

CHAIN OF CUSTODY

906		
	LAB WORK ORDER NO	
ga tipliga a saway wa		

www.torrentlab.com • email: analysis@torrentlab.com

• NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY •

Company Name: PTI - C	HANG_ME	مرير ريشو'	ા ફલ	. 1 sul 36.	Locati	on of Sa	mpling	B	امر ارستا	wwt	 ბე	در چ	36	D -1	۳,		
Address: 111 Dec Mutural				COW	Purpo	se:											
City: San Russian	State:		Zip Code:		Specia	al Instru	ctions /	Comme	ents:								
Telephone:	FAX:																
REPORT TO: CHATS Man	اسل SAMPLER:	Ca	, WY		P.O. #	<i>†</i> :				E	MAIL:						
TURNAROUND TIME:			E TYPE:		REPORT	FORMA'				Α	NALY:	SIS RI	EQUES	STED			
☐ 10 Working Days ☐ 3 Working Day ☐ 7 Working Days ☐ 2 Working Day ☐ 5 Working Days ☐ 24 Hours	_	Was	ste Water und Water	- I i	QC Lo	/ EDD		130							//		
CLIENT'S SAMPLE I.D.	DATE/TIME SAM	PLED	SAMPLE TYPE	# OF CONT	CONT TYPE	\(\disp\)	<u>X</u>									TORRENT SAMPLE	
1. PIW-A3	12-14-04 1	600	H 20	3	nort	7											
2. POBS-A1	()	330	_	3		¥											
3. Mur-3	3 "	5 45	F	3	S.	*											
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7.						21											
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10.	<u> </u>																
Relinquished/By:	17 a i b i i i i i i i i i i i i i i i i i	Date:		Time:	<u> </u>	Receiv	ed By;	#		7	Pa		Date:	115/2	74	Time:	
2 Relinquished By		Date:		Time:	(Réceiv	ed By:			· <u>· · · · · · · · · · · · · · · · · · </u>	-		Date:			Time:	<u> </u>
Were Samples Received in Good Condition			amples on Ice	_		Metho	d of Shi	oment				<u>· · · · · · · · · · · · · · · · · · · </u>	Sample	e seals in	itact?	Yes [] NO
NOTE: Samples are discarded by the	e laboratory 30 days	from dat	te of receipt u	nless other	arrange	-ment	s are ma	ide.						Page	ə	of _	



STL San Francisco

Sample Receipt Checklist

Submission #:2004- 12 - 0545
Checklist completed by: (initials)
Courier name: STL San Francisco Client Not
Custody seals intact on shipping container/samples Yes No Present
Chain of custody present? Yes_1_No
Chain of custody signed when relinquished and received? Yes
Chain of custody agrees with sample labels? YesNo
Samples in proper container/bottle? YesNo
Sample containers intact? YesNo
Sufficient sample volume for indicated test? YesNo
All samples received within holding time? Yes No
Container/Temp Blank temperature in compliance (4° C ± 2)? Potential reason for > 6° C = Ice melted □ Ice in bags □ Not enough ice □ Not enough blue ice □ Samples in boxes □ Sampled < 4hr. ago?□: Ice not required (e.g. air or bulk sample) □ Ice Present Yes No
Water - VOA vials have zero headspace? No VOA vials submitted Yes No
(if bubble is present, refer to approximate bubble size and itemize in comments as S (small \sim 0), M (medium \sim 0) or L (large \sim 0) Water - pH acceptable upon receipt? \square Yes \square No
□ pH adjusted- Preservative used: □ HNO₃ □ HCl □ H₂SO₄ □ NaOH □ ZnOAc –Lot #(s)
For any item check-listed "No", provided detail of discrepancy in comment section below:
Comments:
Project Management [Routing for instruction of indicated discrepancy(ies)]
Tojoot managon (matato)
Summary of discussion:
Corrective Action (per PM/Client):



February 11, 2005

Engineering and Fire Investigations

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Attn.:

Mark Williams

Project#: 98360-013

Project:

Bohennon

Dear Mr. Williams,

Attached is our report for your samples received on 02/03/2005 16:12 This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 03/20/2005 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: asalimpour@stl-inc.com

Sincerely,

Afsaneh Salimpour Project Manager

Atanch. Salingoe



Gas/BTEX Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-013 Bohcnnon Received: 02/03/2005 16:12

Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
VS-1	02/03/2005 10:44	Air	1
VS-2	02/03/2005 11:23	Air	2
VS-3	02/03/2005 14:00	Air	3
VS-4	02/03/2005 15:20	Air	4



Gas/BTEX Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-013

Bohcnnon

Received: 02/03/2005 16:12

Prep(s):

5030B

Test(s):

8260B

Sample ID: VS-1

Lab ID:

2005-02-0065 - 1

Sampled:

02/03/2005 10:44

Extracted:

2/4/2005 15:50

Matrix:

Air

QC Batch#: 2005/02/04-1D.68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	760	50	ug/L	1.00	02/04/2005 15:50	
Benzene	21	1.0	ug/L	1.00	02/04/2005 15:50	
Toluene	1.8	1.0	ug/L	1.00	02/04/2005 15:50	
Ethylbenzene	4.5	1.0	ug/L	1.00	02/04/2005 15:50	-
Total xylenes	8.0	1.0	ug/L	1.00	02/04/2005 15:50	
Surrogate(s) 1,2-Dichloroethane-d4 Toluene-d8	126.7 100.5	72-128 80-113	% %	1.00 1.00	02/04/2005 15:50 02/04/2005 15:50	



Gas/BTEX Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583 Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-013

Bohonnon

Received: 02/03/2005 16:12

Prep(s):

5030B

Test(s):

8260B

Sample ID: VS-2

.

2005-02-0065 - 2

Sampled: 02/03/2005 11:23

Lab ID:

2/4/2005 15:33

Matrix:

Air

Extracted: OC Batch#:

QC Batch#: 2005/02/04-1D.68

	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline Benzene	760 16	50 1.0	ug/L ug/L	1.00	02/04/2005 15:33 02/04/2005 15:33 02/04/2005 15:33	
Toluene Ethylbenzene Total xylenes	1.3 4.5 5.8	1.0 1.0 1.0	ug/L ug/L ug/L	1.00	02/04/2005 15:33 02/04/2005 15:33	
Surrogate(s) 1,2-Dichloroethane-d4 Toluene-d8	125.5 101.1	72-128 80-113	%	1.00 1.00	02/04/2005 15:33 02/04/2005 15:33	1



Gas/BTEX Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-013

Bohonnon

Received: 02/03/2005 16:12

Prep(s):

5030B

Test(s):

8260B

Sample ID: VS-3

Lab ID:

2005-02-0065 - 3

Sampled:

02/03/2005 14:00

Extracted:

2/4/2005 14:58

Matrix:

Air

QC Batch#: 2005/02/04-1D.68

0	Conc.	RL	Unit	Dilution	Analyzed	Flag
Compound Gasoline Benzene Toluene Ethylbenzene	170 3.3 ND ND	50 1.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L		02/04/2005 14:58 02/04/2005 14:58 02/04/2005 14:58 02/04/2005 14:58 02/04/2005 14:58	
Total xylenes Surrogate(s) 1,2-Dichloroethane-d4 Toluene-d8	2.4 121.5 99.0	72-128 80-113	% %	1.00	02/04/2005 14:58 02/04/2005 14:58	



Gas/BTEX Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583 Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-013

Bohcnnon

Received: 02/03/2005 16:12

Prep(s):

5030B

Air

Test(s):

8260B

Sample ID: VS-4

Lab ID:

2005-02-0065 - 4

Sampled: 02/03/2005 15:20

Extracted:

2/4/2005 14:41

Matrix:

QC Batch#: 2005/02/04-1D.68

	Conc.	RL	Unit	Dilution	Analyzed	Flag
Compound Gasoline Benzene Toluene Ethylbenzene Total xylenes	950 35 2.4 9.2 7.4	50 1.0 1.0 1.0 1.0	ug/L ug/L ug/L ug/L ug/L	1.00 1.00 1.00	02/04/2005 14:41 02/04/2005 14:41 02/04/2005 14:41 02/04/2005 14:41 02/04/2005 14:41	
Surrogate(s) 1,2-Dichloroethane-d4 Toluene-d8	120.0 99.2	72-128 80-113	%	1.00 1.00	02/04/2005 14:41 02/04/2005 14:41	

