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By Alameda County Environmental Health at 2:22 pm, May 10, 2013

May 7, 2013

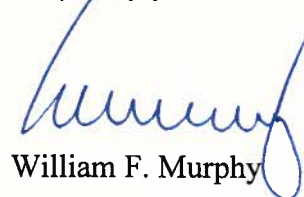
Alameda County Environmental Health Department
Attention: Jerry Wickham
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Byron Power Company, 4901 Bruns Rd., Byron CA

Dear Mr. Wickham:

Attached please find a report, entitled Subsurface Site Characterization Report, dated May 7, 2013, prepared for Byron Power Company by Quest GeoSystems. As a legal authorized representative of Byron Power, I declare under penalty of perjury that, on information and belief, the information and/or recommendations contained in the attached documents and/or reports are true and correct to the best of my knowledge.

Very truly yours,



William F. Murphy

Encl.



May 7, 2013

Project: G09212012-02

Mr. Jerry Wickham
Alameda County Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

**SITE: SLIC CASE R0003079; GEOTRACKER GLOBAL ID T1000003401
BYRON POWER COMPANY
4901 BRUNS ROAD
BYRON, CALIFORNIA 94514**

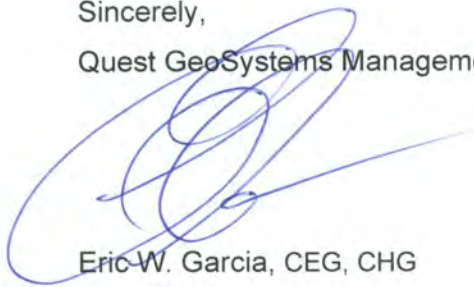
RE: SUBSURFACE SITE CHARACTERIZATION REPORT

Dear Mr. Wickham,

Quest GeoSystems Management (Quest) has prepared the enclosed report to document the results of the Subsurface Site Characterization performed at the above referenced Site in Byron, California. The site activities summarized in the enclosed report were performed consistent with the work scope outlined in previously submitted *Workplan for Additional Site Investigation* dated October 30, 2012 and *Workplan Addenda*, dated January 23, 2013. The investigation was performed consistent with the generally accepted environmental consulting principles and practices that are within the limitations described in the enclosed report. If you have any questions regarding this report, please contact us at (925) 756-1210.

Sincerely,

Quest GeoSystems Management, Inc.



Eric W. Garcia, CEG, CHG
Principal Geologist

PG# 7007, CEG# 2230, CHG# 765

Enclosure: Subsurface Site Characterization Report

cc: File

SUBSURFACE SITE CHARACTERIZATION REPORT

**BYRON POWER COMPANY
4901 BRUNS ROAD
BYRON, CALIFORNIA 94514**

Prepared for:
Byron Power Partners, L.P.
14 Philips Parkway
Montvale, NJ 07645

Prepared by:
Quest GeoSystems Management, Inc.
11275 Sunrise Gold Circle, Suite R
Rancho Cordova, California 95742-6561

May 7, 2013

QUEST GSM # G09212012-02

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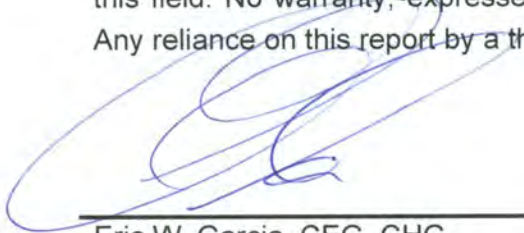
- Appendix A – Permits and GeoTracker Well Survey Data
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- Appendix D – Certified Analytical Reports and Chain-of-Custody Documentation

LIMITATIONS

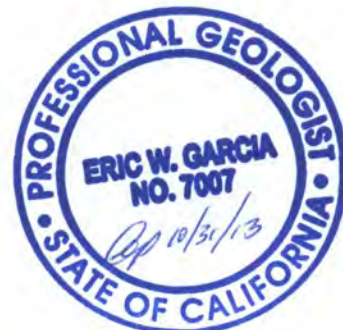
Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

The completed work summarized herein is intended to be a part of an ongoing interactive process. Additional work may be required to more fully assess the extent of petroleum hydrocarbon (PHC) migration in soil and groundwater. The purpose of a geological/hydrogeologic study is to reasonably characterize existing site conditions based on the geology/hydrogeology of the area. In performing such a study, it is understood that a balance must be struck between a reasonable inquiry into the site conditions and an exhaustive analysis of each conceivable environmental characteristic. Geologic/hydrogeologic conditions may exist at the site that cannot be identified solely by visual observation. Where subsurface exploratory work is performed, our professional opinions are based in part on interpretation of data from discrete sampling locations that may not represent actual conditions at unsampled locations. Therefore, no investigation is thorough enough to describe all geologic/hydrogeologic conditions of interest at a given site. Conditions not identified during the study should not be construed as a guarantee of the absence of such conditions at the site, but rather a limitation of the scope of services performed within the scope, limitations, and cost of the work authorized by the client.

This work plan has been prepared by Quest GeoSystems Management for the exclusive use of Byron Power Partners, L.P. (Byron Power) as it pertains to the Site located at 4901 Bruns Road, Byron, California. Our professional services will be performed using the degree of care and skill ordinarily exercised under similar circumstances by other geologists and engineers practicing in this field. No warranty, expressed or implied, is made as to professional advice in this report. Any reliance on this report by a third party is at party's sole risk.


Eric W. Garcia, CEG, CHG
Principal Geologist
PG #7007; CEG #2230; CHG #765
expires 10/31/2013

May 7, 2013
Date



Quest GeoSystems Management Project # G09212012-02

1 INTRODUCTION

This report was prepared by Quest GeoSystems Management, Inc. (Quest) of Rancho Cordova, California on behalf of Byron Power Partners, L.P. (Byron Power). This report summarizes site assessment activities conducted at the Site located at 4901 Bruns Road, Byron, Alameda County, California (Figure 1). The workscope presented below was performed consistent with the previously submitted *Workplan for Additional Site Investigation* dated October 30, 2012; *Workplan Addenda*, dated January 23, 2013; with the requirements of the Alameda County Environmental Health (ACEH), as indicated in their letter dated May 1, 2012; and subsequent workplan approvals dated November 20, 2012, and January 24, 2013. The scope of work completed was intended to establish the presence of soil and groundwater impacts related to petroleum hydrocarbons (PHC's) other Constituents of Concern (COC's) at the Site. Monitoring well installations at the Site were completed under an approved drilling permit (#2012134) with the Zone 7 Water District (Appendix A). Soil probe operations at the Site were completed under an approved soil boring permit (#2013007) with the Zone 7 Water District (Appendix A).

1.1 SCOPE OF WORK

The objective of the site assessment was to collect representative samples of the soil and groundwater samples in order to establish the vertical and lateral impacts of subsurface petroleum hydrocarbons (PHC's) and other constituents of concern (COC's) beneath the Site. An additional objective of the site assessment was to collect representative samples of the onsite surface impoundment sediments and scale stockpiles for waste identification/classification. The following work scope was completed in order to achieve the above-referenced objectives.

1.1.1 Surface Impoundment Sediment and Scale Stockpile Assessment

As part of the site characterization, Quest conducted the following activities:

- ❑ The collection of representative sludge and scale samples from within the onsite surface impoundment and scale deposit stockpile, respectively;
- ❑ The samples were delivered under Chain-of-Custody documentation to a State-Certified analytical laboratory for chemical analysis; and
- ❑ Creation of this report, summarizing the results of the assessment.

1.1.2 Site Assessment

As part of the subsurface site characterization of the Site, Quest conducted the following activities:

- ❑ The installation of four (4) groundwater monitoring wells by hollow-stem auger;
- ❑ The collection of soil samples from within the well boreholes;
- ❑ The completion of fourteen (14) direct push locations by truck-mounted Geoprobe®;
- ❑ The collection of soil samples from within the soil boreholes;
- ❑ Conduct one (1) groundwater monitoring and sampling event;
- ❑ The collection of groundwater samples from the onsite monitoring wells;

- ❑ Select soil and groundwater samples were delivered under Chain-of-Custody documentation to a State-Certified analytical laboratory for chemical analysis; and
- ❑ Creation of this report, summarizing the results of the site assessment and to present the findings of the investigation.

1.2 BACKGROUND

A description of the Site, the geologic and hydrologic conditions, and the project history are summarized in the following subsections.

1.2.1 Site Description

The Site was operated by Byron Power Partners, L.P. dba Byron Power Company (Byron Power), and is located at 4901 Bruns Road, Alameda County, California and is at an approximate elevation of 104 feet above mean sea level (MSL). Figure 1 is a site location map depicting the regional location of the site.

The rectangular Site is situated in the middle of a larger parcel (County Assessor's Parcel Number 99B-7050-001-10) owned by Mr. Steve Shin-Der and Mrs. Puang J. Lee and encompasses an area of approximately 1.43 acres. The remainder of the property is approximately 158 acres consisting of undeveloped land used for cattle grazing.

1.2.2 Site History

The facility was an electric and thermal energy cogeneration facility, which was in operation from 1991 through 2008. Byron Power operated the facility from 1995 through its closure in 2008.

In May through July of 2008 Quest conducted a Phase I Environmental Assessment of the Site (*Phase I Environmental Assessment Report, APN: 99B-7050-001-10, 4901 Bruns Road, Alameda County, California*). On May 20, 2008, Quest personnel completed the site reconnaissance of the facility. As part of the field reconnaissance, Quest reviewed the facilities Hazardous Materials Business Plan (HMBP), which contained chemical descriptions of hazardous materials maintained at the facility. The following Hazardous Materials Inventory – Chemical Description pages were reviewed and were reported to have been located onsite:

- ❑ Ethylene Glycol - antifreeze;
- ❑ Petroleum Lubrication Oil - waste oil;
- ❑ Mobil Pegasos 805 - motor oil;
- ❑ Brominating Tablets;
- ❑ Mineral Spirits;
- ❑ Meras 2324 – corrosion inhibitor (Polymaleic acid, Hydroxyethylidene diphosphonic acid);
- ❑ Chemisis 6190 - corrosion inhibitor (polyethylene, sodium nitrite);
- ❑ Chemisis 4965 - corrosion inhibitor (unknown); and
- ❑ Chemisis 5520 – defoamer (unknown).
- ❑ Watercare 2381 – defoamer (unknown);
- ❑ Watercare 2323 – water treatment (potassium hydroxide);

In the course of conducting a Phase I Environmental Site Assessment of the Site, Quest personnel identified several areas of surface staining, which appeared to be impacted with petroleum hydrocarbons, and areas of wet soil or standing water.

Quest was retained by Byron Power to conduct a limited subsurface soil investigation in relation to the observations/recommendations identified in Section 6.3.8 of Quest's report titled *Phase I Environmental Assessment Report, APN: 99B-7050-001-10, 4901 Bruns Road, Alameda County, California* (Phase I), dated September 30, 2008.

On July 8, 2011, a Quest representative arrived at the Site to collect representative soil samples from areas of soil staining as identified in the Phase I. Upon arriving at the Site, Quest personnel observed additional areas of stained soils not originally noted in the Phase I report. Based on the field observations, additional soil sampling locations were completed. The samples were collected by hand augering a hole to the sample depths (12 and 24 inches below ground surface [bgs]). A total of six (6) sampling locations (S.01 through S.06) were selected and soil samples were collected at 12 and 24 inches bgs at locations S.01 through S.05, and at 12 inches bgs at location S.06. Initial scraping away of the gravel top cover at the Site revealed soil that appeared to be impacted with PHC's. Notable "green" stained coarse-grained (coarse sand) soil appeared prominent from ground surface to approximately 6 inches bgs. This soil was underlain by a moderately plastic fine-grained soil (silt/clay). Visual impacts to this fine-grained soil appeared to extend to at least 1 foot bgs. A "brown" fine-grained (silt/clay) soil was noted toward the base of each borehole. A total of eleven (11) soil samples were collected and analyzed for Total Petroleum Hydrocarbons as gasoline (TPH-G), diesel (TPH-D), and motor oil (TPH-MO) by US EPA Method 8015B, Petroleum Oil & Grease (POG) by US EPA Method SM5520E/F, Volatile Organic Compounds (VOC's) by US EPA Method 8260B; Semi-Volatile Organic Compounds (SVOC's) by US EPA Method 8270C, PCB's by US EPA Method 8082, and LUFT 5 Metals by US EPA Method SW6010B. Soil samples collected for chemical characterization were transported to McCampbell Analytical, Inc., a State-certified analytical laboratory (ELAP #1644) of Pittsburg, California.

July 29, 2011 Quest prepared the report *Soil Sampling and Analysis Report* for Byron Power summarizing the results of the limited soil investigation. Based on a review of the analytical data, PHC impacts to soil appeared limited to within 2 feet of the surface in the areas of surficial staining. Excavation and off-site disposal of the upper 2 feet of this soil to an appropriate landfill was recommended as the most feasible remedial method at the Site. Following excavation of the soils it was proposed that an appropriate number of confirmation soil samples should be collected and chemically analyzed to confirm the removal of impacted soils.

On February 23, 2012, ACEH requested the submission of a workplan to evaluate potential soil and groundwater impacts at the Site.

On April 10, 2012, Quest submitted a report titled *Site Assessment Work Plan*, which proposed a subsurface investigation to assess the vertical and lateral extent of soil impacts at the site. The Workplan was subsequently approved by the ACEH in a letter dated May 1, 2012.

On July 2, 2102, Quest conducted subsurface investigation at the Site. The investigation consisted of the completion of six (6) direct push soil borings (SP.01 through SP.06) from which sixteen (16) soil samples and two (2) groundwater samples (SP.01W and SP.03W) were collected and analyzed for key chemical constituents of concern. Soil samples collected from soil probes SP.01 through SP.05 were found to exceed the environmental screening level (ESL) for Phenol for soil above groundwater, which is a current or potential source of drinking water for residential or commercial/industrial land use. However, no soil samples were found to exceed the ESL for groundwater that is not considered or is a potential source of drinking water for residential land use. Groundwater samples from soil probe SP.01 were found to exceed the ESL's for TPH-D, TPHMO, and TBA for groundwater, which is a current or potential source of drinking water for residential or commercial/industrial land uses. No groundwater was encountered during a subsequent resample attempt adjacent to soil probe SP.01 (SP.07) completed on July 2, 2102. On August 6, 2012, Quest submitted a Report summarizing the findings of the investigation at the Site and made recommendations for interim remedial measures.

On September 4, 2012, ACEH responded to the Quest's report submittal July 6, 2012. ACEH requested the submission of a workplan to further evaluate potential soil and groundwater impacts at the Site, and sample sediment and scale noted in and adjacent to the onsite surface impoundment.

On October 26, 2012, Quest submitted a report titled *Workplan For Additional Site Assessment Work Plan*, which proposed to install four (4) groundwater monitoring wells, collect representative soil and groundwater samples from the wells, and collect soil/sludge and scale samples at the site. The workplan was subsequently approved by the ACEH in a letter dated November 20, 2012.

On January 23, 2013, Quest submitted a report titled *Workplan Addenda*, which proposed to complete fourteen (14) soil probes, and collect representative soil samples from the beneath the building foundation at the site. The workplan was subsequently approved by the ACEH in an email dated January 24, 2013.

1.3 GEOLOGIC AND HYDROLOGIC CHARACTERISTICS

1.3.1 Regional and Local Physiographic Setting

The Site lies within the Coast Ranges Geomorphic Province, which extends approximately 550 miles in a northwest to southeast direction along the coast of California. The Coast Ranges comprises a series of northwest to southeast-trending ridges and narrow valleys, whose orientations are controlled by the fault-dominated geologic structure of the region.

1.3.2 Surface Topographic and Hydrology

Regionally, the general topographic slope of the area is to the north-northeast, ranging from approximately 261 feet above msl in the south to approximately 61 feet above msl to the north of the Site. In the vicinity of the Site, the topography appears relatively level with an elevation of approximately 104 feet above msl (USGS, 1978; EDR, 2008(a)). Surface topography in the

vicinity of the Site slopes moderately downward to the north and increases gently to the west. Nearby surface waters include Bethany Reservoir located approximately 0.90 miles southwest of the Site, the California Aqueduct located approximately 1.20 miles west of the Site and the Delta Mendota Canal located approximately 0.70 miles east of the Site. The Site is not identified as being located within the 100-year zone or 500-year zone, as defined by the Federal Emergency Management Agency (FEMA).

1.3.3 Geologic Review

The Site is underlain by soil referred to as the San Ysidro Series loam. The local vicinity surrounding the site is underlain by Altamont Series clay to the south and east, Linne Series clay loam to the northwest and southwest, and Rincon Series clay loam to the southwest, and San Ysidro loam to the north. The State Soil Geographic Database (STATSGO) describes San Ysidro Series loam as moderately well drained soil with high corrosion potential. According to STATSGO database, the hydrologic group is categorized as Class D which are described as clayey, and having a high water or shallow to an impervious layer. In profile, the soil layers include loam from the ground surface to 16 inches below ground surface (bgs). The subsoil is clay from 16 to 33 inches bgs and silty clay loam from 33 inches to 59 inches. Permeability of the subsoil is very slow.

1.3.4 Hydrogeologic Review

The regional groundwater gradient is unknown. Information on the groundwater in the immediate vicinity of the Site is also not readily available. Review of State records (GeoTracker) did not indicate any groundwater monitoring wells near the Site, which could be used to determine groundwater elevation. However, Quest reviewed boring logs dated May 23, 2006 for the Chevron Holey-Byron Road facility located approximately 2.7 miles north of the Site. According to the boring logs, depth to groundwater ranged from 2 ft to 5 ft bgs.

2 INVESTIGATION SUMMARY

The following sections summarize activities conducted at the Site. The work scope included a field investigation, analytical program, and the preparation of this report of findings. The following sections summarize the investigation completed at the Site.

2.1 FIELD INVESTIGATION

The field investigation consisted of four (4) phases of field investigation, 1) Surface Impoundment and Scale Deposit Sampling, 2) Groundwater Monitoring Well Installations, 3) Groundwater Monitoring and Sampling, and 4) Additional Soil Probe Operations.

2.1.1 Surface Impoundment and Scale Deposit Sampling

On December 7, 2012, a Quest geologist collected discrete sludge and scale deposit samples at the Site (Figure 2). The two (2) discrete sludge samples (SI.01 & SI.02) were collected by driving a clean 6-inch stainless-steel sleeve into the sediment to retain a discrete sample from each sample location. One (1) scale sample (SCALE) was collected by hand digging a hole in the stockpile surface to the sample depth (6 inches below the surface). Then a clean 6-inch stainless-steel tube was driven into the stockpile to retain a discrete sample.

Once each sample was collected, each sleeve was sealed with tight-fitting plastic caps, labeled, placed in a chilled ice chest, and preserved for transport under chain-of-custody documentation to McCampbell Analytical, Inc. (MAI), a State-certified analytical laboratory of Pittsburg, California for chemical analysis. Section 2.2 summarizes the chemical analysis completed on the samples collected.

2.1.2 Groundwater Monitoring Well Installations

On December 18, 19, and 21 2012, a Quest geologist supervised Woodward Drilling (Woodward), a State-licensed C-57 Well Driller (#695970), of Rio Vista, California, in the installation of four (4) groundwater monitoring wells using an HK-81 and Mobile B-53 hollow-stem auger rigs (Figure 3). Soil borings for monitoring wells MW.01 through MW.04 were advanced to 27.0, 27.5, 26.0, and 31.0 feet bgs, respectively. Quest's geologist examined soil cuttings and discrete soil samples produced during drilling operations to prepare lithologic log of monitoring wells MW.01 through MW.04 (Appendix B). The boring logs also include well construction details for monitoring wells MW.01 through MW.04.

Soil Sampling Activities

Soil samples collected from each of the soil borings were field screened, observing the soil for lithologic data, odor, and unusual stains. A headspace analysis was conducted using a photo-ionization detector (PID) to detect the presence of volatile organic compounds (VOC's). Soil samples collected from monitoring wells MW.01, MW.03, and MW.04 were collected at approximately 4, and 8 feet bgs. The soil sample collected from monitoring well MW.02 was collected at approximately 8 feet bgs. A total of seven (7) soil samples were collected from monitoring wells MW.01 through MW.04. The soil samples were then appropriately labeled, placed in an ice chest, and preserved for transport under chain-of-custody documentation to

MAI for chemical analysis. Section 2.2 summarizes the chemical analysis completed on the samples.

Monitoring Well Development

On December 21, 2012, Quest personnel completed well development of monitoring wells MW.01 through MW.04. Well development consisted of using a surge block to surge/flush the well screens. Subsequent to the use of the surge block a peristaltic pump with clean, dedicated poly tubing was used to evacuate the sediment laden groundwater from the well until the purged water was clear of sediments and water quality parameters stabilized. The purged water was appropriately containerized onsite consistent with Section 2.1.5

Groundwater Monitoring Well Elevation Survey

On December 31, 2012, Benchmark Consultants (Benchmark), a State-licensed Land Surveyor of Antioch, California, conducted an elevation survey of the groundwater monitoring wells and prominent site features. Benchmark subsequently provided requisite GEO X and GEO YZ data files for submission into the State of California GeoTracker database. Copies of the data submissions are included in Appendix A.

2.1.3 Groundwater Monitoring and Sampling

On December 28, 2012, the depth to groundwater and the total depth of each well were measured using an electronic well sounder. The well sounder was cleaned with a non-phosphatic cleaning solution and water, and then was double rinsed with tap water prior to gauging and purging each well. A summary of these measurements is presented in Table 1.

On December 28, 2012, subsequent to groundwater elevation measurements, monitoring wells MW.01 through MW.04 were purged using dedicated ¼" polyethylene tubing and a peristaltic pump. During purging, the temperature, pH, specific conductance (EC), Dissolved Oxygen (DO), and Oxygen Reduction Potential (ORP) were measured and recorded. Copies of the field data sheets are included in Appendix C.

The groundwater samples collected were then decanted into sampling containers appropriate to each analytical method being employed. The sample containers were then appropriately labeled, placed in an ice chest, and preserved for transport under chain-of-custody documentation to MAI for chemical analysis. Section 2.2 summarizes the chemical analysis completed on the samples collected.

2.1.4 Additional Soil Probe Operations

On January 30 and 31, 2013, a Quest geologist supervised Woodward in pushing soil probes SP-8 through SP-21, using a truck-mounted AMS direct-push dual-tube probe (Figure 4). Soil probe locations SP-8 through SP-21 were advanced to between 12 and 16 feet bgs. Quest's geologist examined soil cuttings and discrete soil samples produced during drilling operations to prepare lithologic logs of soil probes SP-8 through SP-21 (Appendix B). Groundwater was not encountered during this portion of the field operations at the Site.

Soil Sampling Activities

Soil samples collected from each of the soil probes were field screened, observing the soil for lithologic data, odor, and unusual stains. A headspace analysis was conducted using a PID to detect the presence of VOC's. Soil probes SP-8 through SP-21 were continuously cored to each location's termination depth. Soil samples collected from soil probes SP-8 through SP-21 were collected at approximately 2 feet bgs. Additional soil samples were collected from soil probes SP-12, SP-15, and SP-19 at approximately 1, 6, and 1 foot bgs, respectively. A total of seventeen (17) soil samples were collected from soil probes SP-8 through SP-21. The soil samples from each soil probe were then appropriately labeled, placed in an ice chest, and preserved for transport under chain-of-custody documentation to MAI for chemical analysis. Section 2.2 summarizes the chemical analysis completed on the samples collected.

Soil Probe Backfill

Upon completion of the soil probe, the tool strings were removed from the boreholes and the bore hole grouted by tremmie pipe, from the base of the borehole to the surface. The grout consisted of Portland cement.

2.1.5 Investigation Derived Wastes (IDW)

Investigation derived wastes (IDW) were generated during the Site investigation activities. Soil spoils generated at the Site were containerized onsite in DOT-approved 55-gallon drums. Equipment decontamination rinseate, well development and sampling purgewater were containerized onsite in DOT-approved 55-gallon drums. The drums were appropriately labeled and segregated to a secure location at the Site. The drums will be profiled using the Site analytical data and disposed/recycled at an appropriate facility.

2.2 ANALYTICAL TESTING PROGRAM

Soil and groundwater samples were collected and preserved in the field for transport to an analytical laboratory. The sample containers were labeled, stored at a temperature of less than 4 degrees centigrade (<4°C), and transported along with appropriate chain-of-custody documentation to MAI for chemical analysis. Sludge and scale sample analytical results are included in Tables 2, 3, and 4 and on the certified analytical reports in Appendix D. Soil sample analytical results are included in Table 4 and on the certified analytical reports in Appendix D. Groundwater sample analytical results are included in Tables 5 and 6, and on the certified analytical reports in Appendix D.

2.2.1 Sample Analysis Protocols

The surface impoundment sludge samples were analyzed for:

- ❑ Total Petroleum Hydrocarbons as Diesel (TPH-D), and as Motor Oil (TPH-MO), and as Gasoline (TPH-G) using U.S. EPA Method 8015M;
- ❑ VOC's using U.S. EPA Method 8260;
- ❑ Semi-Volatile Organic Compounds (SVOC's) using U.S. EPA Method 8270;
- ❑ CAM-17 Metals using US EPA Method SW6020; and
- ❑ Percent Moisture using ASTM Method D2216-92.

The stockpiled scale deposit samples were analyzed for:

- ❑ TPH-D, TPH-MO, TPH-G using U.S. EPA Method 8015M;
- ❑ VOC's using U.S. EPA Method 8260;
- ❑ SVOC's using U.S. EPA Method 8270;
- ❑ CAM-17 Metals using US EPA Method SW6020;
- ❑ Reactivity, Corrosivity, and Ignitability (RCI) using US EPA Methods SW-846, 9040, and 1010; and
- ❑ Asbestos using US EPA Method 600/R-93-116.

The soil samples collected from soil probes SP-8 through SP-21 were analyzed for:

- ❑ TPH-D, TPH-MO, TPH-G using U.S. EPA Method 8015M;
- ❑ VOC's using U.S. EPA Method 8260; and
- ❑ SVOC's using U.S. EPA Method 8270.

The groundwater samples collected from monitoring wells MW.01 through MW.04 were analyzed for:

- ❑ TPH-D, TPH-MO, TPH-G using U.S. EPA Method 8015M;
- ❑ VOC's using U.S. EPA Method 8260;
- ❑ SVOC's using U.S. EPA Method 8270;
- ❑ Dissolved Oxygen (DO) by field meter;
- ❑ Oxygen Reduction Potential (ORP) by field meter;
- ❑ Temperature by field meter;
- ❑ Electrical Conductivity (EC) by field meter; and
- ❑ pH by field meter.

