DOCKETED	
Docket Number:	99-AFC-08C
Project Title:	Blythe Energy Project Compliance & Blythe Transmission Line Modification
TN #:	231040
Document Title:	Blythe Energy Project - 2018 Annual Compliance Report - Part 1
Description:	Part 1 of Blythe Energy Project's 2018 Annual Compliance Report
Filer:	Mary Dyas
Organization:	California Energy Commission
Submitter Role:	Energy Commission
Submission Date:	12/10/2019 10:37:03 AM
Docketed Date:	12/10/2019

Blythe Energy Inc.

Ramon Campos
Blythe Energy Inc.
385 North Buck Blvd
Blythe, California 92225
760.921.1364
Ramon.campos@altagas.ca

July 23, 2019

Ms. Mary Dyas
Compliance Project Manager
1516 9th Street, MS 2000
Sacramento, CA 95814
Mary.Dyas@energy.ca.gov

Subject: Annual Compliance Report Year 2018/2019
BE-GEN-07112010

Dear Ms. Dyas:

Pursuant to the Commission Decision for the Blythe Energy Inc., enclosed please find the Annual Compliance Report for the reporting period July 1, 2018 through June 30, 2019.

EXECUTIVE SUMMARY

The Blythe Energy Inc. facility (the Facility) began commercial operation December 29, 2003. For this reporting period, the Facility operated 6,002 hours on Unit 11 and 7,053 hours on Unit 12 from July 1, 2018 through June 30, 2019, with an availability factor of 74.97%.

OPERATIONS SUMMARY INFORMATION

MONTHLY NET PRODUCTION

Month		Net Production (MWh)	
Jul-18		284,421	
Aug-18		286,431	
Sep-18		291,529	
Oct-18		229,439	
Nov-18		272,098	
Dec-18		239,322	
Jan-19		160,029	
Feb-19		17,996	
Mar-19		0	
Apr-19		2,777	
May-19		144,406	
Jun-19		140,467	

MODIFICATIONS AND TESTING

The Facility completed its Major Maintenance Outage Overhaul February 4 through May 3, 2019. Of the 86 outage days, 7 were used for testing and tuning.

The outage projects included a control system upgrade for the Siemens DCS. CT 12 and ST 10 were completely disassembled, inspected, and reassembled with new hardware, including new generator rotors. New CO catalyst was installed in HRSGs 11 and 12. The Chiller system was thoroughly inspected and overhauled.

The facility conducted RATA / Compliance stack testing for on October 10, 2018. Results indicate all conditions were met; reports were submitted on November 26, 2018.

ENVIRONMENTAL HEALTH AND SAFETY

Facility staff worked 52,050 hours during the reporting period, with no reportable safety incidents and no lost time accidents.

Blythe Energy is an approved CalOSHA VPP facility. The site identifies opportunities for continuous improvement through the VPP program, examining safety policies, programs, procedures, and best practices. An example of such a best practice is the continuing site safety improvement to replace all incandescent lighting with brighter LED fixtures.

On April 2018 one employee became Special Government Employee (SGE), certified as part of the duties of VPP. The Facility team is committed to continuing with the VPP.

REQUIRED DOCUMENTATION

The required items listed below are either submitted by the quarterly submittal due dates or are included with this report:

1. An updated compliance matrix containing the current status of all Conditions of Certification.

2. A summary of the current project operating status and an explanation of any significant changes to facility operations during the year. The Facility has had no significant changes with respect to Facility operations.

3. Documents required by the following conditions:

   Note: The Facility submits Quarterly Emissions Reports to the Mojave Desert Air Quality Management District (MDAQMD), EPA Region IX, and the CEC by January 30, April 30, July 30, and October 30. The January report includes a summary of the reported information for the previous calendar year.

   AQ-1 (Air Quality) – Operation of the Gas Turbines. The Facility operates the as per design while maintaining compliance.

AQ-2 (Air Quality) – Monthly natural gas sulfur content analytical results. The Facility submits these data per the above-noted Reports.

AQ-4 (Air Quality) – Start up shutdown emissions of NOx, CO, and VOC. These are monitored using a Continuous Emissions Monitoring System (CEMS). Turbine fuel consumption is monitored using either a Continuous Emissions Rate Monitoring System (CERMS) meeting the requirements of 40 CFR Part 75 Appendix A or a stack flow rate calculation method. The facility installs, calibrates, maintains, and operates these monitoring systems according to District-approved monitoring plan and MDAQMD Rule 218.

AQ-5 & AQ-6 (Air Quality) – Emissions limits – NOx, CO, NH3, VOC, SOx, PM10. Emissions from the turbines do not exceed the permitted emission limits with or without the use of duct burners, except for CO, NOx, and VOC during startup, shutdown, and malfunctions. The Facility submits these data per the above-noted Reports.

AQ-7 (Air Quality) – Emissions limits – NOx, CO, NH3, VOC, SOx, PM10. Emissions from the Facility including the cooling towers do not exceed permitted emission limits. The Facility submits these data per the above-noted Reports.

AQ-8 (Air Quality) – Particulate emissions. These emissions do not exceed opacity equal to or greater than 20% for a period aggregate more than 3 minutes in any one hour, excluding water vapor. Independent lab analysis results are included in the annual reports.

AQ-10, AQ-11 and AQ-12 (Air Quality) -– Selective catalytic NOx reduction system. The catalyst is in service when the gas turbines are in operation. The ammonia injection system is service when the gas turbines are in operation. Access to the stack sample port is available as needed.

AQ-13, AQ-14 (Air Quality) – Compliance test – Annual compliance tests are performed in accordance with the MDAQMD Compliance Test Procedural protocols

AQ-15 (Air Quality) – VOC Characterization. The Facility submits these data upon completion of the required source testing within the required time frame and as referenced in the Condition to MDAQMD, EPA Region IX, and CEC.

AQ-16 (Air Quality) – Performance Specifications. The Facility submits these data per the above-noted Reports.

AQ-18 (Air Quality) – VOC and CO limit specifications. The facility is in compliance.

AQ-DB1 – 4 and AQ-SCR 1- 5 (Air Quality) – Data management. All emission limits, and emissions data involving the combustion turbine generators and the duct burners are collected and maintained for the mandated 5 years per the conditions of certification permit B007957 and B007958. The facility reports these data in the above-noted Report.

AQ-CT1, 2, 3, 4, 5 and 6 (Air Quality) – Summary of the cooling operations and maintenance events, and compliance tests per conditions of certification permit B007957 and B007958. The facility reports these data in the above-stated Quarterly Reports and in the reports referenced in AQ-15.

AQ-IC1, 2, 3, 4, 5, 6, 7, 8 and 9 (Air Quality) – Summary of the Emergency Diesel Engines operations and maintenance events, and compliance test per Conditions of Certification permit E007961 are maintained on site at the Facility.

Haz-1 (Hazardous Materials Management) – List of Hazardous Materials present at the Facility in reportable quantities.

Waste-2 (Waste Management) – The Facility has had no enforcement action, past or pending, in the reporting period.

Waste-3 Waste Management Methods – Hazardous waste is stored on the Facility's 180-day slab until such time it is picked up by approved waste haulers for treatment and/or disposal according to regulation. Refer to waste generation for detailed pick up and disposal information. The Facility's EPA ID # is: CAL000364934

Biological Resources – A report from the designated biologist and inclusive of vegetation control efforts is submitted with this annual report. T-Line vegetation was addressed this reporting period. A physical survey was conducted by Utility Tree Service, Inc. and the vegetation, identified during the survey was trimmed as required, by Utility Tree Service, Inc.

Soils and Water-4 – The average monthly groundwater consumption is included in the Semi-Annual Groundwater Monitoring Report.

Soils and Water-8 – A record of the measured groundwater levels from the on-site monitoring wells is included in the Semi-Annual Groundwater Monitoring Report.

Soils and Water-10 – Water monitoring analytical results are included in the Semi-Annual Groundwater Monitoring Report.

A cumulative listing of all post-certification changes approved by the Commission or cleared by the CPM – none this reporting period.

Projection of project compliance activities scheduled during the next year.

	Issues	Resources/Comments	Update
1	First Aid/AED Training	Training conducted in August 2018	Annual/ Next August 2019
2	Ammonia Safety training	Training for the operations and Maintenance team	3 year compliance training completed Aug 2018, Next Training is scheduled for Aug 2021
3	RATA and Compliance Testing	Montrose: October 2019	Annual event
4	Biological Monitoring Program	Submitted to: California Energy Commission.	Annual event
5	Semi-Annual Water Monitoring Report	Submitted to California Regional Water Quality Board	Semi-Annual and Annual
6	Title V Operating Permit Renewal	Existing permit issued November 18, 2017	Existing permit issued will expire on November 18, 2022
7	Source Testing	Source Testing scheduled for 2019	Every 5 years

Please contact Ramon Campos at 760.921.1364 should you have any questions.

Blythe Energy Inc.

Steve Brussee,
Senior Manager, Environment & Safety - Power, ASUS

cc: Ramon Campos
file

Blythe Energy Project

2018-19 Annual Report
(Spring 2018 through Spring 2019)
for Biological Resources

Submitted to:

Ramon Campos
Blythe Energy Center
P.O. Box 1210
Blythe, California 92226

Submitted by:

Alice E. Karl, Ph.D
Blythe Energy Project Designated Biologist
P.O. Box 74006
Davis, California 95617

12 July 2019

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BLYTHE ENERGY PROJECT
2018-19 ANNUAL REPORT
(SPRING 2018 THROUGH SPRING 2019)
FOR BIOLOGICAL RESOURCES

1.0 BACKGROUND

Blythe Energy Project (BEP or Project) became operational December 29, 2003. The California Energy Commission's (CEC's) licensing of BEP identified several Conditions of Certification that would occur after operation began[1]. For the operations period, the following biological Conditions of Certification are applicable:

BIO-6 BEP personnel monitor evaporation ponds for bird and wildlife losses

BIO-7 The Designated Biologist monitors evaporation ponds for bird use

BIO-8 Monitor water quality in the evaporation ponds

BIO-9 Conduct maintenance monitoring of the plant's tortoise exclusion fencing

BIO-11 Implement an exotic weed control program to control invasions on adjacent lands

BIO-15 BEP's *Amendment to Add 66 Acre Area for Deposit of Excess Sediments* (August 14, 2002), incorporated an Interim Weed and Erosion Prevention Program (IWEPP)[2]. Implement an exotic weed control program for this 66-acre site ("Blythe 1B") and adjacent 10-acre cultural exclusion site in order to mitigate any potential outbreak of noxious weeds on all bare ground sites for three years; eliminate weed seeds from the soil stockpile for future revegetation potential

Information related to **BIO-8** is addressed elsewhere in the Project's annual report to the CEC. Activities relating to the remaining biological conditions are reported here for the period from January 2018 through June 2019. A report on activities from the prior period can be found in the 2017-8 Annual Report on Biological Resources[3] as well as earlier annual reports.

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[1] California Energy Commission. 2001, Commission Decision, Application for Certification, Blythe Energy Project, Docket No. 99-AFC-8 , March 2001.

[2] Karl, A. E. 2003. Blythe Energy Project. Interim Weed and Erosion Prevention Program. Submitted to the California Energy Commission, Sacramento, CA. 10 pp plus attachments.

[3] Karl, A. E. 2019. Blythe Energy Project 2017-8 Annual Report for Biological Resources. Submitted to Blythe Energy Inc, Blythe, CA. 9 pp.

2.0 ACTIONS AND RECOMMENDATIONS RELATING TO CONDITIONS OF CERTIFICATION

2.1 BIO-6

Condition of Certification **BIO-6** reads:

> *"The evaporation ponds shall be monitored by plant personnel for bird and wildlife losses (see **BIO-1**). If a substantial number of bird and wildlife are found dead during any year, as determined by the CPM or Designated Biologist, then measures shall be identified and implemented that will substantially reduce or eliminate the problem. This monitoring shall continue for the first three years of plant operations, and depending on the results, could be discontinued at that time."*

2.1.1 Methods Used at BEP to Achieve Compliance with Conditions of Certification

Evaporation ponds and the immediate area around the ponds are checked daily, during bird hazing and other maintenance activities. Any dead birds are removed from the pond and the Designated Biologist contacted and provided pictures and information for determination of species and mortality factors. Following this, the birds are labeled and frozen for examination during Designated Biologist site visits to further elucidate cause of death. The exception is a listed species, which the Designated Biologist reports to the CEC, and also the U.S. Fish and Wildlife Service if a federally listed species, immediately.

2.1.2 Results and Recommendations

Two dead birds were reported for this period. Both were found in the pond on 22 April 2019. One was an adult western grebe. Cause of death was unknown. The bird was salt encrusted, which likely resulted from pond water drying on the carcass after removal. While Total Dissolved Solids (TDS) are well over 100,000 mg/L (see Section 2.2.2, below), it's unlikely that salt encrustation or salt ingestion would have killed the bird because any extended stay by a live, live bird would have been noticed during the frequent pond monitoring throughout the day. The second bird was merely a few centimeters of breast skin and feathers. Definitive identification was not possible.

Based on the very low mortality rate, the recommendation is to continue the current monitoring activities.

2.2 BIO-7

Condition of Certification **BIO-7** reads:

> *"The evaporation ponds (following start of operation when liquid is in the ponds) shall be monitored twice monthly (once every two weeks – two weeks apart) by the Designated Biologist or another biologist or person familiar with and who can identify birds of the area and is approved by the CPM. Records shall be made of the type of birds (e.g. waterfowl, shorebird, etc.), number of birds and behavior. This monitoring shall continue for the first three years of plant operations, and depending on the results, could be discontinued at that time or continued, as needed."*

2.2.1 Methods Used at BEP to Achieve Compliance with Conditions of Certification

The project became operational December 29, 2003. Monitoring of pond use by birds began in late June 2003 and continued through December 2007. Reports documenting bird use of the ponds were submitted every six months during this period, with the final monitoring report was submitted in February 2008[4]. All reports are on file at BEP.

Based on the potentially hazardous levels of selenium and sodium in the evaporation pond water, BEP implemented a program in March 2005 to minimize the risk of elevated levels of selenium and sodium in the evaporation ponds. The program included a bird-deterrent program, continued monitoring of bird use at the ponds and supplementary water monitoring.

As Designated Biologist, I developed a bird deterrent program focused on two premises: (1) making resources provided by the ponds less available (i.e., habitat elimination) and (2) making these resources less attractive (i.e., hazing). Removal of nesting habitat for shorebirds was achieved by (1) removing rainwater puddles from ponds when they were not in use, and (2) raising the water level in the ponds to eliminate the shoreline. Emergent vegetation was not permitted to grow in the ponds. These habitat modifications also rendered the sediment less available to wading species for foraging. As an ancillary benefit, salinity decreased when fresh water was added to raise the water level to remove the shoreline. Further, Charlyn Mosely, former Environmental Compliance Officer, and I developed an integrated system of negative stimuli to haze birds, including cannons, flags across the pond, and hourly walking/driving on the pond levees.

Because of decreased staffing, AltaGas (the current owner) modified this program and currently adheres to the following, reduced hazing methods:

[4] Karl, A. E. 2008. Blythe Energy Project. Semiannual summary of bird use of the evaporation ponds: Summer and Fall 2007. Submitted to Blythe Energy, LLC, Blythe, CA. 11 pp.

- ◊ AltaGas added large, static "eye" balloons along the upper berm edges in 2016 in an attempt to replace the flags, which require at least annual replacement.
- ◊ 15 March through 14 September – The pond berms are driven every three hours. The bird "cannon" is fired at randomized times throughout the day and moved to different locations around the pond at least daily. Birds present at the ponds are counted, identified if possible, and behaviors recorded; all data are recorded on monitoring logs.
- ◊ 15 September through 14 March - Before 0800 daily, the condition of the eye balloons is inspected. Birds present at both ponds are counted, identified if possible, and behaviors recorded; all data are recorded on monitoring logs.
- ◊ Areas surrounding the ponds and between the east and west ponds are surveyed once a day for predatory signs and annotated in the log. Any remnants are removed and discarded unless there are sufficient remains for species identification. These are frozen.

2.2.2 Results and Recommendations

AltaGas is continuously attending to the issue of sludge islands. As of 05 June 2019, they are attempting to empty the eastern pond to clean the pond and make any necessary repairs to the liner. They anticipate that it will take until December to fully evaporate the pond. Currently, there are several exposed sludge islands, which will remain until the pond is renovated. The western pond was about three-quarters full on 05 June, and has been full all year.

No vegetation is growing in either pond, nor has it ever grown there since the Project began operations. Based on this, it's very possible that the water conditions inhibit plant growth. TDS is substantial: 130,000 mg/L in the eastern pond and 110,000 in the western[5].

In summary, the bird deterrents and continual efforts to minimize sludge islands seem to be working, based on the low numbers of mortalities. Currently, AltaGas is collating the bird observation log for further evaluation of bird use and nesting. Preliminary data suggest that black-necked stilts and pipits are the most common shorebirds, with eared grebes and northern shovelers the most common waterfowl (R. Campos, pers. comm. to A. Karl). This report will be amended once the data collation and evaluation are completed.

2.3 BIO-9

Condition of Certification **BIO-9** reads:

[5] Eurofins TestAmerica, Irvine. 2019. Analytical report for samples collected on 14 April 2019. Laboratory Job ID: 440-238964-1. Submitted to R. DeLaParra, Northstar Environmental Remediation, Lake Forest, CA. 23 pp.

"The project owner shall conduct maintenance monitoring of the desert tortoise exclusion fencing on a monthly basis and complete repairs within one week of a problem being identified.

The project owner shall submit records of all monitoring dates, identify the locations that required repair, and any corrective actions taken in the Annual Compliance Report."

2.3.1 Methods Used at BEP to Achieve Compliance with Conditions of Certification

Mr. Campos reports that the fences were monitored weekly, with repairs made as necessary (pers. comm. to Alice Karl). Alta Gas maintains records of all monitoring dates and remedial actions, if any.

2.3.2 Results and Recommendations

Over time, sand had accumulated on the southern property fence and was beginning to compromise the exclusion utility of the tortoise fence. In 2019, AltaGas cleared the accumulated sand and vegetation growth from this fence. My recommendation is to continue to monitor the fences, and repair as necessary, to ensure that they remain functional. Any gaps that suggest that tortoises may have entered the site could result in a site clearance survey.

2.4 BIO-11

Condition of Certification **BIO-11** reads:

"A comprehensive exotic weed control program for California Department of Agriculture List A, List B, and Red Alert weeds, shall be implemented at the 76-acre power plant site. This program shall be implemented until such time that the adjacent land use on the north and west sides is not longer a natural community or agriculture, or until the plant is permanently closed. … The natural vegetation adjacent to the BEP site shall be monitored to determine if it has been modified or degraded, if so, these changes to the adjacent sites should be documented by the project's Designated Biologist in a report which includes photos of the adjacent land uses.

The project owner shall provide a progress/activity report regarding exotic weed control efforts and document changes (as needed) to the surrounding areas in the annual Compliance report."

2.4.1 Methods Used at BEP to Achieve Compliance with Conditions of Certification

The habitat immediately surrounding the entire BEP and IB site (collectively termed the "Project"), including the 10-acre cultural exclusion area abutting Blythe 1B's northern border, has been surveyed annually for introduction of any weeds resulting from Project construction and operations activities. In practice this includes the entire fenceline, the temporary road on the western fenceline that was constructed to build the fence, and the shoulder of Buck Blvd. I also survey all surfaces, especially non-compacted surfaces (e.g., ditches, berms, stockpile edges) and places where water would collect (detention basins) inside the Project site. These surveys, or at least those along the fence, typically occur in February before seed set by the most invasive and offensive weed species found at BEP: Sahara mustard (*Brassica tournefortii*); Russian thistle (*Salsola tragus*); and tamarisk (*Tamarix* sp.).

During each year's surveys, I uproot or direct the removal of mustard and Russian thistle plants along the fenceline and inside the Project that are not part of large, dense groupings and discard them into the enclosed BEP trash bins for disposal. Again, this occurs at the appropriate time of year to minimize population spread – i.e., following germination but prior to seed set, generally in early to mid-February. Dense groupings are mapped and directed to the Senior Environmental Specialist to be sprayed with glyphosate (Roundup©) or excavated and removed (bagged and disposed of in BEP bins) by BEP personnel or their herbicide contractor. These activities by BEP personnel are always to be accomplished immediately, prior to seed set (the timing of which I provide).

In 2009, based on my recommendations, the project owner began spraying all potential growth areas for Sahara mustard and Russian thistle (e.g., swales, berm edges, stockpiles, fencelines) with a pre-emergent herbicide in early fall, prior to seed germination. The spraying of pre-emergent herbicide was consistently successful[3,6]. Prior to the implementation of pre-emergent spraying in 2009, weeds had consistently grown along fencelines and the stockpiles. Since 2009, when the pre-emergent was sprayed, there has been very little to no mustard or other weeds growing along the fencelines, despite a robust and persistent population of those weeds in all of the surrounding lands. Even with this abundant seed source and the enhanced germination substrate along the fence from sand blowing onto the site from the denuded lands to the north, the pre-emergent successfully prevented the growth and enhancement of noxious weeds associated with the project fence and the stockpiles.

[6] Karl, A. E. 2011. Blythe Energy Project 2010 Annual Report for Biological Resources. Submtted to FPL Energy, Blythe, CA. 13 pp.

2.4.2 Results and Recommendations

AltaGas sprayed a pre-emergent in October 2018 (R. Campos, pers. comm.). All surfaces on the power plant site, plus the switchyard and the 66-acre stockpile (Blythe 1B) were sprayed. Winter 2018-9 was an abundant winter rainfall, through spring. Even so, upon my examination in June 2019, there was only minor growth on any part of the Project. The few plants I noticed that were still green were targeted for immediate removal.

The landscaping around the project is being well maintained on the eastern and southern fencelines. It appears that irrigation has been eliminated on the northern, based on the dying plants. A few Sahara mustard and one tamarisk were growing on the northern fencline gates; the tamarisk is scheduled for removal.