02/10/2005 11:03



Gas/BTEX Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-013

Bohcnnon

Received: 02/03/2005 16:12

Batch QC Report

 Prep(s): 5030B
 Water
 QC Batch # 2005/02/04-1D.68

 MB: 2005/02/04-1D.68-052
 Date Extracted: 02/04/2005 08:52

	Conc.	RL	Unit	Analyzed	Flag
Gasoline Benzene Toluene Ethylbenzene	ND ND ND ND ND	50 0.5 0.5 0.5 1.0	ug/L ug/L ug/L ug/L ug/L	02/04/2005 08:52 02/04/2005 08:52 02/04/2005 08:52 02/04/2005 08:52 02/04/2005 08:52	
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	104.6 102.8	73-130 81-114	% %	02/04/2005 08:52 02/04/2005 08:52	



Gas/BTEX Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195

San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-013

Bohcnnon

Received: 02/03/2005 16:12

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2005/02/04-1D.68

LCS

2005/02/04-1D.68-014

Extracted: 02/04/2005

Analyzed: 02/04/2005 09:14

LCSD

	Conc.	ug/L	Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
Compound	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene Toluene	27.3 26.6		25 25	109.2 106.4	Ī		69-129 70-130	20 20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	415 511		500 500	83.0 102.2			73-130 81-114			



Gas/BTEX Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-013 Bohonnon Received: 02/03/2005 16:12

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS/MSD)

Water

QC Batch # 2005/02/04-1D.68

MS/MSD

2005-01-0758 - 002

MS:

2005/02/04-1D.68-012

Extracted: 02/04/2005

Lab ID: Analyzed:

02/04/2005 11:12

Dilution:

1.00

MSD:

2005/02/04-1D.68-030

Extracted: 02/04/2005

Analyzed:

02/04/2005 11:30

Dilution:

1.00

Compound	Conc.	Conc. ug/L.		Spk.Level Recovery %			Limits %		Flags		
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Benzene Toluene	32.7 34.9	31.6 32.0	ND ND	25 25	130.8 139.6	126.4 128.0	3.4 8.7	69-129 70-130	20 20	M4 M4	
Surrogate(s) 1,2-Dichloroethane-d4 Toluene-d8	485 574	496 524		500 500	97.0 114.8	99.2 104.8		73-130 81-11 4		S 7	



Gas/BTEX Fuel Oxygenates by 8260B

Engineering and Fire Investigations

Attn.: Mark Williams

111 Deerwood Road, Ste 195 San Ramon, CA 94583

Phone: (925) 457-7384 Fax: (925) 820-9587

Project: 98360-013

Bohcnnon

Received: 02/03/2005 16:12

Legend and Notes

Result Flag

Μ4

MS/MSD spike recoveries were above acceptance limits. See blank spike (LCS).

S7

Surrogate recoveries higher than acceptance limits.

2005-07-0065 STL San Francisco Chain of Custody

SEVERN STL

Whate while ins

Report To

1220 Quarry Lane • Pleasanton CA 94566-4756

Phone: (925) 484-1919 • Fax: (925) 484-1096

Email: sflogin@stl-inc.com

Analysis Request

608 508

Reference #: 9799\$

Date 2/3/05 Page 1 of __ Low Level Metals by EPA 200.8/6020 (ICP-MS): ☐ Alkalinity ☐ TDS ☐ Hexavalent Chromium pH (24h hold time for H₂O) 30, E Number of Containers W.E.T (STLC) TCLP បង់

Metals: 🗅 Lead 🗅 LUFT 🗅 RCRA Volatile Organics GC/MS (VOCs) □ EPA 82608 □ 624 Company: CFL GLOGS-Address: 111 Dernus RZ Sale 195 Purgeable Aromatics BTEX EPA - □ 8021 □ 8260B TPH EPA - 76 8015/8021 Phone: Sampled By: Bill To: Mark Munician Westerneum Phone(125457-736) Mat Pres Date Time Sample ID 2140- 10:44 11.23 \searrow 2:000 3:20 1) Relinquished by 2) Relinquished by: 3) Relinquished by: Sample Receipt Project Info. Project Name: # of Containers: Time Time Signature Project#: 与も360~013 PO#: Head Space: Printed Name Date Printed Name Date Temp: 22°C Company Company Conforms to record: Credit Card#: 3) Received by: 2) Received by: 48h 24h Other: Time Signature Time Signature ☐ State Tank Fund EDF Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ Global ID ___ Special Instructions / Comments: Date Printed Name Printed Name Company Company Company *STL SF reports 8015M from C₉-C₂₄ (industry norm). Default for 8015B is C₁₀-C₂₆.