3 FINDINGS

3.1 SLUDGE AND SCALE SAMPLES

A total of two (2) sludge (SI.01 & SI.02) and one (1) scale stockpile (SCALE) sample were collected from the surface impoundment and scale deposit stockpile, and analyzed for key COC's. The analytical results of the samples submitted are summarized in Tables 2, 3, and 4, and on certified analytical reports in Appendix D. The following is a summary of COC's detected in the analyzed samples:

- ❑ TPH-G was detected in samples SI.01, SI.02, and SCALE at concentrations of 1.8 mg/Kg, 11 mg/Kg, and 0.26* mg/Kg, respectively (*flagged by laboratory as detected below quantitation limits);
- ❑ TPH-D was detected in samples SI.01, SI.02, and SCALE at concentrations of 72 mg/Kg, 430 mg/Kg, and 3.6 mg/Kg, respectively;
- ❑ TPH-MO was detected in samples SI.01, SI.02, and SCALE at concentrations of 160 mg/Kg, 660 mg/Kg, and 12 mg/Kg, respectively;
- ❑ Acetone was detected in sample SI.02 at a concentration of 0.15 mg/Kg;
- ❑ Methyl Ethyl Ketone (MEK) was detected in samples SI.01, and SI.02 at concentrations of 0.0076* mg/Kg, and 0.012* mg/Kg, respectively (*flagged by laboratory as detected below quantitation limits);
- ❑ Carbon Disulfide was detected in samples SI.01, and SI.02 at concentrations of 0.016 mg/Kg, and 0.019 mg/Kg, respectively;
- ❑ DIPE was detected in sample SI.02 at a concentration of 0.0028 mg/Kg;
- ❑ Ethyl-Benzene was detected in sample SI.02 at a concentration of 0.043 mg/Kg;
- ❑ Isopropyl Benzene was detected in sample SI.02 at a concentration of 0.011 mg/Kg;
- ❑ 4-Isopropyl Toluene was detected in sample SI.02 at a concentration of 0.0072* mg/Kg (*flagged by laboratory as detected below quantitation limits);
- ❑ Methylene Chloride was detected in sample SI.01 at a concentration of 0.0044* mg/Kg (*flagged by laboratory as detected below quantitation limits);
- ❑ Naphthalene was detected in samples SI.01, and SI.02 at concentrations of 0.0023* mg/Kg, and 0.16 mg/Kg, respectively (*flagged by laboratory as detected below quantitation limits);
- ❑ Toluene was detected in samples SI.01, and SI.02 at concentrations of 0.0058 mg/Kg, and 0.0059* mg/Kg, respectively (*flagged by laboratory as detected below quantitation limits);
- ❑ 1,2,4-Trimethyl-Benzene was detected in samples SI.01, and SI.02 at concentrations of 0.0035* mg/Kg, and 0.18 mg/Kg, respectively (*flagged by laboratory as detected below quantitation limits);
- ❑ 1,3,5-Trimethyl-Benzene was detected in sample SI.02 at a concentration of 0.089 mg/Kg;
- ❑ Total Xylenes was detected in sample SI.02 at a concentration of 0.48 mg/Kg;

- ❑ Antimony was detected in samples SI.01, SI.02, and SCALE at concentrations of 2.5 mg/Kg, 1.5 mg/Kg, and 1.2 mg/Kg, respectively;
- ❑ Arsenic was detected in samples SI.01, SI.02, and SCALE at concentrations of 1.2 mg/Kg, 1.8 mg/Kg, and 0.97 mg/Kg, respectively;
- ❑ Barium was detected in samples SI.01, SI.02, and SCALE at concentrations of 65 mg/Kg, 110 mg/Kg, and 150 mg/Kg, respectively;
- ❑ Cadmium was detected in samples SI.01, and SI.02 at concentrations of 0.24 mg/Kg, 0.21 mg/Kg, and 0.26 mg/Kg, respectively;
- ❑ Chromium was detected in samples SI.01, SI.02, and SCALE at concentrations of 5.6 mg/Kg, 8.5 mg/Kg, and 3.5 mg/Kg, respectively;
- ❑ Cobalt was detected in samples SI.01, SI.02, and SCALE at concentrations of 0.67 mg/Kg, 0.90 mg/Kg, and 0.83 mg/Kg, respectively;
- ❑ Copper was detected in samples SI.01, SI.02, and SCALE at concentrations of 58 mg/Kg, 44 mg/Kg, and 65 mg/Kg, respectively;
- ❑ Lead was detected in samples SI.01, SI.02, and SCALE at concentrations of 19 mg/Kg, 31 mg/Kg, and 21 mg/Kg, respectively;
- ❑ Mercury was detected in samples SI.01, SI.02, and SCALE at concentrations of 0.031 mg/Kg, 0.040 mg/Kg, and 0.036 mg/Kg, respectively;
- ❑ Molybdenum was detected in samples SI.01, SI.02, and SCALE at concentrations of 140 mg/Kg, 87 mg/Kg, and 6.6 mg/Kg, respectively;
- ❑ Nickel was detected in samples SI.01, SI.02, and SCALE at concentrations of 2.6 mg/Kg, 2.5 mg/Kg, and 3.0 mg/Kg, respectively;
- ❑ Selenium was detected in sample SI.01 at a concentrations of 0.23 mg/Kg;
- ❑ Vanadium was detected in samples SI.01, SI.02, and SCALE at concentrations of 2.0 mg/Kg, 1.8 mg/Kg, and 0.79 mg/Kg, respectively;
- ❑ Zinc was detected in samples SI.01, SI.02, and SCALE at concentrations of 180 mg/Kg, and 390 mg/Kg, and 190 mg/Kg, respectively; and
- ❑ No other key COC's were identified at or above their respective detection limit.

3.2 SOIL CONDITIONS

3.2.1 Subsurface Conditions

The subsurface conditions of the Site consisted primarily of sandy silts, sandy clays, silty sands, well-graded gravel with sand, gravels, volcanic ash, and welded tuff. Copies of the soil boring logs can be found in Appendix A.

3.2.2 Soil Sample Analytical Results

Seventeen (17) soil samples were collected from soil probes SP-8 through SP-21 and subsequently analyzed for key COC's. The analytical results of the soil samples submitted are summarized in Table 4, and on certified analytical reports in Appendix D. The following is a summary of COC's detected in soil samples:

- ❑ TPH-D was detected in twenty-one (21) soil samples at concentrations ranging from 1.0 mg/Kg (SP-16-2) to 140 mg/Kg (SP-08-2); and

- ❑ TPH-MO was detected in thirteen (13) soil samples at concentrations ranging from 6.0 mg/Kg (SP-13-2) to 2,300 mg/Kg (SP-19-1);
- ❑ Acetone was detected in two (2) soil samples at concentrations ranging from 0.079 mg/Kg (SP-17-2) to 0.094 mg/Kg (SP-19-1); and
- ❑ No other key COC's were identified at or above their respective detection limit.

3.3 GROUNDWATER CONDITIONS

3.3.1 Hydrogeology

On December 28, 2012, the depth to groundwater was measured in groundwater monitoring wells MW.01 through MW.04. Groundwater elevation beneath the site ranged from 86.47 feet to 89.33 feet AMSL, with an average elevation of 87.82 feet AMSL. Groundwater elevation data are summarized in Table 1.

Groundwater flow beneath the Site appears to be northeast (N65°E) at an approximate groundwater gradient of 0.0238. Copies of the field data sheets are included in Appendix C, and groundwater elevation contours and the direction of groundwater flow are shown on Figure 5.

3.3.2 Groundwater Sample Analytical Results

Groundwater samples collected from groundwater monitoring wells MW.01 through MW.04 were analyzed for TPH-G, TPH-D, TPH-MO, VOC's, and SVOC's. Groundwater sample analytical results are included in Tables 5 and 6, on the field collection data sheets in Appendix C, and on the certified analytical reports in Appendix D. The following is a summary of key hydrocarbon compounds detected in groundwater samples:

- ❑ TPH-G was detected in groundwater sample MW.03 at a concentration of 51 µg/L;
- ❑ TPH-D was detected in groundwater samples MW.01 through MW.04 at concentrations of 27* µg/L, 41* µg/L, 120 µg/L, and 56 µg/L, respectively (*flagged by laboratory as detected below quantitation limits);
- ❑ Benzene was detected in groundwater sample MW.03 at a concentration of 0.85 µg/L;
- ❑ Isopropyl Benzene was detected in groundwater sample MW.03 at a concentration of 6.8 µg/L;
- ❑ MIBK was detected in groundwater sample MW.03 at a concentration of 0.65 µg/L;
- ❑ Naphthalene (8260) was detected in groundwater sample MW.03 at a concentration of 1.4 µg/L;
- ❑ Total Xylenes was detected in groundwater sample MW.03 at a concentration of 0.72 µg/L;
- ❑ Benzoic Acid was detected in groundwater samples MW.01 and MW.04 at concentrations of 5.9 µg/L, and 6.3 µg/L, respectively;
- ❑ Naphthalene (8270) was detected in groundwater sample MW.03 at a concentration of 1.4 µg/L;
- ❑ pH was analyzed and found to range from 6.53 (MW.03) to 7.83 (MW.01);

- ❑ Electrical conductivity (EC) was analyzed and found to range from 3,301 $\mu\text{S}/\text{cm}$ (MW.01) to 5,780 $\mu\text{S}/\text{cm}$ (MW.02); and
- ❑ No other key COC's were identified at or above their respective detection limit.

4 EVALUATION

Based on the review of the subsurface data, hydrogeologic data, and analytical results of this investigation, petroleum hydrocarbon impacted soil and surficial water was identified at the Site. The following sections evaluate the collected data, and compare the findings with current State and Federal guidelines for subsurface soils and groundwater.

4.1 REGULATORY EVALUATION

Hazardous Waste Designation

In California hazardous wastes are regulated by California Health and Safety Code (HSC), Division 20, Chapter 6.5, Hazardous Waste Control Law, and California Code of Regulations (CCR), Division 4.5, Title 22 CCR. In California, the classification of wastes and the establishment of cleanup levels for sites which have been contaminated with toxic chemicals are performed by two separate State agencies with separate regulatory authority. The State Water Resources Control Board/Regional Water Quality Control Boards classify wastes according to the risk of impairment to water quality. The DTSC classifies wastes based on a direct threat of these wastes or sites to public health.

California Regional Water Quality Control Board, Central Valley Region – Basin Plan

The Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) requires the preparation and adoption of water quality control plans (basin plans) [California Water Code, Section 13240] by the State's nine Regional Water Quality Control Boards for watersheds within their regions. According to Section 13050 of the California Water Code, basin plans consist of a designation or establishment for the waters within a specified area of beneficial uses to be protected, water quality objectives (WQO's) to protect those uses, and a program of implementation needed for achieving the objectives. The Central Valley Regional Water Quality Control Board (CVRWQCB) has established basin plan WQO's (CVRWQCB, 1998) for ground waters and states that they shall not contain chemical constituents in concentrations that adversely affect beneficial uses. At a minimum, ground waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs) specified in the following provisions of Title 22 of the California Code of Regulations. MCL's are subdivided into Primary and Secondary MCL's which address human health, taste, odor, and appearance of drinking water. Primary MCL's, which address human health, are regulated under Title 22 CCR §64431-§64444. Secondary MCL's, which address the taste, odor, or appearance of drinking water, and are regulated under Title 22 CCR §64449.

California Regional Water Quality Control Board, San Francisco Bay Region - ESL's

In May 2008 the staff of the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) prepared a technical document entitled Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (Interim Final – November 2007) [SFRWQCB, 2008]. This document establishes Environmental Screening Levels (ESL's) for chemicals commonly found in impacted soil and groundwater. The intent of the document is to help

expedite the preparation of environmental risk assessments at sites where impacted soil and groundwater have been identified as an alternative to preparing a formal risk assessment. In this process, soil and groundwater data collected at a site can be directly compared to the ESL's and the need for additional work evaluated. The SFRWQCB (SFRWQCB, 2008) issued tabulated ESL data for constituents of concern, which were subdivided into tables. In particular, the tables were organized to assess Land Use, Depth of Impacted Soil, and Groundwater Utility.

4.1.1 Sludge and Scale Evaluation

Analytical results indicated the presence of PHC's in samples collected during this investigation and submitted for chemical analysis. The following summarize analytical results as they relate to regulatory requirements/guidelines:

Hazardous Waste Classification

The following evaluations are reviewed against requirements of the Hazardous Waste Control Law and Title 22 for specific detected COC's:

- None (0) of the organic compounds detected were found to be listed within Title 22 §66261.24;
- Reactivity, Corrosivity, and Ignitability (RCI): Sample SCALE was not found to exceed RCI limits (Table 2); and
- CAM-17: No metal COC's were found to exceed the Soluble Threshold Limit Concentration (STLC) trigger value or the Total Threshold Limit Concentration (TTLC) limits for samples SI.01, SI.02, and SCALE (Table 3).

SFRWQCB ESL

Soil depths encountered at the Site were found to be less than 3 meters (9.8 feet) bgs. Tables A and B of SFRWQCB (2008) were used for the evaluation of PHC's in soil at the Site. Table 4 presents the sludge, scale, and soil sample analytical results along with respective analyte ESL's. The following summarize the evaluations ESL's for specific detected COC's:

- TPH-G was detected in three (3) samples (SI.01, SI.02, & SCALE). No (0) samples were found to exceed the ESL's for TPH-G;
- TPH-D was detected in three (3) samples (SI.01, SI.02, & SCALE). One (1) sample was found to exceed the ESL for water that is considered or is a potential source of drinking water for residential or commercial/industrial land uses (83 mg/Kg). No (0) samples were found to exceed the ESL for water that is not considered or is a potential source of drinking water for residential (100 mg/Kg) or commercial/industrial land uses (180 mg/Kg);
- TPH-MO D was detected in three (3) samples (SI.01, SI.02, & SCALE). One (1) sample was found to exceed the ESL's for water that is for residential uses (370 mg/Kg). No (0) samples were found to exceed the ESL's for water that is for commercial/industrial land uses (2,500 mg/Kg);
- Acetone was detected in one (1) sample (SI.02). No (0) samples were found to exceed the ESL's for acetone;

- Methyl Ethyl Ketone (MEK) was detected in two (2) samples (SI.01 & SI.02). No (0) samples were found to exceed the ESL's for MEK;
- Carbon Disulfide was detected in two (2) samples (SI.01 & SI.02). There is no established ESL;
- DIPE was detected in one (1) sample (SI.02). There is no established ESL;
- Ethyl-Benzene was detected in one (1) sample (SI.02). No (0) samples were found to exceed the ESL's for Ethyl-Benzene;
- Isopropyl Benzene was detected in one (1) sample (SI.02). There is no established ESL;
- 4-Isopropyl Toluene was detected in one (1) sample (SI.02). There is no established ESL;
- Methylene Chloride was detected in one (1) sample (SI.01). There is no established ESL;
- Naphthalene was detected in two (2) samples (SI.01 & SI.02). No (0) samples were found to exceed the ESL's for Naphthalene;
- Toluene was detected in two (2) samples (SI.01 & SI.02). No (0) samples were found to exceed the ESL's for Toluene;
- 1,2,4-Trimethyl-Benzene was detected in two (2) samples (SI.01 & SI.02). There is no established ESL;
- 1,3,5-Trimethyl-Benzene was detected in one (1) sample (SI.02). There is no established ESL;
- Total Xylenes was detected in one (1) sample (SI.02). No (0) samples were found to exceed the ESL's for Total Xylenes;
- Arsenic was detected in three (3) samples (SI.01, SI.02, & SCALE). Three (3) samples were found to exceed the ESL's for water that is for residential uses (0.39 mg/Kg). One (1) sample was found to exceed the ESL's for water that is for commercial/industrial land uses (1.6 mg/Kg);
- Molybdenum was detected in three (3) samples (SI.01, SI.02, & SCALE). Two (2) samples were found to exceed the ESL's for water that is for residential or commercial/industrial land uses (40 mg/Kg); and
- No other key COC's were identified as exceeding their respective ESL.

Discussion

The sludge and scale deposits are contained within the lined containment structures at the Site. The deposits represented by samples SI.01, SI.02, and SCALE are not classified as hazardous wastes by designation or classification under Division 20, Chapter 6.5 (Hazardous Waste Control Law), or Title 22 CCR Division 4.5. Sample SI.02 was found to exceed the ESL's for TPH-D and TPH-MO for residential land uses. The ESL for Arsenic is relatively low in comparison to noted regional background for arsenic in northern California [11 mg/Kg (Duvergé, 2011), 20 mg/Kg (Scott, 1991), and 42 mg/Kg (LBNL, 2009)]. Since the deposits are currently contained, ESL's are not pertinent to their current disposition. However, the ESL's would be pertinent if the deposits were to be removed from the containment structures and deposited to open ground at the Site.

4.1.2 Subsurface Soil Guideline Evaluation

Analytical results indicated the presence of PHC's in soil samples collected during this investigation and submitted for chemical analysis. The following summarize analytical results as they relate to regulatory requirements/guidelines:

SFRWQCB ESL

Soil depths encountered at the Site were found to be less than 3 meters (9.8 feet) bgs. Tables A and B of SFRWQCB (2008) were used for the evaluation of PHC's in soil at the Site. The following evaluations are reviewed against Residential ESL's for specific detected COC's:

- TPH-D was detected in twenty-one (21) soil samples. Three (3) soil samples were found to exceed the ESL for water that is considered or is a potential source of drinking water (83 mg/Kg) for residential or commercial/industrial land uses, and the ESL for water that is not considered or is a potential source of drinking water (100 mg/Kg) for residential uses. No (0) soil samples were found to exceed the ESL for water that is not considered or is a potential source of drinking water (180 mg/Kg) for commercial/industrial land uses;
- TPH-MO was detected in thirteen (13) soil samples. Three (3) soil samples were found to exceed the ESL for residential land uses (370 mg/Kg). No (0) soil samples were found to exceed the ESL for water that is not considered or is a potential source of drinking water (2,500 mg/Kg) for commercial/industrial land uses;
- Acetone was detected in two (2) soil samples. No (0) soil samples were found to exceed the ESL for water that is considered or is a potential source of drinking water for residential or commercial/industrial land uses (0.5 mg/Kg) or the ESL for water that is not considered or is a potential source of drinking water (0.5 mg/Kg) for residential or commercial/industrial land uses;
- Phenol was not detected in the soil samples submitted for chemical analysis. It should be noted that the Reporting Limit (RL = 0.25 mg/Kg) and Method Detection Limit (MDL = 0.12 mg/Kg) for the analytical method is higher than the ESL for water that is considered or is a potential source of drinking water for residential or commercial/industrial land uses (0.076 mg/Kg); and
- No other key COC's were identified as exceeding their respective ESL.

Discussion

Based on the evaluation above, TPH-D and TPH-MO were the only analytes found to exceed the residential land use ESL's, and TPH-D was the only analyte found to exceed the commercial/industrial land use ESL for water that is considered or is a potential source of drinking water. SFRWQCB (2008) recommends that when evaluating TPH analytical results to ESL's, they should be evaluated in terms of both TPH and well characterized indicator chemicals (e.g., benzene, toluene, ethylbenzene, xylenes and targeted PAHs). No other indicator chemical analytes (VOC's or SVOC's) were identified with corresponding TPH results.

It should be noted that various SVOC analytes have ESL's that are lower than the MDL for those analytes. Further evaluation of these analytes is limited by the detection limit of the

analytical method. For the purposes of this evaluation it was noted that the dilution factor (DF) for all soil samples analyzed was low. Therefore, these analytes should be evaluated based on confirmed positive results above the respective MDL.

4.1.3 Groundwater Guideline Evaluation

Analytical results indicated the presence of PHC's in groundwater samples collected during this investigation. The following summarize analytical results as they relate to regulatory requirements/guidelines:

CVRWQCB – Basin Plan WQO's

Current Basin Plan WQO's were used for the evaluation of COC's in groundwater samples collected at the Site. The following evaluations are based on the specific detected COC's:

- ❑ TPH-G: Groundwater sample MW.03 (51 µg/L) was found to exceed the taste and odor threshold of 5.0 µg/L;
- ❑ TPH-D: Groundwater sample MW.03 (120 µg/L) was found to exceed the taste and odor threshold of 100 µg/L;
- ❑ Benzene: No (0) groundwater sample collected and analyzed were found to exceed the Basin Plan WQO of 1.0 µg/L;
- ❑ Isopropyl benzene: No listed Primary or Secondary MCL's;
- ❑ 4-Methyl-2-pentanone (MIBK): No listed Primary or Secondary MCL's;
- ❑ Naphthalene: No listed Primary or Secondary MCL's;
- ❑ Benzoic Acid: No listed Primary or Secondary MCL's;
- ❑ pH: Groundwater samples MW.01 through MW.04 were found to be within the Basin Plan WQO;
- ❑ EC: Groundwater samples MW.01 through MW.04 were found to be exceed the Basin Plan WQO of 900 µS/cm; and
- ❑ No other key COC's were identified as exceeding their respective WQO's.

SFRWQCB – ESL

Soil depths encountered at the Site were found to be less than 3 meters (9.8 feet) bgs. Tables F-1a and F-1b of SFRWQCB (2008) were used for the evaluation of PHC's in groundwater at the Site. The following evaluations are based on the specific detected COC's:

- ❑ TPH-D: Groundwater sample MW.03 (120 µg/L) was found to exceed the ESL for residential land uses (100 µg/L). No (0) groundwater samples were found to exceed the ESL for commercial/industrial land uses (210 µg/L);
- ❑ Benzene: No (0) groundwater samples were found to exceed the ESL for water that is considered or is a potential source of drinking water (1.0 µg/L) for residential or commercial/industrial land uses;
- ❑ Isopropyl benzene: No listed ESL;
- ❑ MIBK: No (0) groundwater samples were found to exceed the ESL for water that is considered or is a potential source of drinking water for residential (120 µg/L) or commercial/industrial land uses (170 µg/L);

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- ❑ Naphthalene: No (0) groundwater samples were found to exceed the ESL for water that is considered or is a potential source of drinking water for residential (17 µg/L) or commercial/industrial land uses (24 µg/L);
 - ❑ Total Xylenes: No (0) groundwater samples were found to exceed the ESL for water that is considered or is a potential source of drinking water for residential (20 µg/L) or commercial/industrial land uses (100 µg/L);
 - ❑ Benzoic Acid: No listed ESL; and
 - ❑ No other key COC's were identified as exceeding their respective ESL.

Discussion

Based on the evaluation above, only one (1) monitoring well (MW.03) was found to exceed the TPH-D ESL's for residential land use and the WQO's for TPH-g and TPH-D. Analysis of groundwater in the field identified that EC in monitoring wells MW.01 through MW.04 exceeded the respective WQO. SFRWQCB (2008) recommends that when evaluating TPH analytical results to ESL's, they should be evaluated in terms of both TPH and well characterized indicator chemicals (e.g., benzene, toluene, ethylbenzene, xylenes and targeted PAHs). No other indicator chemical analytes (VOC's or SVOC's) were identified with corresponding TPH results. The locally occurring groundwater indicated EC ranging from 3,301 to 5,780 µS/cm, which are substantially in excess of the Basin Plan limit of 900 µS/cm.

5 CONCLUSIONS

5.1 SLUDGE AND SCALE EVALUATION

By definition, the sludge and scale deposits represented by sludge samples SI.01 and SI.02, and scale sample SCALE, respectively, are not considered a hazardous waste. The waste materials are contained by an impervious liner. Future release of these deposits, or placement on open ground could pose some groundwater risk. Consideration might be given in the future to removal of the surface impoundment and scale deposits, and their appropriate disposition.

5.2 SITE SUBSURFACE EVALUATION

The Site and surrounding area are currently zoned Large Parcel Agriculture (Alameda County, 2000), which limits the use and size of the adjacent parcels. Based on the current zoning requirements, existing Site and adjacent property use, and the rural nature of the area, residential uses are limited. Therefore, review of the Site and local groundwater utility should be considered for agricultural and commercial/Industrial land uses. The following provide Quest conclusions based on soil and groundwater conditions at the Site:

5.2.1 Soil Conditions at the Site

TPH-D was the only analyte found to exceed the commercial/industrial land use ESL for water that is considered or is a potential source of drinking water. No other indicator chemical analytes (VOC's or SVOC's) were identified with corresponding TPH-D results. The results were for three (3) out of twenty-four (24) samples collected during this investigation. These three (3) samples are located beneath the building foundation and the soils they represent are therefore relatively immobile. The noted soil impacts are within 2 feet of the surface and are limited laterally to beneath the building slab. Based on the current use of the facility and surrounding properties, and the shallow, limited lateral extent, and immobile nature of the soil impacts noted, the Site should be considered low risk and No Further Action should be considered.

5.2.2 Groundwater Conditions at the Site

No (0) analytical samples were found to exceed the respective ESL's for commercial/industrial land uses. One (1) monitoring well (MW.03) was found to exceed the WQO's for TPH-G and TPH-D. Benzene was identified in monitoring well MW.03 below the respective ESL's and WQO. No other indicator chemical analytes (VOC's or SVOC's) were identified with corresponding TPH results. Groundwater in the area of the Site was found to exceed the respective WQO for EC.

The naturally occurring groundwater at the Site appears to be of poor quality. The EC measurements from monitoring wells MW.01 through MW.04 indicate very high EC that is four to six times the Basin Plan WQO. Based on the current use of the facility and surrounding properties, and the limited, low concentrations of COC impacts noted, the Site should be considered low risk and a No Further Action Letter issued.

6 RECOMMENDATIONS

Based on the findings and conclusions of this report it is recommended that the following should be conducted for this Site:

- Based on the limited extent of soil and groundwater impacts and the poor quality of the locally occurring groundwater, No Further Action (NFA) should be considered for the Site; and
- A copy of this report should be forwarded to ACEH for their review and action.

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TABLES

TABLE 1 – Summary of Groundwater Elevation Data

Monitoring Well	MW.01		MW.02		MW.03		MW.04	
Well Head Elevation (Feet)	110.83		107.03		106.92		104.02	
Date								
12/28/2012	21.50	89.33	18.27	88.76	20.19	86.73	17.55	86.47

Notes:

- bgs = Below Ground Surface
- * = Site elevation datum established December 2012 by Benchmark Consultants.
- = Not measured, unable to measure

**TABLE 2 – Summary of Sludge & Scale Sample Analytical Results,
 U.S. EPA Methods SW-846, 9040, 1010, 600/R-93-116, & ASTM D2216-92**

SAMPLE ID	DATE SAMPLED	ANALYSIS					
		RCI				% Moisture	Asbestos
		Reactivity		Corrosivity	Ignitability		
Sulfide	Cyanide						
SI.01	12/07/12	---	---	---	---	67.4	---
SI.02	12/07/12	---	---	---	---	58.5	---
SCALE	12/07/12	Negative	Negative	8.90	Negative	---	ND
Hazardous Waste Classification by Characteristics - 22 CCR §66261				≤2 or ≥12.5			

NOTES:

- = Not Analyzed

**TABLE 3 – Summary of Sludge & Scale Sample Analytical Results,
U.S. EPA Method SW6020**

ANALYTE	SAMPLE ID			STLC Trigger (mg/kg)	STLC Limit (mg/L)	TCLP Trigger (mg/kg)	TCLP Limit (mg/L)	TTLC Limit (mg/kg)	R2 ESL (mg/kg)	Regional Background* (mg/kg)
	SI.01	SI.02	SCALE							
	12/07/12	12/07/12	12/07/12							
Antimony	2.5	1.5	1.2	150	15	300	15	500	6.3	22
Arsenic	1.2	1.8	0.97	50	5.0	100	5.0	500	0.39	20
Barium	65	110	150	1,000	100	2,000	100	10,000	750	410
Beryllium	ND<0.19	ND<0.19	ND<0.19	7.5	0.75	15	0.75	75	4.0	3.2
Cadmium	0.24	0.21	ND<0.16	10	1.0	20	1.0	100	1.7	14
Chromium	5.6	8.5	3.5	50	5.0	100	5.0	500	1,000	170
Cobalt	0.67	0.90	0.83	800	80	1,600	80	8,000	40	25
Copper	58	44	65	250	25	500	25	2,500	230	67
Lead	19	31	21	50	5.0	100	5.0	1,000	200	54
Mercury	0.031	0.040	0.036	2.0	0.2	4	0.2	20	1.3	1.3
Molybdenum	140	87	6.6	3,500	350	7,000	350	3,500	40	4.8
Nickel	2.6	2.5	3.0	200	20	400	20	2,000	150	145
Selenium	0.23	ND<0.22	ND<0.22	10	1.0	20	1.0	100	10	4.9
Silver	ND<0.13	ND<0.13	ND<0.13	50	5.0	100	5.0	500	20	4.8
Thallium	ND<0.14	ND<0.14	ND<0.14	70	7.0	140	7.0	700	1.3	3.8
Vanadium	2.0	1.8	0.79	240	24	480	24	2,400	16	90
Zinc	180	390	190	2,500	250	5,000	250	5,000	600	120

NOTES:
 mg/kg = Milligram per Kilogram
 mg/L = Milligram per Liter
 * = Background Metals Concentrations in Soil in Northern Santa Clara County (Scott, 1995).
 R2 ESL = San Francisco Bay Regional Water Quality Control Board (RWQCB, 2008), Environmental Screening Levels; Residential Land Use, Shallow Soil, Drinking Water Resource

**TABLE 4 – Summary of Sludge, Scale, & Soil Sample Analytical Results,
U.S. EPA Methods 8015B, 8260B, and 8270B**

SAMPLE ID	DATE SAMPLED	SAMPLE INTERVAL (feet BSG)	ANALYTES								
			8015C			8260B					
			TPH-G (mg/kg)	TPH-D (mg/kg)	TPH-MO (mg/kg)	Acetone (mg/kg)	TAME (mg/kg)	Benzene (mg/kg)	MEK (mg/kg)	TBA (mg/kg)	Carbon Disulfide (mg/kg)
MW.01-4	12/18/12	4.0	ND<1.0	1.5	ND<5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
MW.01-8	12/18/12	8.0	ND<1.0	1.3	ND<5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
MW.02-8	12/21/12	8.0	ND<1.0	2.3	7.4	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
MW.03-4	12/19/12	4.0	ND<1.0	1.3	ND<5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
MW.03-8	12/19/12	8.0	ND<1.0	1.5	ND<5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
MW.04-4	12/18/12	4.0	ND<1.0	1.8	7.4	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
MW.04-8	12/18/12	8.0	ND<1.0	1.6	ND<5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
SI.01	12/07/12	0.5	1.8	72	160	ND<0.05	ND<0.005	ND<0.005	0.0076,J	ND<0.05	0.016
SI.02	12/07/12	0.5	11	430	660	0.15	ND<0.0020	ND<0.0032	0.012,J	ND<0.011	0.019
SCALE	12/07/12	0.5	0.26,J	3.6	12	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
SP-08-2	01/30/13	2.0	ND<1.0	140	1,000	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
SP-09-2	01/31/13	2.0	ND<1.0	120	1,400	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
SP-10-2	01/30/13	2.0	ND<1.0	1.9	6.5	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
SP-11-2	01/31/13	2.0	ND<1.0	13	170	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
SP-12-1	01/31/13	1.0	ND<1.0	20	98	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
SP-12-2	01/31/13	2.0	ND<1.0	2.9	7.9	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
SP-13-2	01/30/13	2.0	ND<1.0	1.1	6.0	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
SP-14-2	01/30/13	2.0	ND<1.0	1.4	ND<5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
SP-15-2	01/30/13	2.0	ND<1.0	ND<1.0	ND<5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
SP-15-6	01/30/13	6.0	ND<1.0	ND<1.0	9.0	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
SP-16-2	01/31/13	2.0	ND<1.0	1.0	ND<5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
SP-17-2	01/31/13	2.0	ND<1.0	13	52	0.079	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
SP-18-2	01/30/13	2.0	ND<1.0	2.1	ND<5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
SP-19-1	01/30/13	1.0	ND<1.0	130	2,300	0.094	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
SP-19-2	01/30/13	2.0	ND<1.0	1.9	20	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
SP-20-2	01/31/13	2.0	ND<1.0	1.3	ND<5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
SP-21-2	01/31/13	2.0	ND<1.0	ND<1.0	ND<5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.02	ND<0.05	ND<0.005
ESL Drinking Water Resources (Residential)			83	83	370	0.5	---	0.044	3.9	0.075	
ESL Non-Drinking Water Resources (Residential)			100	100	370	0.5	---	0.12	13	100	
ESL Drinking Water Resources (Commercial/Industrial)			83	83	2,500	0.5	---	0.044	3.9	0.075	
ESL Drinking Water Resources (Commercial/Industrial)			180	180	2,500	0.5	---	0.270	13	110	