Both Sahara mustard and seeds will continue to invade BEP from lands around BEP, especially due to the current instability in the soils north of Riverside Avenue. In Winter 2010-2011, that area was cleared, disked and planted with winter wheat, a crop that failed and left a barren, windblown surface. Historically, that area had been tilled and had a robust Sahara mustard population, but surface disturbance had ceased some time ago and the habitat had completely regrown into a native creosote bush community with a relatively stable soil surface. Following the clearance in 2011, mustard has grown there and weed seeds continually blow south onto BEP. In Winter 2016-2017, this area was again bladed, although it was not planted; it continues to support a dense mustard growth with north winds blowing sand and weed seed onto BEP (Figure 1). The other lands surrounding the Project also continue to supply a weed seed source that continuously infiltrates the Project site (Figure 2). Several of the Project's site features - the fencelines, slopes and depressions, and road grading - provide favorable microsites that enhance germination and growth and could contribute to the spread of noxious weeds, Sahara mustard in particular. The cultural set-aside, in particular, has been heavily invaded by mustard from the field across Hobsonway, mostly in the north and northwest (prevailing winds).

Maintaining the current program of pre-emergent spraying and post-emergent weed removal will ensure that the Project is not responsible for the spread or increased population sizes of these noxious, highly invasive weeds. The following successful measures have been and will continue to be recommended for controlling weed populations specifically associated with the Project:

- ◊ Continue to monitor fences, roads, and other features that may enhance weed populations.

- ◊ Apply a pre-emergent herbicide (e.g., Diuron 4L) in October, prior to the first winter rains, to prevent germination of weeds the following winter and spring.

Figure 1. Sahara mustard-infested fields north of BEP. Photo taken from Hobsonway, facing north. The tan-orange color is the dense stand of Sahara mustard. The darker brown is plantain (*Plantago ovata*) and forget-me-not (*Cryptantha* spp.)

Figure 2. Sahara mustard-infested lands west of BEP, taken from the northwest corner of the Project, facing west-southwest.

As needed, each spring continue to manually remove and/or use post-emergent herbicides (e.g., glyphosate [Roundup©] or mustard-specific herbicides) to eliminate all weed individuals. Ensure that this activity is done prior to seed set by identifying plant phenological condition, checking the Project site at sufficient intervals in the event that weather patterns result in multiple flushes of germination, and submitting dates of plant removal and spraying.

◊ Re-apply dust palliatives as necessary on BEP and the stockpiles, to minimize the accumulation of sand (hospitable germination sites for weeds) and weed seeds.

2.5 BIO-15

Condition of Certification **BIO-15** for this amendment reads.

> **BIO-15** - "The project owner shall implement an Interim Weed and Erosion Prevention Program for the applicable portion of the 66-acre expansion area to mitigate any potential outbreak of noxious weeds on all bare ground sites for the three (3) years (1095 days) following final grading. The Interim Weed and Erosion Prevention Program shall propose a technique that prevents erosion, reduces dependence on herbicides, and prevents the germination of weed seed to the highest level possible. If the 66-acre expansion area remains undeveloped for the entire three (3) year period, and there is no permitted project for the site, then the project owner shall implement a long-term plan to re-establish regionally native vegetation on the site within one year, and remove portions of the desert tortoise proof fencing to allow wildlife to return to the site."

2.5.1 Methods to Achieve Compliance with Conditions of Certification

The approved IWEPP for the BEP Amendment established a three-year program to manage the stockpile, in the event that Blythe II (now Sonoran Energy Project) was not permitted. The program objective was to produce a stockpile that was weed-seed free for use in subsequent revegetation. The IWEPP program began in Fall 2003, following completion of stockpile development and contouring. In accordance with the IWEPP, a pre-emergent herbicide was applied to the stockpile on 14 October 2003, following final contouring of the stockpiles[7]. The dust suppressant, "Envirotac" was applied, as needed, to minimize airborne dust.

The second and third years of the program were designed to eliminate the weed seed bank in the stockpiles by farming the weeds. This program was to include

[7] Karl, A.E. 2004. Blythe Energy Project: Annual report for biological compliance issues, June 2003 through June 2004. Submitted to FPL Energy, Blythe Energy Project, Blythe, CA. 7 pp plus appendices.

actively germinating weed seeds in the soil stockpile, applying supplemental irrigation as necessary, and then eliminating the weeds prior to seed set, through the use of herbicides. Exceptionally high winter rainfall the second year obviated the need for supplementary irrigation. The negligible response of weeds following that winter of high rainfall suggested that there were few viable seeds in the stockpile that were available for germination, so no supplemental irrigation was applied in Year 3. (There was precipitation in Year 3, but it was sub-average.)

The Sonoran Energy Project, which proposed to occupy the 66-acre expansion area, was permitted as Blythe II on 14 December 2005. Based on this permitting and the apparent lack of a viable weed seed bank in the stockpiles (see above), on April 4, 2007, Blythe Energy requested a suspension of that portion of the IWEPP program that included actively farming the weed seeds on the stockpile and subsequently using the stockpile soils for revegetation[8]. The CEC approved this request[9]. In its place, weed populations have been monitored and generally either removed manually or sprayed with glyphosate annually since 2003, in association with **BIO-11**. This has occurred at the appropriate time of year to minimize population spread – i.e. -following germination but prior to seed set, generally in early to mid-February. The stockpiles are also sprayed, typically annually, with the pre-emergent herbicide in fall, prior to seed germination associated with fall/early winter storms.

This program of weed inspection, prevention and removal will continue until Blythe II construction begins.

2.5.2 Results and Recommendations

See Section 2.4.2 in **BIO-11**, above, for results.

3.0 SUMMARY

AltaGas is doing an excellent job of minimizing the attraction of the ponds to waterfowl. They are keeping the project weed free. Mr. Campos readily and thoroughly complied with the additional methods that I requested in the previous year.

My recommendation is to continue with the current, successful methods, incorporating additional minor changes as noted above.

[8] Karl, A. E. 2007. Letter to Steve Munro, Project Manager, California Energy Commission, to request suspension of the IWEPP. April 4, 2007. 2 pp.
[9] Munro, S. 2007. E-mail to Alice Karl. June 28, 2007.

Blythe Energy Inc. (CERSID: 10321807)

Facility Information Submitted Feb 27, 2019

Submitted on 2/27/2019 4:04:28 PM by *Lee Pyle* of Blythe Energy Inc. (Blythe, CA.)

- Business Activities
- Business Owner/Operator Identification

Guidance Messages

- **Warning:**
  1. Business Activities - The Address for CERSID: 10321807 has changed from: '385 N Buck Blvd, Blythe, CA 92225' to '385 N Buck Blvd, Blythe, CA 92225'.

Hazardous Materials Inventory Submitted Feb 27, 2019

Submitted on 2/27/2019 4:04:28 PM by *Lee Pyle* of Blythe Energy Inc. (Blythe, CA.)

- Hazardous Material Inventory (34)
- Site Map (Official Use Only)
  - *Annotated Site Map (Official Use Only)* (Adobe PDF, 917KB)

Emergency Response and Training Plans Submitted Feb 27, 2019

Submitted on 2/27/2019 4:04:28 PM by *Lee Pyle* of Blythe Energy Inc. (Blythe, CA.)

- Emergency Response/Contingency Plan
  - *Emergency Response/Contingency Plan* (Adobe PDF, 404KB)
- Employee Training Plan
  - *Employee Training Plan* (Adobe PDF, 227KB)
  - *Employee Training Plan* (Adobe PDF, 705KB)
  - *Employee Training Plan* (Adobe PDF, 162KB)

Aboveground Petroleum Storage Act Submitted Feb 27, 2019

Submitted on 2/27/2019 4:04:28 PM by *Lee Pyle* of Blythe Energy Inc. (Blythe, CA.)

- Aboveground Petroleum Storage Act Documentation
  - Provided To Regulator on 2/14/2014

Site Identification

Blythe Energy Inc.
385 N Buck Blvd
Blythe, CA 92225
County
Riverside

CERS ID
10321807
EPA ID Number
CAL000226304

Submittal Status

Submitted on 2/27/2019 by *Lee Pyle* of Blythe Energy Inc. (Blythe, CA.)

Hazardous Materials

Does your facility have on site (for any purpose) at any one time, hazardous materials at or above 55 gallons for liquids, 500 pounds for solids, or 200 cubic feet for compressed gases (include liquids in ASTs and USTs); or is regulated under more restrictive inventory local reporting requirements (shown below if present); or the applicable Federal threshold quantity for an extremely hazardous substance specified in 40 CFR Part 355, Appendix A or B; or handle radiological materials in quantities for which an emergency plan is required pursuant to 10 CFR Parts 30, 40 or 70?	Yes

Underground Storage Tank(s) (UST)

Does your facility own or operate underground storage tanks?	No

Hazardous Waste

Is your facility a Hazardous Waste Generator?	Yes
Does your facility treat hazardous waste on-site?	No
Is your facility's treatment subject to financial assurance requirements (for Permit by Rule and Conditional Authorization)?	No
Does your facility consolidate hazardous waste generated at a remote site?	No
Does your facility need to report the closure/removal of a tank that was classified as hazardous waste and cleaned on-site?	No
Does your facility generate in any single calendar month 1,000 kilograms (kg) (2,200 pounds) or more of federal RCRA hazardous waste, or generate in any single calendar month, or accumulate at any time, 1 kg (2.2 pounds) of RCRA acute hazardous waste; or generate or accumulate at any time more than 100 kg (220 pounds) of spill cleanup materials contaminated with RCRA acute hazardous waste.	No
Is your facility a Household Hazardous Waste (HHW) Collection site?	No

Excluded and/or Exempted Materials

Does your facility recycle more than 100 kg/month of excluded or exempted recyclable materials (per HSC 25143.2)?	No
Does your facility own or operate ASTs above these thresholds? Store greater than 1,320 gallons of petroleum products (new or used) in aboveground tanks or containers.	Yes
Does your facility have Regulated Substances stored onsite in quantities greater than the threshold quantities established by the California Accidental Release prevention Program (CalARP)?	Yes

Additional Information

No additional comments provided.

Facility/Site

Blythe Energy Inc.
385 N Buck Blvd
Blythe, CA 92225

CERS ID
10321807

Submittal Status

Submitted on 2/27/2019 by *Lee Pyle* of Blythe Energy Inc. (Blythe, CA.)

Identification

Blythe Energy Inc.

Operator Phone	Business Phone	Business Fax	Beginning Date	Ending Date	
(760) 921-1369	(760) 921-1364	(760) 922-1037	2/28/2019	2/28/2020	
			Dun & Bradstreet	**SIC Code**	**Primary NAICS**
			058599884	4911	221112

Facility/Site Mailing Address

385 N Buck Blvd
Blythe, CA 92225

Primary Emergency Contact

Aaron Honor

Title
Plant General Manager

Business Phone	24-Hour Phone	Pager Number
(760) 921-1360	(951) 315-4893	

Owner

AltaGas Ltd
(760) 921-1360
385 N Buck Blvd
Blythe, CA 92225

Secondary Emergency Contact

Ramon Campos

Title
Compliance Manager

Business Phone	24-Hour Phone	Pager Number
(760) 921-1364	(928) 230-1524	

Billing Contact

Kris Kramer
(760) 921-1366 kris.kramer@altagas.ca
385 N Buck Blvd
Blythe, CA 92225

Environmental Contact

Ramon Campos
(760) 921-1364 ramon.campos@altagas.ca
385 N Buck Blvd
Blythe, CA 92225

Name of Signer	Signer Title	Document Preparer
Ramon Campos	Compliance Manager	SCS Tracer Environmental

Additional Information

Locally-collected Fields

Some or all of the following fields may be required by your local regulator(s).

Property Owner

AltaGas Ltd

Phone
(760) 921-1360

Mailing Address
385 N Buck Blvd
Blythe, CA 92225

Assessor Parcel Number (APN)
824-101-021

Number of Employees
25

Facility ID
FA0023213

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org.	**Blythe Energy Inc.**	Chemical Location	CERS ID **10321807**
Facility Name	**Blythe Energy Inc.** 385 N Buck Blvd, Blythe 92226	**Chemical Treatment Area**	Facility ID **FA0023213** Status **Submitted** on 2/27/2019 4:04 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Quantities Largest Cont.	Quantities Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Water Reactive, Class 2	**Sulfuric Acid** CAS No 7664-93-9 ✔EHS	**Pounds** State: Liquid Type: Pure	**91440** Storage Container: Aboveground Tank Days on Site: 365	**91440**	91440 Pressue: Ambient Temperature: Ambient	Waste Code	- Physical Corrosive To Metal - Health Carcinogenicity - Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Specific Target Organ Toxicity			✔	

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org.	**Blythe Energy Inc.**	Chemical Location	CERS ID **10321807**
Facility Name	**Blythe Energy Inc.** 385 N Buck Blvd, Blythe 92226	**Chemical Treatment Area, Water Treatment Area**	Facility ID **FA0023213** Status **Submitted** on 2/27/2019 4:04 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	**Sodium Hypochlorite Solution** CAS No 7681-52-9	**Gallons** State Liquid Type Mixture	**6520** Storage Container Aboveground Tank, Plastic/Non-metalic Drum, Tote Bin Days on Site: 365	**6100**	6520 Pressue Ambient Temperature Ambient	Waste Code	- Physical Corrosive To Metal - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation	SODIUM HYPOCHLORITE SOLUTION	12 %		7681-52-9

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org.	**Blythe Energy Inc.**	Chemical Location	CERS ID **10321807**
Facility Name	**Blythe Energy Inc.** 385 N Buck Blvd, Blythe 92226	**Chiller Area**	Facility ID **FA0023213** Status **Submitted** on 2/27/2019 4:04 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	**Stabrex ST70** CAS No See Below	**Gallons** State Liquid Type Mixture	**400** Storage Container Tote Bin Days on Site: 365	**400**	400 Pressue Ambient Temperature Ambient	Waste Code	- Physical Corrosive To Metal - Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation	Sodium Hypochlorite Sodium Bromide Sodium Hydroxide	6 % 9 % 5 %		7681-52-9 7647-15-6 1310-73-2

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org.	**Blythe Energy Inc.**	Chemical Location	CERS ID **10321807**
Facility Name	**Blythe Energy Inc.** 385 N Buck Blvd, Blythe 92226	**Chiller Area, Chemical Treatment Area**	Facility ID **FA0023213** Status **Submitted** on 2/27/2019 4:04 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	**3DT Trasar 3DT487** CAS No See Below	**Gallons** State Liquid Type Mixture	**1100** Storage Container Aboveground Tank, Plastic/Non-metalic Drum, Tote Bin Days on Site: 365	**400**	1100 Pressue Ambient Temperature Ambient	Waste Code	- Physical Corrosive To Metal - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation	Phosphoric Acid	10 %		7664-38-2

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org.	**Blythe Energy Inc.**	Chemical Location	CERS ID **10321807**
Facility Name	**Blythe Energy Inc.** 385 N Buck Blvd, Blythe 92226	**Chiller Building**	Facility ID **FA0023213** Status **Submitted** on 2/27/2019 4:04 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Quantities Largest Cont.	Quantities Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 2.1 - Flammable Gases Corrosive, Flammable Gas, Explosive	**Refrigerant R717 - Ammonia** CAS No 7664-41-7 ✔EHS	**Pounds** State: Gas Type: Pure	**55000** Storage Container: Tank Inside Building Days on Site: 365	**20000**	55000 Pressue: Ambient Temperature: Ambient	Waste Code: 141	- Physical Gas Under Pressure - Physical Corrosive To Metal - Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Aspiration Hazard - Health Simple Asphyxiant	Anhydrous Ammonia	100 %	✔	7664-41-7

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Blythe Energy Inc.**
Facility Name **Blythe Energy Inc.**
385 N Buck Blvd, Blythe 92226

Chemical Location
Fab Shop

CERS ID **10321807**
Facility ID **FA0023213**
Status **Submitted** on 2/27/2019 4:04 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 2.1 - Flammable Gases Flammable Gas	**HYDROGEN** CAS No 1333-74-0	**Cu. Feet** State Gas Type Pure	**300** Storage Container Cylinder Days on Site: 365	**150**	300 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Simple Asphyxiant				
DOT: 2.2 - Nonflammable Gases	**ARGON** CAS No 7440-37-1	**Cu. Feet** State Gas Type Pure	**335** Storage Container Cylinder Days on Site: 365	**335**	335 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Gas Under Pressure - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Simple Asphyxiant				
DOT: 2.1 - Flammable Gases Unstable (Reactive), Class 2, Flammable Gas	**Acetylene** CAS No 74-86-2	**Cu. Feet** State Gas Type Pure	**750** Storage Container Cylinder Days on Site: 365	**125**	750 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org.	**Blythe Energy Inc.**	Chemical Location	CERS ID **10321807**
Facility Name	**Blythe Energy Inc.** 385 N Buck Blvd, Blythe 92226	**Fab Shop, Chiller Building Area**	Facility ID **FA0023213** Status **Submitted** on 2/27/2019 4:04 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Quantities Largest Cont.	Quantities Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 2.1 - Flammable Gases Flammable Gas	**PROPANE** CAS No 74-98-6	**Gallons** State Gas Type Pure	**340** Storage Container Aboveground Tank, Cylinder Days on Site: 365	**300**	340 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure - Physical Explosive - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Simple Asphyxiant				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org.	**Blythe Energy Inc.**	Chemical Location	CERS ID **10321807**
Facility Name	**Blythe Energy Inc.** 385 N Buck Blvd, Blythe 92226	**Fire Pump House**	Facility ID **FA0023213** Status **Submitted** on 2/27/2019 4:04 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Quantities Largest Cont.	Quantities Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 3 - Flammable and Combustible Liquids Combustible Liquid, Class II	**DIESEL FUEL** CAS No 68334-30-5	**Gallons** State Liquid Type Mixture	**1100** Storage Container Aboveground Tank, Can, Other Days on Site: 365	**500**	1100 Pressue Ambient Temperature Ambient	Waste Code	- Physical Flammable - Health Carcinogenicity - Health Acute Toxicity - Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation	Fuels, diesel Fatty acids, vegetable oil, methyl esters	99 % 1 %		68334-30-5 68990-52-3

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Blythe Energy Inc.**
Facility Name **Blythe Energy Inc.**
385 N Buck Blvd, Blythe 92226

Chemical Location
Hazardous Waste Storage Area

CERS ID **10321807**
Facility ID **FA0023213**
Status **Submitted** on 2/27/2019 4:04 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Quantities Largest Cont.	Quantities Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 3 - Flammable and Combustible Liquids Combustible Liquid, Class II	**Waste Oil with ammonia** CAS No N/A	**Gallons** State Liquid Type Waste	**275** Storage Container Steel Drum Days on Site: 365	**55**	275 Pressue Ambient Temperature Ambient	Waste Code 223	- Physical Flammable - Health Carcinogenicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation	Waste Petroleum Hydrocarbons			Mixture
DOT: 4.1 - Flammable Solids Flammable Solid	**Waste Oil Filters / Oily Debris** CAS No N/A	**Pounds** State Solid Type Waste	**250** Storage Container Steel Drum Days on Site: 90	**250**	250 Pressue Ambient Temperature Ambient	Waste Code	- Physical Flammable				
DOT: 8 - Corrosives (Liquids and Solids)	**Waste Lead Acid Batteries** CAS No See Below	**Gallons** State Liquid Type Waste	**150** Storage Container Other Days on Site: 365		150 Pressue Ambient Temperature Ambient	Waste Code	- Physical Corrosive To Metal - Health Carcinogenicity - Health Acute Toxicity - Health Reproductive Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Specific Target Organ Toxicity	Lead Sulfuric Acid	70 % 20 %	 ✔	7439-92-1 7664-93-9

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Blythe Energy Inc.**
Facility Name **Blythe Energy Inc.**
385 N Buck Blvd, Blythe 92226

Chemical Location
Hazardous Waste Storage Area

CERS ID **10321807**
Facility ID **FA0023213**
Status **Submitted** on 2/27/2019 4:04 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Quantities Largest Cont.	Quantities Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 2.1 - Flammable Gases Flammable Gas, Toxic	**Waste Aerosols** CAS No NA	**Cu. Feet** State Gas Type Waste	**10** Storage Container Other Days on Site: 365	**1**	10 Pressue Ambient Temperature Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Simple Asphyxiant				
DOT: 3 - Flammable and Combustible Liquids Flammable Liquid, Class I-B	**Waste Oil** CAS No N/A	**Gallons** State Liquid Type Waste	**500** Storage Container Aboveground Tank Days on Site: 365	**500**	300 Pressue Ambient Temperature Ambient	Waste Code	- Physical Flammable - Health Carcinogenicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization				
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	**Caustic Soda** CAS No See Below	**Gallons** State Liquid Type Mixture	**330** Storage Container Plastic/Non-metalic Drum Days on Site: 365	**55**	330 Pressue Ambient Temperature Ambient	Waste Code	- Physical Corrosive To Metal - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation	Water Sodium Hydroxide	90 % 10 %		7732-18-5 1310-73-2
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	**Liquichlor 12.5%** CAS No See Below	**Gallons** State Liquid Type Mixture	**220** Storage Container Plastic/Non-metalic Drum Days on Site: 365	**55**	220 Pressue Ambient Temperature Ambient	Waste Code	- Physical Corrosive To Metal - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation	Sodium Hypochlorite	13 %		7681-52-9

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org.	**Blythe Energy Inc.**	Chemical Location	CERS ID **10321807**
Facility Name	**Blythe Energy Inc.** 385 N Buck Blvd, Blythe 92226	**High Cylinder Area, fab Shop**	Facility ID **FA0023213** Status **Submitted** on 2/27/2019 4:04 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 6.1 - Toxic Substances Highly Toxic, Corrosive, Oxidizing, Class 1	**OXYGEN** CAS No 7782-44-7	**Cu. Feet** State Gas Type Pure	**1685** Storage Container Cylinder Days on Site: 365	**337**	1685 Pressue > Ambient Temperature > Ambient	Waste Code	- Physical Oxidizer - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org.	**Blythe Energy Inc.**	Chemical Location	CERS ID **10321807**
Facility Name	**Blythe Energy Inc.** 385 N Buck Blvd, Blythe 92226	**High Pressure Cylinder Area**	Facility ID **FA0023213** Status **Submitted** on 2/27/2019 4:04 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Quantities Largest Cont.	Quantities Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 2.2 - Nonflammable Gases	**NITROGEN** CAS No 7727-37-9	**Cu. Feet** State Gas Type Pure	**8762** Storage Container Cylinder Days on Site: 365	**337**	8762 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Gas Under Pressure - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Simple Asphyxiant				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org.	**Blythe Energy Inc.**	Chemical Location	CERS ID **10321807**
Facility Name	**Blythe Energy Inc.** 385 N Buck Blvd, Blythe 92226	**High Pressure Cylinder Area**	Facility ID **FA0023213** Status **Submitted** on 2/27/2019 4:04 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Quantities Largest Cont.	Quantities Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 2.3 - Toxic Gases Oxidizing Gas, Gaseous	**Nitric Oxide/Nitrogen** CAS No See Below	**Cu. Feet** State Gas Type Mixture	**1136** Storage Container Cylinder Days on Site: 365	**142**	1136 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Gas Under Pressure - Physical Oxidizer - Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Simple Asphyxiant	Nitrogen Nitric Oxide	55 % 45 %	 ✔	7727-37-9 10102-43-9