Notes:
 (mg/Kg) = Milligrams per Kilogram
 --- = Not applicable
 ND<0.5 = Not detected at or above representative detection limit
 TPH-G = Total Petroleum Hydrocarbons as Gasoline
 TAME = tert-Amyl Methyl Ether
 MEK = Methyl Ethyl Ketone
 TBA = t-Butyl Alcohol
 J = Analyte detected below quantitation limits
 ESL = Environmental Screening Levels (RWQCB, 2008), Table A (Drinking Water Resource), Table B (Non-Drinking Water Resource)

**TABLE 4 (Cont.) – Summary of Sludge, Scale, & Soil Sample Analytical Results,
U.S. EPA Methods 8015B, 8260B, and 8270B**

SAMPLE ID	DATE SAMPLED	SAMPLE INTERVAL (feet BSG)	ANALYTES									
			8260B									
			DIPE (mg/kg)	Ethyl-Benzene (mg/kg)	ETBE (mg/kg)	2-Hexanone (mg/kg)	Isopropyl Benzene (mg/kg)	4-Isopropyl Toluene (mg/kg)	MTBE (mg/kg)	Methylene Chloride (mg/kg)	MIBK (mg/kg)	
MW.01-4	12/18/12	4.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
MW.01-8	12/18/12	8.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
MW.02-8	12/21/12	8.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
MW.03-4	12/19/12	4.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
MW.03-8	12/19/12	8.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
MW.04-4	12/18/12	4.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
MW.04-8	12/18/12	8.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
SI.01	12/07/12	0.5	ND>0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	0.0044,J	ND<0.005
SI.02	12/07/12	0.5	0.0028	0.043	ND<0.0026	ND<0.0050	0.011	0.0072,J	ND<0.0026	ND<0.0072	ND<0.0016	ND<0.0016
SCALE	12/07/12	0.5	ND>0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
SP-08-2	01/30/13	2.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
SP-09-2	01/31/13	2.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
SP-10-2	01/30/13	2.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
SP-11-2	01/31/13	2.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
SP-12-1	01/31/13	1.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
SP-12-2	01/31/13	2.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
SP-13-2	01/30/13	2.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
SP-14-2	01/30/13	2.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
SP-15-2	01/30/13	2.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
SP-15-6	01/30/13	6.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
SP-16-2	01/31/13	2.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
SP-17-2	01/31/13	2.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
SP-18-2	01/30/13	2.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
SP-19-1	01/30/13	1.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
SP-19-2	01/30/13	2.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
SP-20-2	01/31/13	2.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
SP-21-2	01/31/13	2.0	ND0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005
ESL Drinking Water Resources (Residential)			---	2.3	---	---	---	---	0.023	---	---	2.8
ESL Non-Drinking Water Resources (Residential)			---	2.3	---	---	---	---	8.4	---	---	3.9
ESL Drinking Water Resources (Commercial/Industrial)			---	3.3	---	---	---	---	8.4	---	---	2.8
ESL Drinking Water Resources (Commercial/Industrial)			---	4.7	---	---	---	---	8.4	---	---	3.9

Notes:
 (mg/Kg) = Milligrams per Kilogram
 --- = Not applicable
 ND<0.5 = Not detected at or above representative detection limit
 DIPE = Total Petroleum Hydrocarbons as Gasoline
 ETBE = Ethyl tert-butyl ether
 MTBE = Methyl tert-butyl ether
 MIBK = Methyl isobutyl ketone
 J = Analyte detected below quantitation limits
 ESL = Environmental Screening Levels (RWQCB, 2008), Table A (Drinking Water Resource), Table B (Non-Drinking Water Resource)

TABLE 4 (Cont.) – Summary of Sludge, Scale, & Soil Sample Analytical Results, U.S. EPA Methods 8015B, 8260B, and 8270B

SAMPLE ID	DATE SAMPLED	SAMPLE INTERVAL (feet BSG)	ANALYTES							
			8260B					8270		
			Naphthalene (mg/kg)	Toluene (mg/kg)	1,2,4-Trimethyl-Benzene (mg/kg)	1,3,5-Trimethyl-Benzene (mg/kg)	Total Xylenes (mg/kg)	Benzoic Acid (mg/kg)	Naphthalene (mg/kg)	Phenol (mg/kg)
MW.01-4	12/18/12	4.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
MW.01-8	12/18/12	8.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
MW.02-8	12/21/12	8.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
MW.03-4	12/19/12	4.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
MW.03-8	12/19/12	8.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
MW.04-4	12/18/12	4.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
MW.04-8	12/18/12	8.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
SI.01	12/07/12	0.5	0.0023,J	0.0058	0.0035,J	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
SI.02	12/07/12	0.5	0.16	0.0059,J	0.18	0.089	0.48	ND<1.0	ND<0.13	ND<0.12
SCALE	12/07/12	0.5	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
SP-08-2	01/30/13	2.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<2.0	ND<2.6	ND<2.4
SP-09-2	01/31/13	2.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
SP-10-2	01/30/13	2.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
SP-11-2	01/31/13	2.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
SP-12-1	01/31/13	1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
SP-12-2	01/31/13	2.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
SP-13-2	01/30/13	2.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
SP-14-2	01/30/13	2.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
SP-15-2	01/30/13	2.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
SP-15-6	01/30/13	6.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
SP-16-2	01/31/13	2.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
SP-17-2	01/31/13	2.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
SP-18-2	01/30/13	2.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
SP-19-1	01/30/13	1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<2.0	ND<2.6	ND<2.4
SP-19-2	01/30/13	2.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
SP-20-2	01/31/13	2.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
SP-21-2	01/31/13	2.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<1.0	ND<0.13	ND<0.12
ESL Drinking Water Resources (Residential)			1.3	2.9	---	---	2.3	---	1.3	0.076
ESL Non-Drinking Water Resources (Residential)			1.3	9.3	---	---	11	---	1.3	3.9
ESL Drinking Water Resources (Commercial/Industrial)			2.8	2.9	---	---	2.3	---	2.8	0.076
ESL Drinking Water Resources (Commercial/Industrial)			2.8	9.3	---	---	11.0	---	2.8	3.9

Notes:
(mg/Kg) = Milligrams per Kilogram
--- = Not applicable
ND<0.5 = Not detected at or above representative detection limit
J = Analyte detected below quantitation limits
ESL = Environmental Screening Levels (RWQCB, 2008), Table A (Drinking Water Resource), Table B (Non-Drinking Water Resource)

TABLE 5 – Summary of Groundwater Sample Analytical Results, Field-Based Measurements

SAMPLE ID	DATE SAMPLED	ANALYSIS				
		pH	EC (µS/cm)	DO (mg/L)	Temperature (°C)	ORP (mV)
MW.01	12/28/12	7.83	3,301	6.70	20.30	47.8
MW.02	12/28/12	6.99	5,780	3.54	19.69	80.1
MW.03	12/28/12	6.53	4,465	5.82	19.46	135.0
MW.04	12/28/12	7.50	3,672	6.73	20.31	83.2
SFBRWQCB Basin Plan		6.5 - 8.0	900	---	---	---

NOTES:
EC = Electrical Conductivity
µS/cm = micro Siemens per centimeter
°C = Degrees Celcius
DO = Dissolved Oxygen
mg/L = Milligrams per Liter
ORP = Oxygen Reduction Potential
mV = milli Volts
SFBRWQCB = San Francisco Bay Regional Water Quality Control Board

**TABLE 6 – Summary of Groundwater Sample Analytical Results,
U.S. EPA Methods 8015B, 8260B, and 8270B**

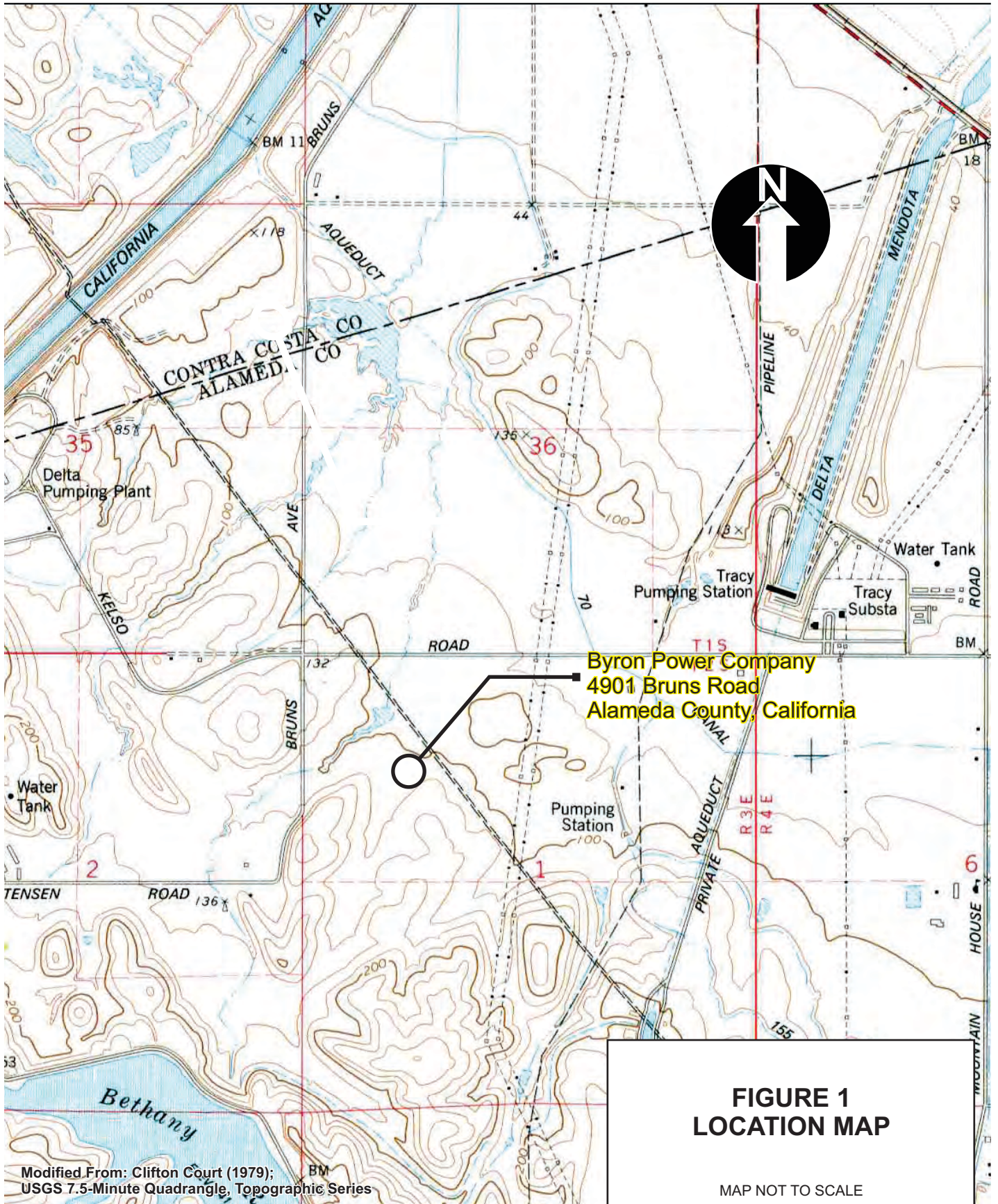
SAMPLE ID	DATE	ANALYTES									
		8015			8260						
		TPH-G (µg/L)	TPH-D (µg/L)	TPH-MO (µg/L)	Acetone (µg/L)	TAME (µg/L)	Benzene (µg/L)	MEK (µg/L)	TBA (µg/L)	DIPE (µg/L)	Ethyl-Benzene (µg/L)
MW.01	12/28/12	ND<50	27,J	ND<250	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<2.0	ND<0.5	ND<0.5
MW.02	12/28/12	ND<50	41,J	ND<250	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<2.0	ND<0.5	ND<0.5
MW.03	12/28/12	51	120	ND<250	ND<10	ND<0.5	0.85	ND<2.0	ND<2.0	ND<0.5	ND<0.5
MW.04	12/28/12	ND<50	56	ND<250	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<2.0	ND<0.5	ND<0.5
SFBRWQCB Basin Plan WQO		5.0*	100*	---	---	---	1.0	---	---	---	700
ESL Drinking Water Resources (Residential)		100	100	---	1,500	---	1.0	4,200	12	---	30
ESL Non-Drinking Water Resources (Residential)		100	100	---	1,500	---	1.0	4,200	12	---	30
ESL Drinking Water Resources (Commercial/Industrial)		210	210	---	1,500	---	46	14,000	18,000	---	43
ESL Non-Drinking Water Resources (Commercial/Industrial)		210	210	---	1,500	---	46	14,000	18,000	---	43

Notes:
 µg/L = microgram per Liter
 ND<0.5 = Not detected at or above representative detection limit
 TAME = tert-Amyl methyl ether
 MEK = methyl ethyl ketone
 TBA = t-Butyl alcohol
 J = Analyte detected below quantitation limits
 SFBRWQCB = San Francisco Bay Regional Water Quality Control Board
 ESL = Environmental Screening Levels (SFBRWQCB, 2008), Table A (Drinking Water Resource), Table B (Non-Drinking Water Resource)

SAMPLE ID	DATE	ANALYTES									
		8260						8270			
		ETBE (µg/L)	Isopropyl benzene (µg/L)	MTBE (µg/L)	MIBK (µg/L)	Naphthalene (µg/L)	Toluene (µg/L)	Xylenes (µg/L)	Benzoic Acid (µg/L)	Naphthalene (µg/L)	Phenol (µg/L)
MW.01	12/28/12	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	5.9,J	ND<0.26	ND<0.36
MW.02	12/28/12	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<4.9	ND<0.25	ND<0.35
MW.03	12/28/12	ND<0.5	6.8	ND<0.5	0.65	1.4	ND<0.5	0.72	ND<5.5	0.75,J	ND<0.40
MW.04	12/28/12	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	6.3,J	ND<0.27	ND<0.38
SFBRWQCB Basin Plan WQO		---	---	13/5.0	---	---	150	1,750	---	---	---
ESL Drinking Water Resources (Residential)		---	---	5.0	120	17	40	20	---	17	5.0
ESL Non-Drinking Water Resources (Residential)		---	---	5.0	120	17	40	20	---	17	5.0
ESL Drinking Water Resources (Commercial/Industrial)		---	---	5.0	170	24	130	100	---	24	260
ESL Non-Drinking Water Resources (Commercial/Industrial)		---	---	1,800	170	24	130	100	---	24	260

Notes:
 µg/L = microgram per Liter
 ND<0.5 = Not detected at or above representative detection limit
 DIPE = Diisopropyl ether
 ETBE = Ethyl tert-butyl ether
 MTBE = Methyl tert-butyl ether
 MIBK = Methyl isobutyl ketone
 J = Analyte detected below quantitation limits
 SFBRWQCB = San Francisco Bay Regional Water Quality Control Board
 ESL = Environmental Screening Levels (SFBRWQCB, 2008), Table A (Drinking Water Resource), Table B (Non-Drinking Water Resource)

FIGURES



**FIGURE 1
LOCATION MAP**

MAP NOT TO SCALE

Modified From: Clifton Court (1979);
USGS 7.5-Minute Quadrangle, Topographic Series



Project Name: Byron Power Company 4901 Bruns Road, Alameda County, California		
Project No.: G09212012-02	Drafter: EWG Review: EWG	Revision Date: 10/20/2012







QUEST GEOSYSTEMS MANAGEMENT
 11275 Sunrise Gold Circle, Suite R
 Rancho Cordova, CA 95742
 (925) 756-1210 · (925) 756-1227 Fax



EXPLANATION

-  Sludge/Scale Sample Locations
SI.01
-  Remedial Excavation Soil Sample Locations

- Preferential Pathways
-  Building Ground Rod
 -  2" Conduits
 -  4" & > Conduits
 -  Concrete Pad w/Gravel Base

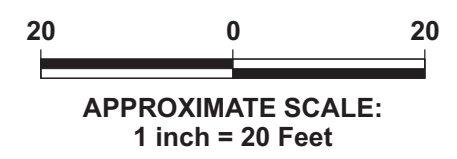


FIGURE 2
SITE MAP DEPICTING
SLUDGE AND SCALE DEPOSIT
SAMPLE LOCATIONS

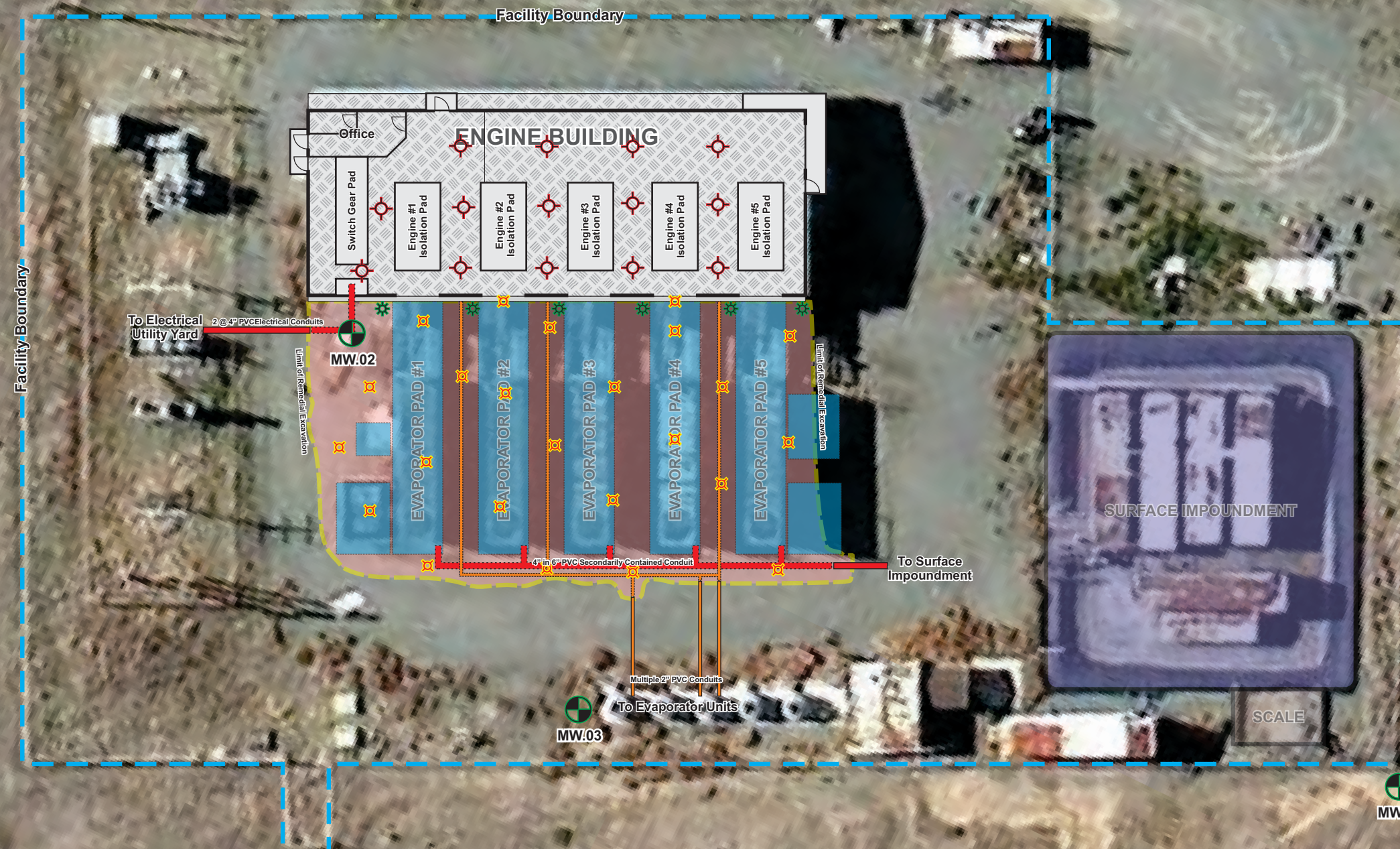
Project Name: Byron Power Company
4901 Bruns Road, Alameda County, California

Project No.: GO9212012-01	Drafter: EWG Review: EWG	Revision Date: 05/01/2013
------------------------------	-----------------------------	------------------------------



QUEST GEOSYSTEMS MANAGEMENT, INC.
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Rancho Cordova, CA 95742
(925) 756-1210 · (925) 756-1227 Fax

Modified From: Google Earth (03/29/2013)



EXPLANATION

- Monitoring Well Locations
- MW.04
- Soil Sample Locations
- Remedial Excavation Soil Sample Locations

Preferential Pathways

- Building Ground Rod
- 2" Conduits
- 4" & > Conduits
- Concrete Pad w/Gravel Base



APPROXIMATE SCALE:
1 inch = 30 Feet

FIGURE 3
SITE MAP DEPICTING
GROUNDWATER MONITORING
WELL LOCATIONS

Project Name: Byron Power Company
4901 Bruns Road, Alameda County, California

Project No.:
G09212012-01

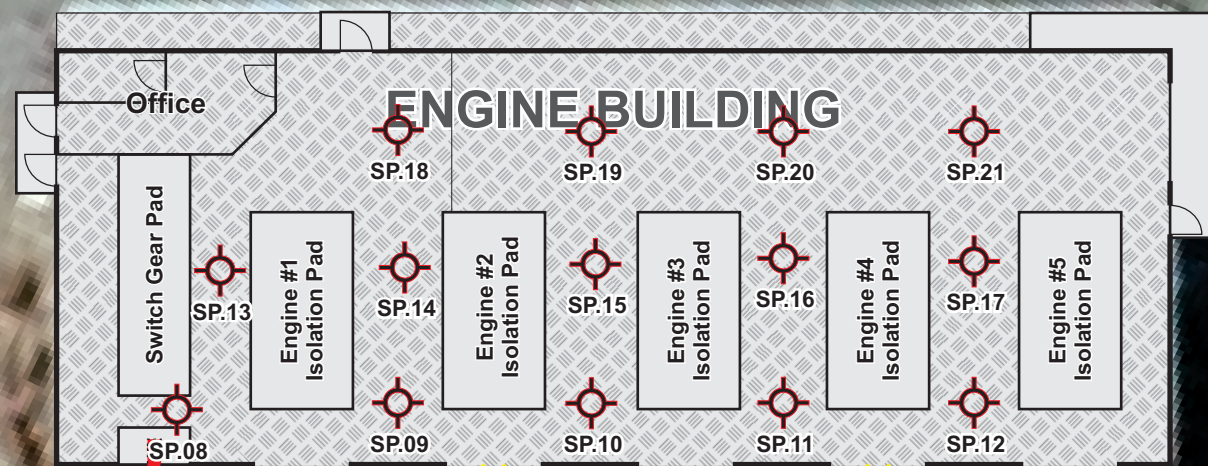
Drafter: EWG
Review: EWG

Revision Date:
05/01/2013

QUEST GEOSYSTEMS MANAGEMENT, INC.
11275 Sunrise Gold Circle, Suite R
Rancho Cordova, CA 95742
(925) 756-1210 · (925) 756-1227 Fax

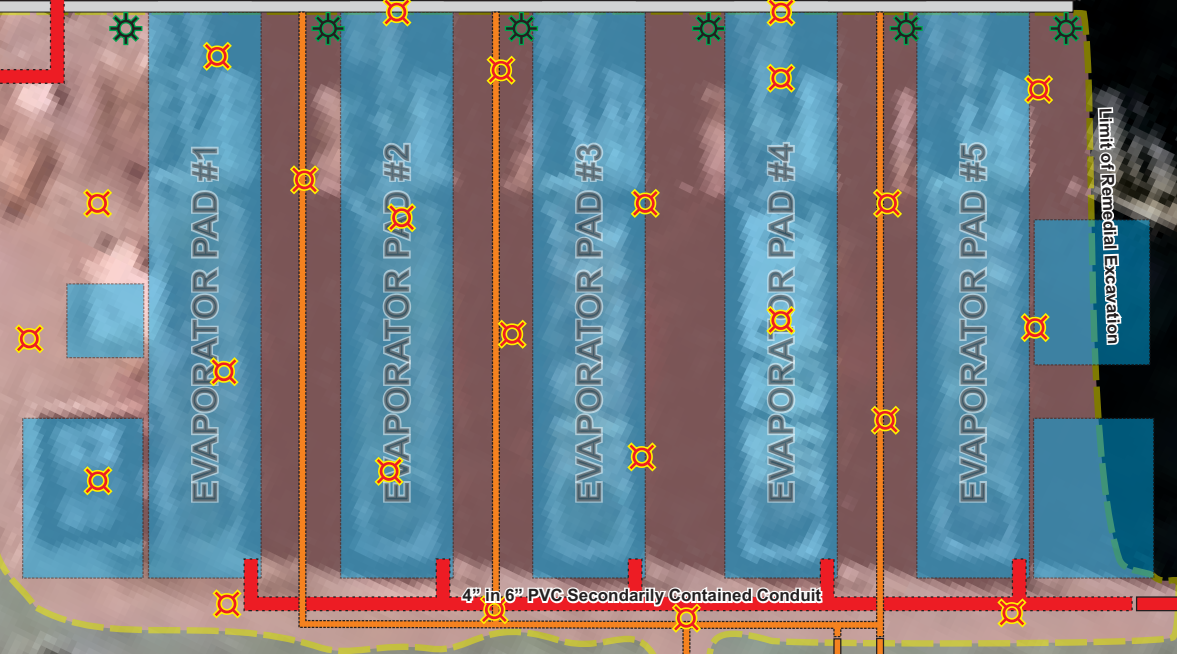
Modified From: Google Earth (03/29/2013)

Facility Boundary



To Electrical Utility Yard
2 @ .4" PVC Electrical Conduits

Limit of Remedial Excavation



Limit of Remedial Excavation

To Surface Impoundment

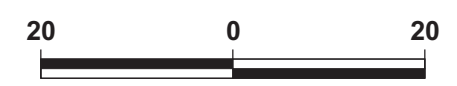
Multiple 2" PVC Conduits
To Evaporator Units

EXPLANATION

- Soil Sample Locations
SP.08
- Remedial Excavation Soil Sample Locations

Preferential Pathways

- Building Ground Rod
- 2" Conduits
- 4" & > Conduits
- Concrete Pad w/Gravel Base



APPROXIMATE SCALE:
1 inch = 20 Feet

FIGURE 4
SITE MAP DEPICTING
SOIL SAMPLE LOCATIONS

Project Name: Byron Power Company
4901 Bruns Road, Alameda County, California

Project No.:
G09212012-01

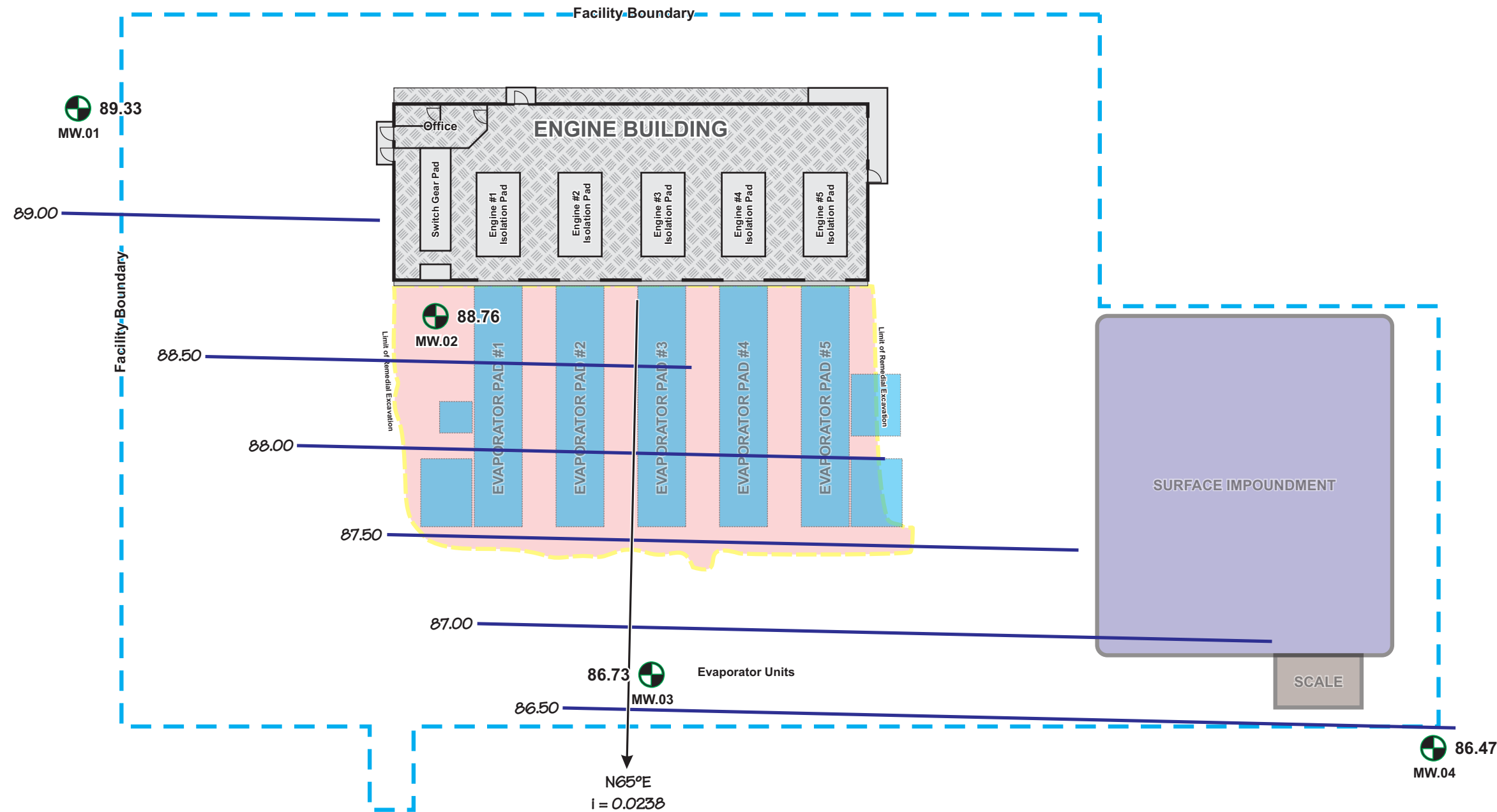
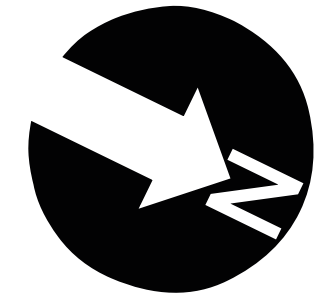
Drafter: EWG
Review: EWG

Revision Date:
05/01/2013

QUEST GEOSYSTEMS MANAGEMENT, INC.
11275 Sunrise Gold Circle, Suite R
Rancho Cordova, CA 95742
(925) 756-1210 · (925) 756-1227 Fax

Facility Boundary

Modified From: Google Earth (03/29/2013)



EXPLANATION

 Monitoring Well Locations
MW.04

 Concrete Pad w/Gravel Base



APPROXIMATE SCALE:
1 inch = 30 Feet

FIGURE 5
GROUNDWATER ELEVATION
CONTOUR MAP,
DECEMBER 28, 2012

Project Name: Byron Power Company
4901 Bruns Road, Alameda County, California

Project No.:
G09212012-01

Drafter: EWG
Review: EWG

Revision Date:
05/01/2013


QUEST GEOSYSTEMS MANAGEMENT, INC.
11275 Sunrise Gold Circle, Suite R
Rancho Cordova, CA 95742
(925) 756-1210 · (925) 756-1227 Fax

APPENDIX A
PERMITS AND GEOTRACKER WELL SURVEY DATA



ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 245-9306

E-MAIL whong@zone7water.com

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT Byron Power Company
4901 Bruns Road, Byron, CA 94514

PERMIT NUMBER 2013007

WELL NUMBER _____

APN 99B-7050-001-10

Coordinates Source _____ ft. Accuracy \sqrt _____ ft.
LAT: 37.791719 ft. LONG: -121.60051 ft.
APN 99B-7050-1-10

PERMIT CONDITIONS
(Circled Permit Requirements Apply)

CLIENT

Name Dan Gullina - Byron Power Partners, L.P.
Address 14 Phillips Parkway Phone (201) 447-9900
City Montvale, NJ Zip 07645

APPLICANT

Name Eric Garcia - Quest GeoSystems Management, Inc.
Email EWG@QUESTGSM.COM Fax (925) 756-1227
Address 11275 Sunrise Gold Cir, Ste R Phone (925) 756-1210
City Rancho Cordova, CA Zip 95742

TYPE OF PROJECT:

Well Construction Geotechnical Investigation _____
Well Destruction Contamination Investigation
Cathodic Protection Other _____

PROPOSED WELL USE:

Domestic Irrigation _____
Municipal Remediation _____
Industrial Groundwater Monitoring _____
Dewatering Other _____

DRILLING METHOD:

Mud Rotary Air Rotary _____ Hollow Stem Auger _____
Cable Tool Direct Push Other _____

DRILLING COMPANY Woodward Drilling Company, Inc.
PO BOX 336, Rio Vista, CA 94571

DRILLER'S LICENSE NO. 710079

WELL SPECIFICATIONS:

Drill Hole Diameter _____ in. Maximum _____
Casing Diameter _____ in. Depth _____ ft.
Surface Seal Depth _____ ft. Number _____

SOIL BORINGS:

Number of Borings 15 Maximum _____
Hole Diameter 2.5 in. Depth 16 ft.

ESTIMATED STARTING DATE 01/28/2013
ESTIMATED COMPLETION DATE 02/01/2013

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 75-08.

APPLICANT'S SIGNATURE [Signature] Date 01/23/2013

ATTACH SITE PLAN OR SKETCH

A GENERAL

1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to your proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report (DWR Form 188), signed by the driller.
3. Permit is void if project not begun within 90 days of approval date.
4. Notify Zone 7 at least 24 hours before the start of work.

B WATER SUPPLY WELLS

1. Minimum surface seal diameter is four inches greater than the well casing diameter.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.
3. Grout placed by tremie.
4. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements.
5. A sample port is required on the discharge pipe near the wellhead.

C GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal diameter is four inches greater than the well or piezometer casing diameter.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
3. Grout placed by tremie.

D. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION. See attached.

G. SPECIAL CONDITIONS. Submit to Zone 7 within 60 days after completion of permitted work the well installation report including all soil and water laboratory analysis results.

Approved [Signature] Date 1/24/13

Wyman Hong



ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 245-9306

E-MAIL whong@zone7water.com

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT Byron Power Company
4901 Bruns Road, Byron, CA 94514

PERMIT NUMBER 2012134
WELL NUMBER 2S/3E-1C2 to 1C5 (MW-1 to MW-4)
APN 99B-7050-001-10

Coordinates Source _____ ft Accuracy ✓ _____ ft.
LAT: 37.791719 ft. LONG: -121.60051 ft.
APN 99B-7050-1-10

PERMIT CONDITIONS
(Circled Permit Requirements Apply)

CLIENT
Name Dan Gulino - Byron Power Partners, L.P.
Address 14 Phillips Parkway Phone (201) 447-9000
City Montvale, NJ Zip 07645

APPLICANT
Name Eric Garcia - Quest GeoSystems Management, Inc.
Email EWG@QUESTGSM.COM Fax (925) 756-1227
Address 11275 Sunrise Gold Cir, Ste R Phone (925) 756-1210
City Rancho Cordova, CA Zip 95742

TYPE OF PROJECT:
Well Construction Geotechnical Investigation
Well Destruction Contamination Investigation
Cathodic Protection Other _____

PROPOSED WELL USE:
Domestic Irrigation
Municipal Remediation
Industrial Groundwater Monitoring
Dewatering Other _____

DRILLING METHOD:
Mud Rotary Air Rotary Hollow Stem Auger
Cable Tool Direct Push Other _____

DRILLING COMPANY Woodward Drilling Company, Inc.
PO Box 336, Rio Vista, CA 94571
DRILLER'S LICENSE NO. 710079

WELL SPECIFICATIONS:
Drill Hole Diameter 8 in. Maximum _____
Casing Diameter 2 in. Depth 35 ft.
Surface Seal Depth 11 ft. Number 4 (temp)

SOIL BORINGS:
Number of Borings _____ Maximum _____
Hole Diameter _____ in. Depth _____ ft.

ESTIMATED STARTING DATE 11/26/2012
ESTIMATED COMPLETION DATE 12/26/2012

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68

APPLICANT'S SIGNATURE [Signature] Date 11/21/2012

ATTACH SITE PLAN OR SKETCH

- A. GENERAL
 1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to your proposed starting date.
 2. Submit to Zone 7 within 60 days after completion of permitted work the original **Department of Water Resources Water Well Drillers Report (DWR Form 188), signed by the driller**
 3. Permit is void if project not begun within 90 days of approval date.
 4. **Notify Zone 7 at least 24 hours before the start of work.**

- B. WATER SUPPLY WELLS
 1. Minimum surface seal diameter is four inches greater than the well casing diameter.
 2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.
 3. Grout placed by tremie
 4. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements.
 5. A sample port is required on the discharge pipe near the wellhead.

- C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
 1. Minimum surface seal diameter is four inches greater than the well or piezometer casing diameter.
 2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
 3. Grout placed by tremie.

- D. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

- E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

- F. WELL DESTRUCTION. See attached.

- G. SPECIAL CONDITIONS. Submit to Zone 7 within 60 days after completion of permitted work the well installation report **including all soil and water laboratory analysis results.**

Approved [Signature] Date 11/26/12
Wyman Hong

GLOBAL_ID	FIELD_PT_NAME	ELEV_SURVEY_DATE	ELEVATION	ELEV_METHOD	ELEV_DATUM	ELEV_ACC_VAL	ELEV_SURVEY_ORG	RISER_HT	ELEV_DESC	EFF_DATE
T1000003401	MW.01	12/28/2012	110.83	CGPS		88	99 BENCHMARK CONSULTANTS	2.79	Alameda County BM Elev. 116.458	
T1000003401	MW.02	12/28/2012	107.03	CGPS		88	99 BENCHMARK CONSULTANTS	2.62	Alameda County BM Elev. 116.459	
T1000003401	MW.03	12/28/2012	106.92	CGPS		88	99 BENCHMARK CONSULTANTS	2.59	Alameda County BM Elev. 116.460	
T1000003401	MW.04	12/28/2012	104.02	CGPS		88	99 BENCHMARK CONSULTANTS	2.66	Alameda County BM Elev. 116.461	

GLOBAL_ID	FIELD_PT_NAME	FIELD_PT_CLASS	XY_SURVEY_LATITUDE	LONGTITUDE	XY_METHOD	XY_DATUM	XY_ACC_V.XY_SURVEY_ORG	GPS_EQUIP_TYPE	XY_SURVEY_DESC
T1000003401	MW.01	MW	12/28/2012	37.7912067	-121.6004705	CGPS	NAD83	99	Benchmark Consultants Antioch CA
T1000003401	MW.02	MW	12/28/2012	37.7914952	-121.6004439	CGPS	NAD83	99	Benchmark Consultants Antioch CA
T1000003401	MW.03	MW	12/28/2012	37.7917013	-121.6002832	CGPS	NAD83	99	Benchmark Consultants Antioch CA
T1000003401	MW.04	MW	12/28/2012	37.7921990	-121.6004971	CGPS	NAD83	99	Benchmark Consultants Antioch CA

APPENDIX B
SOIL BORING LOGS

PROJECT:		BORING LOG		KEY	
DRILLING CONTRACTOR:		STARTED:		FINISHED:	
DRILLER'S NAME:		NORTHING:		EASTING:	
DRILLING METHOD:		COORD SYSTEM/DATUM:			
DRILLING EQUIPMENT:		HOLE DIAMETER [in]:		TOTAL DEPTH [ft]: 21	
SAMPLING METHOD:		DEPTH TO WATER [ft]:		CASING DEPTH [ft]:	
HAMMER WEIGHT:		DROP [in]:		LOGGED BY:	
				PROJECT MANAGER:	

DEPTH [feet]	SAMPLES					PID Reading	Odor	LITHOLOGIC DESCRIPTION		WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS	
	Sample ID	Sample	Blows/6 in.	Recovery [%]	Surface Elevation:			Conditions:			
0								GW			
1								GP			
2								GM			Casing
3								GC			
4								SW			
5								SP			
6								SM			Screen
7								SC			
8								ML			
9								CL			
10								OL			Grout / Portland Cement
11								MH			
12								CH			
13								OH			
14								Pt			Bentonite
15								Asphalt			
16								Concrete			
17								Topsoil			
18								Baserock Fill			Sand
19								Volcanic Ash			
20								Volcanic Rock			
21											

PROJECT: Byron Power Co. 4901 Bruns Road, Byron, CA		BORING LOG		MW-1	
DRILLING CONTRACTOR: Woodward Drilling		STARTED: 12/17/2012		FINISHED: 12/18/2012	
DRILLER'S NAME: Armand		NORTHING:		EASTING:	
DRILLING METHOD: Hollow Stem Auger		COORD SYSTEM/DATUM:			
DRILLING EQUIPMENT: HK-81		HOLE DIAMETER [in]: 8		TOTAL DEPTH [ft]: 27	
SAMPLING METHOD: 2 "x24" Cal Mod; continuous core		DEPTH TO WATER [ft]:		CASING DEPTH [ft]: 27	
HAMMER WEIGHT:		DROP [in]:		LOGGED BY: RLN	
				PROJECT MANAGER: Eric Garcia	

DEPTH [feet]	SAMPLES					PID Reading	Odor	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS	
	Sample ID	Sample	Blows/6 in.	Recovery [%]					Surface Elevation:	Conditions: cold, clear, light wind
0								TOPSOIL		Above ground well completion, monument with locking cap
1								SILTY SAND (SM): Dark yellowish brown (10YR 4/4), loose, dry to moist, 60% fine sand, 30% silt, 20% clay		
2										
3										Casing: 2" schedule 40 PVC (0-17')
4	MW.01-4							VOLCANIC ASH: dry to moist, deeply weathered, trace of open root burrows <1/8" diameter, heavy iron staining along burrows		
5						NO				
6				83						Grout (Portland cement) (0-12.5')
7						NO				
8	MW.01-8			50						
9						NO				
10				83						
11						NO				
12				50						
13						NO				Bentonite pellets (12.5-15')
14				75						
15						NO				
16				83						

PROJECT: Byron Power Co. 4901 Bruns Road, Byron, CA		BORING LOG		MW-1
DRILLING CONTRACTOR: Woodward Drilling		STARTED: 12/17/2012	FINISHED: 12/18/2012	
DRILLER'S NAME: Armand		NORTHING:	EASTING:	
DRILLING METHOD: Hollow Stem Auger		COORD SYSTEM/DATUM:		
DRILLING EQUIPMENT: HK-81		HOLE DIAMETER [in]: 8	TOTAL DEPTH [ft]: 27	
SAMPLING METHOD: 2 "x24" Cal Mod; continuous core		DEPTH TO WATER [ft]:	CASING DEPTH [ft]: 27	
HAMMER WEIGHT:	DROP [in]:	LOGGED BY: RLN	PROJECT MANAGER: Eric Garcia	

DEPTH [feet]	SAMPLES					PID Reading	Odor	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS	
	Sample ID	Sample	Blows/6 in.	Recovery [%]	Surface Elevation:				Conditions:	
17							NO	SANDY SILT (ML): Dark yellowish brown (10YR 4/6), soft, dry to moist, 40% fine to very fine sand, 60% silt VOLCANIC ASH		#3 Sand (15-27') Screen: 2" schedule 40 PVC with 0.010" slots (17-27')
18				75			NO	VOLCANIC ASH: Light olive brown (2.5Y 5/6), dry to moist, very deeply weathered-clay rich		
19				75			NO	SILTY SAND (SM): Dark yellowish brown (10YR 4/6), dense, wet, 80% very fine to fine sand, 15% silt, 5% clay		
20				79			NO	WELDED TUFF: 3" thick layer at 23'		
21				0			NO	VOLCANIC ASH: Light olive brown (2.5Y 5/6), dry to moist, very deeply weathered-clay rich		
22				75			NO	SANDY FAT CLAY (CH): Yellowish brown (10YR 4/4), soft, wet, 10% gravel, 35% fine sand, 55% clay, volcanic clasts deeply weathered		
23										
24										
25										
26										
27										

PROJECT: Byron Power Co. 4901 Bruns Road, Byron, CA		BORING LOG		MW-2	
DRILLING CONTRACTOR: Woodward Drilling		STARTED: 12/21/2012 11:00		FINISHED: 12/21/2012 15:15	
DRILLER'S NAME: Joe		NORTHING:		EASTING:	
DRILLING METHOD: Hollow Stem Auger		COORD SYSTEM/DATUM:			
DRILLING EQUIPMENT: Mobile B-53		HOLE DIAMETER [in]: 8		TOTAL DEPTH [ft]: 27.5	
SAMPLING METHOD: 2 "x24" Cal Mod; continuous core		DEPTH TO WATER [ft]:		CASING DEPTH [ft]: 27	
HAMMER WEIGHT: 130		DROP [in]: 30		LOGGED BY: RLN	
				PROJECT MANAGER: Eric Garcia	

DEPTH [feet]	SAMPLES				PID Reading	Odor	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS	
	Sample ID	Sample	Blows/6 in.	Recovery [%]				Surface Elevation:	Conditions: occasional rain, cold windy
17			36			NO	(2.5Y 6/3) and light olive brown (2.5Y 4.3), weak, friable, deeply weathered, light iron staining		
18			50/4"	17		NO			
19			28			NO			
20			19						
21			32			NO	trace open root holes with iron stains at 19-21'		
22			50/4"	0		NO	3" welded tuff layer at 22.5'		#3 Sand (15-27.5') Screen: 2" schedule 40 PVC with 0.010" slots (17-27')
23						NO	VOLCANIC ASH: Pale olive (5Y 6/3), wet, deeply weathered, friable, weak		
24									
25						NO			drill without sampling 23-27.5'
26									
27									

PROJECT: Byron Power Co. 4901 Bruns Road, Byron, CA		BORING LOG		MW-3	
DRILLING CONTRACTOR: Woodward Drilling		STARTED: 12/19/2012 13:00		FINISHED: 12/19/2012	
DRILLER'S NAME: Armand		NORTHING:		EASTING:	
DRILLING METHOD: Hollow Stem Auger		COORD SYSTEM/DATUM:			
DRILLING EQUIPMENT: HK-81		HOLE DIAMETER [in]: 8		TOTAL DEPTH [ft]: 25.5	
SAMPLING METHOD: 2 "x24" Cal Mod; continuous core		DEPTH TO WATER [ft]:		CASING DEPTH [ft]: 25	
HAMMER WEIGHT:		DROP [in]:		LOGGED BY: RLN	
				PROJECT MANAGER: Eric Garcia	

DEPTH [feet]	SAMPLES					PID Reading	Odor	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS	
	Sample ID	Sample	Blows/6 in.	Recovery [%]	Surface Elevation:				Conditions: clear, warm, calm	
0								SANDY SILT (ML): Dark yellowish brown (10YR 4/6), soft, moist, 40% very fine sand, 55% silt, 5% clay, low plasticity		Above ground well completion, monument with locking cap
1										
2										
3										Casing: 2" schedule 40 PVC (0-15')
4	MW.03-4									
5						NO				Hand augered to 5'
6				75				SANDY SILT (ML): Dark yellowish brown (10YR 5/6), soft, dry to moist, 70% fine sand, 30% silt, low plasticity		Grout (Portland cement) (0-11')
7						NO				
8	MW.03-8									
9						NO				
10				67						
11						NO				
12				83				SILTY SAND (SM): Dark yellowish brown (10YR 5/6), loose, dry to moist		Bentonite pellets (11-13')
13						NO				
14				83						
15						NO		SILTY SAND (SM): Dark yellowish brown (10YR 3/4), loose, dry to moist, 10% fine subrounded gravel, 70% fine sand, 20% silt		
16				50						

PROJECT: Byron Power Co. 4901 Bruns Road, Byron, CA		BORING LOG		MW-3
DRILLING CONTRACTOR: Woodward Drilling		STARTED: 12/19/2012 13:00	FINISHED: 12/19/2012	
DRILLER'S NAME: Armand		NORTHING:	EASTING:	
DRILLING METHOD: Hollow Stem Auger		COORD SYSTEM/DATUM:		
DRILLING EQUIPMENT: HK-81		HOLE DIAMETER [in]: 8	TOTAL DEPTH [ft]: 25.5	
SAMPLING METHOD: 2 "x24" Cal Mod; continuous core		DEPTH TO WATER [ft]:	CASING DEPTH [ft]: 25	
HAMMER WEIGHT:	DROP [in]:	LOGGED BY: RLN	PROJECT MANAGER: Eric Garcia	

DEPTH [feet]	SAMPLES				PID Reading	Odor	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS	
	Sample ID	Sample	Blows/6 in.	Recovery [%]				Surface Elevation:	Conditions: clear, warm, calm
17									#3 Sand (13-25.5')
18				67					
19							SILTY SAND (SM): Yellowish brown (10YR 5/6), loose, moist, 80% fine subrounded sand, 20% silt, light iron stain		
20				83					Screen: 2" schedule 40 PVC with 0.010" slots (15-25')
21							VOLCANIC ASH: Mottled yellowish brown (10YR 4/4) and olive (5Y5/3), soft, moist, friable, weak, widely fractured, trace micaceous		
22				83					
23									
24				75					
25									

PROJECT: Byron Power Co. 4901 Bruns Road, Byron, CA		BORING LOG		MW-4	
DRILLING CONTRACTOR: Woodward Drilling		STARTED: 12/18/2012		FINISHED: 12/18/2012	
DRILLER'S NAME: Armand		NORTHING:		EASTING:	
DRILLING METHOD: Hollow Stem Auger		COORD SYSTEM/DATUM:			
DRILLING EQUIPMENT: HK-81		HOLE DIAMETER [in]: 8		TOTAL DEPTH [ft]: 31	
SAMPLING METHOD: 2 "x24" Cal Mod; continuous core		DEPTH TO WATER [ft]:		CASING DEPTH [ft]: 24	
HAMMER WEIGHT:		DROP [in]:		LOGGED BY: RLN	
				PROJECT MANAGER: Eric Garcia	

DEPTH [feet]	SAMPLES					PID Reading	Odor	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS	
	Sample ID	Sample	Blows/6 in.	Recovery [%]	Surface Elevation:				Conditions: clear, cold, light wind	
0								SILTY SAND (SM): Brown (7.5YR 4/4), loose, moist, 60% fine sand, 30% silt, 10% clay, low plasticity		Above ground well completion, monument with locking cap
1										
2						NO				
3										Casing: 2" schedule 40 PVC (0-14')
4	MW.04-4					NO				
5								trace calcite veining at 5'		Hand augered to 5'
6				100	0	NO		SILTY SAND (SM): Dark yellowish brown (10YR 4/6), loose, moist, 60% very fine sand, 40% silt, 2" interbeds of silty sand with 80% fine sand, 20% silt		Lean grout, Type II Portland cement (0-11')
7						NO				
8	MW.04-8			75						
9						NO				
10				67						
11						NO				
12				100				SANDY LEAN CLAY (CL): Yellowish brown (10YR 5/6), soft, wet to moist, 30% very fine sand, 70% lean clay		Bentonite pellets (11-13')
13						NO				
14				83				SILTY SAND (SM): Yellowish brown (10YR 5/6), dense, moist, 80% very fine sand, 20% silt		
15						NO				
16				83				SILTY SAND (SM): Yellowish brown (10YR 5/6),		

PROJECT: Byron Power Co. 4901 Bruns Road, Byron, CA		BORING LOG		MW-4	
DRILLING CONTRACTOR: Woodward Drilling		STARTED: 12/18/2012		FINISHED: 12/18/2012	
DRILLER'S NAME: Armand		NORTHING:		EASTING:	
DRILLING METHOD: Hollow Stem Auger		COORD SYSTEM/DATUM:			
DRILLING EQUIPMENT: HK-81		HOLE DIAMETER [in]: 8		TOTAL DEPTH [ft]: 31	
SAMPLING METHOD: 2 "x24" Cal Mod; continuous core		DEPTH TO WATER [ft]:		CASING DEPTH [ft]: 24	
HAMMER WEIGHT:		DROP [in]:		LOGGED BY: RLN	
				PROJECT MANAGER: Eric Garcia	

DEPTH [feet]	SAMPLES					PID Reading	Odor	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS		
	Sample ID	Sample	Blows/6 in.	Recovery [%]	Surface Elevation:				Conditions: clear, cold, light wind		
17							NO	loose, wet, 70% fine to coarse sand, 30% silt			
18				75			NO			#3 Sand (13-25')	
19							NO	WELL GRADED GRAVEL with SAND (GW): Yellowish brown (10YR 5/6), loose, wet, 40% fine rounded to subrounded gravel, 40% fine to medium sand, 20% silt			Screen: 2" schedule 40 PVC with 0.010" slots (14-24')
20				100			NO				
21							NO				
22				75			NO	SILTY SAND (SM): Yellowish brown (10YR 5/6), loose, wet, 80% fine to medium sand, 20% silt, light iron stain, 6" layer of fine gravel (Sandstone and Red Chert) at 24'			
23							NO				
24				100			NO				
25							NO				
26				83			NO				
27							NO				
28				83			NO	VOLCANIC ASH: Vari-colored (pale yellow (2.5Y 6/3); yellow brown (10YR 5/6); strong brown (7.5YR 4/6)), wet, very deeply weathered, friable, elongated fine gravel size pieces oriented horizontally in clayey matrix		Bentonite chips (25-31')	
29							NO				
30				50			NO				
31											

PROJECT: Byron Power Co. 4901 Bruns Road, Byron, CA		BORING LOG		SP-8
DRILLING CONTRACTOR: Woodward Drilling		STARTED: 1/30/2013 09:50	FINISHED: 1/30/2013 10:08	
DRILLER'S NAME: Juan & Carlos		NORTHING:	EASTING:	
DRILLING METHOD: Direct Push		COORD SYSTEM/DATUM:		
DRILLING EQUIPMENT: AMS Power Probe 9500		HOLE DIAMETER [in]: 2	TOTAL DEPTH [ft]: 16	
SAMPLING METHOD: Continuous Core		DEPTH TO WATER [ft]:	CASING DEPTH [ft]:	
HAMMER WEIGHT:	DROP [in]:	LOGGED BY: RLN	PROJECT MANAGER: Eric Garcia	

DEPTH [feet]	SAMPLES				PID Reading	Odor	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample ID	Sample	Blows/6 in.	Recovery [%]				
0							CONCRETE	Conditions: inside building
0.5					0	NO	GRAVEL	
1							SILTY SAND (SM): Brown (10YR 4/3), soft, wet to 2', moist below 2', 70% very fine sand, 30% silt	
2	SP-08-2							
2.5			69					
3								
4					0	NO		
5							SILTY SAND (SM): Dark yellowish brown (10YR 3/6), stiff, moist, 70% fine sand, 30% silt, trace clay, low plasticity	
6								
6.5								
7								
8					0	NO		
9								
10								
10.5								
11								
12					0	NO		
13							SANDY LEAN CLAY (CL): Yellowish brown (10YR 5/6), soft, moist, 30% very fine sand, 70% clay, moderate to high plasticity, trace deeply weathered volcanic clasts	
14								
14.5								
15					0	NO	SILTY SAND (SM): Yellowish brown (10YR 5/6), medium stiff, moist, 70% fine sand, 30% silt, trace iron staining, trace weathered volcanic clasts	
16							VOLCANIC ROCK: Mottled light yellowish brown (10YR 6/4) and dark yellowish brown (10YR 4/6), moist and wet, very deeply weathered	

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PROJECT: Byron Power Co. 4901 Bruns Road, Byron, CA		BORING LOG		SP-9	
DRILLING CONTRACTOR: Woodward Drilling		STARTED: 1/30/2013 13:00		FINISHED: 1/30/2013 13:20	
DRILLER'S NAME: Juan & Carlos		NORTHING:		EASTING:	
DRILLING METHOD: Direct Push		COORD SYSTEM/DATUM:			
DRILLING EQUIPMENT: AMS Power Probe 9500		HOLE DIAMETER [in]: 2		TOTAL DEPTH [ft]: 12	
SAMPLING METHOD: Continuous Core - dual tube		DEPTH TO WATER [ft]:		CASING DEPTH [ft]:	
HAMMER WEIGHT:		DROP [in]:		LOGGED BY: RLN	
				PROJECT MANAGER: Eric Garcia	

DEPTH [feet]	SAMPLES				PID Reading	Odor	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample ID	Sample	Blows/6 in.	Recovery [%]				
0						CONCRETE		
1						GRAVEL		
2	SP-09-2			48		SANDY SILT (ML): Brown (10YR 4/3), soft to medium stiff, moist, 30% fine sand, 70% silt		
3								
4								
5								
6				63		SILTY SAND (SM): Yellowish brown (10YR 5/6), stiff, moist, 70% fine sand, 30% silt, low plasticity		
7								
8								
9								
10				63		VOLCANIC ASH: Mottled yellowish brown (10YR 5/6) and olive (5Y5/4), moist, deeply weathered, friable, weak	Hand drilling from 10'	
11							Refusal at 12.0'	
12							Backfilled 1/30/13 by WD	