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Blythe Energy Inc.**
Facility Name **Blythe Energy Inc.**
385 N Buck Blvd, Blythe 92226

Chemical Location
High Pressure Vessel Area

CERS ID **10321807**
Facility ID **FA0023213**
Status **Submitted** on 2/27/2019 4:04 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 2.2 - Nonflammable Gases Cryogen	**OXYGEN/Nitrogen** CAS No See Below	**Cu. Feet** State Gas Type Mixture	**2002** Storage Container Cylinder Days on Site: 365	**143**	2002 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Gas Under Pressure - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation	Oxygen Nitrogen	23 % 78 %		7782-44-7 7727-37-9
DOT: 2.2 - Nonflammable Gases	**Carbon Monoxide/Nitric Oxide/Nitrogen** CAS No See Below	**Cu. Feet** State Gas Type Mixture	**3266** Storage Container Cylinder Days on Site: 365	**142**	3266 Pressue Ambient Temperature Ambient	Waste Code	- Physical Hazard Not Otherwise Classified - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation	Carbon Monoxide Nitric Oxide Nitrogen	18 % 9 % 73 %		10102-43-9 630-08-0 7727-37-9
DOT: 2.2 - Nonflammable Gases Cryogen	**Nitrogen, Liquid** CAS No 7727-37-9	**Gallons** State Liquid Type Pure	**40** Storage Container Cylinder Days on Site: 365	**40**	40 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Gas Under Pressure - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation - Health Simple Asphyxiant				
DOT: 2.2 - Nonflammable Gases	**Helium** CAS No 7440-59-7	**Cu. Feet** State Gas Type Pure	**542** Storage Container Cylinder Days on Site: 365	**271**	542 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Gas Under Pressure - Health Simple Asphyxiant				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org.	**Blythe Energy Inc.**	Chemical Location	CERS ID **10321807**
Facility Name	**Blythe Energy Inc.** 385 N Buck Blvd, Blythe 92226	**Outside of Water Treatment Equipment Area, Turbine Building A**	Facility ID **FA0023213** Status **Submitted** on 2/27/2019 4:04 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Quantities Largest Cont.	Quantities Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	**Aqueous Ammonia** CAS No 1336-21-6 ✔EHS	**Pounds** State: Liquid Type: Mixture	**119000** Storage Container: Aboveground Tank Days on Site: 365	**116000**	119000 Pressue: > Ambient Temperature: Ambient	Waste Code	- Physical Corrosive To Metal - Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation	AMMONIUM HYDROXIDE	30 %	✔	1336-21-6

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org.	**Blythe Energy Inc.**	Chemical Location	CERS ID **10321807**
Facility Name	**Blythe Energy Inc.** 385 N Buck Blvd, Blythe 92226	**Step Up Transformer**	Facility ID **FA0023213** Status **Submitted** on 2/27/2019 4:04 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Quantities Largest Cont.	Quantities Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 9 - Misc. Hazardous Materials	**Nytro 10 GB XT (Insulating Oil)** CAS No NA	**Gallons** State Liquid Type Mixture	**70320** Storage Container Aboveground Tank Days on Site: 365	**16800**	70320 Pressue Ambient Temperature Ambient	Waste Code	- Physical Flammable - Health Aspiration Hazard				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Blythe Energy Inc.**
Facility Name **Blythe Energy Inc.**
385 N Buck Blvd, Blythe 92226

Chemical Location
Turbine Building A

CERS ID **10321807**
Facility ID **FA0023213**
Status **Submitted** on 2/27/2019 4:04 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Quantities Largest Cont.	Quantities Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 3 - Flammable and Combustible Liquids Combustible Liquid, Class III-B	**Hydraulic Oil** CAS No 55957-10-3	**Gallons** State Liquid Type Mixture	**320** Storage Container Tank Inside Building Days on Site: 365	**160**	320 Pressue Ambient Temperature Ambient	Waste Code	- Physical Flammable - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization				
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	**NALCO S711** CAS No NA	**Gallons** State Liquid Type Mixture	**400** Storage Container Tote Bin Days on Site: 365	**400**	400 Pressue Ambient Temperature Ambient	Waste Code	- Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org.	**Blythe Energy Inc.**	Chemical Location	CERS ID **10321807**
Facility Name	**Blythe Energy Inc.** 385 N Buck Blvd, Blythe 92226	**Turbine Building A & Hazardous Waste Storage Area**	Facility ID **FA0023213** Status **Submitted** on 2/27/2019 4:04 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Quantities Largest Cont.	Quantities Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 3 - Flammable and Combustible Liquids Combustible Liquid, Class III-B	**Lubrication Oil** CAS No N/A	**Gallons** State Liquid Type Mixture	**16140** Storage Container Aboveground Tank, Tank Inside Building Days on Site: 365	**7200**	16140 Pressue Ambient Temperature Ambient	Waste Code	- Physical Flammable - Health Serious Eye Damage Eye Irritation				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Blythe Energy Inc.**
Facility Name **Blythe Energy Inc.**
385 N Buck Blvd, Blythe 92226

Chemical Location
Water Treatment Area

CERS ID **10321807**
Facility ID **FA0023213**
Status **Submitted** on 2/27/2019 4:04 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Quantities Largest Cont.	Quantities Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 3 - Flammable and Combustible Liquids	**Permatreat PC191T (Anti-Scalant)** CAS No NA	**Gallons** State Liquid Type Mixture	**300** Storage Container Steel Drum, Tote Bin Days on Site: 365	**300**	300 Pressue Ambient Temperature Ambient	Waste Code	- Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization				
DOT: 6.1 - Toxic Substances Toxic, Corrosive	**Versene 100** CAS No 64-02-8	**Gallons** State Liquid Type Mixture	**1375** Storage Container Plastic/Non-metalic Drum Days on Site: 60	**55**	1375 Pressue Ambient Temperature Ambient	Waste Code	- Physical Corrosive To Metal - Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation	Tetrasodium ethylenediamine tetraacetate	38 %		64-02-8
DOT: 6.1 - Toxic Substances Toxic, Corrosive	**Permatreat PC-22** CAS No See Below	**Gallons** State Liquid Type Mixture	**110** Storage Container Aboveground Tank Days on Site: 365	**110**	110 Pressue Ambient Temperature Ambient	Waste Code	- Physical Corrosive To Metal - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation	Polyethylene Glycol 2,2-Dibromo-3-nitrilopropionamide Sodium Bromide Dibromoacetonitrile	60 % 30 % 5 % 1 %		25322-68-3 10222-01-2 7647-15-6 3252-43-5

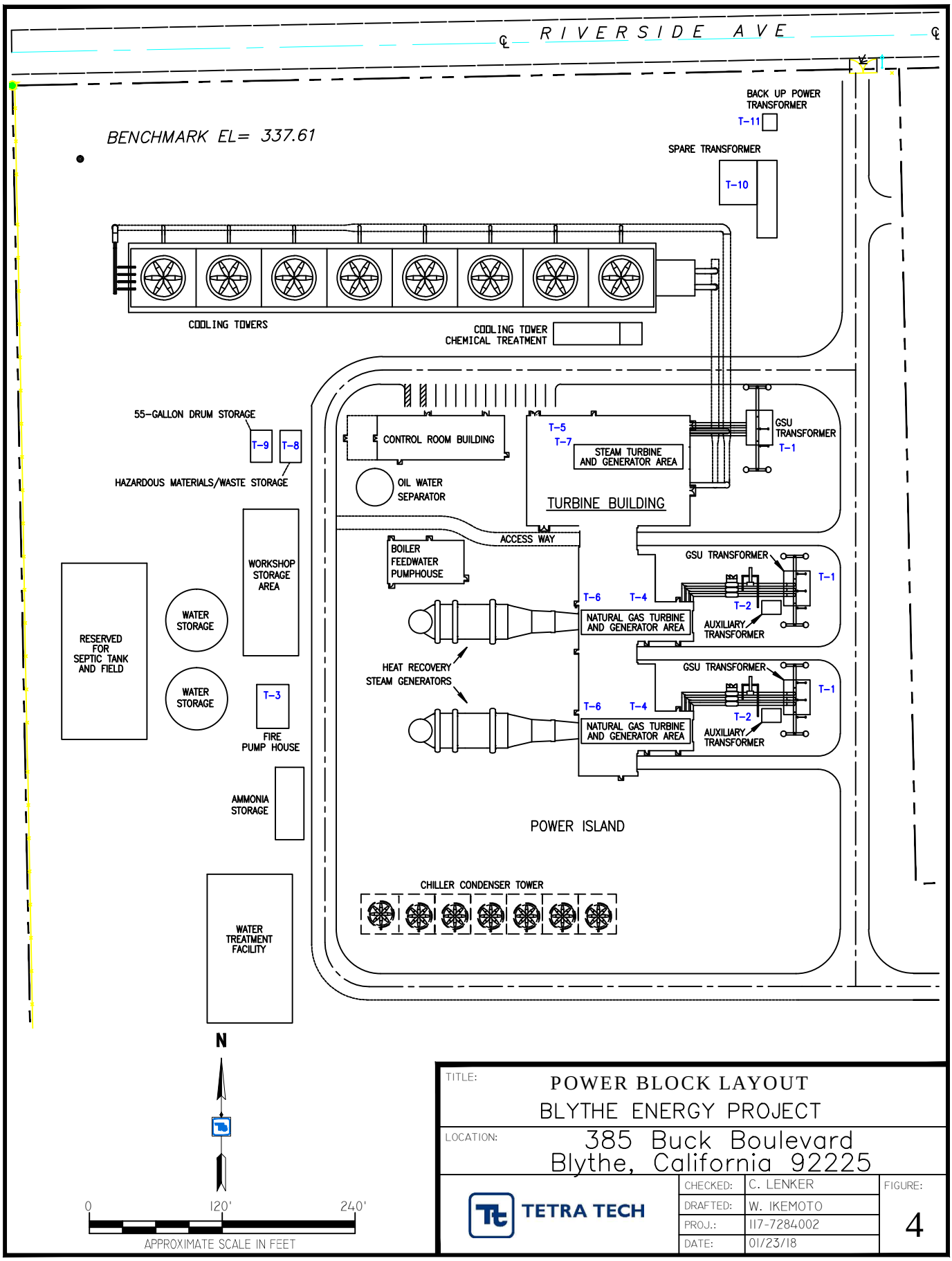
Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Blythe Energy Inc.**
Facility Name **Blythe Energy Inc.**
385 N Buck Blvd, Blythe 92226

Chemical Location
Water Treatment Equipment Area

CERS ID **10321807**
Facility ID **FA0023213**
Status **Submitted** on 2/27/2019 4:04 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Toxic, Water Reactive, Class 1	**Sodium Hydroxide** CAS No 1310-73-2	**Gallons** State Liquid Type Mixture	**440** Storage Container Aboveground Tank, Plastic/Non-metalic Drum Days on Site: 365	**200**	440 Pressue Ambient Temperature Ambient	Waste Code	- Physical Flammable - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation	SODIUM HYDROXIDE (CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.)	25 %		1310-73-2
DOT: 9 - Misc. Hazardous Materials	**Snow White Calcium Sulfate** CAS No 7778-18-9	**Pounds** State Solid Type Pure	**10000** Storage Container Bag	**55**	10000 Pressue Ambient Temperature Ambient	Waste Code	- Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation				



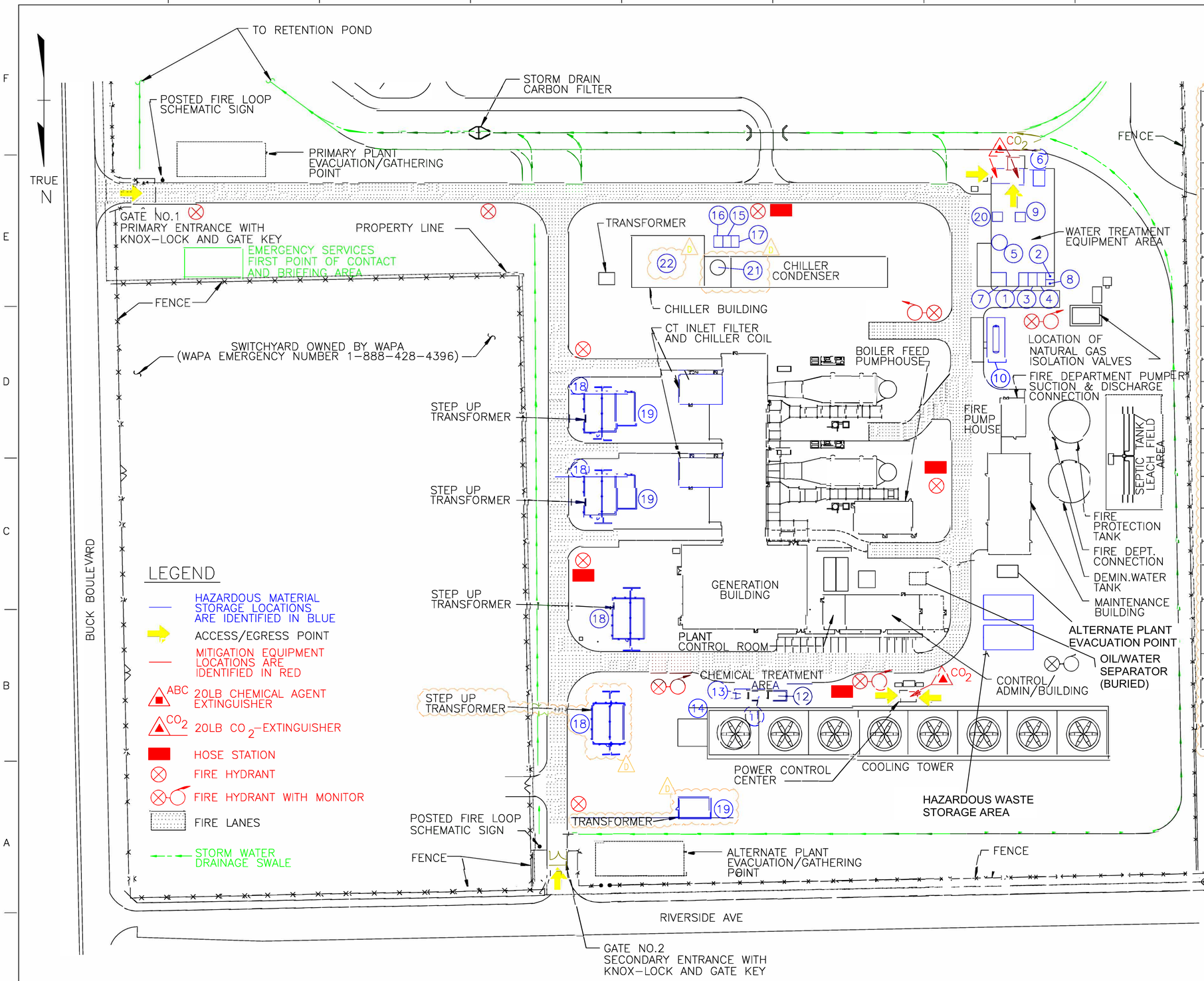
TITLE: POWER BLOCK LAYOUT
BLYTHE ENERGY PROJECT

LOCATION: 385 Buck Boulevard
Blythe, California 92225

TETRA TECH

CHECKED:	C. LENKER	FIGURE:
DRAFTED:	W. IKEMOTO	4
PROJ.:	117-7284002	
DATE:	01/23/18	

Table 2. Storage and Use of Oil Products				
Tank ID	**Oil Products**	**Volume (Gallons)**	**Use**	**Storage/Use Area**
T-1	Nitro 10 GBXT	16,500 (x3)	GSU Transformers	Electrical Equipment
T-2	Nitro 10 GBXT	1,620 (x2)	Auxiliary Transformers	Electrical Equipment
T-3	Diesel	500	Fire Pump Fuel Tank	Fire Pump Building
T-4	Lubrication Oil	3,600 (x2)	Combustion Turbine Lubrication	Turbine Building
T-5	Lubrication Oil	6650 gallons	Steam Turbine Lubrication	Turbine Building
T-6	Hydraulic Oil	80 (x2)	Combustion Turbine Hydraulics	Turbine Building
T-7	Hydraulic Oil	160	Steam Turbine Hydraulics	Turbine Building
T-8	Used Oil	250-gallon tank	Hazardous Materials Storage	Haz Mat Area
T-9	Lubrication Oil	55 (x30)	Refilling Lubrication Tanks	55-Gallon Drum Area
T-10	Nitro 10 GBXT	16,500	Spare Transformer in Case of Emergency	Electrical Equipment Northeast of Cooling Towers
T-11	Nitro 10 GBXT	827	Back up Transformer for Emergency Loss of Power	Electrical Equipment North of Spare Transformer



NOTES

1. FOR INDOOR STORAGE OF HAZARDOUS MATERIAL AND MITIGATION EQUIPMENT LOCATIONS, ALSO SEE DRAWINGS HMMP-2,3,4,5,6 & 7.

HAZARDOUS MATERIAL IDENTIFICATION AND INVENTORY

REF NO.	DESCRIPTION	MAXIMUM QUANTITY-TYPE OF STORAGE	CHEMICAL COMMON NAME	HAZARD CLASS
1	Permaclean PC-11	100 GAL TANK		CR
2	NOT USED	NOT USED	NOT USED	NOT USED
3	SODIUM HYDROXIDE, 25% CONCENTRATION	100 GAL TANK	SODIUM HYDROXIDE	CR
4	PERMATREAT-191	100 GAL TANK	ANTI-SCALANT	IR
5	NOT USED	NOT USED	NOT USED	NOT USED
6	CALCIUM SULFATE, 100% CONCENTRATION	10,000 LBS. BAGS	GYPSUM	IR;OHH
7	SULFURIC ACID, 93-97% CONCENTRATION	2,000 GAL. TANK	SULFURIC ACID	CR;TX;WR2; OHH
8	SODIUM HYPRCHLORITE, 12% CONCENTRATION	100 GAL. TANK	BLEACH	IR;CR;OX2
9	LUBE OIL	100 GAL. RESERVOIR	MINERAL OIL	C3B;IR
10	AMMONIUM HYDROXIDE, 29.5% CONCENTRATION	16,000 GAL. TANK	AQUEOUS AMMONIA	CR;TX
11	SULFURIC ACID, 93-97% CONCENTRATION	6,000 GAL. TANK	SULFURIC ACID	CR;TX;WR2; OHH
12	SODIUM HYPRCHLORITE, 12% CONCENTRATION	6,000 GAL. TANK	BLEACH	IR;CR;OX2
13	3D TRASAR 3DT 487	300 GAL TOTE	CORROSION INHIBITOR	CR:SN:OHH
14	NOT USED	NOT USED	NOT USED	NOT USED
15				
16	NALCO STABREX ST 70	300 GAL TOTE	ANTI-SCALANT	IR:CR:TX
17	3D TRASAR 3DT 487	300 GAL TOTE	Corrosion Inhibitor	CR:SN:OHH
18	INSULATING OIL	15,900 GAL. RESERVOIR	MINERAL OIL	C3B;IR
19	INSULATING OIL	1,560 GAL. RESERVOIR	MINERAL OIL	C3B;IR
20	NOT USED	NOT USED	NOT USED	NOT USED
21	CALCITE	TWO TANKS 76,000 POUNDS EACH	CALCIUM CARBONATE	IR
22	ANHYDROUS AMMONIA	55,000 POUNDS	AMMONIA LIQUID GAS	IR:CR:TX

HAZARD CLASS LEGEND FOR TABLE:

IR – IRRITANT
CR – CORROSIVE
TX – TOXIC
SN – SENSITIZER
CL3B – COMBUSTIBLE LIQUID
WR2 – WATER REACTIVE
OX2 – OXIDIZER
OHH – OTHER HEALTH HAZARD

BLYTHE ENERGY PROJECT
OWNER: BLYTHE ENERGY LLC.
385 N. BUCK BLVD., BLYTHE, CA 92226

PLANT OUTDOOR AND COOLING TOWER POWER CONTROL CENTER

HAZARDOUS MATERIAL AND MITIGATION EQUIPMENT LOCATION PLAN

HMMP-1

DATE: 4/12/12
REVISION D

2425-001/HMMP-1

CALIFORNIA ENVIRONMENTAL REPORTING SYSTEM (CERS)

CONSOLIDATED EMERGENCY RESPONSE / CONTINGENCY PLAN

Prior to completing this Plan, please refer to the INSTRUCTIONS FOR COMPLETING A CONSOLIDATED CONTINGENCY PLAN

A. FACILITY IDENTIFICATION AND OPERATIONS OVERVIEW

FACILITY ID # FA—002—3213 (A1.)	CERS ID # 10321807 (A2.)	DATE OF PLAN PREPARATION/REVISION (MM/DD/YYYY) 02/13/2019 (A3.)

BUSINESS NAME *(Same as Facility Name or DBA - Doing Business As)* (A4.)
Blythe Energy

BUSINESS SITE ADDRESS (A5.)
385 N. Buck Blvd

BUSINESS SITE CITY (A6.)		ZIP CODE (A7.)
Blythe	CA	92226

TYPE OF BUSINESS (e.g., Painting Contractor) (A8.)	INCIDENTAL OPERATIONS (e.g., Fleet Maintenance) (A9.)
Power Plant	

THIS PLAN COVERS CHEMICAL SPILLS, FIRES, AND EARTHQUAKES INVOLVING (Check all that apply): (A10.)

☒ 1. HAZARDOUS MATERIALS; ☒ 2. HAZARDOUS WASTES

B. INTERNAL RESPONSE

INTERNAL FACILITY EMERGENCY RESPONSE WILL OCCUR BY (Check all that apply): (B1.)

☒ 1. CALLING PUBLIC EMERGENCY RESPONDERS (e.g., 9-1-1)
☒ 2. CALLING HAZARDOUS WASTE CONTRACTOR
☐ 3. ACTIVATING IN-HOUSE EMERGENCY RESPONSE TEAM

C. EMERGENCY COMMUNICATIONS, PHONE NUMBERS AND NOTIFICATIONS

In the event of an emergency involving hazardous materials and/or hazardous waste, all facilities must IMMEDIATELY:
1. Notify facility personnel and evacuate if necessary in accordance with the Emergency Action Plan (Title 8 California Code of Regulations §3220);
2. Notify local emergency responders by calling 9-1-1;
3. Notify the local Unified Program Agency (UPA) at the phone number below; and
4. Notify the State Warning Center at (800) 852-7550.