PROJECT: Byron Power Co. 4901 Bruns Road, Byron, CA		BORING LOG		SP-10	
DRILLING CONTRACTOR: Woodward Drilling		STARTED: 1/30/2013 13:34		FINISHED: 1/30/2013 13:55	
DRILLER'S NAME: Juan & Carlos		NORTHING:		EASTING:	
DRILLING METHOD: Direct Push		COORD SYSTEM/DATUM:			
DRILLING EQUIPMENT: AMS Power Probe 9500		HOLE DIAMETER [in]: 2		TOTAL DEPTH [ft]: 16	
SAMPLING METHOD: Continuous Core		DEPTH TO WATER [ft]:		CASING DEPTH [ft]:	
HAMMER WEIGHT:		DROP [in]:		LOGGED BY: RLN	
				PROJECT MANAGER: Eric Garcia	

DEPTH [feet]	SAMPLES					PID Reading	Odor	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample ID	Sample	Blows/6 in.	Recovery [%]					
0								CONCRETE	Conditions: inside building
0.5								GRAVEL	
1								SANDY SILT (ML): Dark yellowish brown (10YR 3/4), soft, wet, 30% fine sand, 70% silt	
2	SP-10-2			71				moist and stiff below 2'	
3									
4									
5								SILTY SAND (SM): Yellowish brown (10YR 5/6), stiff, moist, 80% fine sand, 20% silt, low plasticity	
6				50					
7									
8									
9								sand coarsens with depth	
10				63				trace roots from ~10'	
11								trace fine chert and sandstone gravels	
12								VOLCANIC ASH: Mottled brownish yellow (10YR 6/5) and yellowish brown (10YR 5/6), very stiff, very deeply weathered, friable, 10% subangular gravel-sized volcanic clasts	
13									
14				75					
15									
16									

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PROJECT: Byron Power Co. 4901 Bruns Road, Byron, CA		BORING LOG		SP-11	
DRILLING CONTRACTOR: Woodward Drilling		STARTED: 1/31/2013 09:20		FINISHED: 1/31/2013 09:40	
DRILLER'S NAME: Juan & Carlos		NORTHING:		EASTING:	
DRILLING METHOD: Direct Push		COORD SYSTEM/DATUM:			
DRILLING EQUIPMENT: AMS Power Probe 9500		HOLE DIAMETER [in]: 2		TOTAL DEPTH [ft]: 16	
SAMPLING METHOD: Continuous Core - dual tube		DEPTH TO WATER [ft]:		CASING DEPTH [ft]:	
HAMMER WEIGHT:		DROP [in]:		LOGGED BY: RLN	
				PROJECT MANAGER: Eric Garcia	

DEPTH [feet]	SAMPLES					PID Reading	Odor	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample ID	Sample	Blows/6 in.	Recovery [%]					
0								CONCRETE	Conditions: inside building
1					1	Faint	GRAVEL: no odor SANDY SILT (ML): Dark greyish brown (10YR 4/2), soft, wet, 30% fine to very fine sand, 70% silt		
2	SP-11-2			71					
3									
4					0	NO	SANDY SILT (ML): Dark yellowish brown (10YR 4/6), very stiff, moist, 25% fine sand, 75% silt		
5				83					
6					0	NO			
7				83					
8					0	NO			
9				83					
10					0	NO			
11				75			SILTY SAND (SM): Yellowish brown (10YR 5/6), loose, wet to moist, 80% very fine to medium sand, 20% silt		
12					0	NO			
13				96			VOLCANIC ASH: Mottled brownish yellow (10YR 6/6) and yellowish brown (10YR 5/6), stiff, very deeply weathered, friable, clay rich matrix		
14					0	NO			
15				83					
16					0	NO			

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PROJECT: Byron Power Co. 4901 Bruns Road, Byron, CA		BORING LOG		SP-13	
DRILLING CONTRACTOR: Woodward Drilling		STARTED: 1/30/2013 10:50		FINISHED: 1/30/2013 11:05	
DRILLER'S NAME: Juan & Carlos		NORTHING:		EASTING:	
DRILLING METHOD: Direct Push		COORD SYSTEM/DATUM:			
DRILLING EQUIPMENT: AMS Power Probe 9500		HOLE DIAMETER [in]: 2		TOTAL DEPTH [ft]: 16	
SAMPLING METHOD: Continuous Core		DEPTH TO WATER [ft]:		CASING DEPTH [ft]:	
HAMMER WEIGHT:		DROP [in]:		LOGGED BY: RLN	
				PROJECT MANAGER: Eric Garcia	

DEPTH [feet]	SAMPLES					PID Reading	Odor	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample ID	Sample	Blows/6 in.	Recovery [%]					
0								CONCRETE	Conditions: inside of building
1								GRAVEL	
2	SP-13-2			71				SANDY SILT (ML): Brown (10YR 4/3), medium stiff to soft, moist, 30% very fine sand, 70% silt, trace clay, low to moderate plasticity	
3									
4								SILTY SAND (SM): Dark yellowish brown (10YR 4/6), stiff, moist, 70% fine sand, 30% silt, low plasticity	
5									
6				63					
7									
8									
9									
10				67					
11									
12								SANDY SILT (ML): Yellowish brown (10YR 5/6), dense, moist, 30% very fine sand, 70% silt	
13									
14				63				SILTY SAND (SM): Yellowish brown (10YR 5/8), loose, moist to wet, 80% fine rounded sand, 20% silt, trace clay	
15								VOLCANIC ASH: Yellowish brown (10YR 5/6), wet, very deeply weathered, friable, angular 0.5" clasts of ash in clayey matrix, 1.5" thick hard ash layer at 15.5'	
16									

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PROJECT: Byron Power Co. 4901 Bruns Road, Byron, CA		BORING LOG		SP-14	
DRILLING CONTRACTOR: Woodward Drilling		STARTED: 1/30/2013 12:00		FINISHED: 1/30/2013 12:30	
DRILLER'S NAME: Juan & Carlos		NORTHING:		EASTING:	
DRILLING METHOD: Direct Push		COORD SYSTEM/DATUM:			
DRILLING EQUIPMENT: AMS Power Probe 9500		HOLE DIAMETER [in]: 2		TOTAL DEPTH [ft]: 16	
SAMPLING METHOD: Continuous Core		DEPTH TO WATER [ft]:		CASING DEPTH [ft]:	
HAMMER WEIGHT:		DROP [in]:		LOGGED BY: RLN	
				PROJECT MANAGER: Eric Garcia	

DEPTH [feet]	SAMPLES					PID Reading	Odor	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample ID	Sample	Blows/6 in.	Recovery [%]					
0						0	NO	CONCRETE	Conditions: inside of building
1	SP-14-2					0	NO	GRAVEL	
2				75		0	NO	SANDY SILT (ML): Dark yellowish brown (10YR 4/6), stiff, moist, 30% fine sand, 70% silt	
3						0	NO		
4						0	NO		
5									
6				63		0	NO		
7								SILTY SAND (SM): Yellowish brown (10YR 5/4), soft, moist to wet, 75% fine sand, 25% silt, low plasticity, trace fine clast gravel rounded	
8						0	NO		
9									
10				54					
11									
12						0	NO		
13									
14				60		0	NO	VOLCANIC ASH: Light yellowish brown (10YR 6/4), hard, wet, friable, weak, clay rich matrix	
15									
16						0	NO		

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PROJECT: Byron Power Co. 4901 Bruns Road, Byron, CA		BORING LOG		SP-15	
DRILLING CONTRACTOR: Woodward Drilling		STARTED: 1/30/2013 14:13		FINISHED: 1/30/2013 15:15	
DRILLER'S NAME: Juan & Carlos		NORTHING:		EASTING:	
DRILLING METHOD: Direct Push		COORD SYSTEM/DATUM:			
DRILLING EQUIPMENT: AMS Power Probe 9500		HOLE DIAMETER [in]: 2		TOTAL DEPTH [ft]: 12	
SAMPLING METHOD: Continuous Core - dual tube		DEPTH TO WATER [ft]:		CASING DEPTH [ft]:	
HAMMER WEIGHT:		DROP [in]:		LOGGED BY: RLN	
				PROJECT MANAGER: Eric Garcia	

DEPTH [feet]	SAMPLES					PID Reading	Odor	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS	
	Sample ID	Sample	Blows/6 in.	Recovery [%]					Surface Elevation:	Conditions: inside of building
0								CONCRETE		
1					2	Faint		GRAVEL: no odor SANDY SILT (ML): Dark yellowish brown (10YR 3/4), stiff, moist, 30% fine sand, 70% silt, faint petroleum / solvent odor		
2	SP-15-2							SANDY SILT (ML): Yellowish brown (10YR 5/6), stiff, moist, 30% fine sand, 70% silt		
3										
4					0	Faint				
5								SILTY SAND (SM): Yellowish brown (10YR 5/4), stiff, moist, 60% fine sand, 40% silt		
6	SP-15-6				50	1	Faint			
7										
8					0	NO				
9										
10					67	0	NO	VOLCANIC ASH: Dark yellowish brown (10YR 4/6), very stiff, dry to moist, very deeply weathered, friable		
11										Refusal at 12'
12					0	NO		VOLCANIC ASH: Mottled very pale brown (10YR 7/4) and yellowish brown (10YR 5/4), very stiff, dry to moist, very deeply weathered		Backfilled 1/30/13 by WD

PROJECT: Byron Power Co. 4901 Bruns Road, Byron, CA		BORING LOG		SP-16	
DRILLING CONTRACTOR: Woodward Drilling		STARTED: 1/31/2013 08:49		FINISHED: 1/31/2013 09:10	
DRILLER'S NAME: Juan & Carlos		NORTHING:		EASTING:	
DRILLING METHOD: Direct Push		COORD SYSTEM/DATUM:			
DRILLING EQUIPMENT: AMS Power Probe 9500		HOLE DIAMETER [in]: 2		TOTAL DEPTH [ft]: 16	
SAMPLING METHOD: Continuous Core		DEPTH TO WATER [ft]:		CASING DEPTH [ft]:	
HAMMER WEIGHT:		DROP [in]:		LOGGED BY: RLN	
				PROJECT MANAGER: Eric Garcia	

DEPTH [feet]	SAMPLES				PID Reading	Odor	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS	
	Sample ID	Sample	Blows/6 in.	Recovery [%]					
0					0	NO	CONCRETE	Conditions: inside of building	
1					0	NO	GRAVEL		
2	SP-16-2				0	NO	SANDY SILT (ML): Dark yellowish brown (10YR 4/6), soft, wet to ~2', moist below 2', 30% fine sand, 70% silt		
3				67	0	NO			
4					0	NO			
5					50	0	NO		
6					0	NO	sandy silt becomes stiff by 6'		
7					83	0	NO		
8					0	NO			
9					83	0	NO		
10					0	NO	SILTY SAND (SM): Dark yellowish brown (10YR 4/6), loose, moist, 80% fine rounded sand, 20% silt		
11					75	0	NO		
12					0	NO	VOLCANIC ASH: Light yellowish brown (10YR 6/4), soft, moist, deeply weathered, friable, weak		
13					100				
14					0	NO			
15					100				
16								Backfilled 1/31/13 by WD	

PROJECT: Byron Power Co. 4901 Bruns Road, Byron, CA		BORING LOG		SP-17	
DRILLING CONTRACTOR: Woodward Drilling		STARTED: 1/31/2013 10:48		FINISHED: 1/31/2013 11:20	
DRILLER'S NAME: Juan & Carlos		NORTHING:		EASTING:	
DRILLING METHOD: Direct Push		COORD SYSTEM/DATUM:			
DRILLING EQUIPMENT: AMS Power Probe 9500		HOLE DIAMETER [in]: 2		TOTAL DEPTH [ft]: 16	
SAMPLING METHOD: Continuous Core		DEPTH TO WATER [ft]:		CASING DEPTH [ft]:	
HAMMER WEIGHT:		DROP [in]:		LOGGED BY: RLN	
				PROJECT MANAGER: Eric Garcia	

DEPTH [feet]	SAMPLES					PID Reading	Odor	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample ID	Sample	Blows/6 in.	Recovery [%]					
0						0	NO	CONCRETE	Conditions: inside building
1						1	Faint	GRAVEL: no odor SANDY SILT (ML): Dark yellowish brown (10YR 4/6), soft, wet, 40% fine sand, 60% silt	
2	SP-17-2			86				SANDY SILT (ML): Dark yellowish brown (10YR 4/6), stiff, moist, 30% fine sand, 70% silt	
3						0	NO		
4									
5				83					
6						0	NO		
7				83					
8						0	NO	sand coarsens with depth	
9				83					
10						0	NO		
11				75					
12						0	NO	SILTY SAND (SM): Yellowish brown (10YR 4/4), dense, moist, 30% fine gravel, 50% fine sand, 30% silt	
13				92					
14						0	NO	1" welded tuff layer at 13.8'	
15								VOLCANIC ASH: Mottled dark yellowish brown (10YR 3/4) and brownish yellow (10YR 5/4), moist, very deeply weathered, friable, weak	
16									

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PROJECT: Byron Power Co. 4901 Bruns Road, Byron, CA		BORING LOG		SP-18	
DRILLING CONTRACTOR: Woodward Drilling		STARTED: 1/30/2013 11:20		FINISHED: 1/30/2013 11:55	
DRILLER'S NAME: Juan & Carlos		NORTHING:		EASTING:	
DRILLING METHOD: Direct Push		COORD SYSTEM/DATUM:			
DRILLING EQUIPMENT: AMS Power Probe 9500		HOLE DIAMETER [in]: 2		TOTAL DEPTH [ft]: 16	
SAMPLING METHOD: Continuous Core		DEPTH TO WATER [ft]:		CASING DEPTH [ft]:	
HAMMER WEIGHT:		DROP [in]:		LOGGED BY: RLN	
				PROJECT MANAGER: Eric Garcia	

DEPTH [feet]	SAMPLES				PID Reading	Odor	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS	
	Sample ID	Sample	Blows/6 in.	Recovery [%]				Surface Elevation:	Conditions: inside of building
0							CONCRETE		
0.5							GRAVEL		
1					0	NO	SILTY SAND (SM): Very dark grayish brown (10YR 4/2), loose, moist, 80% fine sand, 20% silt, low plasticity		
2	SP-18-2			71	0	NO	SANDY SILT (ML): Dark yellowish brown (10YR 4/6), medium stiff to soft, moist, 40% fine sand, 60% silt		
3					0	NO			
4					0	NO			
5					0	NO			
6				63			SANDY SILT (ML): Yellowish brown (10YR 5/4), stiff, moist, 40% very fine to fine sand, 60% silt		
7					0	NO			
8					0	NO			
9					0	NO			
10				58			SANDY SILT (ML): Dark yellowish brown (10YR 4/6), medium stiff to soft, moist, 30% fine sand, 70% silt		
11					0	NO			
12				63	0	NO			
13					0	NO			
14				63			SANDY SILT (ML): Mottled brownish yellow (10YR 6/6) and yellowish brown (10YR 5/6), medium stiff, moist, 30% very fine sand, light iron stain		
15					0	NO			
16									Backfilled 1/30/13 by WD

PROJECT: Byron Power Co. 4901 Bruns Road, Byron, CA		BORING LOG		SP-19	
DRILLING CONTRACTOR: Woodward Drilling		STARTED: 1/30/2013 15:15		FINISHED: 1/30/2013 15:45	
DRILLER'S NAME: Juan & Carlos		NORTHING:		EASTING:	
DRILLING METHOD: Direct Push		COORD SYSTEM/DATUM:			
DRILLING EQUIPMENT: AMS Power Probe 9500		HOLE DIAMETER [in]: 2		TOTAL DEPTH [ft]: 16	
SAMPLING METHOD: Continuous Core		DEPTH TO WATER [ft]:		CASING DEPTH [ft]:	
HAMMER WEIGHT:		DROP [in]:		LOGGED BY: RLN	
				PROJECT MANAGER: Eric Garcia	

DEPTH [feet]	SAMPLES				PID Reading	Odor	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample ID	Sample	Blows/6 in.	Recovery [%]				
0							CONCRETE	Conditions: inside of building
0.5				2	Faint		GRAVEL: faint odor in gravel	
1	SP-19-1			1	Faint		SANDY SILT (ML): Very dark grayish brown (10YR 3/2), stiff, moist, 40% fine to very fine sand, 60% silt	
2	SP-19-2		90	0	NO		color change to dark yellowish brown (10YR 4/6)	
4				0	NO		color change to yellow brown (10YR 5/4) at 6'	
5			83					
6				0	NO			
7			83					
8				0	NO		SILTY SAND (SM): Dark yellowish brown (10YR 4/6), loose, moist, 80% fine sand, 20% silt	
9			75					
10				0	NO		VOLCANIC ASH: Brownish yellow (10YR 6/6), moist, very deeply weathered, clay rich matrix, friable, weak	
11			75					
12				0	NO			
13			83					
14				0	NO			
15			75					
16								

Backfilled 1/31/13 by WD

PROJECT: Byron Power Co. 4901 Bruns Road, Byron, CA		BORING LOG		SP-21	
DRILLING CONTRACTOR: Woodward Drilling		STARTED: 1/31/2013 11:30		FINISHED: 1/31/2013 12:00	
DRILLER'S NAME: Juan & Carlos		NORTHING:		EASTING:	
DRILLING METHOD: Direct Push		COORD SYSTEM/DATUM:			
DRILLING EQUIPMENT: AMS Power Probe 9500		HOLE DIAMETER [in]: 2		TOTAL DEPTH [ft]: 12	
SAMPLING METHOD: Continuous Core		DEPTH TO WATER [ft]:		CASING DEPTH [ft]:	
HAMMER WEIGHT:		DROP [in]:		LOGGED BY: RLN	
				PROJECT MANAGER: Eric Garcia	

DEPTH [feet]	SAMPLES				PID Reading	Odor	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample ID	Sample	Blows/6 in.	Recovery [%]				
0							CONCRETE	Conditions: inside of building Refusal at 12' Backfilled 1/31/13 by WD
0				0	NO		GRAVEL	
1				0	Faint		SANDY SILT (ML): Dark yellowish brown (10YR 4/4), soft, moist, 30% fine to very fine sand, 70% silt	
2	SP-21-2			86				
3				0	NO			
4				0	NO			
5				75				
6				0	NO			
7				92				
8				0	NO		SILTY SAND (SM): Dark yellowish brown (10YR 4/6), loose, moist, 80% fine to very fine sand, 20% silt	
9				83				
10				0	NO		VOLCANIC ASH: Light yellowish brown (2.5Y 6/3), moist, very deeply weathered, friable, weak clay rich matrix	
11				83				
12								

APPENDIX C
FIELD DATA SHEETS

FIELD LOGS

Fourth Quarter 2012 Groundwater Monitoring & Sampling Event

Phase II Subsurface Site Investigation

**Byron Power Company
4901 Bruns Road
Byron, California**

**12/28/2012
Quest GSM Project# G09212012-02**

Quest GSM

WELL GAUGING/PURGING CALCULATIONS
DATA SHEET

Byron Power Co.

Tech(s): <i>Robert Nelson</i>		Date: <i>12/28/2012</i>	Job No.: <i>G092/2012-02</i>	Location: <i>Byron Power Co</i>				
Drums on Site @ TOA/TOD		Soil:			Water:		Total number of DRUMS used for this event	
Soil:		Water:			Soil:		Water:	
Well No.	Diameter (in)	DTB (ft)	DTW (ft)	ST (ft)	CV (gal)	PV (gal)	SPL (ft)	Notes <i>Time</i>
<i>MW-4</i>	<i>2"</i>	<i>27.87</i>	<i>17.55</i>	<i>10.29</i>	<i>1.65</i>	<i>4.93</i>	<i>0</i>	<i>7:46</i>
<i>MW-1</i>	<i>2"</i>	<i>30.18</i>	<i>21.50</i>	<i>8.68</i>	<i>1.39</i>	<i>4.17</i>	<i>0</i>	<i>9:50</i>
<i>MW-3</i>	<i>2"</i>	<i>26.38</i>	<i>20.19</i>	<i>6.19</i>	<i>0.99</i>	<i>2.97</i>	<i>0</i>	<i>9:54</i>
<i>MW-2</i>	<i>2"</i>	<i>30.58</i>	<i>18.27</i>	<i>12.31</i>	<i>1.97</i>	<i>5.91</i>	<i>0</i>	<i>10:00</i>

Explanation:

DTB = Depth to Bottom
 DTW = Depth to Water
 ST = Saturated Thickness (DTB-DTW) must be > 1 foot
 CV = Casing Volume (ST x cf)
 PV = Purge Volume (standard 3 x CV, well development 10 x CV)
 SPL = Thickness of Separate Phase Liquid

Conversion Factors (cf)

2-inch diameter well cf = 0.16 gal/ft
 4-inch diameter well cf = 0.65 gal/ft
 6-inch diameter well cf = 1.44 gal/ft

Field Form A

Page 1 of 1

FLUID SAMPLE COLLECTION LOG

PROJECT DATA			
PROJECT NAME:	Byron Power Company	DATE:	12/28/2012
PROJECT NUMBER:	G09212012-02	SAMPLE LOCATION ID:	MW.01
PROJECT MANAGER:	Eric W. Garcia	SAMPLER:	Robert L. Nelson

WELL CONSTRUCTION DATA			
CASING DIAMETER	WELL VOLUMES PER UNIT	SAMPLE TYPE	
<input checked="" type="checkbox"/> 2"	Well Casing Gal/ft.	<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Treatment Influent
<input type="checkbox"/> 4"	3/4 0.0229	<input type="checkbox"/> Surface Water	<input type="checkbox"/> Treatment Effluent
<input checked="" type="checkbox"/> Other: 3/4" RN	2.0 0.1632	<input type="checkbox"/> Other	
	4.0 0.6528		
	6.0 1.490		

FLUID LEVEL DATA			
DEPTH TO PRODUCT:	PRODUCT THICKNESS:	MINIMUM PURGE VOLUME	
DEPTH OF WELL:	WATER COLUMN:	(3 OR 4 WCV):	
DEPTH TO WATER:	WELL CASING VOLUME:	ACTUAL VOL. PURGED:	

WATER QUALITY										
TIME	VOL (GAL)	PH	COND (mS/cm @ 25°C)	TURB (NTU)	DO (mg/L)	TEMP. (°F/°C)	SAL (%)	TDS (mg/L)	ORP (mV)	OTHER
1139	1.0	8.06	2678		6.37	18.68			43.6	
1141	2.0	7.83	2611		5.00	20.15			49.9	
1143	3.0	7.78	2612		4.58	20.41			51.5	
1325	4.0	7.83	3301		6.70	20.30			47.8	

PURGE METHOD	
<input type="checkbox"/> Pump (Disp/Sub)	<input type="checkbox"/> Other:
<input checked="" type="checkbox"/> Bailer (Tef/PVC/SS/Plg)	<input type="checkbox"/> Peristaltic

SAMPLE METHOD	
<input checked="" type="checkbox"/> Bailer (Tef/PVC/SS/Plg)	<input type="checkbox"/> Dedicated
<input type="checkbox"/>	<input type="checkbox"/> Other:

SAMPLES COLLECTED					
	ID	TIME	DATE	LAB	ANALYTES
SAMPLE	MW.01	1325	12/28/2012	McC Campbell Analytical	TPH-MR, VOC's, SVOC's
DUPLICATE					
SPLIT					
FIELD BLANK					

COMMENTS:
 Well dry at 3.5 gallons (1145); Σ = 21.45 @ 1320

SAMPLER: Robert L. Nelson PROJECT MANAGER: [Signature]

FLUID SAMPLE COLLECTION LOG

PROJECT DATA			
PROJECT NAME:	Byron Power Company	DATE:	12/28/2012
PROJECT NUMBER:	G09212012-02	SAMPLE LOCATION ID:	MW.02
PROJECT MANAGER:	Eric W. Garcia	SAMPLER:	Robert L. Nelson

WELL CONSTRUCTION DATA			
CASING DIAMETER	WELL VOLUMES PER UNIT	SAMPLE TYPE	
<input checked="" type="checkbox"/> 2"	Well Casing Gal/ft.	<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Treatment Influent
<input type="checkbox"/> 4"	3/4 0.0229	<input type="checkbox"/> Surface Water	<input type="checkbox"/> Treatment Effluent
<input checked="" type="checkbox"/> Other: 3/4"	2.0 0.1632	<input type="checkbox"/> Other	
	4.0 0.6528		
	6.0 1.490		

FLUID LEVEL DATA			
DEPTH TO PRODUCT:	0	PRODUCT THICKNESS:	0
DEPTH OF WELL:	30.58	MINIMUM PURGE VOLUME	(3 OR 4 WCV): 6
DEPTH TO WATER:	18.27	WATER COLUMN:	12.31
		WELL CASING VOLUME:	1.97
		ACTUAL VOL. PURGED:	8.0

WATER QUALITY										
TIME	VOL (GAL)	PH	COND (mS/cm - uS/cm)	TURB (NTU)	DO (mg/L)	TEMP. (°F/°C)	SAL (%)	TDS (mg/L)	ORP (mV)	OTHER
12:05	2.0	7.93	3676		6.67	18.41			50.8	
12:08	4.0	7.18	5471		3.18	19.62			61.4	
12:11	6.0	6.96	6357		3.25	19.55			78.9	
12:17	7.0	7.03	5650		3.26	19.61			79.1	
12:25	8.0	6.99	5780		3.54	19.69			80.1	

PURGE METHOD	
<input type="checkbox"/> Pump (Disp/Sub)	<input checked="" type="checkbox"/> Other:
<input checked="" type="checkbox"/> Baller (Tef/PVC/SS/Disp)	<input type="checkbox"/> Perforated

SAMPLE METHOD	
<input checked="" type="checkbox"/> Direct	<input type="checkbox"/> Filtered
<input type="checkbox"/> Other:	<input type="checkbox"/> Other:

SAMPLES COLLECTED					
	ID	TIME	DATE	LAB	ANALYTES
SAMPLE	MW.02	1230	12/28/2012	McCombs Analytical	TEMP, PH, COND, DO
DUPLICATE					
SPLIT					
FIELD BLANK					

COMMENTS:

SAMPLER: Robert L. Nelson PROJECT MANAGER: [Signature]



11275 Sunrise Gold Circle, Suite R
Rancho Cordova, CA 95742
(925) 756-1210 Office
(925) 756-1227 Fax
Internet - http://www.questgsm.com/

FLUID SAMPLE COLLECTION LOG

PROJECT DATA			
PROJECT NAME:	Byron Power Company	DATE:	12/28/2012
PROJECT NUMBER:	G09212012-02	SAMPLE LOCATION ID:	MW.03
PROJECT MANAGER:	Eric W. Garcia	SAMPLER:	Robert Nelson

WELL CONSTRUCTION DATA			
CASING DIAMETER	WELL VOLUMES PER UNIT	SAMPLE TYPE	
<input checked="" type="checkbox"/> 2"	Well Casing Gal/ft.	<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Treatment Influent
<input type="checkbox"/> 4"	3/4 0.0229	<input type="checkbox"/> Surface Water	<input type="checkbox"/> Treatment Effluent
<input type="checkbox"/> Other: 3/4"	2.0 0.1632		<input type="checkbox"/> Other
	4.0 0.6528		
	6.0 1.490		

FLUID LEVEL DATA			
DEPTH TO PRODUCT:	PRODUCT THICKNESS:	MINIMUM PURGE VOLUME	
DEPTH OF WELL:	WATER COLUMN:	(3 OR 4 WCV):	
DEPTH TO WATER:	WELL CASING VOLUME:	ACTUAL VOL. PURGED:	

WATER QUALITY										
TIME	VOL (GAL)	PH	COND (mS/cm - µg/cm)	TURB (NTU)	DO (mg/L)	TEMP. (°F/°C)	SAL (%)	TDS (mg/L)	ORP (mV)	OTHER
1307	1.0	6.70	44550		5.72	18.48			81.9	
1310	2.0	6.66	45210		4.41	20.17			78.2	
1343	2.0	6.53	44061		5.82	19.46			135.0	

PURGE METHOD	
<input type="checkbox"/> Pump (Disp/Sub)	<input type="checkbox"/> Other:
<input checked="" type="checkbox"/> Bailer (Tef/PVC/SS/Disp)	<input type="checkbox"/> Peristaltic

SAMPLE METHOD	
<input checked="" type="checkbox"/> Bailer (Tef/PVC/SS/Disp)	<input type="checkbox"/> Dedicated
<input type="checkbox"/> Other:	<input type="checkbox"/> Other:

SAMPLES COLLECTED					
	ID	TIME	DATE	LAB	ANALYSES
SAMPLE	MW.03	1350	12/28/2012	McC Campbell Analytical	TPH, Vol's, MOC's
DUPLICATE					
SPLIT					
FIELD BLANK					

COMMENTS:
Dry at 2 Gallons (1310) Σ = 20.49 at 1343

SAMPLER: Robert Nelson PROJECT MANAGER: [Signature]

FLUID SAMPLE COLLECTION LOG

PROJECT DATA	
PROJECT NAME: <u>Byron Power Company</u>	DATE: <u>12/28/2012</u>
PROJECT NUMBER: <u>G09212012-02</u>	SAMPLE LOCATION ID: <u>MW.04</u>
PROJECT MANAGER: <u>Eric W. Garcia</u>	SAMPLER: <u>Robert Nelson</u>

WELL CONSTRUCTION DATA		
CASING DIAMETER	WELL VOLUMES PER UNIT	SAMPLE TYPE
<input checked="" type="checkbox"/> 2"	Well Casing Gal/ft.	<input checked="" type="checkbox"/> Groundwater <input type="checkbox"/> Treatment Influent
<input type="checkbox"/> 4"	3/4 0.0229	<input type="checkbox"/> Surface Water <input type="checkbox"/> Treatment Effluent
<input type="checkbox"/> Other: 3/4"	2.0 0.1632	<input type="checkbox"/> Other
	4.0 0.6528	
	6.0 1.490	

FLUID LEVEL DATA			
DEPTH TO PRODUCT: _____	PRODUCT THICKNESS: <u>0</u>	MINIMUM PURGE VOLUME _____	
DEPTH OF WELL: <u>27.84</u>	WATER COLUMN: <u>10.29</u>	(3 OR 4 WCV): <u>5</u>	
DEPTH TO WATER: <u>17.55</u>	WELL CASING VOLUME: <u>1.65</u>	ACTUAL VOL. PURGED: <u>6.0</u>	

WATER QUALITY										
TIME	VOL (GAL)	PH	COND. (mS/cm @ 25°C)	TURB (NTU)	DO (mg/L)	TEMP. (°F)	SAL (%)	TDS (mg/L)	ORP (mV)	OTHER
<u>1040</u>	<u>1.5</u>	<u>7.40</u>	<u>3391</u>		<u>11.36</u>	<u>18.74</u>			<u>108.2</u>	
<u>1045</u>	<u>3.0</u>	<u>7.60</u>	<u>3429</u>		<u>5.96</u>	<u>20.05</u>			<u>94.1</u>	
<u>1050</u>	<u>4.0</u>	<u>7.34</u>	<u>3593</u>		<u>5.83</u>	<u>20.49</u>			<u>85.8</u>	
<u>1056</u>	<u>5.0</u>	<u>7.32</u>	<u>3654</u>		<u>6.74</u>	<u>20.24</u>			<u>84.1</u>	
<u>1105</u>	<u>6.0</u>	<u>7.50</u>	<u>3672</u>		<u>6.73</u>	<u>20.31</u>			<u>83.2</u>	

PURGE METHOD	SAMPLE METHOD
<input type="checkbox"/> Pump (Disp/Sub) <input type="checkbox"/> Other <input checked="" type="checkbox"/> Baller (Tef/PVC/SS/Disp) <input type="checkbox"/> Peristaltic	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Dedicated <input type="checkbox"/> Other: _____

SAMPLES COLLECTED					
	ID	TIME	DATE	LAB	ANALYTES
SAMPLE	<u>MW.04</u>	<u>1110</u>	<u>12/28/2012</u>	<u>McGraw Hill Analytical</u>	<u>TEMP, VOC's, SVOC's</u>
DUPLICATE	_____	_____	_____	_____	_____
SPLIT	_____	_____	_____	_____	_____
FIELD BLANK	_____	_____	_____	_____	_____

COMMENTS: _____

SAMPLER: Robert Nelson PROJECT MANAGER: Eric W. Garcia

APPENDIX D
CERTIFIED ANALYTICAL REPORT AND
CHAIN-OF-CUSTODY DOCUMENTATION



Analytical Report

Quest GeoSystems Management 11275 Sunrise Gold Cir., Ste. R Rancho Cordova, CA 95742	Client Project ID: #G09212012-02; Byron Power Company	Date Sampled: 12/07/12
		Date Received: 12/07/12
	Client Contact: Eric Garcia	Date Reported: 12/17/12
	Client P.O.:	Date Completed: 12/17/12

WorkOrder: 1212191

December 17, 2012

Dear Eric:

Enclosed within are:

- 1) The results of the **3** analyzed samples from your project: **#G09212012-02; Byron Power Company,**
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

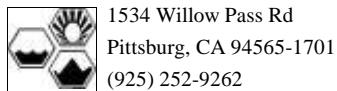
If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
 Laboratory Manager
 McC Campbell Analytical, Inc.