Facilities that generate, treat, store or dispose of hazardous waste have additional responsibilities to notify and coordinate with other response agencies. Whenever there is an imminent or actual emergency situation such as an explosion, fire, or release, the Emergency Coordinator must follow the appropriate requirements for the category of facility and type of release involved:
1. Title 22 California Code of Regulations §66265.56. Emergency Procedures for generators of 1,000 kilograms or more of hazardous waste in any calendar month.
2. Title 22 California Code of Regulations §66265.196. Response to Leaks or Spills and Disposition of Leaking or Unfit-for-Use Tank Systems.
3. Title 40 Code of Federal Regulations §302.6. Notification requirements for a release of a hazardous substance equal to or greater than the reportable quantity.
4. Title 22 California Code of Regulations §66262.34(d)(2) and Title 40 Code of Federal Regulations §262.34(d)(5)(ii) for generators of less than 1000 kilograms of hazardous waste in any calendar month.

Following notification and before facility operations are resumed in areas of the facility affected by the incident, the Emergency Coordinator shall notify the local UPA and the local fire department's hazardous materials program, if necessary, that the facility is in compliance with requirements to:
1. Provide for proper storage and disposal of recovered waste, contaminated soil or surface water, or any other material that results from an explosion, fire, or release at the facility; and
2. Ensure that no material that is incompatible with the released material is transferred, stored, or disposed of in areas of the facility affected by the incident until cleanup procedures are completed.

EMERGENCY RESPONSE PHONE NUMBERS:

AMBULANCE, FIRE, POLICE AND CHP	9-1-1
CALIFORNIA STATE WARNING CENTER (CSWC)/CAL OES	(800) 852-7550
NATIONAL RESPONSE CENTER (NRC)	(800) 424-8802
POISON CONTROL CENTER	(800) 222-1222
LOCAL UNIFIED PROGRAM AGENCY (UPA)	(760) 863-8976 (C1.)
OTHER (Specify): (C2.)	(C3.)

NEAREST MEDICAL FACILITY / HOSPITAL NAME: Palo Verde Hospital (C4.) (760) 922-4115 (C5.)

AGENCY NOTIFICATION PHONE NUMBERS:

CALIFORNIA DEPT. OF TOXIC SUBSTANCES CONTROL (DTSC)	(916) 255-3545
REGIONAL WATER QUALITY CONTROL BOARD (RWQCB)	(760) 346-7491 (C6.)
U.S. ENVIRONMENTAL PROTECTION AGENCY (US EPA)	(800) 300-2193
CALIFORNIA DEPT. OF FISH AND WILDLIFE (CDFW)	(916) 358-2900
U.S. COAST GUARD (USCG)	(202) 267-2180
CAL OSHA	(916) 263-2800
CAL FIRE OFFICE OF THE STATE FIRE MARSHAL (OSFM)	(916) 323-7390
OTHER (Specify): (C7.)	(C8.)
OTHER (Specify): (C9.)	(C10.)

INTERNAL FACILITY EMERGENCY COMMUNICATIONS OR ALARM NOTIFICATION WILL OCCUR BY (Check all that apply): C11.

- [x] 1. VERBAL WARNINGS;
- [x] 2. PUBLIC ADDRESS OR INTERCOM SYSTEM;
- [x] 3. TELEPHONE;
- [ ] 4. PAGERS;
- [x] 5. ALARM SYSTEM;
- [x] 6. PORTABLE RADIO

NOTIFICATIONS TO NEIGHBORING FACILITIES THAT MAY BE AFFECTED BY AN OFF-SITE RELEASE WILL OCCUR BY (Check all that apply): C12.

- [x] 1. VERBAL WARNINGS;
- [ ] 2. PUBLIC ADDRESS OR INTERCOM SYSTEM;
- [ ] 3. TELEPHONE;
- [ ] 4. PAGERS;
- [ ] 5. ALARM SYSTEM;
- [ ] 6. PORTABLE RADIO

EMERGENCY COORDINATOR CONTACT INFORMATION: Aaron Honor - Plant General Manager C13.

PRIMARY EMERGENCY COORDINATOR NAME: Aaron Honor PHONE NO.: (760) 921-1360 PHONE NO.: (951) 315-4893

ALTERNATE EMERGENCY COORDINATOR NAME: Ramon Campos PHONE NO.: (928) 230-1524 PHONE NO.: (760) 922-9950

- [ ] Check if additional Emergency Coordinator contact and address information is available onsite or by calling PHONE NO.:

Note: If more than one alternate emergency coordinator is designated, attach a list in order of responsibility.

D. EMERGENCY CONTAINMENT AND CLEANUP PROCEDURES

Check the applicable boxes to indicate your facility's procedures for containing spills and preventing and mitigating releases, fires and/or explosions.

D1.

- [x] 1. MONITOR FOR LEAKS, RUPTURES, PRESSURE BUILD-UP, ETC.;
- [x] 2. PROVIDE STRUCTURAL PHYSICAL BARRIERS (e.g., Portable spill containment walls, built-in berms);
- [x] 3. PROVIDE ABSORBENT PHYSICAL BARRIERS (e.g., Pads, spill pigs, spill pillows);
- [x] 4. COVER OR BLOCK FLOOR AND/OR STORM DRAINS;
- [x] 5. LINED TRENCH DRAINS AND/OR SUMPS;
- [x] 6. AUTOMATIC FIRE SUPPRESSION SYSTEM;
- [x] 7. ELIMINATE SOURCES OF IGNITION FOR FLAMMABLE HAZARDS;
- [x] 8. STOP PROCESSES AND/OR OPERATIONS;
- [x] 9. AUTOMATIC / ELECTRONIC EQUIPMENT SHUT-OFF SYSTEM;
- [x] 10. SHUT OFF WATER, GAS, ELECTRICAL UTILITIES;
- [x] 11. CALL 9-1-1 FOR PUBLIC EMERGENCY RESPONDER ASSISTANCE AND/OR MEDICAL AID;
- [x] 12. NOTIFY AND EVACUATE PERSONS IN ALL THREATENED AND/OR IMPACTED AREAS;
- [x] 13. ACCOUNT FOR EVACUATED PERSONS IMMEDIATELY AFTER EVACUATION;
- [ ] 14. PROVIDE PROTECTIVE EQUIPMENT FOR ON-SITE EMERGENCY RESPONSE TEAM;
- [x] 15. REMOVE CONTAINERS AND/OR ISOLATE AREAS;
- [x] 16. HIRE LICENSED HAZARDOUS WASTE CONTRACTOR;
- [x] 17. USE ABSORBENT MATERIAL FOR SPILL CONTAINMENT;
- [ ] 18. VACUUM SUCTION USING APPROPRIATE VACUUM (e.g., Intrinsically safe) FOR SPILL CONTROL AND/OR CLEANUP;
- [ ] 19. DECONTAMINATE PERSONNEL AND EQUIPMENT WITHIN DESIGNATED AREA AND DISPOSE OF WASTEWATER AS HAZARDOUS WASTE;
- [x] 20. PROVIDE SAFE TEMPORARY STORAGE OF HAZARDOUS WASTE GENERATED DURING EMERGENCY ACTIONS;
- [ ] 21. OTHER (Specify): D2.

E. FACILITY EVACUATION

THE FOLLOWING ALARM SIGNAL(S) WILL BE USED TO BEGIN EVACUATION OF THE FACILITY (Check all that apply): E1.

E2.

- [ ] 1. BELLS;
- [x] 2. HORNS/SIRENS;
- [x] 3. VERBAL (i.e., Shouting);
- [ ] 4. OTHER (Specify):

THE FOLLOWING LOCATION(S) WILL BE USED FOR AN EMERGENCY ASSEMBLY AREA(S) (e.g., Parking lot, street corner): E3.

1.) Main Gate 2.) North Gate 3.) Warehouse

Note: The Emergency Coordinator must account for all onsite employees and visitors after evacuation.

EVACUATION ROUTE S AND ALTERNATE EVACUATION ROUTES ARE DESCRIBED AS FOLLOWS: E4.

- [x] 1. WRITTEN PROCEDURES DESCRIBING ROUTES, EXITS, AND ASSEMBLY AREAS;
- [x] 2. EVACUATION MAP(S) DEPICTING ROUTES, EXITS, AND ASSEMBLY AREAS;
- [ ] 3. OTHER (Specify): E5.

Note: Evacuation procedures and/or maps should be posted in visible facility locations and must be included in the Contingency Plan.

F. ARRANGEMENTS FOR EMERGENCY SERVICES

ADVANCE ARRANGEMENTS FOR LOCAL EMERGENCY SERVICES (Check one of the following): F1.

- [ ] 1. HAVE BEEN DETERMINED NOT NECESSARY;
- [x] 2. THE FOLLOWING ARRANGEMENTS HAVE BEEN MADE (Specify): Call 911 for Ammonia and chemical related releases, and for emergencies. F2.

Note: Advance arrangements with local fire and police departments, hospitals, state and local emergency response teams, and/or emergency services contractors should be made for your facility, if necessary. Large Quantity Generators must describe arrangements in the Contingency Plan.

G. EMERGENCY EQUIPMENT

Check the applicable boxes to list emergency response equipment available at the facility, identify the location(s) where the equipment is kept, and indicate the equipment's capability, if applicable.

TYPE	EQUIPMENT AVAILABLE G1.	LOCATION G2.	CAPABILITY G3.
EXAMPLE	☒ *CHEMICAL PROTECTIVE GLOVES*	*SPILL RESPONSE KIT*	*SINGLE USE, OIL RESISTANT ONLY*
Safety and First Aid	1. ☒ CHEMICAL PROTECTIVE SUITS, APRONS, AND/OR VESTS	Warehouse	Protective Suit
	2. ☒ CHEMICAL PROTECTIVE GLOVES	Warehouse	
	3. ☒ CHEMICAL PROTECTIVE BOOTS	Warehouse	
	4. ☒ SAFETY GLASSES, GOGGLES, AND FACE SHIELDS	Warehouse	
	5. ☒ HARD HATS	Warehouse/On Personnel	
	6. ☒ AIR-PURIFYING RESPIRATORS	On Personnel	
	7. ☐ SELF-CONTAINED BREATHING APPARATUS (SCBA)		
	8. ☒ FIRST AID KITS	Control Room/Admin Bldg./maint shop	
	9. ☒ PLUMBED EYEWASH FOUNTAIN AND/OR SHOWER	Throughout	
	10. ☐ PORTABLE EYEWASH KITS AND/OR STATION		
	11. ☐ OTHER		
Fire Fighting	12. ☒ PORTABLE FIRE EXTINGUISHERS	Throughout	
	13. ☒ FIXED FIRE SUPPRESSION SYSTEMS AND/ OR SPRINKLERS	Throughout	
	14. ☒ FIRE ALARM BOXES	Exit Doors/Throughout	
	15. ☐ OTHER		
Spill Control and Clean-Up	16. ☒ ALL-IN-ONE SPILL KIT	Warehouse	
	17. ☒ ABSORBENT MATERIAL	Chem Storage Area	
	18. ☒ CONTAINER FOR USED ABSORBENT	Throughout	
	19. ☒ BERM AND/OR DIKING EQUIPMENT	Throughout	
	20. ☒ BROOM	Throughout	
	21. ☒ SHOVEL	Throughout	
	22. ☒ VACUUM	Throughout	
	23. ☐ EXHAUST HOOD		
	24. ☒ SUMP AND/OR HOLDING TANK	Oil/Water Separator	
	25. ☒ CHEMICAL NEUTRALIZERS	Chemical Treatment Area	
	26. ☐ GAS CYLINDER LEAK REPAIR KIT		
	27. ☐ SPILL OVERPACK DRUMS		
	28. ☐ OTHER		
Communi-cations and Alarm Systems	29. ☒ TELEPHONES (e.g., Cellular)	Throughout	
	30. ☒ INTERCOM AND/OR PA SYSTEM	Throughout	
	31. ☒ PORTABLE RADIOS	On Personnel	
	32. ☒ AUTOMATIC ALARM CHEMICAL MONITORING EQUIPMENT	Throughout	
Other	33. ☒ OTHER	Throughout	Security Cameras
	34. ☐ OTHER		

H. EARTHQUAKE VULNERABILITY

Identify areas of the facility that are vulnerable to hazardous materials releases due to seismic motion. These areas require immediate isolation and inspection.

VULNERABLE AREAS (Check all that apply): H1.	LOCATIONS (e.g., Shop, outdoor shed, lab): H2.
☒ 1. HAZARDOUS MATERIALS AND/OR WASTE STORAGE AREAS	Ammonia System
☒ 2. PROCESS LINES AND PIPING	Ammonia System
☒ 3. LABORATORY	General Chemistry Lab
☐ 4. WASTE TREATMENT AREA	

Identify mechanical systems vulnerable to releases / spills due to earthquake-related motion. These systems require immediate isolation and inspection.

VULNERABLE SYSTEMS AND/OR EQUIPMENT (Check all that apply): H3.	LOCATIONS: H4.
☒ 1. SHELVES, CABINETS AND/OR RACKS	Chemical Storage Area
☒ 2. TANKS AND SHUT-OFF VALVES	Throughout
☒ 3. PORTABLE GAS CYLINDERS	Chemical Storage Area/Flammable Locker
☒ 4. EMERGENCY SHUT-OFF AND/OR UTILITY VALVES	Natural Gas Inlet
☒ 5. SPRINKLER SYSTEMS	Throughout
☒ 6. STATIONARY PRESSURIZED CONTAINERS (e.g., Propane tank)	High Pressure Cylinder Area

I. EMPLOYEE TRAINING

Employee training is required for all employees and/or contractors handling hazardous materials and/or hazardous wastes during normal and/or emergency operations. Most facilities will need to submit a separate Training Plan. However, your CUPA may accept this section as the Training Plan for some small facilities.
Employee training plans may include the following content:

- Applicable laws and regulations;
- Emergency response plans and procedures;
- Safety Data Sheets;
- Hazard communication related to health and safety;
- Methods for safe handling of hazardous substances;
- Hazards of materials and processes (e.g., fire, explosion, asphyxiation);
- Hazard mitigation, prevention and abatement procedures;
- Coordination of emergency response actions;
- Notification procedures for local emergency responders, CUPA, Cal OES, and onsite personnel;
- Communication and alarm systems;
- Personal protective equipment;
- Use and maintenance of emergency response equipment and supplies (e.g. Fire extinguishers, respirators, spill control materials);
- Decontamination procedures;
- Evacuation procedures and evacuation staging locations;
- Identification of facility areas, equipment, and systems vulnerable to earthquakes and other natural disasters.
- OTHER (Specify):

Check the applicable boxes below to indicate how the employee training program is administered.

☐ 1. FORMAL CLASSROOM ☒ 2. VIDEOS ☒ 3. SAFETY MEETINGS ☐ 4. STUDY GUIDES / MANUALS I1.

☒ 5. OTHER (Specify): Web Based Training Courses I2.

☐ 6. NOT APPLICABLE SINCE FACILITY HAS NO EMPLOYEES

☒ 7. CHECK IF A SEPARATE EMPLOYEE TRAINING PLAN IS USED AND UPLOADED TO CERS AS A PDF DOCUMENT I3.

☒ 8. CHECK IF EMPLOYEE TRAINING IS COVERED BY THE ABOVE REFERENCED CONTENT AND OTHER DOCUMENTS ONSITE I4.

EMPLOYEE TRAINING FREQUENCY AND RECORDKEEPING TRAINING MUST BE:

- Provided initially for new employees as soon as possible following the date of hire. New employees should not work in an unsupervised position that involves hazardous materials handling and/or hazardous waste management without proper training;
- Provided within six months from the date of hire for new employees at a large quantity generator;
- Ongoing and provided at least annually;
- Amended prior to a change in process or work assignment;
- Given upon modification to the Emergency Response/Contingency Plan.

Large Quantity Generator Training: Large quantity generators (1,000 kg or more) must retain written plan and documentation of employee training which includes:

- A written description of the type and amount of both initial and ongoing training that will be given to persons filling each job position having responsibility for hazardous waste management and/or emergency response.
- The name, job title and job description for each position at the facility related to hazardous waste management.
- Current employee training records must be retained until closure of the facility and former employee training records must be retained for at least three years after termination of employment.

Small Quantity Generator Training: Small quantity generators (less than 1,000 kg) must include basic hazardous waste management and emergency response procedures but a written employee training plan and training records are not required. In order to show that the facility has met the small quantity generator employee training requirement, an employee training plan and training records may be made available.

Hazardous Materials Business Plan Training: Businesses must provide initial and annual employee training that includes the content referenced above. The training may be based on the job position and training records must be made available for a period of at least three years.

J. LIST OF ATTACHMENTS

Check one of the following: J1.

☒ 1. NO ATTACHMENTS ARE REQUIRED; or

☐ 2. THE FOLLOWING DOCUMENTS ARE ATTACHED: J2.

Blythe Energy Center maintains a full Emergency Action Plan at the facility. Please refer to the plan for full emergency procedure.

	Production Training - 2018	Location	Date Due	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed
	January GPi			*Acuna, J*	*Brunson.W*	*Coen, L*	*Coverdale, M*	*Harris, R*	*Hipke,D*	*Lemire, R.*	*Middlebrook, J.*	*Moreno, E*	*Moreno, H*	*Rizzotto, G.*	*Shasky, M.*
1	**NS0101 - NERC Compliance Awareness**	GPiLearn	**1/31/2018**	1/19/2018	6/27/2018	1/30/2018	1/21/2018	1/9/2018	1/9/2018	1/8/2018	1/15/2018	1/17/2018	1/22/2018	1/11/2018	1/23/2018
2	**NS0201 - Critical Infrastructure Protection Standards**	GPiLearn	**1/31/2018**	1/25/2018	6/27/2018	1/30/2018	1/21/2018	1/9/2018	1/10/2018	1/8/2018	1/15/2018	1/18/2018	1/22/2018	1/11/2018	1/23/2018
3	**NS0301 - Intro to PWR syt for Generator owner/ops**	GPiLearn	**1/31/2018**	1/19/2018	6/27/2018	1/30/2018	1/21/2018	1/9/2018	1/9/2018	1/8/2018	1/15/2018	1/17/2018	1/22/2018	1/11/2018	1/24/2018
4	**NS0302 - NERC Event Reporting**	GPiLearn	**1/31/2018**	1/20/2018	6/27/2018	1/30/2018	1/24/2018	1/9/2018	1/14/2018	1/9/2018	1/15/2018	1/17/2018	1/22/2018	1/11/2018	1/26/2018
5	**NS0306 -System Protection Coordination**	GPiLearn	**1/31/2018**	1/27/2018	6/27/2018	1/30/2018	1/24/2018	1/13/2018	1/14/2018	1/9/2018	1/15/2018	1/17/2018	1/22/2018	1/29/2018	1/27/2018
6	**NS0310 - NERC Protective Relay**	GPiLearn	**1/31/2018**	1/25/2018	6/27/2018	1/30/2018	1/24/2018	1/14/2018	1/14/2018	1/9/2018	1/15/2018	1/17/2018	1/22/2018	1/29/2018	1/27/2018
7	**PF1602 - Circuit Breakers**	GPiLearn	**1/31/2018**	1/20/2018	6/27/2018	1/30/2018	1/21/2018	1/14/2018	1/10/2018	1/8/2018	1/15/2018	1/18/2018	1/22/2018	1/29/2018	2/8/2018
				7	7	7	7	7	7	7	7	7	7	7	5
	Classroom training														
	Respiratory fit / Hearing Test	Classroom	**1/31/2018**	1/8/2018		1/8/2018	1/8/2018	1/8/2018	1/8/2018	1/8/2018	1/8/2018	1/8/2018	1/8/2018	1/8/2018	1/8/2018
	February GPi	Location	Date Due	*Acuna, J*	*Brunson.W*	*Coen, L*	*Coverdale, M*	*Harris, R*	*Hipke,D*	*Lemire, R.*	*Middlebrook, J.*	*Moreno, E*	*Moreno, H*	*Rizzotto, G.*	*Shasky, M.*
1	**OS1901 - PPE General Protection**	GPiLearn	**2/28/2018**	2/18/2018	7/2/2018	2/16/2018	2/25/2018	2/8/2018	2/18/2018	2/8/2018	2/15/2018	3/6/2018	4/5/2018	4/23/2018	8/10/2018
2	**OS1902 - PPE Foot/Head Protection**	GPiLearn	**2/28/2018**	2/18/2018	7/2/2018	2/16/2018	2/25/2018	2/8/2018	2/18/2018	2/8/2018	2/15/2018	3/6/2018	3/6/2018	4/23/2018	8/10/2018
3	**OS1903 - PPE Eye & Face Protection**	GPiLearn	**2/28/2018**	3/7/2018	7/2/2018	2/16/2018	2/25/2018	2/8/2018	2/18/2018	2/8/2018	2/15/2018	3/6/2018	3/18/2018	4/23/2018	8/10/2018
4	**OS1904 - Hand Protection**	GPiLearn	**2/28/2018**	3/7/2018	7/2/2018	2/16/2018	2/25/2018	2/8/2018	2/18/2018	2/8/2018	2/15/2018	3/6/2018	4/5/2018	4/23/2018	8/10/2018
5	**OS1905 - Head Protection**	GPiLearn	**2/28/2018**	2/23/2018	7/2/2018	2/16/2018	2/25/2018	2/8/2018	2/18/2018	2/8/2018	3/18/2018	3/6/2018	4/5/2018	4/23/2018	8/10/2018
6	**ND-CAL-04.0 - ELECTRICAL SAFETY CAL/OSHA**	GPiLearn	**2/28/2018**	3/8/2018	7/2/2018	2/16/2018	2/25/2018	2/14/2018	2/18/2018	2/15/2018	2/25/2018	3/6/2018	3/18/2018	4/23/2018	8/10/2018
7	**ND-ELT-1.0 ELECTRACAL SAFETY**	GPiLearn	**2/28/2018**	3/8/2018	7/2/2018	2/16/2018	2/25/2018	2/14/2018	2/18/2018	2/15/2018	2/28/2018	3/6/2018	3/18/2018	4/23/2018	8/10/2018
8	**ND-ELT0 4.0 ELECTRICAL SAFETY - Arc flash**	GPiLearn	**2/28/2018**	3/18/2018	7/2/2018	2/16/2018	2/25/2018	2/22/2018	2/18/2018	2/15/2018	2/28/2018	3/6/2018	3/18/2018	4/23/2018	8/10/2018
				8	8	8	8	8	8	8	8	8	8	8	8
	February Classroom	Completed													
	Scaffold Training	Classroom	**2/28/2018**												
		Completed													
	March GPi	Location	Date Due	*Acuna, J*	*Brunson.W*	*Coen, L*	*Coverdale, M*	*Harris, R*	*Hipke,D*	*Lemire, R.*	*Middlebrook, J.*	*Moreno, E*	*Moreno, H*	*Rizzotto, G.*	*Shasky, M.*
1	**ND-CAL-09.0 - Basic First Aid**	GPiLearn	**3/31/2018**	4/3/2018	7/2/2018	3/8/2018	3/29/2018	3/21/2018	3/21/2018	3/18/2018	3/18/2018	3/15/2018	4/5/2018	4/25/2018	4/30/2018
2	**ND-CAL-05.0 - Bloodborne Pathogens Awareness**	GPiLearn	**3/31/2018**	4/3/2018	7/2/2018	3/8/2018	3/29/2018	3/21/2018	3/21/2018	3/18/2018	3/18/2018	3/15/2018	4/5/2018	4/25/2018	4/30/2018
	March Classroom	Completed		2	2	2	2	2	2	2	2	2	2	2	2
	LOTO Training Program	Classroom	**3/31/2018**	3/23/2018		3/23/2018	3/23/2018	3/23/2018	3/23/2018	3/23/2018	3/23/2018	3/23/2018	3/23/2018	3/23/2018	3/23/2018
		Completed													
	April GPi	Location	Date Due	*Acuna, J*	*Brunson.W*	*Coen, L*	*Coverdale, M*	*Harris, R*	*Hipke,D*	*Lemire, R.*	*Middlebrook, J.*	*Moreno, E*	*Moreno, H*	*Rizzotto, G.*	*Shasky, M.*
1	**OS0701 - Confined Space Mod 1****	GPiLearn	**4/30/2018**	4/18/2018	7/2/2018	4/30/2018	4/30/2018	4/7/2018	4/7/2018	4/6/2018	4/16/2018	5/5/2018	5/6/2018	4/25/2018	5/15/2017
2	**OS0702 - Confined Space Mod 2****	GPiLearn	**4/30/2018**	4/24/2018	7/2/2018	4/30/2018	4/30/2018	4/7/2018	4/7/2018	4/6/2018	4/16/2018	4/24/2018	4/12/2018	4/25/2018	5/15/2017
3	**OS1701 - LOTO Mod 1**	GPiLearn	**4/30/2018**	4/24/2018	6/29/2018	4/23/2018	4/30/2018	4/7/2018	4/19/2018	4/8/2018	4/17/2018	4/17/2018	4/12/2018	4/25/2018	
4	**OS1702 - LOTO Mod 2**	GPiLearn	**4/30/2018**	4/25/2018	7/2/2018	4/23/2018	4/30/2018	4/7/2018	4/19/2018	4/6/2018	4/21/2018	4/17/2018	4/14/2018	4/25/2018	
5	**ND-CAL-02.0 - Hot-Work Welding -Cutting Program ****	GPiLearn	**4/30/2018**	4/28/2018	7/2/2018	4/30/2018	4/30/2018	4/19/2018	4/7/2018	4/6/2018	4/21/2018	4/24/2018	4/14/2018	4/25/2018	4/27/2018
6	**ND-EXC-1.0- Excavating - Trench Program ****	GPiLearn	**4/30/2018**	4/9/2018	7/2/2018	4/7/2018	4/30/2018	4/7/2018	4/7/2018	4/6/2018	4/16/2018	4/24/2018	4/14/2018	4/25/2018	4/28/2018
7	**ND-HTW-1.0 HOT WORKS/ARC WELDING - NEW**	GPiLearn	**4/30/2018**	4/18/2018	7/2/2018	4/28/2018	4/30/2018	4/7/2018	4/7/2018	4/6/2018	4/21/2018	5/5/2018	4/14/2018	4/25/2018	
	April Classroom	Completed		7	7	7	7	7	7	7	7	7	5	7	2
	Fire Extinguisher/Fall Protection/PPE Use and Safety	Classroom		4/18/2018		4/18/2018	4/18/2018	4/18/2018	4/18/2018	4/18/2018	4/18/2018	4/18/2018	4/18/2018	4/18/2018	4/18/2018
		Completed													

	May GPi	Location	Date Due	Acuna, J	Brunson.W	Coen, L	Coverdale, M	Harris, R	Hipke,D	Lemire, R.	Middlebrook, J.	Moreno, E	Moreno, H	Rizzotto, G.	Shasky, M.
1	ND-FLO-1.0 FORKLIFT OPERATORS TRAIING:FUNDAMENTALS -NEW	GPiLearn	5/31/2018	5/11/2018	5/31/2018	4/23/2018	6/19/2018	5/29/2018	5/28/2018	6/6/2018	5/31/2018	6/2/2018	6/7/2018	6/19/2018	5/31/2018
2	ND-FLO-2.0 FORKLIFT OP TRAINING -SAFE OP - NEW	GPiLearn	5/31/2018	5/11/2018	7/2/2018	5/10/2018	6/19/2018	5/29/2018	5/28/2018	6/6/2018	5/31/2018	6/2/2018	6/7/2018	6/19/2018	5/31/2018
3	ND-FLO-3.0- FORKLIFT TRAINING - SAGFE TRAVELING AND LOADING- NEW	GPiLearn	5/31/2018	5/11/2018	7/2/2018	5/10/2018	6/19/2018	5/29/2018	5/28/2018	6/6/2018	5/31/2018	6/2/2018	6/7/2018	6/19/2018	5/31/2018
4	ND-FLO-4.0- FORKLIFT OP TRAINING - SAFE MAINTENANCE- NEW	GPiLearn	5/31/2018	5/11/2018	7/2/2018	5/10/2018	5/31/2018	5/29/2018	5/28/2018	6/6/2018	5/31/2018	6/2/2018	6/7/2018	6/19/2018	5/31/2018
5	ND-INT-15.0 DRIVER SAFETY HAZARD DRIVING CONDITION INT.- NEW	GPiLearn	5/31/2018	5/11/2018	5/31/2018	4/23/2018	5/31/2018	5/29/2018	5/28/2018	6/6/2018	5/31/2018	6/2/2018	6/7/2018	6/19/2018	5/31/2018
6	ND-DRV-2.0 - DISTRACTED DRIVER	GPiLearn	5/31/2018	5/11/2018	5/31/2018	4/23/2018	5/31/2018	5/29/2018	5/28/2018	6/6/2018	5/31/2018	6/2/2018	6/7/2018	6/19/2018	5/31/2018
7	ND-DRV-4.0 - HAZARD OF SPEEDING **	GPiLearn	5/31/2018	5/11/2018	5/31/2018	4/23/2018	5/31/2018	5/29/2018	5/28/2018	6/6/2018	5/31/2018	6/2/2018	6/7/2018	6/19/2018	5/31/2018
8	ND-HSW-1.0 -HEAT STRESS IN WORKPLACE **	GPiLearn	5/31/2018	5/11/2018	5/31/2018	4/23/2018	5/31/2018	5/29/2018	5/28/2018	6/6/2018	5/31/2018	6/2/2018	6/7/2018	6/11/2018	5/31/2018
		Completed	8	8	8	8	8	8	8	8	8	8	8	8	8

	June GPi	Location	Date Due	Acuna, J	Brunson.W	Coen, L	Coverdale, M	Harris, R	Hipke,D	Lemire, R.	Middlebrook, J.	Moreno, E	Moreno, H	Rizzotto, G.	Shasky, M.
1	EN0101 - Air Handbook **	GPiLearn	6/30/2018	6/19/2018	6/26/2018	6/12/2018	6/11/2018	6/15/2018	6/30/2018	6/24/2018	6/24/2018	6/28/2018	6/30/2018	6/11/2018	6/22/2018
		Completed		1	1	1	1	1		1	1	1		1	1

	July GPi	Location	Date Due	Acuna, J	Brunson.W	Coen, L	Coverdale, M	Harris, R	Hipke,D	Lemire, R.	Middlebrook, J.	Moreno, E	Moreno, H	Rizzotto, G.	Shasky, M.
1	ND-INT-33.0 - Hazard Communication- International *	GPiLearn	7/31/2018	7/7/2018	7/17/2018	7/5/2018	7/31/2018	7/10/2018	7/29/2018	7/30/2018	7/30/2018	7/5/2018	7/31/2018	7/31/2018	7/31/2018
2	ND-CAL-07.0 - COMPRESSED GAS AWARNESS **	GPiLearn	7/31/2018	7/7/2018	7/18/2018	7/3/2018	7/31/2019	7/11/2018	7/29/2018	7/30/2018	7/31/2018	7/31/2018	7/30/2018	7/30/2018	7/31/2018
3	ND-CHM-1.0 CHEMICAL SAFETY **	GPiLearn	7/31/2018	7/7/2018	7/18/2018	7/3/2018	8/2/2018	7/11/2018	7/29/2018	7/30/2018	7/31/2018	7/31/2018	7/30/2018	7/30/2018	7/31/2018
4	EN0901 - SPCC **	GPiLearn	7/31/2018	5/2/2018	7/5/2018	7/5/2018	8/3/2018	8/1/2018	7/29/2018	7/30/2018	7/14/2018	7/31/2018	7/31/2018	7/30/2018	8/3/2018
5	EN0301 - DOT Awareness- every 3 yrs only	GPiLearn	7/31/2018	7/31/2018	6/26/2018	7/5/2018	7/31/2018	7/17/2018	7/29/2018	7/30/2018	7/14/2018	7/31/2018	7/12/2018	7/30/2018	8/9/2018
6	EN0302 - DOT Function Specific - every 3 yrs only	GPiLearn	7/31/2018	7/31/2018	6/27/2018	7/6/2018	7/31/2018	7/17/2018	7/29/2018	7/30/2018	7/1/2018	7/31/2018	7/17/2018	7/30/2018	8/9/2018
7	EN0303- DOT Safety - Every 3 yrs only	GPiLearn	7/31/2018	7/31/2018	7/5/2018	7/5/2018	7/31/2018	4/13/2018	7/29/2018	7/30/2018	7/1/2018	7/31/2018	7/31/2018	7/30/2018	8/9/2018
		Completed	1/7/1900	7	7	7	7	7	7	7	7	7	7	7	7

	August GPi	Location	Date Due	Acuna, J	Brunson.W	Coen, L	Coverdale, M	Harris, R	Hipke,D	Lemire, R.	Middlebrook, J.	Moreno, E	Moreno, H	Rizzotto, G.	Shasky, M.
1	EN0601- Hazardous Waste Generation**	GPiLearn	8/31/2018	8/14/2018	8/2/2018	8/6/2018	8/28/2018	8/17/2018	8/5/2018	8/16/2018	8/15/2018	8/21/2018	8/28/2018	8/28/2018	8/27/2018
2	EN0602 -Hazardous Waste Handbook **	GPiLearn	8/31/2018	8/7/2018	8/2/2018	8/6/2018	8/28/2018	8/26/2018	8/5/2018	8/16/2018	8/15/2018	8/21/2018	8/28/2018	8/28/2018	8/28/2018
3	OS1501 - Hearing Conservation Mod 1**	GPiLearn	8/31/2018	8/7/2018	8/25/2018	8/2/2018	8/27/2018	8/16/2018	8/5/2018	8/16/2018	8/15/2018	8/21/2018	8/28/2018	8/28/2018	8/28/2018
4	OS1502 - Hearing Conservation Mod 2**	GPiLearn	8/31/2018	8/14/2018	8/25/2018	8/2/2018	8/27/2018	8/261/18	8/5/2018	8/16/2018	8/15/2018	8/21/2018	8/28/2018	8/14/2018	8/28/2018
5	OS2001 - Respirators Mod 1**	GPiLearn	8/31/2018	8/14/2018	8/14/2018	8/2/2018	8/27/2018	8/17/2018	8/5/2018	8/16/2018	8/15/2018	8/21/2018	8/28/2018	8/28/2018	8/29/2018
6	OS2002 - Respirators Mod 2**	GPiLearn	8/31/2018	8/14/2018	8/25/2018	8/2/2018	8/28/2018	8/17/2018	8/5/2018	8/15/2018	8/15/2018	8/21/2018	8/28/2018	8/29/2018	8/29/2018
		Completed		6	6	6	6	6	6	6	6	6	6	6	6

	September GPi	Location	Date Due	Acuna, J	Brunson.W	Coen, L	Coverdale, M	Harris, R	Hipke,D	Lemire, R.	Middlebrook, J.	Moreno, E	Moreno, H	Rizzotto, G.	Shasky, M.
1	PF0103 - Fire Protection **	GPiLearn	9/20/2018	9/11/2018	9/9/2018	9/14/2018	9/5/2018	9/11/2018	*9/6/2018*	9/4/2018	9/9/2018	9/9/2018	9/11/2018	9/24/2018	9/12/2018
2	ND-CAL-11.0- FIRE SAFETY **	GPiLearn	9/20/2018	9/11/2018	9/9/2018	9/20/2018	9/5/2018	9/11/2018	*9/6/2018*	9/4/2018	9/9/2018	9/9/2018	9/11/2018	9/24/2018	9/12/2018
3	EN1001 - Stormwater **	GPiLearn	9/20/2018	9/5/2018	8/2/2018	**9/14/2018**	9/5/2018	9/4/2018	*9/6/2018*	9/4/2018	9/6/2018	9/9/2018	9/10/2018	9/24/2018	9/6/2018
4	ND-CAL-06.0 INDUSTRIAL EROGONOMICS **	GPiLearn	9/20/2018	9/11/2018	9/9/2018	**9/14/2018**	9/5/2018	9/11/2018	*9/6/2018*	9/4/2018	9/9/2018	9/9/2018	9/11/2018	9/24/2018	9/11/2018
		Completed													3

	October GPi	Location	Date Due	Acuna, J	Brunson.W	Coen, L	Coverdale, M	Harris, R	Hipke,D	Lemire, R.	Middlebrook, J.	Moreno, E	Moreno, H	Rizzotto, G.	Shasky, M.
1	ND-CAL-01.0 FALL PROTECTION**	GPiLearn	10/31/2018	10/19/2018	10/18/2018	10/8/2018	10/14/2018	10/2/2018	10/16/2018	10/12/2018	10/18/2018	10/18/2018	10/12/2018	10/15/2018	10/8/2018
2	OS0801 - Cranes Mod 1**	GPiLearn	10/31/2018	10/19/2018	10/19/2018	10/9/2018	10/14/2018	10/2/2018	10/16/2018	10/12/2018	10/18/2018	10/18/2018	10/13/2018	10/15/2018	10/11/2018
3	OS0802 - Cranes Mod 2**	GPiLearn	10/31/2018	10/19/2018	10/19/2018	10/17/2018	10/14/2018	10/12/2018	10/16/2018	10/12/2018	10/18/2018		10/13/2018	10/15/2018	10/12/2018

		Completed		3	3	3	3	3	3	3	3	2	3	3	3
	November GPi	Location	Date Due	*Acuna, J*	*Brunson.W*	*Coen, L*	*Coverdale, M*	*Harris, R*	*Hipke,D*	*Lemire, R.*	*Middlebrook, J.*	*Moreno, E*	*Moreno, H*	*Rizzotto, G.*	*Shasky, M.*
1		GPiLearn													
		Completed													
	December GPi	Location	Date Due	*Acuna, J*		*Coen, L*	*Coverdale, M*	*Harris, R*	*Hipke,D*	*Lemire, R.*	*Middlebrook, J.*	*Moreno, E*	*Moreno, H*	*Rizzotto, G.*	*Shasky, M.*
		GPiLearn													
		GPiLearn													
		GPiLearn													
		GPiLearn													
		GPiLearn													
		Completed													

Date Completed	Date Completed	Date Completed	Date Completed	Date Completed
Smith, F.	***Walsh, C***	***Wasserburger, P***	***Whipple, E.***	
1/25/2018	11/16/2017	1/11/2018	1/18/2018	
1/25/2018	11/16/2017	1/11/2018	1/18/2018	
1/25/2018	11/20/2017	1/11/2018	1/26/2018	
1/20/2018	11/20/2017	1/12/2018	1/26/2018	
1/29/2018	11/20/2017	1/12/2018	1/29/2018	
1/29/2018	11/20/2017	1/12/2018	1/30/2018	
2/2/2018	1/15/2018	1/11/2018	1/18/2018	
7	7	7	7	
1/8/2018	1/8/2018	1/8/2018	1/8/2018	
Smith, F.	***Walsh, C***	***Wasserburger, P***	***Whipple, E.***	
2/2/2018	2/17/2018	4/6/2018	2/28/2018	
2/2/2018	2/17/2018	4/6/2018	2/28/2018	
2/20/2018	2/17/2018	4/6/2018	2/28/2018	
2/17/2018	2/17/2018	4/6/2018	2/28/2018	
2/17/2018	2/17/2018	4/6/2018	2/28/2018	
2/22/2018	3/6/2018	4/6/2018	2/28/2018	
2/20/2018	3/6/2018	4/6/2018	2/28/2018	
2/20/2018	3/6/2018	4/6/2018	2/28/2018	
8	8	8	8	
Smith, F.	***Walsh, C***	***Wasserburger, P***	***Whipple, E.***	
3/8/2018	3/18/2018	4/6/2018	4/11/2018	
3/8/2018	4/20/2018	4/6/2018	4/11/2018	
2	2	**2**	**2**	
3/23/2018	3/23/2018	3/23/2018	3/23/2018	
Smith, F.	***Walsh, C***	***Wasserburger, P***	***Whipple, E.***	
5/5/2018	5/5/2018	4/9/2018	5/5/2018	
5/5/2018	5/5/2018	4/9/2018	5/5/2018	
5/5/2018	5/5/2018	4/9/2018	5/5/2018	
5/5/2018	5/5/2018	4/9/2018	5/5/2018	
5/5/2018	5/5/2018	4/9/2018	5/5/2018	
5/5/2018	5/5/2018	4/9/2018	5/5/2018	
5/5/2018	5/5/2018	4/9/2018	5/5/2018	
7	**7**	**7**	**7**	
4/18/2018	4/18/2018	4/18/2018	4/18/2018	

Smith, F.	Walsh, C	Wasserburger, P	Whipple, E.	
6/12/2018	5/31/2018	5/14/2018	6/12/2018	
6/12/2018	5/31/2018	5/14/2018	6/12/2018	
6/12/2018	5/31/2018	5/14/2018	6/12/2018	
6/12/2018	5/31/2018	5/14/2018	6/12/2018	
6/12/2018	5/31/2018	5/14/2018	6/12/2018	
6/12/2018	5/31/2018	5/14/2018	6/12/2018	
6/12/2018	5/31/2018	5/14/2018	6/12/2018	
6/12/2018	5/31/2018	5/14/2018	6/12/2018	
8	**8**	**8**	**8**	

Smith, F.	Walsh, C	Wasserburger, P	Whipple, E.	
6/12/2018	6/24/2018	6/14/2018	6/30/2018	
1	**1**	**1**		

Smith, F.	Walsh, C	Wasserburger, P	Whipple, E.	
7/4/2018	7/31/2018	*7/5/2018*	7/22/2018	
7/5/2018	7/30/2018	7/5/2018	7/22/2018	
7/5/2018	7/30/2018	7/5/2018	7/22/2018	
7/9/2018	7/31/2018	7/5/2018	7/22/2018	
7/9/2018	7/31/2018	7/5/2018	7/22/2018	
7/17/2018	7/31/2018	7/5/2018	7/22/2018	
7/17/2018	7/31/2018	7/5/2018	7/22/2018	
7	7	7	7	

Smith, F.	Walsh, C	Wasserburger, P	Whipple, E.	
8/1/2018	8/18/2018	8/3/2018	8/14/2018	
8/1/2018	8/28/2018	8/3/2018	8/14/2018	
8/2/2018	8/9/2018	8/8/2018	8/15/2018	
8/2/2018	8/28/2018	8/15/2018	8/15/2018	
8/1/2018	8/30/2018	8/3/2018	8/14/2018	
8/3/2018	8/28/2018	8/18/2018	8/15/2018	
6	6	6	6	

Smith, F.	Walsh, C	Wasserburger, P	Whipple, E.	
9/18/2018	9/8/2018	9/14/2018	9/8/2018	
9/18/2018	9/8/2018	9/14/2018	9/8/2018	
10/17/2018	9/9/2018	9/8/2018	9/7/2018	
9/18/2018	9/18/2018	9/8/2018	9/8/2018	

Smith, F.	Walsh, C	Wasserburger, P	Whipple, E.	
10/13/2018	10/15/2018	10/8/2018	10/16/2018	
10/13/2018	10/15/2018	10/11/2018	110/16/18	
10/13/2018	10/15/2018	10/11/2018	10/16/2018	

3	3	3	3	
Smith, F.	***Walsh, C***	***Wasserburger, P***	***Whipple, E.***	
Smith, F.	***Walsh, C***	***Wasserburger, P***	***Whipple, E.***	

	Production Training - 2018	Location
	January GPi	
1	**NS0101 - NERC Compliance Awareness**	**GPiLearn**
2	**NS0201 - Critical Infrastructure Protection Standards**	**GPiLearn**
3	**NS0301 - Intro to PWR syt for Generator owner/ops**	**GPiLearn**
4	**NS0302 - NERC Event Reporting**	**GPiLearn**
5	**NS0306 -System Protection Coordination**	**GPiLearn**
6	**NS0310 - NERC Protective Relay**	**GPiLearn**
7	**PF1602 - Circuit Breakers**	**GPiLearn**
	January Total complete = 7 classes	**GPiLearn**
	Classroom Training	
	Respiratory fit / Hearing Test	**Classroom**
	February GPi	Location
1	**OS1901 - PPE General Protection**	**GPiLearn**
2	**OS1902 - PPE Foot/Head Protection**	**GPiLearn**
3	**OS1903 - PPE Eye & Face Protection**	**GPiLearn**
4	**OS1904 - Hand Protection**	**GPiLearn**
5	**OS01905 - Head Protection**	**GPiLearn**
6	**ND-CAL-04.0 - ELECTRICAL SAFETY CAL/OSHA**	**GPiLearn**
7	**ND-ELT-1.0 ELECTRACAL SAFETY**	**GPiLearn**
8	**ND-ELT0 4.0 ELECTRICAL SAFETY - Arc flash**	**GPiLearn**
	February total complete= 8 classes	**GPiLearn**
	February Classroom	**Completed**
	Scaffold Training	**Classroom**
	March GPi	Location
1	**ND-CAL-09.0 - Basic First Aid**	**GPiLearn**
2	**ND-CAL-05.0 - Bloodborne Pathogens Awareness**	**GPiLearn**
	March Classroom	**Completed**
	LOTO Training Program	**Classroom**
		Completed
	April GPi	Location
1	**OS0701 - Confined Space Mod 1**	**GPiLearn**
2	**OS0702 - Confined Space Mod 2**	**GPiLearn**
3	**OS1701 - LOTO Mod 1**	**GPiLearn**
4	**OS1702 - LOTO Mod 2**	**GPiLearn**
5	**ND-CAL-02.0 - Hot-Work Welding -Cutting Program**	**GPiLearn**
6	**ND-EXC-1.0- Excavating - Trench Program**	**GPiLearn**
7	**ND-HTW-1.0 HOT WORK/ARC WELDING -NEW**	