The analytical results relate only to the items tested.



WorkOrder: 1212191

ClientCode: QGSM

WaterTrax
 WriteOn
 EDF
 Excel
 EQUIS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:
 Eric Garcia
 Quest GeoSystems Management
 11275 Sunrise Gold Cir., Ste. R
 Rancho Cordova, CA 95742
 (925) 756-1210 FAX: (925) 756-1227

Email: eric.garcia@questgsm.com
 cc:
 PO:
 ProjectNo: #G09212012-02; Byron Power Company

Bill to:
 Lexie Hinds
 Quest GeoSystems Management
 98 Daisyfield Drive
 Livermore, CA 94551
 lexiehinds@yahoo.com

Requested TAT: 5 days

Date Received: 12/07/2012

Date Printed: 12/07/2012

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1212191-001	Si.01	Soil	12/7/2012 11:16	<input type="checkbox"/>	A	A		A	A	A	A					
1212191-002	Si.02	Soil	12/7/2012 11:11	<input type="checkbox"/>	A	A		A	A	A						
1212191-003	SCALE	Soil	12/7/2012 11:06	<input type="checkbox"/>	A	A	A	A	A			A				

Test Legend:

1	8260B_S	2	8270D_S	3	ASBEST400 (435 CARB)_S	4	CAM17MS_S	5	G-MBTEX_S
6	Moisture_S	7	PREDF REPORT	8	ReactS_S	9		10	
11		12							

The following SamplIDs: 001A, 002A, 003A contain testgroup.

Prepared by: Maria Venegas

Comments:

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



Sample Receipt Checklist

Client Name: **Quest GeoSystems Management** Date and Time Received: **12/7/2012 3:28:47 PM**
 Project Name: **#G09212012-02; Byron Power Company** LogIn Reviewed by: **Maria Venegas**
 WorkOrder N°: **1212191** Matrix: Soil Carrier: Client Drop-In

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No
 Container/Temp Blank temperature Cooler Temp: 3.9°C NA
 Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
 Sample labels checked for correct preservation? Yes No
 Metal - pH acceptable upon receipt (pH<2)? Yes No NA
 Samples Received on Ice? Yes No

(Ice Type: WET ICE)

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

 Comments:



Table with client information: Quest GeoSystems Management, Client Project ID: #G09212012-02; Byron Power Company, Date Sampled: 12/07/12, Date Received: 12/07/12, Client Contact: Eric Garcia, Date Extracted: 12/07/12, Client P.O., Date Analyzed: 12/11/12

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1212191

Table with Lab ID: 1212191-001A, Client ID: Si.01, Matrix: Soil

Main data table with columns: Compound, Conc. *, DF, MDL, RL, Compound, Conc. *, DF, MDL, RL. Lists various chemical compounds and their detection results.

Surrogate Recoveries (%)

Table showing surrogate recoveries: %SS1: 110, %SS2: 114, %SS3: 124

Comments:

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

J) analyte detected below quantitation limits



Table with client information: Quest GeoSystems Management, Client Project ID: #G09212012-02; Byron Power Company, Date Sampled: 12/07/12, Date Received: 12/07/12, Client Contact: Eric Garcia, Date Extracted: 12/07/12, Client P.O., Date Analyzed: 12/11/12

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1212191

Table with Lab ID: 1212191-002A, Client ID: Si.02, Matrix: Soil

Main data table with columns: Compound, Conc. *, DF, MDL, RL, Compound, Conc. *, DF, MDL, RL. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table showing surrogate recoveries: %SS1: 114, %SS2: 111, %SS3: 124

Comments:

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

J) analyte detected below quantitation limits



Table with client information: Quest GeoSystems Management, Client Project ID: #G09212012-02; Byron Power Company, Date Sampled: 12/07/12, Date Received: 12/07/12, Client Contact: Eric Garcia, Date Extracted: 12/07/12, Client P.O., Date Analyzed: 12/10/12

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1212191

Summary table with Lab ID: 1212191-003A, Client ID: SCALE, Matrix: Soil

Main data table with columns: Compound, Conc. *, DF, MDL, RL, Compound, Conc. *, DF, MDL, RL. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table showing surrogate recoveries: %SS1: 107, %SS2: 116, %SS3: 127

Comments:

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

J) analyte detected below quantitation limits



Table with client information: Quest GeoSystems Management, Client Project ID: #G09212012-02; Byron Power Company, Date Sampled: 12/07/12, Date Received: 12/07/12, Client Contact: Eric Garcia, Date Extracted: 12/07/12, Rancho Cordova, CA 95742, Client P.O., Date Analyzed: 12/15/12

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B

Analytical Method: SW8270C

Work Order: 1212191

Table with lab information: Lab ID: 1212191-001A, Client ID: Si.01, Matrix: Soil

Main data table with columns: Compound, Concentration *, DF, MDL, RL, Compound, Concentration *, DF, MDL, RL. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table showing surrogate recoveries: %SS1: 91, %SS2: 87, %SS3: 74, %SS4: 76, %SS5: 53, %SS6: 86

Comments: a3

* water samples in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L.

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.

a3) sample diluted due to high organic content.



Table with client information: Quest GeoSystems Management, Client Project ID: #G09212012-02; Byron Power Company, Date Sampled: 12/07/12, Date Received: 12/07/12, Client Contact: Eric Garcia, Date Extracted: 12/07/12, Rancho Cordova, CA 95742, Client P.O., Date Analyzed: 12/15/12

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B

Analytical Method: SW8270C

Work Order: 1212191

Table with lab information: Lab ID: 1212191-002A, Client ID: Si.02, Matrix: Soil

Main data table with columns: Compound, Concentration *, DF, MDL, RL, Compound, Concentration *, DF, MDL, RL. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table showing surrogate recoveries: %SS1: 108, %SS2: 100, %SS3: 84, %SS4: 88, %SS5: 50, %SS6: 95

Comments: a3

* water samples in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L.

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.

a3) sample diluted due to high organic content.



Table with client information: Quest GeoSystems Management, Client Project ID: #G09212012-02; Byron Power Company, Date Sampled: 12/07/12, Date Received: 12/07/12, Client Contact: Eric Garcia, Date Extracted: 12/07/12, Rancho Cordova, CA 95742, Client P.O., Date Analyzed: 12/14/12

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B

Analytical Method: SW8270C

Work Order: 1212191

Table with lab and client ID information: Lab ID 1212191-003A, Client ID SCALE, Matrix Soil

Main data table with columns: Compound, Concentration *, DF, MDL, RL, Compound, Concentration *, DF, MDL, RL. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table showing surrogate recovery percentages: %SS1: 81, %SS2: 72, %SS3: 64, %SS4: 64, %SS5: 44, %SS6: 64

Comments:

* water samples in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L.

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.

a3) sample diluted due to high organic content.



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Quest GeoSystems Management 11275 Sunrise Gold Cir., Ste. R Rancho Cordova, CA 95742	Client Project ID: #G09212012-02;	Date Sampled: 12/07/12
	Byron Power Company	Date Received 12/07/12
	Client Contact: Eric Garcia	Date Extracted 12/07/12
	Client P.O.:	Date Analyzed 12/11/12

CAM / CCR 17 Metals*

Lab ID	1212191-001A	1212191-002A	1212191-003A	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	Si.01	Si.02	SCALE		
Matrix	S	S	S	MDL	RL
Extraction Type	TOTAL	TOTAL	TOTAL	mg/Kg	mg/Kg

ICP Metals, Concentration*

Analytical Method: SW6020

Extraction Method: SW3050B

Work Order: 1212191

Dilution Factor	1	1	1	1	1
Antimony	2.5	1.5	1.2		0.14 0.5
Arsenic	1.2	1.8	0.97		0.27 0.5
Barium	65	110	150		4.0 5.0
Beryllium	ND	ND	ND		0.19 0.5
Cadmium	0.24,J	0.21,J	ND		0.16 0.25
Chromium	5.6	8.5	3.5		0.5 0.5
Cobalt	0.67	0.90	0.83		0.17 0.5
Copper	58	44	65		0.4 0.5
Lead	19	31	21		0.5 0.5
Mercury	0.031,J	0.040,J	0.036,J		0.01 0.05
Molybdenum	140	87	6.6		0.17 0.5
Nickel	2.6	2.5	3.0		0.25 0.5
Selenium	0.23,J	ND	ND		0.22 0.5
Silver	ND	ND	ND		0.13 0.5
Thallium	ND	ND	ND		0.14 0.5
Vanadium	2.0	1.8	0.79		0.5 0.5
Zinc	180	390	190		2.0 5.0
%SS:	95	91	91		

Comments

*water samples are reported in µg/L, product/oil/non-aqueous liquid samples and all TCLP / STLC / DISTLC / SPLP extracts are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, filter samples in µg/filter.

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

TOTAL = Hot acid digestion of a representative sample aliquot.

TRM = Total recoverable metals is the "direct analysis" of a sample aliquot taken from its acid-preserved container.

DISS = Dissolved metals by direct analysis of 0.45 µm filtered and acidified sample.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor

J) analyte detected below quantitation limits



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 72946

WorkOrder: 1212191

EPA Method: SW8260B		Extraction: SW5030B					Spiked Sample ID: 1212060-001A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
tert-Amyl methyl ether (TAME)	ND<0.1	0.050	NR	NR	NR	94	N/A	N/A	70 - 130	
Benzene	ND<0.1	0.050	NR	NR	NR	95.2	N/A	N/A	70 - 130	
t-Butyl alcohol (TBA)	ND<1	0.20	NR	NR	NR	116	N/A	N/A	70 - 130	
Chlorobenzene	ND<0.1	0.050	NR	NR	NR	94.5	N/A	N/A	70 - 130	
1,2-Dibromoethane (EDB)	ND<0.08	0.050	NR	NR	NR	96.7	N/A	N/A	70 - 130	
1,2-Dichloroethane (1,2-DCA)	ND<0.08	0.050	NR	NR	NR	98.2	N/A	N/A	70 - 130	
1,1-Dichloroethene	ND<0.1	0.050	NR	NR	NR	95.2	N/A	N/A	70 - 130	
Diisopropyl ether (DIPE)	ND<0.1	0.050	NR	NR	NR	95.4	N/A	N/A	70 - 130	
Ethyl tert-butyl ether (ETBE)	ND<0.1	0.050	NR	NR	NR	96	N/A	N/A	70 - 130	
Methyl-t-butyl ether (MTBE)	ND<0.1	0.050	NR	NR	NR	98.5	N/A	N/A	70 - 130	
Toluene	0.28	0.050	NR	NR	NR	95.5	N/A	N/A	70 - 130	
Trichloroethene	ND<0.1	0.050	NR	NR	NR	95.2	N/A	N/A	70 - 130	
%SS1:	105	0.12	NR	NR	NR	99	N/A	N/A	70 - 130	
%SS2:	106	0.12	NR	NR	NR	100	N/A	N/A	70 - 130	
%SS3:	113	0.012	NR	NR	NR	96	N/A	N/A	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 72946 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212191-001A	12/07/12 11:16 AM	12/07/12	12/11/12 3:43 AM	1212191-002A	12/07/12 11:11 AM	12/07/12	12/11/12 4:26 AM
1212191-003A	12/07/12 11:06 AM	12/07/12	12/10/12 2:40 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCS D = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS-Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2).$
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.
 Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



QC SUMMARY REPORT FOR SW8270C

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 73098

WorkOrder: 1212191

Analyte	EPA Method: SW8270C		Extraction: SW3550B				Spiked Sample ID: 1212196-004A			
	Sample mg/Kg	Spiked mg/Kg	MS % Rec.	MSD % Rec.	MS-MSD % RPD	LCS % Rec.	Acceptance Criteria (%)			
							MS / MSD	RPD	LCS	
Acenaphthene	ND<0.66	5	NR	NR	NR	82.4	N/A	N/A	30 - 130	
4-Chloro-3-methylphenol	ND<0.5	5	NR	NR	NR	88.2	N/A	N/A	30 - 130	
2-Chlorophenol	ND<0.5	5	NR	NR	NR	80.6	N/A	N/A	30 - 130	
1,4-Dichlorobenzene	ND<0.66	5	NR	NR	NR	67.2	N/A	N/A	30 - 130	
2,4-Dinitrotoluene	ND<0.66	5	NR	NR	NR	93.7	N/A	N/A	30 - 130	
4-Nitrophenol	ND<2.6	5	NR	NR	NR	51.9	N/A	N/A	30 - 130	
N-Nitrosodi-n-propylamine	ND<0.66	5	NR	NR	NR	62.7	N/A	N/A	30 - 130	
Pentachlorophenol	ND<2.6	5	NR	NR	NR	52.1	N/A	N/A	30 - 130	
Phenol	ND<0.5	5	NR	NR	NR	83.2	N/A	N/A	30 - 130	
Pyrene	ND<0.66	5	NR	NR	NR	90	N/A	N/A	30 - 130	
1,2,4-Trichlorobenzene	ND<0.66	5	NR	NR	NR	76.6	N/A	N/A	30 - 130	
%SS1:	100	5	NR	NR	NR	100	N/A	N/A	30 - 130	
%SS2:	97	5	NR	NR	NR	95	N/A	N/A	30 - 130	
%SS3:	83	5	NR	NR	NR	91	N/A	N/A	30 - 130	
%SS4:	83	5	NR	NR	NR	81	N/A	N/A	30 - 130	
%SS5:	58	5	NR	NR	NR	65	N/A	N/A	30 - 130	
%SS6:	85	5	NR	NR	NR	90	N/A	N/A	30 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 73098 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212191-001A	12/07/12 11:16 AM	12/07/12	12/15/12 3:01 AM	1212191-002A	12/07/12 11:11 AM	12/07/12	12/15/12 3:26 AM
1212191-003A	12/07/12 11:06 AM	12/07/12	12/14/12 11:13 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS} - \text{Sample}) / (\text{Amount Spiked})$; $\text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2)$.
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = matrix interference and / or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix, sample diluted due to high matrix or analyte content, or MS/MSD samples diluted due to high organic content.
 #) surrogate diluted out of range; & = low or no recovery of surrogate or target analytes due to matrix interference.
 Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



QC SUMMARY REPORT FOR SW6020

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 72976

WorkOrder: 1212191

EPA Method: SW6020		Extraction: SW3050B					Spiked Sample ID: 1212191-001A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
Antimony	2.5	50	111	118	5.40	104	75 - 125	20	75 - 125	
Arsenic	1.2	50	109	115	5.34	108	75 - 125	20	75 - 125	
Barium	65	500	113	121	5.95	103	75 - 125	20	75 - 125	
Beryllium	ND	50	102	107	4.65	115	75 - 125	20	75 - 125	
Cadmium	ND	50	110	116	4.96	107	75 - 125	20	75 - 125	
Chromium	5.6	50	106	113	5.71	118	75 - 125	20	75 - 125	
Cobalt	0.67	50	113	117	3.76	111	75 - 125	20	75 - 125	
Copper	58	50	NR	NR	NR	114	N/A	N/A	75 - 125	
Lead	19	50	107	117	6.55	109	75 - 125	20	75 - 125	
Mercury	ND	1.25	104	112	7.11	101	75 - 125	20	75 - 125	
Molybdenum	140	50	NR	NR	NR	108	N/A	N/A	75 - 125	
Nickel	2.6	50	106	111	4.97	114	75 - 125	20	75 - 125	
Selenium	ND	50	110	118	6.91	114	75 - 125	20	75 - 125	
Silver	ND	50	110	114	3.87	101	75 - 125	20	75 - 125	
Thallium	ND	50	105	109	3.54	102	75 - 125	20	75 - 125	
Vanadium	2.0	50	108	114	5.75	116	75 - 125	20	75 - 125	
Zinc	180	500	105	115	7.08	114	75 - 125	20	75 - 125	
%SS:	95	500	91	100	9.99	117	70 - 130	20	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 72976 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212191-001A	12/07/12 11:16 AM	12/07/12	12/11/12 12:38 AM	1212191-001A	12/07/12 11:16 AM	12/07/12	12/11/12 2:41 PM
1212191-002A	12/07/12 11:11 AM	12/07/12	12/11/12 12:01 AM	1212191-003A	12/07/12 11:06 AM	12/07/12	12/11/12 12:08 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS} - \text{Sample}) / (\text{Amount Spiked})$; $\text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2)$.
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not applicable to this method.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 72969

WorkOrder: 1212191

EPA Method: SW8015Bm		Extraction: SW5030B					Spiked Sample ID: 1212104-004A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) £	ND	0.60	93	94.8	1.86	101	70 - 130	20	80 - 120	
MTBE	ND	0.10	96	100	4.40	104	70 - 130	20	80 - 120	
Benzene	ND	0.10	101	97.5	3.43	98.7	70 - 130	20	80 - 120	
Toluene	ND	0.10	100	97	3.45	98.4	70 - 130	20	80 - 120	
Ethylbenzene	ND	0.10	101	98.7	2.71	101	70 - 130	20	80 - 120	
Xylenes	ND	0.30	102	99.4	2.93	103	70 - 130	20	80 - 120	
%SS:	99	0.10	106	102	3.89	107	70 - 130	20	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 72969 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212191-001A	12/07/12 11:16 AM	12/07/12	12/12/12 7:07 PM	1212191-002A	12/07/12 11:11 AM	12/07/12	12/11/12 4:52 PM
1212191-003A	12/07/12 11:06 AM	12/07/12	12/10/12 6:52 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 % Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 £ TPH(btex) = sum of BTEX areas from the FID.
 # cluttered chromatogram; sample peak coelutes with surrogate peak.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



QC SUMMARY REPORT FOR WET CHEMISTRY TESTS

Test Method: SWChpt7 (Ignitability)

Matrix: S

WorkOrder: 1212191

Method Name: SWChpt7_Ign			Units: pos/neg			BatchID: 73241	
Lab ID	Sample	DF	Dup / Ser. Dil.	DF	% RPD	Acceptance Criteria (%)	
1212191-003A	neg	1	neg	1	N/A	N/A	

BATCH 73241 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212191-003A	12/07/12 11:06 AM	12/13/12	12/13/12 1:15 PM				

Dup = Duplicate; Ser. Dil. = Serial Dilution; MS = Matrix Spike; RD = Relative Difference; RPD = Relative Percent Deviation.
 Precision = Absolute Value (Sample - Duplicate)
 $RPD = 100 * (Sample - Duplicate) / [(Sample + Duplicate) / 2]$
 %RPD is calculated using results of up to 10 significant figures, however the reported results are rounded to 2 or 3 significant figures. Therefore there may be a slight discrepancy between the %RPD displayed above and %RPD calculated using the reported results. MAI considers %RPD based upon more significant figures to be more accurate.



QC SUMMARY REPORT FOR WET CHEMISTRY TESTS

Test Method: ASTM D2216-92 (Percent Moisture)

Matrix: S

WorkOrder: 1212191

Method Name: ASTMD2216-92		Units: ±, wet wt%			BatchID: 72991	
Lab ID	Sample	DF	Dup / Ser. Dil.	DF	% RPD	Acceptance Criteria (%)
1212191-001A	67.4	1.42	67.0	1.414	0.628	<15
1212191-002A	58.5	1.95	56.1	2.087	4.19	<15

BATCH 72991 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212191-001A	12/07/12 11:16 AM	12/10/12	12/11/12 1:20 PM	1212191-002A	12/07/12 11:11 AM	12/10/12	12/11/12 1:30 PM

Test Method: SW9045D (pH)

Matrix: S

WorkOrder: 1212191

Method Name: SW9045D		Units: ±, pH units @ °C			BatchID: 72995	
Lab ID	Sample	DF	Dup / Ser. Dil.	DF	Precision	Acceptance Criteria
1212191-003A	8.90 @ 21.7°C	1	8.91 @ 21.8°C	1	0.01	0.1

BATCH 72995 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212191-003A	12/07/12 11:06 AM	12/07/12	12/07/12 9:36 PM				

Dup = Duplicate; Ser. Dil. = Serial Dilution; MS = Matrix Spike; RD = Relative Difference; RPD = Relative Percent Deviation.

Precision = Absolute Value (Sample - Duplicate)

RPD = 100 * (Sample - Duplicate) / [(Sample + Duplicate) / 2]

%RPD is calculated using results of up to 10 significant figures, however the reported results are rounded to 2 or 3 significant figures. Therefore there may be a slight discrepancy between the %RPD displayed above and %RPD calculated using the reported results. MAI considers %RPD based upon more significant figures to be more accurate.



QC SUMMARY REPORT FOR WET CHEMISTRY TESTS

Test Method: SWchpt7_CN (Reactive Cyanide)

Matrix: S

WorkOrder: 1212191

Method Name: SWchpt7_CN		Units: pos/neg			BatchID: 73239	
Lab ID	Sample	DF	Dup / Ser. Dil.	DF	% RPD	Acceptance Criteria (%)
1212191-003A	neg	1	neg	1	N/A	N/A

BATCH 73239 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212191-003A	12/07/12 11:06 AM	12/13/12	12/13/12 2:00 PM				

Test Method: SWchpt7_S (Reactive Sulfide)

Matrix: S

WorkOrder: 1212191

Method Name: SWchpt7_S		Units: pos/neg			BatchID: 73239	
Lab ID	Sample	DF	Dup / Ser. Dil.	DF	% RPD	Acceptance Criteria (%)
1212191-003A	neg	1	neg	1	N/A	N/A

BATCH 73239 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212191-003A	12/07/12 11:06 AM	12/13/12	12/13/12 2:00 PM				

Dup = Duplicate; Ser. Dil. = Serial Dilution; MS = Matrix Spike; RD = Relative Difference; RPD = Relative Percent Deviation.

Precision = Absolute Value (Sample - Duplicate)

$RPD = 100 * (Sample - Duplicate) / [(Sample + Duplicate) / 2]$

%RPD is calculated using results of up to 10 significant figures, however the reported results are rounded to 2 or 3 significant figures. Therefore there may be a slight discrepancy between the %RPD displayed above and %RPD calculated using the reported results. MAI considers %RPD based upon more significant figures to be more accurate.



QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 72989

WorkOrder: 1212191

EPA Method: SW8015B		Extraction: SW3550B					Spiked Sample ID: 1212122-002A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH-Diesel (C10-C23)	1.2	40	124	127	2.48	99.5	70 - 130	30	70 - 130	
%SS:	81	25	79	80	1.10	93	70 - 130	30	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 72989 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212191-001A	12/07/12 11:16 AM	12/07/12	12/13/12 3:47 PM	1212191-002A	12/07/12 11:11 AM	12/07/12	12/12/12 9:35 AM
1212191-003A	12/07/12 11:06 AM	12/07/12	12/12/12 3:39 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS} - \text{Sample}) / (\text{Amount Spiked})$; $\text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2)$.
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



Bulk Asbestos Analysis

(EPA Method 600/R-93-116, Visual Area Estimation)

McC Campbell Analytical, Inc.
Account Payable
1534 Willow Pass Rd

Pittsburg, CA 94565

Client ID: A31409
Report Number: B171337
Date Received: 12/10/12
Date Analyzed: 12/17/12
Date Printed: 12/17/12
First Reported: 12/17/12

Job ID/Site: G09212012-02 - Byron Power Company

FALI Job ID: A31409

Date(s) Collected: 12/07/2012

Total Samples Submitted: 1

Total Samples Analyzed: 1

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
SCALE	11325629						
Layer: Off-White/Beige Soil							ND
Total Composite Values of Fibrous Components:		Asbestos (ND)					
Cellulose (Trace)							

Tad Thrower, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

Analytical results and reports are generated by Forensic Analytical Laboratories Inc. (FALI) at the request of and for the exclusive use of the person or entity (client) named on such report. Results, reports or copies of same will not be released by FALI to any third party without prior written request from client. This report applies only to the sample(s) tested. Supporting laboratory documentation is available upon request. This report must not be reproduced except in full, unless approved by FALI. The client is solely responsible for the use and interpretation of test results and reports requested from FALI. Forensic Analytical Laboratories Inc. is not able to assess the degree of hazard resulting from materials analyzed. FALI reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified. All samples were received in acceptable condition unless otherwise noted.



Analytical Report

Quest GeoSystems Management 11275 Sunrise Gold Cir., Ste. R Rancho Cordova, CA 95742	Client Project ID: G09212012-02; Byron Power Company	Date Sampled: 12/18/12-12/19/12
	Client Contact: Eric Garcia	Date Received: 12/19/12
	Client P.O.:	Date Reported: 12/28/12
		Date Completed: 12/28/12

WorkOrder: 1212525

January 04, 2013

Dear Eric:

Enclosed within are:

- 1) The results of the **6** analyzed samples from your project: **G09212012-02; Byron Power Company,**
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
 Laboratory Manager
 McC Campbell Analytical, Inc.

The analytical results relate only to the items tested.

1212525



QUEST GEOSYSTEMS MANAGEMENT
11275 Sunrise Gold Circle, Suite R,
Rancho Cordova, California 95742

PROJECT REPORTING

Company: Quest GeoSystems Management, Inc.
Attention: Mr. Eric W. Garcia Phone: (925) 756-1210
Fax: (925) 756-1227
Address: 11275 Sunrise Gold Cir, Suite R, Rancho Cordova, CA 95742
Email: ericgarcia@questgsm.com

PROJECT BILLING

Company: Quest GeoSystems Management, Inc.
Attention: Mr. Eric W. Garcia Phone: (925) 756-1210
Fax: (925) 756-1227
Address: 11275 Sunrise Gold Cir, Suite R, Rancho Cordova, CA 95742
Email: ericgarcia@questgsm.com

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH 24 HOUR 48 HOUR 5 DAY OTHER:
EDF Required? YES NO

Project Name: Byron Power Company

Project Number: G09212012-02

Project Location: 4901 Bruns Road
Byron, California

Sampler Signature:

ANALYSIS REQUEST

COMMENTS

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# of Containers	Type of Containers	MATRIX					PRESERVATION METHOD				TPH-MR - 8015	VOC's - 8260B	SVOC's - 8270	depth in ft
		Date	Time			Water	soil	Air	Sludge	Other	Ice	HCl	HNO3	Other				
MW.01-4	MW.01	12-18	1455	1	SS		X				X				X	X	X	
MW.01-8	MW.01	12-18	1510	1	SS		X				X				X	X	X	
MW.02	MW.02			1	SS		X				X				X	X	X	
MW.02	MW.02			1	SS		X				X				X	X	X	
MW.03-7	MW.03	12-19	1340	1	SS		X				X				X	X	X	
MW.03-8	MW.03	12-19	1350	1	SS		X				X				X	X	X	
MW.04-4	MW.04	12-18	0925	1	SS		X				X				X	X	X	
MW.04-8	MW.04	12-18	1000	1	SS		X				X				X	X	X	

Relinquished By: Robert Nelson

Date: 12-19-2012 Time: 1655

Received By: [Signature]

Remarks: ICE/CAP CONDITION 3.3
HEAD SPACE ABSENT
DECHLORINATED IN LAB
PRESERVATION VOAS O&G METALS OTHER
APPROPRIATE CONTAINERS PRESERVED IN LAB



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1212525

ClientCode: QGSM

WaterTrax
 WriteOn
 EDF
 Excel
 EQuIS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Eric Garcia
Quest GeoSystems Management
11275 Sunrise Gold Cir., Ste. R
Rancho Cordova, CA 95742
(925) 756-1210 FAX: (925) 756-1227

Email: eric.garcia@questgsm.com
cc:
PO:
ProjectNo: G09212012-02; Byron Power Company

Bill to:

Lexie Hinds
Quest GeoSystems Management
98 Daisyfield Drive
Livermore, CA 94551
lexiehinds@yahoo.com

Requested TAT:

5 days

Date Received: 12/19/2012

Date Printed: 12/19/2012

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1212525-001	MW.01-4	Soil	12/18/2012 14:55	<input type="checkbox"/>	A	A	A	A									
1212525-002	MW.01-8	Soil	12/18/2012 15:10	<input type="checkbox"/>	A	A	A										
1212525-003	MW.03-4	Soil	12/19/2012 13:40	<input type="checkbox"/>	A	A	A										
1212525-004	MW.03-8	Soil	12/19/2012 13:50	<input type="checkbox"/>	A	A	A										
1212525-005	MW.04-4	Soil	12/18/2012 9:25	<input type="checkbox"/>	A	A	A										
1212525-006	MW.04-8	Soil	12/18/2012 10:00	<input type="checkbox"/>	A	A	A										

Test Legend:

1	8260B_S	2	8270D_S	3	G-MBTEX_S	4	PREFD REPORT	5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A contain testgroup.

Prepared by: Zoraida Cortez

Comments:

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



Sample Receipt Checklist

Client Name: **Quest GeoSystems Management** Date and Time Received: **12/19/2012 6:15:40 PM**
 Project Name: **G09212012-02; Byron Power Company** LogIn Reviewed by: **Zoraida Cortez**
 WorkOrder N°: **1212525** Matrix: Soil Carrier: Client Drop-In

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No
 Container/Temp Blank temperature Cooler Temp: 3.3°C NA
 Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
 Sample labels checked for correct preservation? Yes No
 Metal - pH acceptable upon receipt (pH<2)? Yes No NA
 Samples Received on Ice? Yes No

(Ice Type: WET ICE)

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

 Comments:



Table with 3 columns: Client Information (Quest GeoSystems Management, 11275 Sunrise Gold Cir., Ste. R, Rancho Cordova, CA 95742), Project ID (G09212012-02; Byron Power Company), and Sampling Dates (Date Sampled: 12/18/12, Date Received: 12/19/12, Date Extracted: 12/19/12, Date Analyzed: 12/20/12).

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1212525

Summary table with 2 columns: Lab ID (1212525-001A), Client ID (MW.01-4), and Matrix (Soil).

Main data table with 8 columns: Compound, Concentration *, DF, Reporting Limit, Compound, Concentration *, DF, Reporting Limit. Lists various organic compounds and their detection results (ND).

Surrogate Recoveries (%)

Table showing surrogate recoveries: %SS1: 111, %SS2: 115, %SS3: 96.

Comments:

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.
ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor
surrogate diluted out of range or coelutes with another peak; (&) low surrogate due to matrix interference.



Table with 3 columns: Client Information (Quest GeoSystems Management, 11275 Sunrise Gold Cir., Ste. R, Rancho Cordova, CA 95742), Project ID (G09212012-02; Byron Power Company), and Sampling Dates (Date Sampled: 12/18/12, Date Received: 12/19/12, Date Extracted: 12/19/12, Date Analyzed: 12/20/12).

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1212525

Summary table with 2 columns: Lab ID (1212525-002A), Client ID (MW.01-8), and Matrix (Soil).

Main data table with 8 columns: Compound, Concentration *, DF, Reporting Limit, Compound, Concentration *, DF, Reporting Limit. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table showing surrogate recoveries: %SS1: 110, %SS2: 117, %SS3: 95.

Comments:

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.
ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor
surrogate diluted out of range or coelutes with another peak; (&) low surrogate due to matrix interference.



Table with 3 columns: Client Project ID: G09212012-02; Byron Power Company; Date Sampled: 12/19/12; Date Received: 12/19/12; Client Contact: Eric Garcia; Date Extracted: 12/19/12; Client P.O.; Date Analyzed: 12/20/12

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1212525

Table with 2 columns: Lab ID (1212525-003A), Client ID (MW.03-4), Matrix (Soil)

Main data table with 8 columns: Compound, Concentration *, DF, Reporting Limit, Compound, Concentration *, DF, Reporting Limit. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table with 2 columns: %SS1 (111), %SS2 (116), %SS3 (92)

Comments:

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.
ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor
surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.



Table with 3 columns: Client Project ID: G09212012-02; Byron Power Company; Date Sampled: 12/19/12; Date Received: 12/19/12; Client Contact: Eric Garcia; Date Extracted: 12/19/12; Client P.O.; Date Analyzed: 12/20/12

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1212525

Table with 2 columns: Lab ID (1212525-004A), Client ID (MW.03-8), Matrix (Soil)

Main data table with 8 columns: Compound, Concentration *, DF, Reporting Limit, Compound, Concentration *, DF, Reporting Limit. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table with 2 columns: %SS1 (109), %SS2 (115), %SS3 (93)

Comments:

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.



Table with 3 columns: Client Information (Quest GeoSystems Management, 11275 Sunrise Gold Cir., Ste. R, Rancho Cordova, CA 95742), Project ID (G09212012-02; Byron Power Company), and Sampling Dates (Date Sampled: 12/18/12, Date Received: 12/19/12, Date Extracted: 12/19/12, Date Analyzed: 12/20/12).

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1212525

Summary table with 2 columns: Lab ID (1212525-005A), Client ID (MW.04-4), and Matrix (Soil).

Main data table with 8 columns: Compound, Concentration *, DF, Reporting Limit, Compound, Concentration *, DF, Reporting Limit. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table showing surrogate recoveries: %SS1: 110, %SS2: 115, %SS3: 93.

Comments:

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.
ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor
surrogate diluted out of range or coelutes with another peak; (&) low surrogate due to matrix interference.



Quest GeoSystems Management 11275 Sunrise Gold Cir., Ste. R Rancho Cordova, CA 95742	Client Project ID: G09212012-02; Byron Power Company	Date Sampled: 12/18/12
	Client Contact: Eric Garcia	Date Received: 12/19/12
	Client P.O.:	Date Extracted: 12/19/12
		Date Analyzed: 12/20/12

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1212525

Lab ID	1212525-006A
Client ID	MW.04-8
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	tert-Amyl methyl ether (TAME)	ND	1.0	0.005
Benzene	ND	1.0	0.005	Bromobenzene	ND	1.0	0.005
Bromochloromethane	ND	1.0	0.005	Bromodichloromethane	ND	1.0	0.005
Bromoform	ND	1.0	0.005	Bromomethane	ND	1.0	0.005
2-Butanone (MEK)	ND	1.0	0.02	t-Butyl alcohol (TBA)	ND	1.0	0.05
n-Butyl benzene	ND	1.0	0.005	sec-Butyl benzene	ND	1.0	0.005
tert-Butyl benzene	ND	1.0	0.005	Carbon Disulfide	ND	1.0	0.005
Carbon Tetrachloride	ND	1.0	0.005	Chlorobenzene	ND	1.0	0.005
Chloroethane	ND	1.0	0.005	Chloroform	ND	1.0	0.005
Chloromethane	ND	1.0	0.005	2-Chlorotoluene	ND	1.0	0.005
4-Chlorotoluene	ND	1.0	0.005	Dibromochloromethane	ND	1.0	0.005
1,2-Dibromo-3-chloropropane	ND	1.0	0.004	1,2-Dibromoethane (EDB)	ND	1.0	0.004
Dibromomethane	ND	1.0	0.005	1,2-Dichlorobenzene	ND	1.0	0.005
1,3-Dichlorobenzene	ND	1.0	0.005	1,4-Dichlorobenzene	ND	1.0	0.005
Dichlorodifluoromethane	ND	1.0	0.005	1,1-Dichloroethane	ND	1.0	0.005
1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004	1,1-Dichloroethene	ND	1.0	0.005
cis-1,2-Dichloroethene	ND	1.0	0.005	trans-1,2-Dichloroethene	ND	1.0	0.005
1,2-Dichloropropane	ND	1.0	0.005	1,3-Dichloropropane	ND	1.0	0.005
2,2-Dichloropropane	ND	1.0	0.005	1,1-Dichloropropene	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Diisopropyl ether (DIPE)	ND	1.0	0.005	Ethylbenzene	ND	1.0	0.005
Ethyl tert-butyl ether (ETBE)	ND	1.0	0.005	Freon 113	ND	1.0	0.1
Hexachlorobutadiene	ND	1.0	0.005	Hexachloroethane	ND	1.0	0.005
2-Hexanone	ND	1.0	0.005	Isopropylbenzene	ND	1.0	0.005
4-Isopropyl toluene	ND	1.0	0.005	Methyl-t-butyl ether (MTBE)	ND	1.0	0.005
Methylene chloride	ND	1.0	0.005	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.005
Naphthalene	ND	1.0	0.005	n-Propyl benzene	ND	1.0	0.005
Styrene	ND	1.0	0.005	1,1,1,2-Tetrachloroethane	ND	1.0	0.005
1,1,2,2-Tetrachloroethane	ND	1.0	0.005	Tetrachloroethene	ND	1.0	0.005
Toluene	ND	1.0	0.005	1,2,3-Trichlorobenzene	ND	1.0	0.005
1,2,4-Trichlorobenzene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	1,2,3-Trichloropropane	ND	1.0	0.005
1,2,4-Trimethylbenzene	ND	1.0	0.005	1,3,5-Trimethylbenzene	ND	1.0	0.005
Vinyl Chloride	ND	1.0	0.005	Xylenes, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	109	%SS2:	115
%SS3:	92		

Comments:

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.



Table with client information: Quest GeoSystems Management, Client Project ID: G09212012-02; Byron Power Company, Date Sampled: 12/18/12-12/19/12, Date Received: 12/19/12, Client Contact: Eric Garcia, Date Extracted: 12/20/12, Rancho Cordova, CA 95742, Client P.O., Date Analyzed: 12/27/12

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B

Analytical Method: SW8270C

Work Order: 1212525

Table with Lab ID: 1212525-001A, Client ID: MW.01-4, Matrix: Soil

Main data table with columns: Compound, Concentration *, DF, MDL, RL, Compound, Concentration *, DF, MDL, RL. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table showing surrogate recoveries: %SS1: 103, %SS2: 96, %SS3: 80, %SS4: 76, %SS5: 48, %SS6: 80

Comments:

* water samples in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L.

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.



Table with client information: Quest GeoSystems Management, Client Project ID: G09212012-02; Byron Power Company, Date Sampled: 12/18/12-12/19/12, Date Received: 12/19/12, Client Contact: Eric Garcia, Date Extracted: 12/20/12, Rancho Cordova, CA 95742, Client P.O., Date Analyzed: 12/27/12

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B

Analytical Method: SW8270C

Work Order: 1212525

Table with Lab ID, Client ID, Matrix, and corresponding values: 1212525-002A, MW.01-8, Soil

Main data table with columns: Compound, Concentration *, DF, MDL, RL, Compound, Concentration *, DF, MDL, RL. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table showing surrogate recovery percentages: %SS1: 112, %SS2: 105, %SS3: 86, %SS4: 82, %SS5: 46, %SS6: 81

Comments:

* water samples in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L.

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.

Handwritten signature



Table with client information: Quest GeoSystems Management, Client Project ID: G09212012-02; Byron Power Company, Date Sampled: 12/18/12-12/19/12, Date Received: 12/19/12, Client Contact: Eric Garcia, Date Extracted: 12/20/12, Rancho Cordova, CA 95742, Client P.O., Date Analyzed: 12/27/12

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B

Analytical Method: SW8270C

Work Order: 1212525

Table with lab and client ID information: Lab ID 1212525-003A, Client ID MW.03-4, Matrix Soil

Main data table with columns: Compound, Concentration *, DF, MDL, RL, Compound, Concentration *, DF, MDL, RL. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table showing surrogate recoveries: %SS1: 98, %SS2: 92, %SS3: 77, %SS4: 74, %SS5: 49, %SS6: 73

Comments:

* water samples in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L.

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.



Table with client information: Quest GeoSystems Management, Client Project ID: G09212012-02; Byron Power Company, Date Sampled: 12/18/12-12/19/12, Date Received: 12/19/12, Client Contact: Eric Garcia, Date Extracted: 12/20/12, Rancho Cordova, CA 95742, Client P.O., Date Analyzed: 12/27/12

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B

Analytical Method: SW8270C

Work Order: 1212525

Table with Lab ID: 1212525-004A, Client ID: MW.03-8, Matrix: Soil

Main data table with columns: Compound, Concentration *, DF, MDL, RL, Compound, Concentration *, DF, MDL, RL. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table showing surrogate recoveries: %SS1: 104, %SS2: 96, %SS3: 82, %SS4: 81, %SS5: 49, %SS6: 81

Comments:

* water samples in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L.

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.



Table with client information: Quest GeoSystems Management, Client Project ID: G09212012-02; Byron Power Company, Date Sampled: 12/18/12-12/19/12, Date Received: 12/19/12, Client Contact: Eric Garcia, Date Extracted: 12/20/12, Rancho Cordova, CA 95742, Client P.O., Date Analyzed: 12/27/12

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B

Analytical Method: SW8270C

Work Order: 1212525

Table with Lab ID, Client ID, Matrix, and corresponding values: 1212525-005A, MW.04-4, Soil

Main data table with columns: Compound, Concentration *, DF, MDL, RL, Compound, Concentration *, DF, MDL, RL. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table showing surrogate recoveries: %SS1: 113, %SS2: 104, %SS3: 87, %SS4: 87, %SS5: 48, %SS6: 88

Comments:

* water samples in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L.

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.



Table with client information: Quest GeoSystems Management, Client Project ID: G09212012-02; Byron Power Company, Date Sampled: 12/18/12-12/19/12, Date Received: 12/19/12, Client Contact: Eric Garcia, Date Extracted: 12/20/12, Rancho Cordova, CA 95742, Client P.O., Date Analyzed: 12/27/12

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B

Analytical Method: SW8270C

Work Order: 1212525

Table with Lab ID, Client ID, Matrix, and sample ID 1212525-006A MW.04-8 Soil

Main data table with columns: Compound, Concentration *, DF, MDL, RL, Compound, Concentration *, DF, MDL, RL. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table showing surrogate recoveries: %SS1: 112, %SS2: 105, %SS3: 86, %SS4: 84, %SS5: 42, %SS6: 85

Comments:

* water samples in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L.

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quest GeoSystems Management 11275 Sunrise Gold Cir., Ste. R Rancho Cordova, CA 95742	Client Project ID: G09212012-02; Byron Power Company	Date Sampled: 12/18/12-12/19/12
	Client Contact: Eric Garcia	Date Received: 12/19/12
	Client P.O.:	Date Extracted: 12/19/12
		Date Analyzed: 12/21/12-12/26/12

Total Extractable Petroleum Hydrocarbons*

Extraction method: SW3550B

Analytical methods: SW8015B

Work Order: 1212525

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	TPH-Motor Oil (C18-C36)	DF	% SS	Comments
1212525-001A	MW.01-4	S	1.5	ND	1	107	e2
1212525-002A	MW.01-8	S	1.3	ND	1	122	e2
1212525-003A	MW.03-4	S	1.3	ND	1	102	e2
1212525-004A	MW.03-8	S	1.5	ND	1	123	e2
1212525-005A	MW.04-4	S	1.8	7.4	1	128	e7,e2
1212525-006A	MW.04-8	S	1.6	ND	1	121	e2

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	ug/L
	S	1.0	5.0	mg/Kg

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:
e2) diesel range compounds are significant; no recognizable pattern
e7) oil range compounds are significant



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 73304

WorkOrder: 1212525

EPA Method: SW8260B		Extraction: SW5030B					Spiked Sample ID: 1212413-004A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
tert-Amyl methyl ether (TAME)	ND	0.050	78.3	77	1.71	78.2	56 - 94	30	70 - 130	
Benzene	ND	0.050	84.7	82.5	2.67	86.4	60 - 106	30	70 - 130	
t-Butyl alcohol (TBA)	ND	0.20	98.9	95	3.96	88.6	56 - 140	30	70 - 130	
Chlorobenzene	ND	0.050	86.4	83.7	3.13	88	61 - 108	30	70 - 130	
1,2-Dibromoethane (EDB)	ND	0.050	93.5	90.3	3.50	94	54 - 119	30	70 - 130	
1,2-Dichloroethane (1,2-DCA)	ND	0.050	85.6	84.1	1.71	85.5	48 - 115	30	70 - 130	
1,1-Dichloroethene	ND	0.050	89	87.1	2.15	93.6	46 - 111	30	70 - 130	
Diisopropyl ether (DIPE)	ND	0.050	85.8	84.7	1.24	86.6	53 - 111	30	70 - 130	
Ethyl tert-butyl ether (ETBE)	ND	0.050	86.6	85.7	1.08	86.7	61 - 104	30	70 - 130	
Methyl-t-butyl ether (MTBE)	ND	0.050	89	87.7	1.45	89.5	58 - 107	30	70 - 130	
Toluene	ND	0.050	101	97.8	2.83	103	64 - 114	30	70 - 130	
Trichloroethene	ND	0.050	87.6	85.7	2.20	89.5	60 - 116	30	70 - 130	
%SS1:	96	0.12	96	98	1.65	97	70 - 130	30	70 - 130	
%SS2:	108	0.12	123	120	2.86	124	70 - 130	30	70 - 130	
%SS3:	93	0.012	115	112	2.71	114	70 - 130	30	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 73304 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212525-001A	12/18/12 2:55 PM	12/19/12	12/20/12 3:24 AM	1212525-002A	12/18/12 3:10 PM	12/19/12	12/20/12 4:06 AM
1212525-003A	12/19/12 1:40 PM	12/19/12	12/20/12 4:48 AM	1212525-004A	12/19/12 1:50 PM	12/19/12	12/20/12 5:30 AM
1212525-005A	12/18/12 9:25 AM	12/19/12	12/20/12 6:13 AM	1212525-006A	12/18/12 10:00 AM	12/19/12	12/20/12 6:55 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCS D = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS-Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2).$
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.
 Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 73396

WorkOrder: 1212525

EPA Method: SW8021B/8015Bm		Extraction: SW5030B					Spiked Sample ID: 1212490-003A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) [£]	ND	0.60	103	110	6.68	90.6	70 - 130	20	70 - 130	
MTBE	ND	0.10	88.4	93.3	5.43	79.8	70 - 130	20	70 - 130	
Benzene	ND	0.10	99.8	103	2.93	93.5	70 - 130	20	70 - 130	
Toluene	ND	0.10	100	103	3.33	93.1	70 - 130	20	70 - 130	
Ethylbenzene	ND	0.10	100	106	5.58	93.8	70 - 130	20	70 - 130	
Xylenes	ND	0.30	100	106	5.99	93.8	70 - 130	20	70 - 130	
%SS:	92	0.10	108	97	10.0	95	70 - 130	20	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 73396 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212525-001A	12/18/12 2:55 PM	12/19/12	12/20/12 7:34 AM	1212525-002A	12/18/12 3:10 PM	12/19/12	12/20/12 8:04 AM
1212525-003A	12/19/12 1:40 PM	12/19/12	12/20/12 8:33 AM	1212525-004A	12/19/12 1:50 PM	12/19/12	12/20/12 9:02 AM
1212525-005A	12/18/12 9:25 AM	12/19/12	12/20/12 6:51 PM	1212525-006A	12/18/12 10:00 AM	12/19/12	12/20/12 7:21 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS-Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2).$
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 £ TPH(btex) = sum of BTEX areas from the FID.
 # cluttered chromatogram; sample peak coelutes with surrogate peak.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



QC SUMMARY REPORT FOR SW8270C

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 73479

WorkOrder: 1212525

EPA Method: SW8270C		Extraction: SW3550B					Spiked Sample ID: 1212490-002A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
Acenaphthene	ND	5	72.4	74	2.24	60.9	30 - 130	30	30 - 130	
4-Chloro-3-methylphenol	ND	5	75.4	78.6	4.19	62.6	30 - 130	30	30 - 130	
2-Chlorophenol	ND	5	79.6	63.3	22.9	65.1	30 - 130	30	30 - 130	
1,4-Dichlorobenzene	ND	5	61.2	62.6	2.33	52.2	30 - 130	30	30 - 130	
2,4-Dinitrotoluene	ND	5	69	69.3	0.328	58.5	30 - 130	30	30 - 130	
4-Nitrophenol	ND	5	40.2	45.7	12.8	39.3	30 - 130	30	30 - 130	
N-Nitrosodi-n-propylamine	ND	5	63.5	48.3	27.1	52.8	30 - 130	30	30 - 130	
Pentachlorophenol	ND	5	40.1	38	5.42	40.4	30 - 130	30	30 - 130	
Phenol	ND	5	65.6	51.1	24.9	55.3	30 - 130	30	30 - 130	
Pyrene	ND	5	87	93.8	7.49	69.8	30 - 130	30	30 - 130	
1,2,4-Trichlorobenzene	ND	5	66.1	80.6	19.7	54.9	30 - 130	30	30 - 130	
%SS1:	87	5	95	89	5.88	77	30 - 130	30	30 - 130	
%SS2:	76	5	91	82	10.1	75	30 - 130	30	30 - 130	
%SS3:	81	5	80	80	0	65	30 - 130	30	30 - 130	
%SS4:	80	5	78	79	0.780	65	30 - 130	30	30 - 130	
%SS5:	42	5	59	60	1.88	50	30 - 130	30	30 - 130	
%SS6:	82	5	95	98	3.61	75	30 - 130	30	30 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 73479 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212525-001A	12/18/12 2:55 PM	12/20/12	12/27/12 5:13 PM	1212525-002A	12/18/12 3:10 PM	12/20/12	12/27/12 5:38 PM
1212525-003A	12/19/12 1:40 PM	12/20/12	12/27/12 6:04 PM	1212525-004A	12/19/12 1:50 PM	12/20/12	12/27/12 6:29 PM
1212525-005A	12/18/12 9:25 AM	12/20/12	12/27/12 6:55 PM	1212525-006A	12/18/12 10:00 AM	12/20/12	12/27/12 7:20 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS} - \text{Sample}) / (\text{Amount Spiked})$; $\text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2)$.
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = matrix interference and / or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix, sample diluted due to high matrix or analyte content, or MS/MSD samples diluted due to high organic content.
 #) surrogate diluted out of range; & = low or no recovery of surrogate or target analytes due to matrix interference.
 Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 73419

WorkOrder: 1212525

EPA Method: SW8015B		Extraction: SW3550B					Spiked Sample ID: 1212477-001A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH-Diesel (C10-C23)	1800	40	NR	NR	NR	99	N/A	N/A	70 - 130	
%SS:	95	25	NR	NR	NR	86	N/A	N/A	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 73419 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212525-001A	12/18/12 2:55 PM	12/19/12	12/22/12 5:33 PM	1212525-002A	12/18/12 3:10 PM	12/19/12	12/21/12 11:22 PM
1212525-003A	12/19/12 1:40 PM	12/19/12	12/22/12 9:36 AM	1212525-004A	12/19/12 1:50 PM	12/19/12	12/26/12 6:02 PM
1212525-005A	12/18/12 9:25 AM	12/19/12	12/21/12 7:58 PM	1212525-006A	12/18/12 10:00 AM	12/19/12	12/26/12 9:26 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS} - \text{Sample}) / (\text{Amount Spiked})$; $\text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2)$.
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



Analytical Report

Quest GeoSystems Management 11275 Sunrise Gold Cir., Ste. R Rancho Cordova, CA 95742	Client Project ID: #G09212012-01; Byron Power Company	Date Sampled: 12/21/12
		Date Received: 12/21/12
	Client Contact: Eric Garcia	Date Reported: 01/03/13
	Client P.O.:	Date Completed: 01/03/13

WorkOrder: 1212613

January 03, 2013

Dear Eric:

Enclosed within are:

- 1) The results of the **1** analyzed sample from your project: **#G09212012-01; Byron Power Company,**
- 2) QC data for the above sample, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
 Laboratory Manager
 McC Campbell Analytical, Inc.

The analytical results relate only to the items tested.



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1212613

ClientCode: QGSM

WaterTrax
 WriteOn
 EDF
 Excel
 EQuIS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Eric Garcia
 Quest GeoSystems Management
 11275 Sunrise Gold Cir., Ste. R
 Rancho Cordova, CA 95742
 (925) 756-1210 FAX: (925) 756-1227

Email: eric.garcia@questgsm.com
 cc:
 PO:
 ProjectNo: #G09212012-01; Byron Power Company

Bill to:

Lexie Hinds
 Quest GeoSystems Management
 98 Daisyfield Drive
 Livermore, CA 94551
 lexiehinds@yahoo.com

Requested TAT:

5 days

Date Received: **12/21/2012**

Date Printed: **12/21/2012**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1212613-001	MW.02-8	Soil	12/21/2012 11:20	<input type="checkbox"/>	A	A	A	A									

Test Legend:

1	8260B_S	2	8270D_S	3	G-MBTEX_S	4	PREFD REPORT	5	
6		7		8		9		10	
11		12							

The following SamplID: 001A contains testgroup.