	April Classroom	**Completed**
	Fire Extinguisher/Fall Protection/PPE Use and Safety	**Classroom**
		Completed
	May GPi	Location
1	**-NEW**	**GPiLearn**
2	**ND-FLO-2.0 FORKLIFT OP TRAINING -SAFE OP - NEW**	**GPiLearn**
3	**ND-FLO-3.0- FORKLIFT TRAINING - SAGFE TRAVELING AND**	**GPiLearn**
4	**ND-FLO-4.0- FORKLIFT OP TRAINING - SAFE MAINTENANCE- NEW**	**GPiLearn**
5	**ND-INT15.0 DRIVER SAFETY HAZARD DRIVING CONDITION INT.- NEW**	**GPiLearn**
6	**ND-DRV-2.0 - DISTRACTED DRIVER**	**GPiLearn**
7	**ND-DRV-4.0 - HAZARD OF SPEEDING**	**GPiLearn**
8	**ND-HSW-1.0 -HEAT STRESS IN WORKPLACE**	**GPiLearn**
		Completed
	June GPi	Location
1	**EN0101 - Air Handbook**	**GPiLearn**
		Completed
	July GPi	Location
1	**ND-INT-33.0 - Hazard Communication- International**	**GPiLearn**
2	**ND-CAL-07.0 - COMPRESSED GAS AWARNESS**	**GPiLearn**
3	**ND-CHM-1.0 CHEMICAL SAFETY**	**GPiLearn**
4	**EN0901 - SPCC**	**GPiLearn**
5	**EN0301 - DOT Awareness**	**GPiLearn**
6	**EN0302 - DOT Function Specific**	**GPiLearn**
7	**EN0303- DOT Safety**	**GPiLearn**
		Completed
	August GPi	Location
1	**EN0601- Hazardous Waste Generation**	**GPiLearn**
2	**EN0602 -Hazardous Waste Handbook**	**GPiLearn**
3	**OS1501 - Hearing Conservation Mod 1**	**GPiLearn**
4	**OS1502 - Hearing Conservation Mod 2**	**GPiLearn**
5	**OS2001 - Respirators Mod 1**	**GPiLearn**
6	**OS2002 - Respirators Mod 2**	**GPiLearn**
		Completed
	September GPi	Location
1	**PF0103 - Fire Protection ***	**GPiLearn**

2	ND-CAL-11.0- FIRE SAFETY *	GPiLearn
3	EN1001 - Stormwater	GPiLearn
4	ND-CAL-06.0 INDUSTRIAL EROGONOMICS *	GPiLearn
		Completed
	October GPi	Location
1	ND-CAL-01.0 FALL PROTECTION*	GPiLearn
2	OS0801 - Cranes Mod 1*	GPiLearn
3	OS0802 - Cranes Mod 2*	GPiLearn
		Completed
	November GPi	Location
1	ND-CAL-10.0 HAND AND POWER TOOL SAFETY ???	GPiLearn
		GPiLearn
		Completed
	December GPi	Location
		GPiLearn
		GPiLearn
		GPiLearn
		GPiLearn
		GPiLearn
		Completed

Pending approval or change

UPDATE 6/

Date Due	*Date Completed*	*Date Completed*	*Date Completed*	*Date Completed*
	Campos, R.	**Gutierrez, D**	**Mehlich, A.**	**Honor , A**
1/31/2018	1/29/2018	1/31/2018	1/31/2018	1/24/2018
1/31/2018	1/29/2018	1/31/2018	1/31/2018	1/24/2018
1/31/2018	1/29/2018	1/31/2018	2/13/2018	1/24/2018
1/31/2018	1/29/2018	1/31/2018	2/12/2018	1/24/2018
1/31/2018	1/29/2018	1/31/2018	2/2/2018	1/24/2018
1/31/2018	1/31/2018	1/31/2018	2/12/2018	1/24/2018
1/31/2018	1/29/2018	1/31/2018	2/12/2018	1/24/2018
1/31/2018	7	7	7	7
1/31/2018	1/8/2018	1/8/2018	1/8/2018	

Date Due	**Campos, R.**	**Gutierrez, D**	**Mehlich, A.**	**Honor , A**
2/29/2018	3/1/2018	3/3/2018	2/12/2018	3/23/2018
2/29/2018	3/1/2018	3/3/2018	2/12/2018	3/23/2018
2/29/2018	3/1/2018	3/3/2018	2/12/2018	3/23/2018
2/29/2018	3/2/2018	3/3/2018	2/12/2018	3/23/2018
2/29/2018	3/2/2018	3/3/2018	2/12/2018	3/23/2018
2/29/2018	3/2/2018	3/3/2018	2/15/2018	3/23/2018
2/29/2018	3/2/2018	3/3/2018	2/15/2018	3/23/2018
2/29/2018	3/2/2018	3/3/2018	2/15/2018	3/23/2018
2/29/2018	8	8	8	8

Date Due	**Campos, R.**	**Gutierrez, D**	**Mehlich, A.**	**Honor , A**
3/31/2018	3/6/2018	3/29/2018	3/31/2018	3/15/2018
3/31/2018	3/6/2018	3/29/2018	3/31/2018	3/15/2018
	2	**2**	**2**	**2**
3/31/2018	3/23/2018	3/23/2018	3/23/2018	3/23/2018

Date Due	**Campos, R.**	**Gutierrez, D**	**Mehlich, A.**	**Honor , A**
4/30/2018	4/30/2018	4/30/2018	4/2/2018	4/30/2018
4/30/2018	6/13/418	4/30/2018	4/2/2018	
4/30/2018	4/30/2018	4/30/2018	4/25/2018	4/30/2018
4/30/2018	4/30/2018	4/30/2018	4/25/2018	4/30/2018
4/30/2018	4/27/2018	4/30/2018	4/27/2018	4/30/2018
4/30/2018	4/28/2018	4/30/2018	4/25/2018	4/30/2018
4/30/2018	6/13/2018	4/30/2018	4/27/2018	4/30/2018

	7	7	7	3
4/30/2018	4/18/2018	4/18/2018	4/18/2018	4/18/2018

Date Due	Campos, R.	Gutierrez, D	Mehlich, A.	Honor , A
5/31/2018	6/13/2018	5/31/2018	5/14/2018	
5/31/2018	6/13/2018	5/31/2018	5/14/2018	
5/31/2018	6/13/2018	5/31/2018	5/14/2018	
5/31/2018	6/13/2018	5/31/2018	5/14/2018	
5/31/2018	6/13/2018	5/31/2018	5/14/2018	
5/31/2018	6/13/2018	5/31/2018	5/14/2018	
5/31/2018	6/13/2018	5/31/2018	5/14/2018	
5/31/2018	6/13/2018	5/31/2018	5/14/2018	
	8	8	8	

Date Due	Campos, R.	Gutierrez, D	Mehlich, A.	Honor , A
6/30/2018	6/18/2018	6/19/2018	6/22/2018	6/20/2018
	1	1	1	1

Date Due	Campos, R.	Gutierrez, D	Mehlich, A.	Honor , A
7/31/2018	8/1/2018	7/29/2018	7/31/2018	7/31/2018
7/31/2018	8/1/2018	7/29/2018	7/31/2018	7/31/2018
7/31/2018	8/1/2018	7/29/2018	7/31/2018	7/31/2018
7/31/2018	8/1/2018	7/29/2018	7/31/2018	7/31/2018
7/31/2018	8/1/2018	7/29/2018	7/31/2018	7/31/2018
7/31/2018	8/1/2018	7/29/2018	7/31/2018	7/31/2018
7/31/2018	8/1/2018	7/29/2018	7/31/2018	7/31/2018
	7	7	7	7

Date Due	Campos, R.	Gutierrez, D	Mehlich, A.	Honor , A
8/31/2018		8/28/2018	8/28/2018	8/29/2018
8/31/2018		8/28/2018	8/28/2018	8/29/2018
8/31/2018		8/28/2018	8/3/2018	8/29/2018
8/31/2018		8/29/2018	8/3/2018	8/29/2018
8/31/2018		8/29/2018	8/28/2018	8/29/2018
8/31/2018		8/29/2018	8/28/2018	8/29/2018
		6	6	6

Date Due	Campos, R.	Gutierrez, D	Mehlich, A.	Honor , A
9/20/2018		9/21/2018	9/5/2018	

9/20/2018		9/21/2018		
9/20/2018		9/21/2018		
9/20/2018		9/20/2018		

Date Due	**Campos, R.**	**Gutierrez, D**	**Mehlich, A.**	**Honor , A**
10/31/2018		10/8/2018	10/27/2018	
10/31/2018		10/8/2018		
10/31/2018		10/8/2018		

Date Due	**Campos, R.**	**Gutierrez, D**	**Mehlich, A.**	**Honor , A**
11/30/2018				
11/30/2018				

Date Due	**Campos, R.**	**Gutierrez, D**	**Mehlich, A.**	**Honor , A**
12/31/2018				
12/31/2018				
12/31/2018				
12/31/2018				
12/31/2018				

13/18 OL

	Administration Team	Location	Date Due
	2018		
	February		
1	OS1901 - PPE General Protection	GPiLearn	2/29/2018
2	OS1902 - PPE Foot/Head Protection	GPiLearn	2/29/2018
3	OS1903 - PPE Eye & Face Protection	GPiLearn	2/29/2018
4	OS1904 - Hand Protection	GPiLearn	2/29/2018
5	OS1905 - Head Protection		
	March	Location	Date Due
4	ND-CAL-09.0 - Basic First Aid	GPiLearn	3/31/2018
5	ND-CAL-05.0 - Bloodborne Pathogens Awareness	GPiLearn	3/31/2018
	May	Location	Date Due
1	ND-INT- 15.0 DRIVER SAFETY HAZARD DRIVING CONDITIONS - INT	GPiLearn	5/31/2018
2	ND-DRV-2.0 - DISTRACTED DRIVER	GPiLearn	5/31/2018
3	ND-DRV-4.0 - HAZARD OF SPEEDING	GPiLearn	5/31/2018
4	ND-HSW-1.0 -HEAT STRESS IN WORKPLACE	GPiLearn	5/31/2018
	July	Location	Date Due
1	ND-INT-33.0- Hazard Communication International	GPiLearn	7/31/2018
2	ND-CAL-07.0 - COMPRESSED GAS AWARNESS	GPiLearn	7/31/2018
3	ND-CHM-1.0 CHEMICAL SAFETY	GPiLearn	7/31/2018
	August	Location	Date Due
Aug	EN0601- Hazardous Waste Generation	GPiLearn	8/31/2018
Aug	EN0602 -Hazardous Waste Handbook	GPiLearn	8/31/2018
Aug	OS1501 - Hearing Conservation Mod 1	GPiLearn	8/31/2018
Aug	OS1502 - Hearing Conservation Mod 2	GPiLearn	8/31/2018
	September	Location	Date Due
sep	PF0103 - Fire Protection	GPiLearn	10/31/2018
sep	ND-CAL--11.0 FIRE SAFETY	GPiLearn	10/31/2018
sep	ND-CAL-06.0 INDUTRIAL EROGONOMICS	GPiLearn	10/31/2018

GPi - Classes in Black are existing classes

Pending approval or change

Date Completed	*Date Completed*	*Date Completed*	
Kramer, K.	**Carlton, R.**	**Lopez, O**	
2/28/2018	2/28/2018	2/28/2018	
2/28/2018	2/28/2018	2/28/2018	
2/28/2018	2/28/2018	2/28/2018	
2/28/2018	2/28/2018	2/28/2018	
2/28/2018	2/28/2018	2/28/2018	
5	**5**	**5**	100%
Kramer, K.	**Carlton, R.**	**Lopez, O**	
3/22/2018	3/29/2018	3/30/2018	
3/22/2018	3/29/2018	3/30/2018	
2	**2**	**2**	100%
Kramer, K.	**Carlton, R.**	**Lopez, O**	
5/31/2018	5/31/2018	5/31/2018	
5/31/2018	5/31/2018	5/31/2018	
5/31/2018	5/31/2018	5/31/2018	
5/31/2018	5/31/2018	5/31/2018	
4	**4**	**4**	100%
Kramer, K.	**Carlton, R.**	**Lopez, O**	
7/2/2018	7/31/2018	7/31/2018	
7/31/2018	7/31/2018	7/31/2018	
7/31/2018	7/31/2018	7/31/2018	
3	3	3	100%
Kramer, K.	**Carlton, R.**	**Lopez, O**	
8/31/2018	8/28/2018	8/28/2018	
8/31/2018	8/31/2018	8/28/2018	
8/28/2018	8/31/2018	8/28/2018	
8/31/2018	8/31/2018	8/28/2018	
4	4	4	100%
Kramer, K.	**Carlton, R.**	**Lopez, O**	
		9/12/2018	
		9/11/2018	

AMERICAN SAFETY & HEALTH INSTITUTE

Class Roster
CPR, AED, and Basic First Aid

Primary Instructor: Jim Orth

Course date(s): 7-23/25-2018

	Last Name	First Name	Email	Telephone	Written Exam Passed	Card Issued
1	Whipple Whipple	Edward	edward.whipple@Altagas.ca	760-922-9950	Y☐ N☐	Y☒ N☐
2	HARRIS	RANDALL	Randall.Harris@Altagas.ca	760.922.9950	Y☐ N☐	Y☒ N☐
3	MORENO	HERIBERTO	Heriberto.Moreno@Altagas.CA	760.922.9950	Y☐ N☐	Y☒ N☐
4	Coverdale coverdale	Miles	Miles.Coverdale@Altagas.CA	760-960-1507	Y☐ N☐	Y☒ N☐
5	Smith	Frank	Frank.Smith@Altagas.CA	760-972-9071	Y☐ N☐	Y☒ N☐
6	WALSH Walsh	Cody	CODY.WALSH@ALTAGAS.CA	951-801-0996	Y☐ N☐	Y☒ N☐
7	CAMPOS	RAMON	ramon.Campos@Altagas.CA	760-921.1364	Y☐ N☐	Y☒ N☐
8	Gutierrez	David	david.gutierrez@altagas.ca	760-921-1359	Y☐ N☐	Y☒ N☐
9	LEMIRE Lemire	ROBERT	ROBERT.LEMIRE@ALTAGAS.CA	760-550-1531	Y☐ N☐	Y☒ N☐
10	[redacted] Moreno	Efrain	Efrain.Moreno@Altagas.CA	760 899 0057	Y☐ N☐	Y☒ N☐
11	Brunson	Wyatt	Wyatt.Brunson@Altagas.ca	703 469 9335	Y☐ N☐	Y☒ N☐
12	HIPKE Hipke	DAVID	DAVID.HIPKE@ALTAGAS.CA	208-698-1883	Y☐ N☐	Y☒ N☐
13	ACUÑA Acuña	Jacinto	jacintoacuna@yahoo.com	760 898 6857	Y☐ N☐	Y☒ N☐
14	Middlebrook	John	John.middlebrook@Altagas.CA	760 397 7991	Y☐ N☐	Y☒ N☐
15	Honor	Aaron	aaron.honor@altagas.ca	951-315-4893	Y☐ N☐	Y☒ N☐
16	SHASKY	MIKE	MIKE.SHASKY@ALTAGAS.CA	(760) 921-1363	Y☐ N☐	Y☐ N☐
17	Carlton Carlton	Rosalie	rosalie.carlton@altagas.ca	760-921-1357	Y☐ N☐	Y☒ N☐
18	Kolkebeck Kolkebeck	Michael	michael.kolkebeck@altagas.ca	(951)345-3073	Y☐ N☐	Y☒ N☐
19	LOPEZ	Olivia	olivia.Godinez-Lopez@altagas.CA		Y☐ N☐	Y☒ N☐
20					Y☐ N☐	Y☐ N☐

Assistant Instructor Required

AMERICAN SAFETY & HEALTH INSTITUTE

Class Roster

CPR, AED, and Basic First Aid

Primary Instructor: Jim Orth

Course date(s): 7-23/25-2018

	Last Name	First Name	Email	Telephone	Written Exam Passed	Card Issued
1	Whipple Whipple	Edward	edward.Whipple@Altagas.ca	760-922-9950	Y☐ N☐	Y☒ N☐
2	HARRIS	RANDALL	Randall.Harris@Altagas.ca	760.922.9950	Y☐ N☐	Y☒ N☐
3	MORENO	HERIBERTO	Heriberto.Moreno@Altagas.CA	760.922.9950	Y☐ N☐	Y☒ N☐
4	Coverdale coverdale	Miles	Miles.Coverdale@Altagas.CA	760-960-1507	Y☐ N☐	Y☒ N☐
5	Smith	Frank	Frank.Smith@Altagas.CA	760-972-9071	Y☐ N☐	Y☒ N☐
6	WALSH Walsh	Cody	CODY.WALSH@ALTAGAS.CA	951-801-0996	Y☐ N☐	Y☒ N☐
7	CAMPOS	RAMON	ramon.Campos@Altagas.CA	760-921.1364	Y☐ N☐	Y☒ N☐
8	Gutierrez	David	david.gutierrez@altagas.ca	760-921-1359	Y☐ N☐	Y☒ N☐
9					Y☐ N☐	Y☐ N☐
10					Y☐ N☐	Y☐ N☐
11					Y☐ N☐	Y☐ N☐
12					Y☐ N☐	Y☐ N☐
13					Y☐ N☐	Y☐ N☐
14					Y☐ N☐	Y☐ N☐
15					Y☐ N☐	Y☐ N☐
16					Y☐ N☐	Y☐ N☐
17					Y☐ N☐	Y☐ N☐
18					Y☐ N☐	Y☐ N☐
19					Y☐ N☐	Y☐ N☐
20					Y☐ N☐	Y☐ N☐

Assistant Instructor Required

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Certificate of Completion

This is to certify that

Cody Walsh

has completed the

2018 On-Site Customized GEA Screw Compressor and Controls Training Session on Omni Microprocessor-based Control Panels

This training consists of technical instruction for the theory and operation and of GEA Refrigeration North America, Inc. Screw Compressor Packages and operational features of the Micro-III Microprocessor-based Control Panels.

31 July 2018		10.0
Completion Date		Contact Hours
Blythe, CA	*Tim C. Keezel*	
Class Location	Tim C. Keezel Training Manager	

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Certificate of Completion

This is to certify that

Frank Smith

has completed the

2018 On-Site Customized GEA Screw Compressor and Controls Training Session on Omni Microprocessor-based Control Panels

This training consists of technical instruction for the theory and operation and of GEA Refrigeration North America, Inc. Screw Compressor Packages and operational features of the Micro-III Microprocessor-based Control Panels.

31 July 2018		10.0
Completion Date		Contact Hours
Blythe, CA	Tim C. Keezel	
Class Location	Tim C. Keezel Training Manager	

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Certificate of Completion

This is to certify that

Miles Coverdale

has completed the

2018 On-Site Customized GEA Screw Compressor and Controls Training Session on Omni Microprocessor-based Control Panels

This training consists of technical instruction for the theory and operation and of GEA Refrigeration North America, Inc. Screw Compressor Packages and operational features of the Micro-III Microprocessor-based Control Panels.

31 July 2018		10.0
Completion Date		Contact Hours
Blythe, CA	*Tim C. Keezel*	
Class Location	Tim C. Keezel Training Manager	

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Certificate of Completion

This is to certify that

Lee Coen

has completed the

2018 On-Site Customized GEA Screw Compressor and Controls Training Session on Omni Microprocessor-based Control Panels

This training consists of technical instruction for the theory and operation and of GEA Refrigeration North America, Inc. Screw Compressor Packages and operational features of the Micro-III Microprocessor-based Control Panels.

31 July 2018		10.0
Completion Date		Contact Hours
Blythe, CA	Tim C. Keezel	
Class Location	Tim C. Keezel Training Manager	

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Certificate of Completion

This is to certify that

Wyatt Brunson

has completed the

2018 On-Site Customized GEA Screw Compressor and Controls Training Session on Omni Microprocessor-based Control Panels

This training consists of technical instruction for the theory and operation and of GEA Refrigeration North America, Inc. Screw Compressor Packages and operational features of the Micro-III Microprocessor-based Control Panels.

31 July 2018		10.0
Completion Date		Contact Hours
Blythe, CA	*Tim C. Keezel*	
Class Location	Tim C. Keezel Training Manager	

engineering for
a better world

Certificate of Completion

This is to certify that

Heriberto Moreno

has completed the

2018 On-Site Customized GEA Screw Compressor and Controls Training Session on Omni Microprocessor-based Control Panels

This training consists of technical instruction for the theory and operation and of GEA Refrigeration North America, Inc. Screw Compressor Packages and operational features of the Micro-III Microprocessor-based Control Panels.

31 July 2018		10.0
Completion Date		Contact Hours
Blythe, CA	Tim C. Keezel	
Class Location	Tim C. Keezel Training Manager	

engineering for
a better world

Certificate of Completion

This is to certify that

Robert Lemire

has completed the

2018 On-Site Customized GEA Screw Compressor and Controls Training Session on Omni Microprocessor-based Control Panels

This training consists of technical instruction for the theory and operation and of GEA Refrigeration North America, Inc. Screw Compressor Packages and operational features of the Micro-III Microprocessor-based Control Panels.

31 July 2018		10.0
Completion Date		Contact Hours
Blythe, CA	*Tim C. Keezel*	
Class Location	Tim C. Keezel Training Manager	

engineering for
a better world

Certificate of Completion

This is to certify that

Ed Whipple

has completed the

2018 On-Site Customized GEA Screw Compressor and Controls Training Session on Omni Microprocessor-based Control Panels

This training consists of technical instruction for the theory and operation and of GEA Refrigeration North America, Inc. Screw Compressor Packages and operational features of the Micro-III Microprocessor-based Control Panels.