Prepared by: Maria Venegas

Comments:

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



Sample Receipt Checklist

Client Name: **Quest GeoSystems Management** Date and Time Received: **12/21/2012 6:13:22 PM**
 Project Name: **#G09212012-01; Byron Power Company** LogIn Reviewed by: **Maria Venegas**
 WorkOrder N°: **1212613** Matrix: Soil Carrier: Client Drop-In

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No
 Container/Temp Blank temperature Cooler Temp: 1.2°C NA
 Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
 Sample labels checked for correct preservation? Yes No
 Metal - pH acceptable upon receipt (pH<2)? Yes No NA
 Samples Received on Ice? Yes No

(Ice Type: WET ICE)

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

 Comments:



Quest GeoSystems Management 11275 Sunrise Gold Cir., Ste. R Rancho Cordova, CA 95742	Client Project ID: #G09212012-01; Byron Power Company	Date Sampled: 12/21/12
	Client Contact: Eric Garcia	Date Received: 12/21/12
	Client P.O.:	Date Extracted: 12/21/12
		Date Analyzed: 12/27/12

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1212613

Lab ID	1212613-001A
Client ID	MW.02-8
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	tert-Amyl methyl ether (TAME)	ND	1.0	0.005
Benzene	ND	1.0	0.005	Bromobenzene	ND	1.0	0.005
Bromochloromethane	ND	1.0	0.005	Bromodichloromethane	ND	1.0	0.005
Bromoform	ND	1.0	0.005	Bromomethane	ND	1.0	0.005
2-Butanone (MEK)	ND	1.0	0.02	t-Butyl alcohol (TBA)	ND	1.0	0.05
n-Butyl benzene	ND	1.0	0.005	sec-Butyl benzene	ND	1.0	0.005
tert-Butyl benzene	ND	1.0	0.005	Carbon Disulfide	ND	1.0	0.005
Carbon Tetrachloride	ND	1.0	0.005	Chlorobenzene	ND	1.0	0.005
Chloroethane	ND	1.0	0.005	Chloroform	ND	1.0	0.005
Chloromethane	ND	1.0	0.005	2-Chlorotoluene	ND	1.0	0.005
4-Chlorotoluene	ND	1.0	0.005	Dibromochloromethane	ND	1.0	0.005
1,2-Dibromo-3-chloropropane	ND	1.0	0.004	1,2-Dibromoethane (EDB)	ND	1.0	0.004
Dibromomethane	ND	1.0	0.005	1,2-Dichlorobenzene	ND	1.0	0.005
1,3-Dichlorobenzene	ND	1.0	0.005	1,4-Dichlorobenzene	ND	1.0	0.005
Dichlorodifluoromethane	ND	1.0	0.005	1,1-Dichloroethane	ND	1.0	0.005
1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004	1,1-Dichloroethene	ND	1.0	0.005
cis-1,2-Dichloroethene	ND	1.0	0.005	trans-1,2-Dichloroethene	ND	1.0	0.005
1,2-Dichloropropane	ND	1.0	0.005	1,3-Dichloropropane	ND	1.0	0.005
2,2-Dichloropropane	ND	1.0	0.005	1,1-Dichloropropene	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Diisopropyl ether (DIPE)	ND	1.0	0.005	Ethylbenzene	ND	1.0	0.005
Ethyl tert-butyl ether (ETBE)	ND	1.0	0.005	Freon 113	ND	1.0	0.1
Hexachlorobutadiene	ND	1.0	0.005	Hexachloroethane	ND	1.0	0.005
2-Hexanone	ND	1.0	0.005	Isopropylbenzene	ND	1.0	0.005
4-Isopropyl toluene	ND	1.0	0.005	Methyl-t-butyl ether (MTBE)	ND	1.0	0.005
Methylene chloride	ND	1.0	0.005	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.005
Naphthalene	ND	1.0	0.005	n-Propyl benzene	ND	1.0	0.005
Styrene	ND	1.0	0.005	1,1,1,2-Tetrachloroethane	ND	1.0	0.005
1,1,2,2-Tetrachloroethane	ND	1.0	0.005	Tetrachloroethene	ND	1.0	0.005
Toluene	ND	1.0	0.005	1,2,3-Trichlorobenzene	ND	1.0	0.005
1,2,4-Trichlorobenzene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	1,2,3-Trichloropropane	ND	1.0	0.005
1,2,4-Trimethylbenzene	ND	1.0	0.005	1,3,5-Trimethylbenzene	ND	1.0	0.005
Vinyl Chloride	ND	1.0	0.005	Xylenes, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	101	%SS2:	107
%SS3:	106		

Comments:

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or coelutes with another peak; (&) low surrogate due to matrix interference.



Table with client information: Quest GeoSystems Management, Client Project ID: #G09212012-01; Byron Power Company, Date Sampled: 12/21/12, Date Received: 12/21/12, Date Extracted: 12/28/12, Date Analyzed: 12/28/12.

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B

Analytical Method: SW8270C

Work Order: 1212613

Table with Lab ID, Client ID, Matrix, and sample ID 1212613-001A MW.02-8 Soil.

Main data table with columns: Compound, Concentration *, DF, MDL, RL, Compound, Concentration *, DF, MDL, RL. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table showing surrogate recoveries: %SS1: 107, %SS2: 96, %SS3: 77, %SS4: 87, %SS5: 79, %SS6: 82.

Comments:

* water samples in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPL extracts are reported in mg/L.

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or surrogate coelutes with another peak.



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 73521

WorkOrder: 1212613

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	ND	0.050	86.7	91	4.83	80.9	56 - 94	30	70 - 130
Benzene	ND	0.050	83.3	90.1	7.73	79.5	60 - 106	30	70 - 130
t-Butyl alcohol (TBA)	ND	0.20	86.7	93	6.80	111	56 - 140	30	70 - 130
Chlorobenzene	ND	0.050	82.3	86.3	4.72	85.8	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	85	88.2	3.61	96.9	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	82.6	88.2	6.55	78.1	48 - 115	30	70 - 130
1,1-Dichloroethene	ND	0.050	69	85.2	21.0	73.5	46 - 111	30	70 - 130
Diisopropyl ether (DIPE)	ND	0.050	80.3	85.7	6.55	79.4	53 - 111	30	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	0.050	82.6	86.6	4.78	82	61 - 104	30	70 - 130
Methyl-t-butyl ether (MTBE)	ND	0.050	86.9	91.9	5.58	86.2	58 - 107	30	70 - 130
Toluene	ND	0.050	84.1	89.1	5.74	85.7	64 - 114	30	70 - 130
Trichloroethene	ND	0.050	95.8	99	3.26	93.9	60 - 116	30	70 - 130
%SS1:	103	0.12	105	105	0	105	70 - 130	30	70 - 130
%SS2:	107	0.12	107	107	0	106	70 - 130	30	70 - 130
%SS3:	106	0.012	103	107	3.33	103	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 73521 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212613-001A	12/21/12 11:20 AM	12/21/12	12/27/12 7:47 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS-Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2).$
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.
 Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



QC SUMMARY REPORT FOR SW8270C

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 73615

WorkOrder: 1212613

Analyte	EPA Method: SW8270C		Extraction: SW3550B				Spiked Sample ID: 1212612-009A			
	Sample mg/Kg	Spiked mg/Kg	MS % Rec.	MSD % Rec.	MS-MSD % RPD	LCS % Rec.	Acceptance Criteria (%)			
							MS / MSD	RPD	LCS	
Acenaphthene	ND	5	105	109	4.03	86.4	30 - 130	30	30 - 130	
4-Chloro-3-methylphenol	ND	5	101	117	14.3	75.2	30 - 130	30	30 - 130	
2-Chlorophenol	ND	5	95.8	114	17.3	74.8	30 - 130	30	30 - 130	
1,4-Dichlorobenzene	ND	5	73	74.3	1.79	72.3	30 - 130	30	30 - 130	
2,4-Dinitrotoluene	ND	5	90.5	107	15.9	76.4	30 - 130	30	30 - 130	
4-Nitrophenol	ND	5	63.8	73.3	13.8	50.3	30 - 130	30	30 - 130	
N-Nitrosodi-n-propylamine	ND	5	78.9	93.3	16.6	61.2	30 - 130	30	30 - 130	
Pentachlorophenol	ND	5	77.9	76.8	1.39	39.6	30 - 130	30	30 - 130	
Phenol	ND	5	79.7	97.2	19.9	63.6	30 - 130	30	30 - 130	
Pyrene	ND	5	99.4	101	1.84	84.6	30 - 130	30	30 - 130	
1,2,4-Trichlorobenzene	ND	5	89	89.2	0.213	81.9	30 - 130	30	30 - 130	
%SS1:	110	5	110	129	15.3	88	30 - 130	30	30 - 130	
%SS2:	99	5	106	128	18.5	79	30 - 130	30	30 - 130	
%SS3:	87	5	100	105	4.56	88	30 - 130	30	30 - 130	
%SS4:	90	5	106	105	0.489	92	30 - 130	30	30 - 130	
%SS5:	82	5	104	105	0.977	79	30 - 130	30	30 - 130	
%SS6:	93	5	99	101	1.21	85	30 - 130	30	30 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 73615 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212613-001A	12/21/12 11:20 AM	12/28/12	12/28/12 7:16 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS-Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2).$
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = matrix interference and / or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix, sample diluted due to high matrix or analyte content, or MS/MSD samples diluted due to high organic content.
 #) surrogate diluted out of range; & = low or no recovery of surrogate or target analytes due to matrix interference.
 Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 73523

WorkOrder: 1212613

EPA Method: SW8021B/8015Bm		Extraction: SW5030B					Spiked Sample ID: 1212613-001A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) £	ND	0.60	110	97.5	12.1	102	70 - 130	20	70 - 130	
MTBE	ND	0.10	108	103	5.46	105	70 - 130	20	70 - 130	
Benzene	ND	0.10	103	100	3.24	100	70 - 130	20	70 - 130	
Toluene	ND	0.10	101	98	3.06	98.6	70 - 130	20	70 - 130	
Ethylbenzene	ND	0.10	103	98.4	4.27	101	70 - 130	20	70 - 130	
Xylenes	ND	0.30	104	99.5	4.82	102	70 - 130	20	70 - 130	
%SS:	101	0.10	90	86	4.21	92	70 - 130	20	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 73523 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212613-001A	12/21/12 11:20 AM	12/21/12	12/27/12 1:36 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 % Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 £ TPH(btex) = sum of BTEX areas from the FID.
 # cluttered chromatogram; sample peak coelutes with surrogate peak.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 73522

WorkOrder: 1212613

EPA Method: SW8015B		Extraction: SW3550B					Spiked Sample ID: 1212613-001A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH-Diesel (C10-C23)	2.3	40	115	118	1.99	104	70 - 130	30	70 - 130	
%SS:	109	25	103	104	0.983	90	70 - 130	30	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 73522 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212613-001A	12/21/12 11:20 AM	12/21/12	12/26/12 8:18 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS-Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2).$
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



Analytical Report

Quest GeoSystems Management 11275 Sunrise Gold Cir., Ste. R Rancho Cordova, CA 95742	Client Project ID: G09212012-02; Byron Power Company	Date Sampled: 12/28/12
		Date Received: 12/28/12
	Client Contact: Eric Garcia	Date Reported: 01/08/13
	Client P.O.:	Date Completed: 01/08/13

WorkOrder: 1212722

January 08, 2013

Dear Eric:

Enclosed within are:

- 1) The results of the **5** analyzed samples from your project: **G09212012-02; Byron Power Company,**
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
 Laboratory Manager
 McC Campbell Analytical, Inc.

The analytical results relate only to the items tested.

1212722



QUEST GEOSYSTEMS MANAGEMENT
 11275 Sunrise Gold Circle, Suite R,
 Rancho Cordova, California 95742

Project Name: *Byron Power Company*
 Project Number: *G09212012-02*
 Project Location: *4901 Bruns Road
 Byron, California*
 Sampler Signature: *Robert L. Nelson*

PROJECT REPORTING
 Company: *Quest GeoSystems Management, Inc.*
 Attention: *Mr. Eric W. Garcia* Phone: *(925) 756-1210*
 Fax: *(925) 756-1227*
 Address: *11275 Sunrise Gold Cir, Suite R, Rancho Cordova, CA 95742*
 Email: *ericgarcia@questgsm.com*

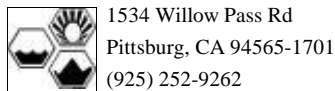
PROJECT BILLING
 Company: *Quest GeoSystems Management, Inc.*
 Attention: *Mr. Eric W. Garcia* Phone: *(925) 756-1210*
 Fax: *(925) 756-1227*
 Address: *11275 Sunrise Gold Cir, Suite R, Rancho Cordova, CA 95742*
 Email: *ericgarcia@questgsm.com*

CHAIN OF CUSTODY RECORD
 TURN AROUND TIME: RUSH 24 HOUR 48 HOUR 5 DAY OTHER:
 EDF Required? YES NO

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# of Containers	Type of Containers	MATRIX					PRESERVATION METHOD				TPH-MR - 8015	VOC's - 8260B	SVOC's - 8270	TPH-G/MBTEX - 8015M/8021	ANALYSIS REQUEST	COMMENTS
		Date	Time			Water	soil	Air	Sludge	Other	Ice	HCl	HNO3	Other						
MW.01	MW.01	12/28/12	1325			X					X	X			X	X	X			
MW.02	MW.02	12/28/12	1230			X					X	X			X	X	X			
MW.03	MW.03	12/28/12	1350			X					X	X			X	X	X			
TRIP	---	---	---	2	VOA	X					X	X						X		
MW.04	MW.04		1110			X					X	X			X	X	X			

Relinquished By: *Robert L. Nelson* Date: *12/28* Time: *1806*
 Received By: *[Signature]*
 Relinquished By: _____ Date: _____ Time: _____
 Received By: _____

Remarks: *3.6*
 GOOD CONDITION _____ APPROPRIATE CONTAINERS _____
 HEAD SPACE ABSENT _____ PRESERVED IN LAB _____
 DECHLORINATED IN LAB _____
 PRESERVATION: VOAS _____ O&G _____ METALS _____ OTHER _____



CHAIN-OF-CUSTODY RECORD

WorkOrder: 1212722

ClientCode: QGSM

WaterTrax
 WriteOn
 EDF
 Excel
 EQUIS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:
 Eric Garcia
 Quest GeoSystems Management
 11275 Sunrise Gold Cir., Ste. R
 Rancho Cordova, CA 95742
 (925) 756-1210 FAX: (925) 756-1227

Email: eric.garcia@questgsm.com
 cc:
 PO:
 ProjectNo: G09212012-02; Byron Power Company

Bill to:
 Lexie Hinds
 Quest GeoSystems Management
 98 Daisyfield Drive
 Livermore, CA 94551
 lexiehinds@yahoo.com

Requested TAT: 5 days

Date Received: 12/28/2012

Date Printed: 12/28/2012

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1212722-001	MW.01	Water	12/28/2012 13:25	<input type="checkbox"/>	B	C	A	B									
1212722-002	MW.02	Water	12/28/2012 12:30	<input type="checkbox"/>	B	C	A										
1212722-003	MW.03	Water	12/28/2012 13:50	<input type="checkbox"/>	B	C	A										
1212722-005	MW.04	Water	12/28/2012 11:10	<input type="checkbox"/>	B	C	A										

Test Legend:

1	8260B_W	2	8270D_W	3	G-MBTX_W	4	PREDF REPORT	5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A, 003A, 005A contain testgroup.

Prepared by: Zoraida Cortez

Comments:

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



Sample Receipt Checklist

Client Name: **Quest GeoSystems Management** Date and Time Received: **12/28/2012 9:59:50 PM**
 Project Name: **G09212012-02; Byron Power Company** Login Reviewed by: **Zoraida Cortez**
 WorkOrder N°: **1212722** Matrix: Water Carrier: Client Drop-In

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No
 Container/Temp Blank temperature Cooler Temp: 3.6°C NA
 Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
 Sample labels checked for correct preservation? Yes No
 Metal - pH acceptable upon receipt (pH<2)? Yes No NA
 Samples Received on Ice? Yes No

(Ice Type: WET ICE)

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

 Comments:



Table with 3 columns: Client Project ID: G09212012-02; Byron Power Company; Date Sampled: 12/28/12; Date Received: 12/28/12; Client Contact: Eric Garcia; Date Extracted: 01/04/13; Client P.O.; Date Analyzed: 01/04/13

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1212722

Table with 2 columns: Lab ID (1212722-001B), Client ID (MW.01), Matrix (Water)

Main data table with 8 columns: Compound, Concentration *, DF, Reporting Limit, Compound, Concentration *, DF, Reporting Limit. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table with 2 columns: %SS1 (98), %SS2 (101), %SS3 (74)

Comments:

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.
ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor
surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.
b1) aqueous sample that contains greater than ~1 vol. % sediment



Quest GeoSystems Management
11275 Sunrise Gold Cir., Ste. R
Rancho Cordova, CA 95742

Client Project ID: G09212012-02;
Byron Power Company
Client Contact: Eric Garcia
Client P.O.:

Date Sampled: 12/28/12
Date Received: 12/28/12
Date Extracted: 01/04/13
Date Analyzed: 01/04/13

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1212722

Table with 2 columns: Lab ID (1212722-002B), Client ID (MW.02), Matrix (Water)

Main data table with 8 columns: Compound, Concentration *, DF, Reporting Limit, Compound, Concentration *, DF, Reporting Limit. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table showing surrogate recoveries: %SS1: 99, %SS2: 98, %SS3: 76

Comments: b1

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

b1) aqueous sample that contains greater than ~1 vol. % sediment



Quest GeoSystems Management
11275 Sunrise Gold Cir., Ste. R
Rancho Cordova, CA 95742

Client Project ID: G09212012-02;
Byron Power Company
Client Contact: Eric Garcia
Client P.O.:

Date Sampled: 12/28/12
Date Received: 12/28/12
Date Extracted: 01/04/13
Date Analyzed: 01/04/13

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1212722

Table with 2 columns: Lab ID (1212722-003B), Client ID (MW.03), Matrix (Water)

Main data table with 8 columns: Compound, Concentration *, DF, Reporting Limit, Compound, Concentration *, DF, Reporting Limit. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table showing surrogate recoveries: %SS1: 98, %SS2: 98, %SS3: 75

Comments: b1

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

b1) aqueous sample that contains greater than ~1 vol. % sediment



Quest GeoSystems Management
11275 Sunrise Gold Cir., Ste. R
Rancho Cordova, CA 95742

Client Project ID: G09212012-02;
Byron Power Company
Client Contact: Eric Garcia
Client P.O.:

Date Sampled: 12/28/12
Date Received: 12/28/12
Date Extracted: 01/04/13
Date Analyzed: 01/04/13

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1212722

Table with 2 columns: Lab ID (1212722-005B), Client ID (MW.04), Matrix (Water)

Main data table with 8 columns: Compound, Concentration *, DF, Reporting Limit, Compound, Concentration *, DF, Reporting Limit. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table showing surrogate recoveries: %SS1: 94, %SS2: 96, %SS3: 75

Comments: b1

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

b1) aqueous sample that contains greater than ~1 vol. % sediment



Table with 3 columns: Quest GeoSystems Management (11275 Sunrise Gold Cir., Ste. R, Rancho Cordova, CA 95742), Client Project ID: G09212012-02; Byron Power Company, Date Sampled: 12/28/12, Date Received: 12/28/12, Client Contact: Eric Garcia, Date Extracted: 01/03/13, Client P.O., Date Analyzed: 01/07/13

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3510C

Analytical Method: SW8270C

Work Order: 1212722

Table with 2 columns: Lab ID (1212722-001C), Client ID (MW.01), Matrix (Water)

Main data table with 10 columns: Compound, Conc. *, DF, MDL, RL, Compound, Conc. *, DF, MDL, RL. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table with 2 columns: Surrogate (e.g., %SS1, %SS2, %SS3, %SS4, %SS5, %SS6) and Recovery Percentage (e.g., 53, 38, 74, 86, 75, 85)

Comments:

* water samples are reported in µg/L; reporting limit may change due to variable water sample volume.
ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor; #) surrogate diluted out of range or surrogate coelutes with another peak.

J) analyte detected below quantitation limits
b1) aqueous sample that contains greater than ~1 vol. % sediment



Table with client information: Quest GeoSystems Management, Client Project ID: G09212012-02; Byron Power Company, Date Sampled: 12/28/12, Date Received: 12/28/12, Client Contact: Eric Garcia, Date Extracted: 01/03/13, Client P.O., Date Analyzed: 01/07/13

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3510C

Analytical Method: SW8270C

Work Order: 1212722

Table with Lab ID: 1212722-002C, Client ID: MW.02, Matrix: Water

Main data table with columns: Compound, Conc. *, DF, MDL, RL, Compound, Conc. *, DF, MDL, RL. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table showing surrogate recoveries: %SS1: 26, %SS2: 19, %SS3: 56, %SS4: 69, %SS5: 47, %SS6: 75

Comments: b1

* water samples are reported in µg/L; reporting limit may change due to variable water sample volume.

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor; #) surrogate diluted out of range or surrogate coelutes with another peak.

J) analyte detected below quantitation limits

b1) aqueous sample that contains greater than ~1 vol. % sediment



Table with 3 columns: Quest GeoSystems Management (11275 Sunrise Gold Cir., Ste. R, Rancho Cordova, CA 95742), Client Project ID: G09212012-02; Byron Power Company, Date Sampled: 12/28/12, Date Received: 12/28/12, Client Contact: Eric Garcia, Date Extracted: 01/03/13, Client P.O., Date Analyzed: 01/07/13

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3510C

Analytical Method: SW8270C

Work Order: 1212722

Table with 2 columns: Lab ID (1212722-003C), Client ID (MW.03), Matrix (Water)

Main data table with 10 columns: Compound, Conc. *, DF, MDL, RL, Compound, Conc. *, DF, MDL, RL. Lists various organic compounds and their detection levels.

Surrogate Recoveries (%)

Table with 2 columns: %SS1-5 and %SS2-6, showing recovery percentages for different surrogate standards.

Comments: b1

* water samples are reported in µg/L; reporting limit may change due to variable water sample volume.

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor; #) surrogate diluted out of range or surrogate coelutes with another peak.

J) analyte detected below quantitation limits

b1) aqueous sample that contains greater than ~1 vol. % sediment



Table with 3 columns: Quest GeoSystems Management (11275 Sunrise Gold Cir., Ste. R, Rancho Cordova, CA 95742), Client Project ID: G09212012-02; Byron Power Company, Date Sampled: 12/28/12, Date Received: 12/28/12, Client Contact: Eric Garcia, Date Extracted: 01/03/13, Client P.O., Date Analyzed: 01/07/13

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3510C

Analytical Method: SW8270C

Work Order: 1212722

Table with 2 columns: Lab ID (1212722-005C), Client ID (MW.04), Matrix (Water)

Main data table with 10 columns: Compound, Conc. *, DF, MDL, RL, Compound, Conc. *, DF, MDL, RL. Lists various organic compounds and their detection results.

Surrogate Recoveries (%)

Table with 2 columns: %SS1-5 and %SS2-6, showing recovery percentages for different surrogate standards.

Comments: b1

* water samples are reported in µg/L; reporting limit may change due to variable water sample volume.

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor; #) surrogate diluted out of range or surrogate coelutes with another peak.

J) analyte detected below quantitation limits

b1) aqueous sample that contains greater than ~1 vol. % sediment



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Quest GeoSystems Management 11275 Sunrise Gold Cir., Ste. R Rancho Cordova, CA 95742	Client Project ID: G09212012-02; Byron Power Company	Date Sampled: 12/28/12
	Client Contact: Eric Garcia	Date Received: 12/28/12
	Client P.O.:	Date Extracted: 12/28/12
		Date Analyzed: 01/03/13-01/05/13

Total Extractable Petroleum Hydrocarbons*

Extraction method: SW3510C

Analytical methods: SW8015B

Work Order: 1212722

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	TPH-Motor Oil (C18-C36)	DF	% SS	Comments
1212722-001A	MW.01	W	27,J	ND	1	96	
1212722-002A	MW.02	W	41,J	ND	1	98	b1
1212722-003A	MW.03	W	120	ND	1	103	e2,b1
1212722-005A	MW.04	W	56	ND	1	115	e2,b1

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	250	µg/L
	S	NA	NA	mg/Kg

* water samples are reported in µg/L, filter samples in µg/filter, µg/wipe in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:
 J) analyte detected below quantitation limits
 b1) aqueous sample that contains greater than ~1 vol. % sediment
 e2) diesel range compounds are significant; no recognizable pattern



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 73691

WorkOrder: 1212722

EPA Method: SW8021B/8015Bm		Extraction: SW5030B					Spiked Sample ID: 1212713-005A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) £	ND	60	103	96.8	5.75	115	70 - 130	20	70 - 130	
MTBE	ND	10	84.6	82.3	2.82	77.9	70 - 130	20	70 - 130	
Benzene	ND	10	94.1	94.5	0.431	110	70 - 130	20	70 - 130	
Toluene	ND	10	94.3	94.8	0.541	111	70 - 130	20	70 - 130	
Ethylbenzene	ND	10	93.5	94.4	0.966	111	70 - 130	20	70 - 130	
Xylenes	ND	30	92.1	93.5	1.49	112	70 - 130	20	70 - 130	
%SS:	99	10	97	104	7.08	105	70 - 130	20	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 73691 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212722-001A	12/28/12 1:25 PM	01/03/13	01/03/13 10:42 PM	1212722-002A	12/28/12 12:30 PM	01/03/13	01/03/13 3:52 AM
1212722-003A	12/28/12 1:50 PM	01/03/13	01/03/13 11:11 PM	1212722-004A	12/28/12	01/03/13	01/03/13 9:13 PM
1212722-005A	12/28/12 11:10 AM	01/03/13	01/03/13 5:20 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 % Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 £ TPH(btex) = sum of BTEX areas from the FID.
 # cluttered chromatogram; sample peak coelutes with surrogate peak.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 73724

WorkOrder: 1212722

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	ND	10	83.6	82.8	0.973	89.7	70 - 130	20	70 - 130
Benzene	ND	10	87.2	87.6	0.465	100	70 - 130	20	70 - 130
t-Butyl alcohol (TBA)	ND	40	82.8	78.2	5.74	83.1	70 - 130	20	70 - 130
Chlorobenzene	ND	10	91.1	90.3	0.871	95.4	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	95.4	89.4	6.51	92	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	82.6	83.7	1.24	89.6	70 - 130	20	70 - 130
1,1-Dichloroethene	ND	10	91.3	93.3	2.23	103	70 - 130	20	70 - 130
Diisopropyl ether (DIPE)	ND	10	83.8	83.9	0.0333	93	70 - 130	20	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	85.7	85.5	0.228	92.8	70 - 130	20	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	87.7	87.1	0.762	91.7	70 - 130	20	70 - 130
Toluene	ND	10	85.5	86.7	1.38	90.6	70 - 130	20	70 - 130
Trichloroethene	ND	10	91.9	92.2	0.326	104	70 - 130	20	70 - 130
%SS1:	96	25	98	100	2.23	107	70 - 130	20	70 - 130
%SS2:	100	25	95	97	2.48	96	70 - 130	20	70 - 130
%SS3:	79	2.5	74	75	2.16	72	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 73724 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212722-001B	12/28/12 1:25 PM	01/04/13	01/04/13 3:58 AM	1212722-002B	12/28/12 12:30 PM	01/04/13	01/04/13 4:40 AM
1212722-003B	12/28/12 1:50 PM	01/04/13	01/04/13 6:16 PM	1212722-005B	12/28/12 11:10 AM	01/04/13	01/04/13 6:57 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 % Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.
 # surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.
 Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 73609

WorkOrder: 1212722

EPA Method: SW8015B		Extraction: SW3510C					Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	108	N/A	N/A	70 - 130	
%SS:	N/A	625	N/A	N/A	N/A	99	N/A	N/A	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 73609 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212722-001A	12/28/12 1:25 PM	12/28/12	01/03/13 5:15 PM	1212722-002A	12/28/12 12:30 PM	12/28/12	01/03/13 10:02 PM
1212722-003A	12/28/12 1:50 PM	12/28/12	01/03/13 2:29 PM	1212722-005A	12/28/12 11:10 AM	12/28/12	01/05/13 10:39 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% Recovery = 100 * (MS - Sample) / (Amount Spiked)$; $RPD = 100 * (MS - MSD) / ((MS + MSD) / 2)$.
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



QC SUMMARY REPORT FOR SW8270C

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 73679

WorkOrder: 1212722

EPA Method: SW8270C		Extraction: SW3510C					Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
Acenaphthene	N/A	20	N/A	N/A	N/A	63.1	N/A	N/A	47 - 145	
4-Chloro-3-methylphenol	N/A	20	N/A	N/A	N/A	58.5	N/A	N/A	22 - 147	
2-Chlorophenol	N/A	20	N/A	N/A	N/A	60.6	N/A	N/A	23 - 134	
1,4-Dichlorobenzene	N/A	20	N/A	N/A	N/A	62.8	N/A	N/A	20 - 124	
2,4-Dinitrotoluene	N/A	20	N/A	N/A	N/A	54	N/A	N/A	39 - 139	
4-Nitrophenol	N/A	100	N/A	N/A	N/A	12.8	N/A	N/A	0 - 132	
N-Nitrosodi-n-propylamine	N/A	20	N/A	N/A	N/A	62.4	N/A	N/A	0 - 230	
Pentachlorophenol	N/A	40	N/A	N/A	N/A	55.9	N/A	N/A	14 - 176	
Phenol	N/A	20	N/A	N/A	N/A	22.1	N/A	N/A	5 - 112	
Pyrene	N/A	20	N/A	N/A	N/A	65.1	N/A	N/A	52 - 115	
1,2,4-Trichlorobenzene	N/A	20	N/A	N/A	N/A	64.8	N/A	N/A	44 - 142	
%SS1:	N/A	20	N/A	N/A	N/A	45	N/A	N/A	1 - 134	
%SS2:	N/A	20	N/A	N/A	N/A	28	N/A	N/A	1 - 112	
%SS3:	N/A	20	N/A	N/A	N/A	74	N/A	N/A	1 - 180	
%SS4:	N/A	20	N/A	N/A	N/A	74	N/A	N/A	1 - 130	
%SS5:	N/A	20	N/A	N/A	N/A	71	N/A	N/A	1 - 144	
%SS6:	N/A	20	N/A	N/A	N/A	67	N/A	N/A	1 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 73679 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1212722-001C	12/28/12 1:25 PM	01/03/13	01/07/13 1:49 PM	1212722-002C	12/28/12 12:30 PM	01/03/13	01/07/13 7:30 PM
1212722-003C	12/28/12 1:50 PM	01/03/13	01/07/13 7:58 PM	1212722-005C	12/28/12 11:10 AM	01/03/13	01/07/13 1:21 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS} - \text{Sample}) / (\text{Amount Spiked})$; $\text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2)$.
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.
 Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.