02 August 2018		10.0
Completion Date		Contact Hours
Blythe, CA	*Tim C. Keezel*	
Class Location	Tim C. Keezel Training Manager	

engineering for
a better world

Certificate of Completion

This is to certify that

Efrain Moreno

has completed the

2018 On-Site Customized GEA Screw Compressor and Controls Training Session on Omni Microprocessor-based Control Panels

This training consists of technical instruction for the theory and operation and of GEA Refrigeration North America, Inc. Screw Compressor Packages and operational features of the Micro-III Microprocessor-based Control Panels.

02 August 2018		10.0
Completion Date		Contact Hours
Blythe, CA	*Tim C. Keezel*	
Class Location	Tim C. Keezel Training Manager	

engineering for
a better world

Certificate of Completion

This is to certify that

David Hipke

has completed the

2018 On-Site Customized GEA Screw Compressor and Controls Training Session on Omni Microprocessor-based Control Panels

This training consists of technical instruction for the theory and operation and of GEA Refrigeration North America, Inc. Screw Compressor Packages and operational features of the Micro-III Microprocessor-based Control Panels.

02 August 2018		10.0
Completion Date		Contact Hours
Blythe, CA	Tim C. Keezel	
Class Location	Tim C. Keezel Training Manager	

engineering for
a better world

Certificate of Completion

This is to certify that

Michael Kolkebeck

has completed the

2018 On-Site Customized GEA Screw Compressor and Controls Training Session on Omni Microprocessor-based Control Panels

This training consists of technical instruction for the theory and operation and of GEA Refrigeration North America, Inc. Screw Compressor Packages and operational features of the Micro-III Microprocessor-based Control Panels.

02 August 2018		10.0
Completion Date		Contact Hours
Blythe, CA	Tim C. Keezel	
Class Location	Tim C. Keezel Training Manager	

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a better world

Certificate of Completion

This is to certify that

Jacinto Acuna

has completed the

2018 On-Site Customized GEA Screw Compressor and Controls Training Session on Omni Microprocessor-based Control Panels

This training consists of technical instruction for the theory and operation and of GEA Refrigeration North America, Inc. Screw Compressor Packages and operational features of the Micro-III Microprocessor-based Control Panels.

02 August 2018		10.0
Completion Date		Contact Hours
Blythe, CA	Tim C. Keezel	
Class Location	Tim C. Keezel Training Manager	

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a better world

Certificate of Completion

This is to certify that

John Middlebrook

has completed the

2018 On-Site Customized GEA Screw Compressor and Controls Training Session on Omni Microprocessor-based Control Panels

This training consists of technical instruction for the theory and operation and of GEA Refrigeration North America, Inc. Screw Compressor Packages and operational features of the Micro-III Microprocessor-based Control Panels.

02 August 2018		10.0
Completion Date		Contact Hours
Blythe, CA	Tim C. Keezel	
Class Location	Tim C. Keezel Training Manager	

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a better world

Certificate of Completion

This is to certify that

Price Wasserburger

has completed the

2018 On-Site Customized GEA Screw Compressor and Controls Training Session on Omni Microprocessor-based Control Panels

This training consists of technical instruction for the theory and operation and of GEA Refrigeration North America, Inc. Screw Compressor Packages and operational features of the Micro-III Microprocessor-based Control Panels.

02 August 2018		10.0
Completion Date		Contact Hours
Blythe, CA	Tim C. Keezel	
Class Location	Tim C. Keezel Training Manager	

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a better world

Certificate of Completion

This is to certify that

Randy Harris

has completed the

2018 On-Site Customized GEA Screw Compressor and Controls Training Session on Omni Microprocessor-based Control Panels

This training consists of technical instruction for the theory and operation and of GEA Refrigeration North America, Inc. Screw Compressor Packages and operational features of the Micro-III Microprocessor-based Control Panels.

02 August 2018		10.0
Completion Date		Contact Hours
Blythe, CA	*Tim C. Keezel*	
Class Location	Tim C. Keezel Training Manager	

engineering for
a better world

Certificate of Completion

This is to certify that

Aaron Honor

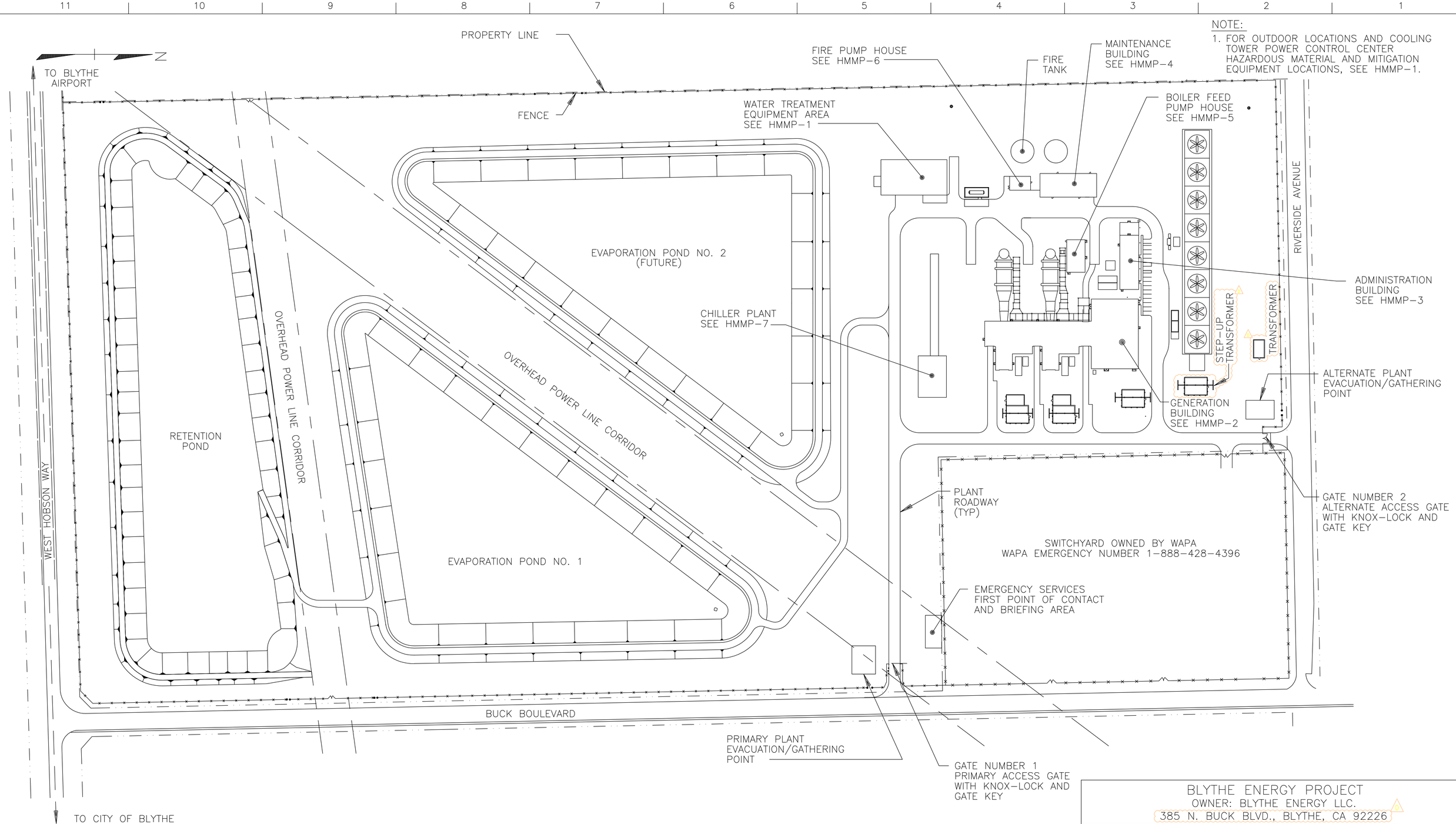
has completed the

2018 On-Site Customized GEA Screw Compressor and Controls Training Session on Omni Microprocessor-based Control Panels

This training consists of technical instruction for the theory and operation and of GEA Refrigeration North America, Inc. Screw Compressor Packages and operational features of the Micro-III Microprocessor-based Control Panels.

02 August 2018		10.0
Completion Date		Contact Hours
Blythe, CA	Tim C. Keezel	
Class Location	Tim C. Keezel Training Manager	

NOTE:
1. FOR OUTDOOR LOCATIONS AND COOLING TOWER POWER CONTROL CENTER HAZARDOUS MATERIAL AND MITIGATION EQUIPMENT LOCATIONS, SEE HMMP-1.



BLYTHE ENERGY PROJECT
OWNER: BLYTHE ENERGY LLC.
385 N. BUCK BLVD., BLYTHE, CA 92226

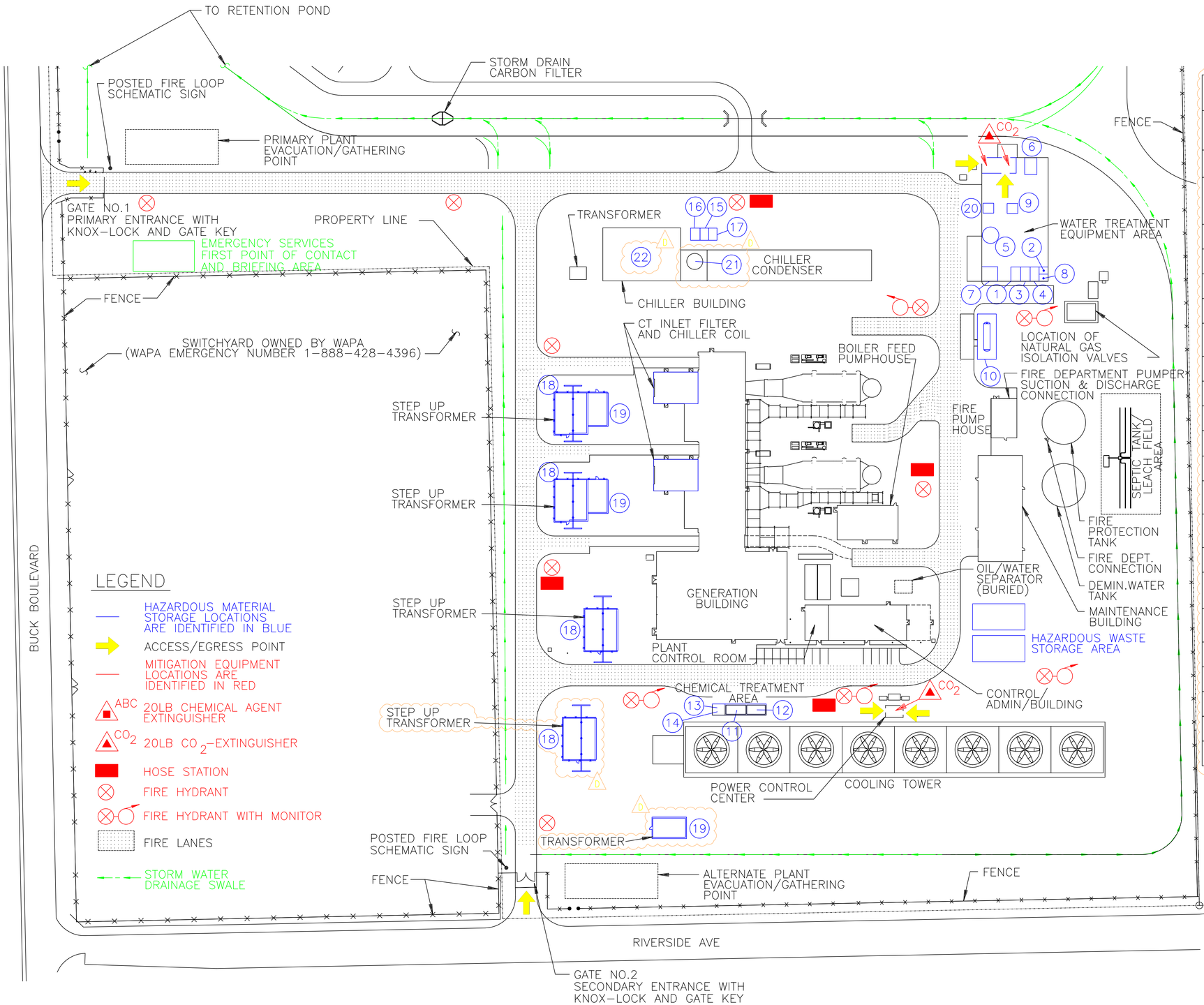
OVERALL SITE AND KEY PLAN

HAZARDOUS MATERIAL AND MITIGATION EQUIPMENT LOCATION PLAN

HMMP-0

DATE: 4/12/12
REVISION D

HMMP-0.DGN (200)



NOTES

1. FOR INDOOR STORAGE OF HAZARDOUS MATERIAL AND MITIGATION EQUIPMENT LOCATIONS, ALSO SEE DRAWINGS HMMP-2,3,4,5,6 & 7.

HAZARDOUS MATERIAL IDENTIFICATION AND INVENTORY

REF NO.	DESCRIPTION	MAXIMUM QUANTITY-TYPE OF STORAGE	CHEMICAL DESCRIPTION COMMON NAME	HAZARD CLASS
1	HYDROGEN CHLORIDE 5% CONCENTRATION	500 GAL TANK	HYDROCHLORIC ACID	CR
2	SODIUM CHLORIDE	100 LBS. BAGS 100 GAL. SOLUTION TANK	SALT	IR
3	SODIUM HYDROXIDE, 25% CONCENTRATION	100 GAL TANK	SODIUM HYDROXIDE	CR
4	PERMATREAT-191	100 GAL TANK	ANTI-SCALANT	IR
5	CALCIUM CHLORIDE, 30% CONCENTRATION	5,000 GAL. TANK	CALCIUM CHLORIDE	IR
6	CALCIUM SULFATE, 100% CONCENTRATION	10,000 LBS. BAGS	GYPSUM	IR;OHH
7	SULFURIC ACID, 93-97% CONCENTRATION	2,000 GAL. TANK	SULFURIC ACID	CR;TX;WR2; OHH
8	SODIUM HYPRCHLORITE, 12% CONCENTRATION	100 GAL. TANK	BLEACH	IR;CR;OX2
9	LUBE OIL	100 GAL. RESERVOIR	MINERAL OIL	C3B;IR
10	AMMONIUM HYDROXIDE, 29.5% CONCENTRATION	16,000 GAL. TANK	AQUEOUS AMMONIA	CR;TX
11	SULFURIC ACID, 93-97% CONCENTRATION	6,000 GAL. TANK	SULFURIC ACID	CR;TX;WR2; OHH
12	SODIUM HYPRCHLORITE, 12% CONCENTRATION	6,000 GAL. TANK	BLEACH	IR;CR;OX2
13	3D TRASAR 3DT 195	300 GAL TOTE	ANTI-SCALANT CORROSION INHIBITOR	CR:SN:OHH
14	3D TRASAR 3DT 185	300 GAL TOTE	ANTI-SCALANT CORROSION INHIBITOR	IR
15	NALCO STABREX ST 70	300 GAL TOTE	PHOSPHORIC ACID	IR:CR:TX
16	NOT USED	NOT USED	NOT USED	NOT USED
17	3D TRASAR 3DT 187	300 GAL TOTE	PHOSPHORIC ACID	IR:CR:TX
18	INSULATING OIL	15,900 GAL. RESERVOIR	MINERAL OIL	C3B;IR
19	INSULATING OIL	1,560 GAL. RESERVOIR	MINERAL OIL	C3B;IR
20	NOT USED	NOT USED	NOT USED	NOT USED
21	CALCITE	TWO TANKS 76,000 POUNDS EACH	CALCIUM CARBONATE	IR
22	ANHYDROUS AMMONIA	55,000 POUNDS	AMMONIA LIQUID GAS	IR:CR:TX

HAZARD CLASS LEGEND FOR TABLE:

IR – IRRITANT
CR – CORROSIVE
TX – TOXIC
SN – SENSITIZER
CL3B – COMBUSTIBLE LIQUID
WR2 – WATER REACTIVE
OX2 – OXIDIZER
OHH – OTHER HEALTH HAZARD

BLYTHE ENERGY PROJECT
OWNER: BLYTHE ENERGY LLC.
385 N. BUCK BLVD., BLYTHE, CA 92226

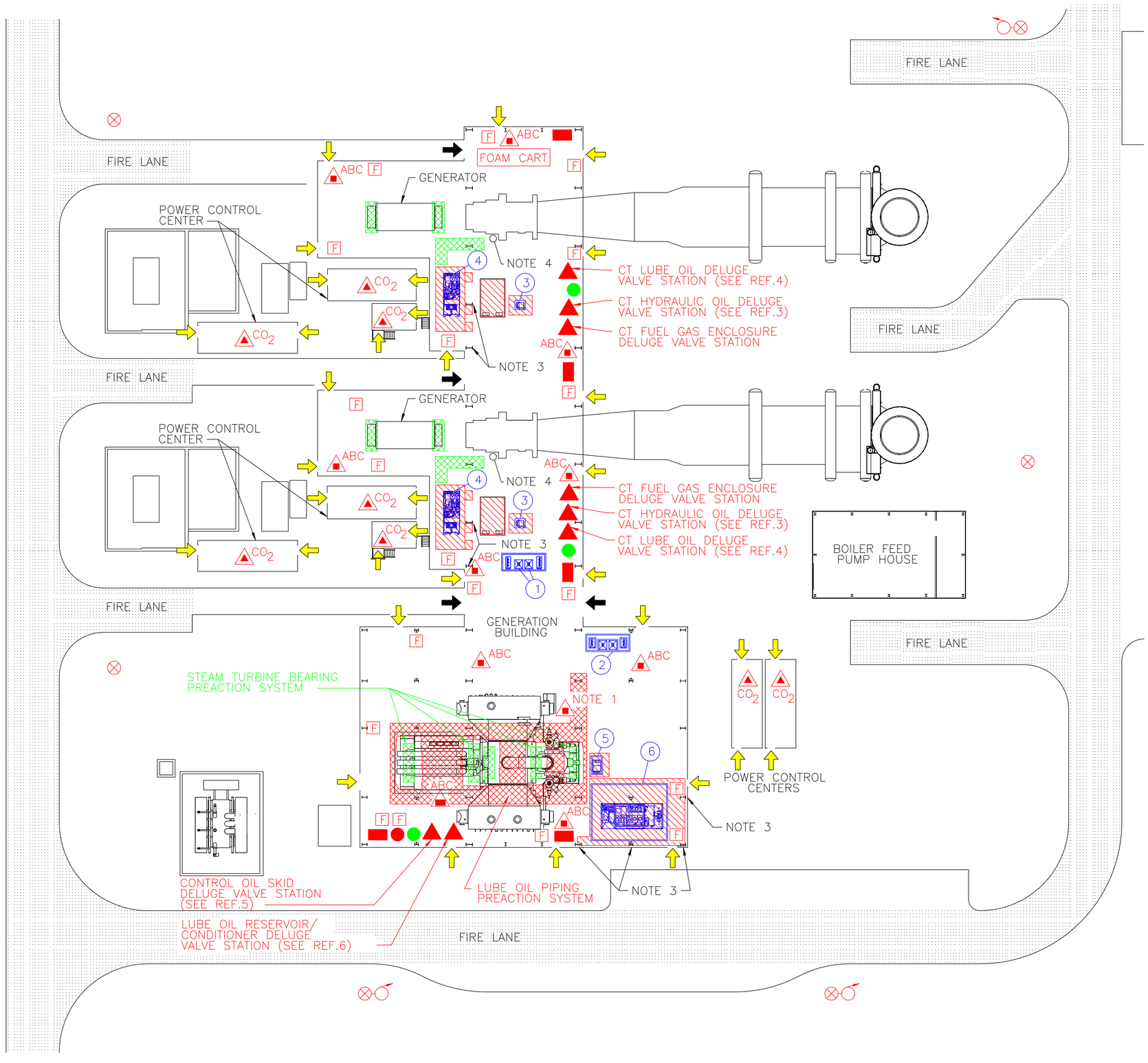
PLANT OUTDOOR AND COOLING TOWER POWER CONTROL CENTER

HAZARDOUS MATERIAL AND MITIGATION EQUIPMENT LOCATION PLAN

HMMP-1

DATE: 4/12/12
REVISION D

2425-001/HMMP-1



NOTES

1. ABC – EXTINGUISHER LOCATED ON PLATFORM.
2. DISCHARGE DENSITY FOR ALL FIRE PROTECTION SYSTEMS SHOWN ON THIS DRAWING IS 0.30 GPM/SQ FT.
3. BUILDING SUPPORT COLUMNS ARE SPRINKLERED WITH THE SAME DELUGE SYSTEM THAT PROTECTS THE RESERVOIRS.
4. AUTOMATIC DRY CHEMICAL SYSTEM FOR PROTECTION OF CT LUBE OIL PIPING TO CT CONNECTION.

HAZARDOUS MATERIAL IDENTIFICATION AND INVENTORY

REF NO.	DESCRIPTION	MAXIMUM QUANTITY–TYPE OF STORAGE	CHEMICAL DESCRIPTION COMMON NAME	HAZARD CLASS
1	AMMONIUM HYDROXIDE, 19% CONCENTRATION	600 GAL. TOTE BINS	AQUEOUS AMMONIA	CR
2	SODIUM PHOSPHATE, TRIBASIC 5% CONCENTRATION	600 GAL. TOTE BINS	TRISODIUM PHOSPHATE	IR
3	HYDRAULIC OIL	80 GAL. RESERVOIRS	MINERAL OIL	CL3B;IR
4	LUBE OIL	3,550 GAL. RESERVOIRS	MINERAL OIL	CL3B;IR
5	CONTROL OIL	190 GAL. RESERVOIR	MINERAL OIL	CL3B;IR
6	LUBE OIL	3,695 GAL. RESERVOIR	MINERAL OIL	CL3B;IR

HAZARD CLASS LEGEND FOR TABLE:

IR – IRRITANT
CL3B – COMBUSTIBLE LIQUID
URI – UNSTABLE REACTIVE
CR – CORROSIVE

LEGEND

- HAZARDOUS MATERIAL STORAGE LOCATIONS ARE IDENTIFIED IN BLUE
- ACCESS/EGRESS POINT
- ROLL–UP DOOR ACCESS
- MITIGATION EQUIPMENT LOCATIONS ARE IDENTIFIED IN RED OR GREEN
- ABC 20LB CHEMICAL AGENT EXTINGUISHER
- CO_2 20LB CO_2–EXTINGUISHER
- HOSE STATION
- PREACTION VALVE STATION
- DELUGE VALVE STATION
- FIRE HYDRANT
- FIRE HYDRANT WITH MONITOR
- F MANUAL FIRE ALARM PULL STATION
- AREA PROTECTED BY AUTOMATIC DELUGE SYSTEM
- AREA PROTECTED BY PREACTION SYSTEM
- AREA PROTECTED BY PREACTION SYSTEM (BEARING AND CT LUBE OIL PIPING)
- PREACTION VALVE STATION
- FIRE LANES

BLYTHE ENERGY PROJECT
OWNER: BLYTHE ENERGY LLC.
385 N. BUCK BLVD., BLYTHE, CA 92226

GENERATION BUILDING AND POWER CONTROL ENCLOSURES

HAZARDOUS MATERIAL AND MITIGATION EQUIPMENT LOCATION PLAN

HMMP–2

DATE: 4/12/12
REVISION D

2425–001/HMMP_2SH1

NOTES

1. THERE ARE NO HAZARDOUS MATERIALS STORED IN THIS BUILDING.

OPERATIONS CENTER
PREACTION SYSTEM LOCATED:
- ABOVE HUNG CEILING
- OPERATIONS CENTER
- BELOW RAISED FLOOR

LEGEND

	ACCESS/EGRESS POINT
	MITIGATION EQUIPMENT LOCATIONS ARE IDENTIFIED IN RED
ABC	20LB CHEMICAL AGENT EXTINGUISHER
CO_2	20LB CO_2 –EXTINGUISHER
F	MANUAL FIRE ALARM PULL STATION
	AREA PROTECTED BY WET–PIPE SPRINKLER SYSTEM
	AREA PROTECTED BY AUTOMATIC PREACTION SYSTEM
	PREACTION VALVE STATION
	WET SPRINKLER SYSTEM VALVE STATION

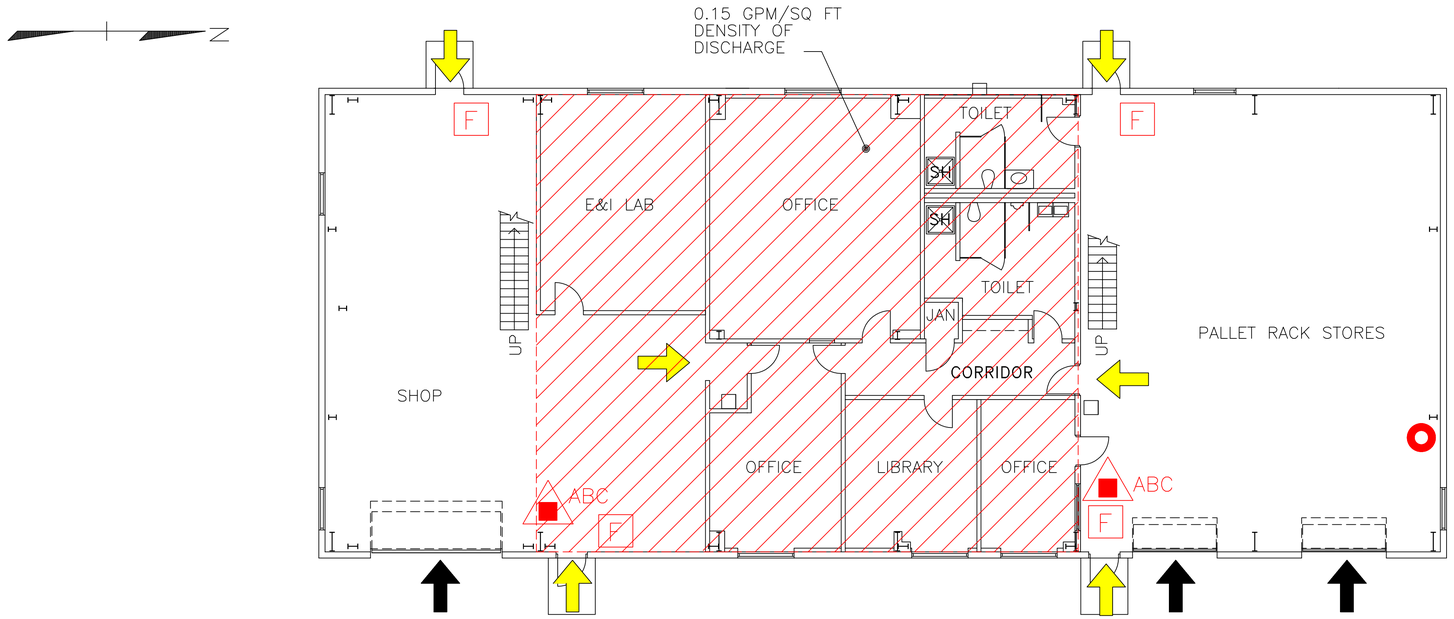
BLYTHE ENERGY PROJECT
OWNER: BLYTHE ENERGY LLC.
385 N. BUCK BLVD., BLYTHE, CA 92226

ADMINISTRATION BUILDING

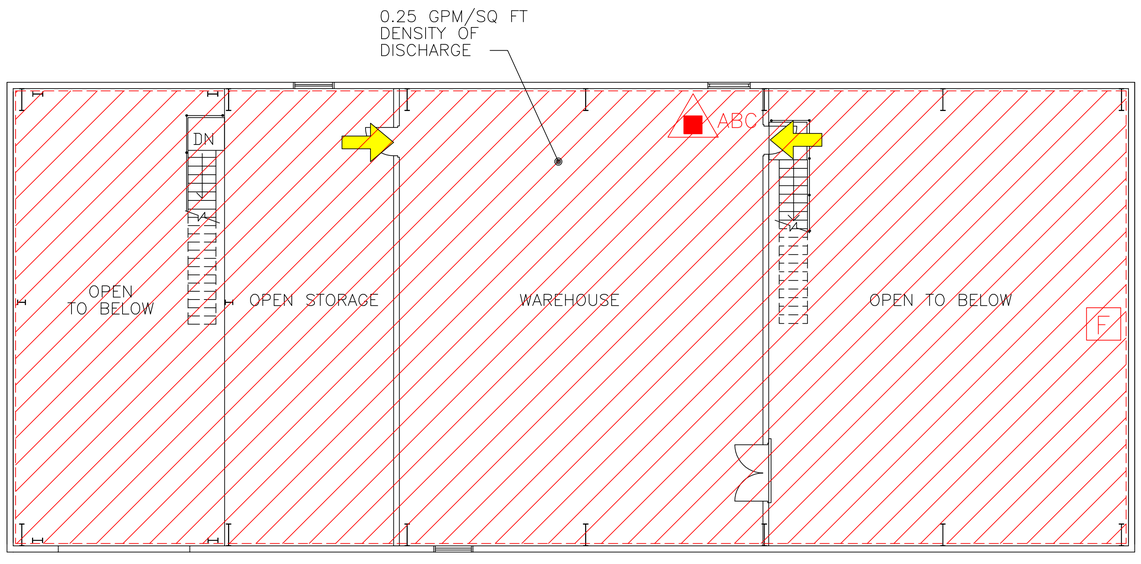
HAZARDOUS MATERIAL AND MITIGATION EQUIPMENT LOCATION PLAN

HMMP–3

DATE: 4/12/12
REVISION D



GROUND FLOOR PLAN



SECOND FLOOR PLAN

NOTES

1. THERE ARE NO HAZARDOUS MATERIALS STORED IN THIS BUILDING.

LEGEND

- ACCESS/EGRESS POINT
- ROLL-UP DOOR ACCESS
- MITIGATION EQUIPMENT LOCATIONS ARE IDENTIFIED IN RED
- ABC — 20LB CHEMICAL AGENT EXTINGUISHER
- WET SPRINKLER SYSTEM VALVE STATION
- F — MANUAL FIRE ALARM PULL STATION
- AREA PROTECTED BY WET-PIPE SPRINKLER SYSTEM

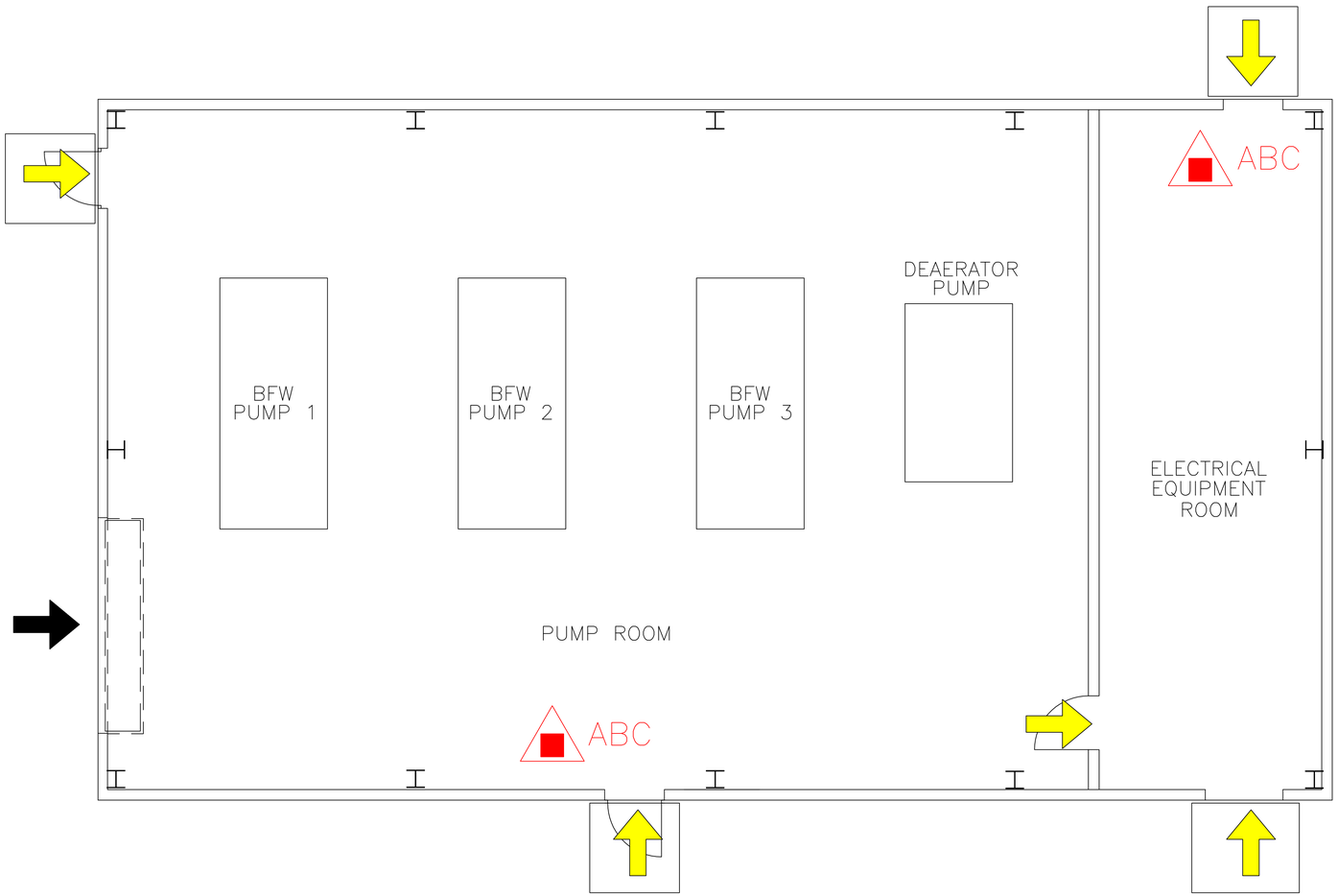
BLYTHE ENERGY PROJECT
OWNER: BLYTHE ENERGY LLC.
385 N. BUCK BLVD., BLYTHE, CA 92226

MAINTENANCE SHOP AND WAREHOUSE

HAZARDOUS MATERIAL AND MITIGATION EQUIPMENT LOCATION PLAN

HMMP-4

DATE: 4/12/12
REVISION D



NOTES

1. THERE ARE NO HAZARDOUS MATERIALS STORED IN THIS BUILDING.

LEGEND

ACCESS/EGRESS POINT

ROLL-UP DOOR ACCESS

MITIGATION EQUIPMENT LOCATIONS ARE IDENTIFIED IN RED

ABC 20LB CHEMICAL AGENT EXTINGUISHER

BLYTHE ENERGY PROJECT
OWNER: BLYTHE ENERGY LLC.
385 N. BUCK BLVD., BLYTHE, CA 92226

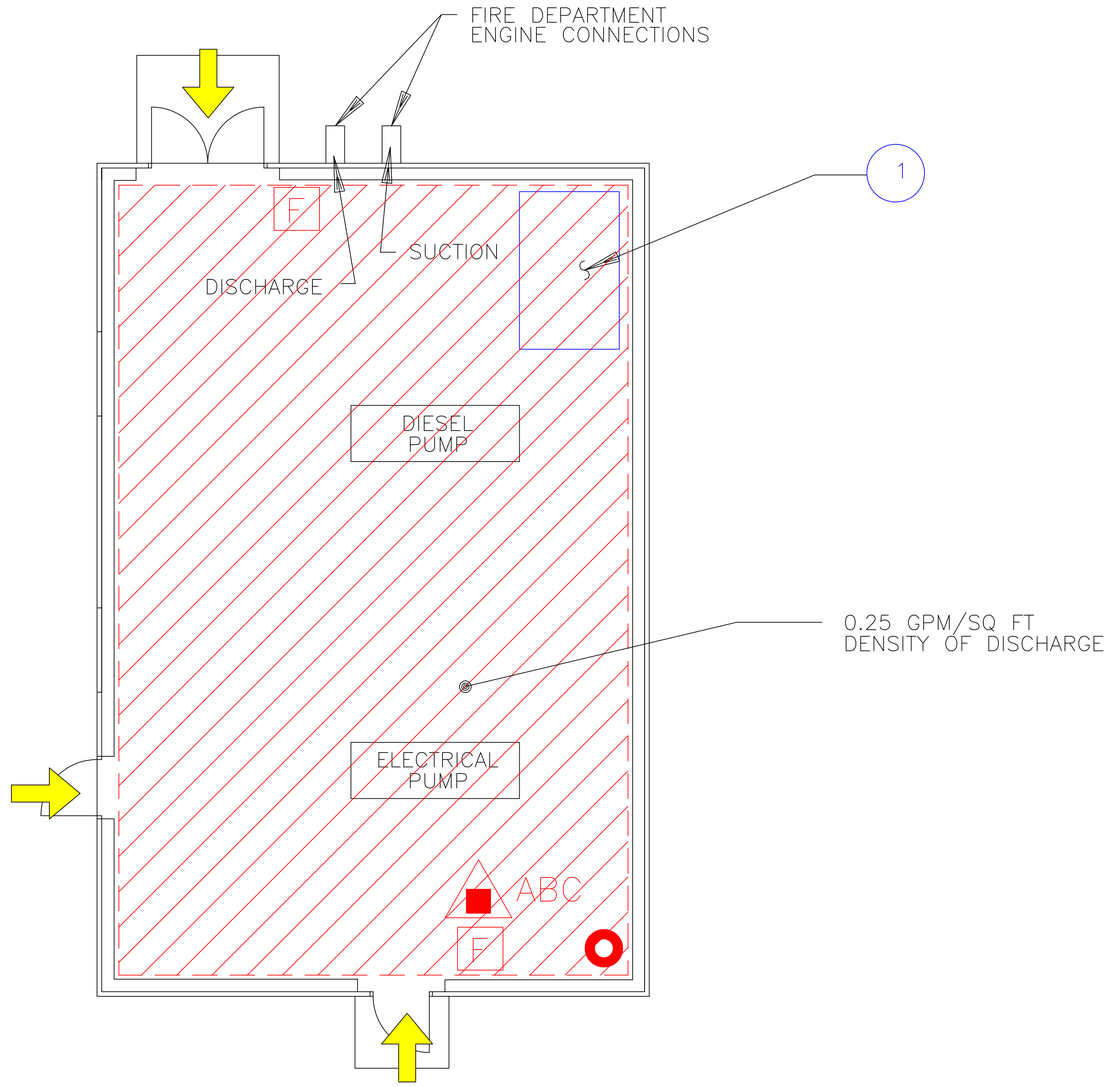
BOILER FEED PUMP HOUSE

HAZARDOUS MATERIAL AND MITIGATION EQUIPMENT LOCATION PLAN

HMMP-5

DATE: 4/12/12
REVISION D

HMMP-5 (10:8)



LEGEND

- ACCESS/EGRESS POINT
- MITIGATION EQUIPMENT LOCATIONS ARE IDENTIFIED IN RED
- ABC — 20LB CHEMICAL AGENT EXTINGUISHER
- WET SPRINKLER SYSTEM VALVE STATION
- F — MANUAL FIRE ALARM PULL STATION
- AREA PROTECTED BY WET-PIPE SPRINKLER SYSTEM

HAZARDOUS MATERIAL IDENTIFICATION AND INVENTORY

REF NO.	DESCRIPTION	MAXIMUM QUANTITY TYPE OF STORAGE	CHEMICAL DESCRIPTION COMMON NAME	HAZARD CLASS
1	DIESEL FUEL NO. 2	450 GAL TANK	DIESEL	CL2 & IR

HAZARD CLASS LEGEND:

CL2 = COMBUSTABLE LIQUID
IR = IRRITANT

BLYTHE ENERGY PROJECT
OWNER: BLYTHE ENERGY LLC.
385 N. BUCK BLVD., BLYTHE, CA 92226

FIRE PUMP HOUSE

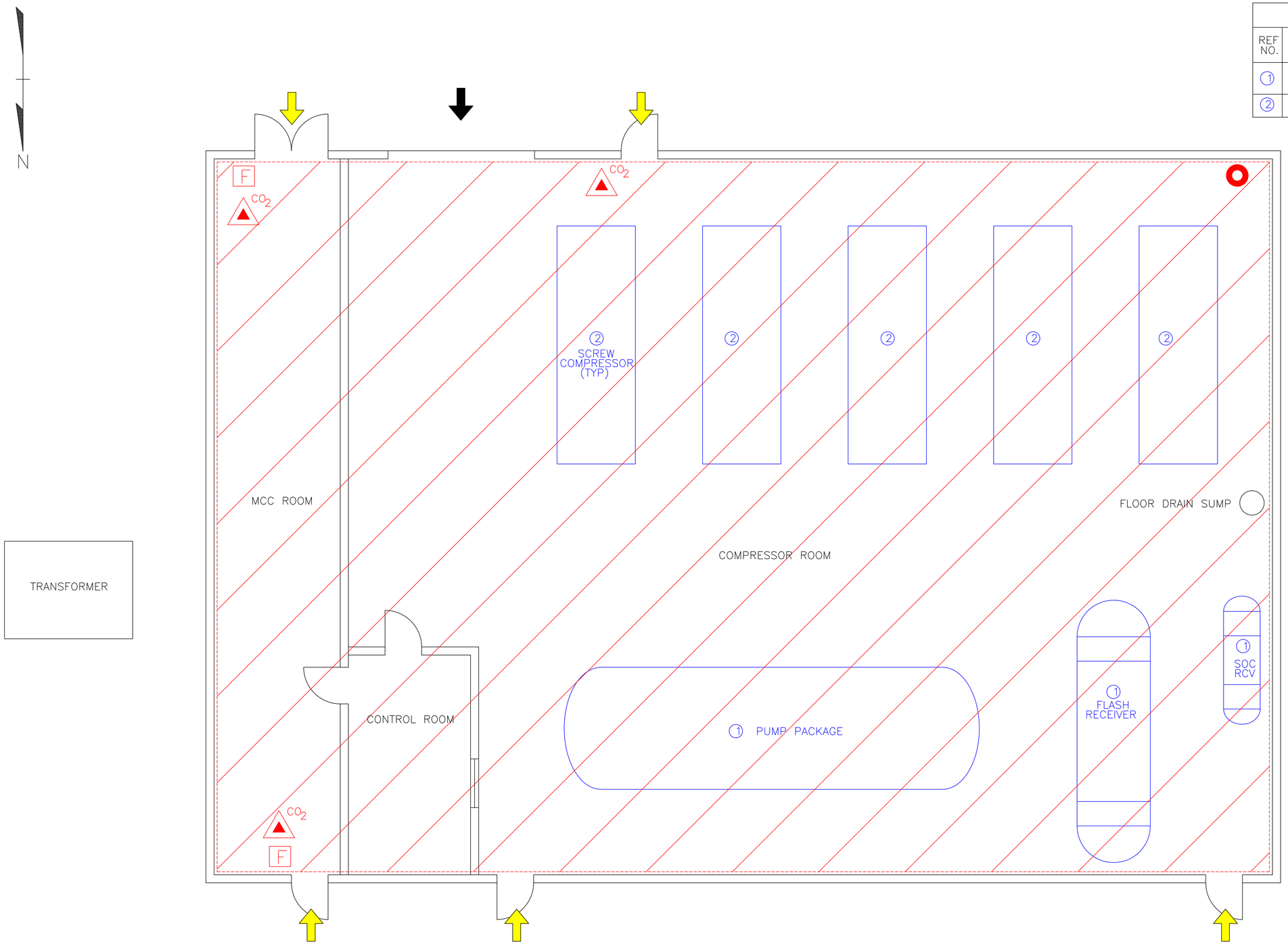
HAZARDOUS MATERIAL AND MITIGATION EQUIPMENT LOCATION PLAN

HMMP-6

DATE: 4/12/12
REVISION D

HMMP-6 (10:8)

HAZARDOUS MATERIAL IDENTIFICATION AND INVENTORY				
REF NO.	DESCRIPTION	MAXIMUM QUANTITY TYPE OF STORAGE	CHEMICAL DESCRIPTION COMMON NAME	HAZARD CLASS
1	ANHYDROUS AMMONIA	55,000 LBS. CONTENT SYSTEM	AMMONIA LIQUID/ AMMONIA GAS	CR;TX
2	LUBE OIL	1,135 GAL. RESERVOIRS	MINERAL OIL	CL3B,IR



HAZARD CLASS LEGEND FOR TABLE:

CR –CORROSIVE
IR – IRRITANT
CL3B –COMBUSTIBLE LIQUID
TX –TOXIC

LEGEND

- HAZARDOUS MATERIAL STORAGE LOCATIONS ARE IDENTIFIED IN BLUE
- ACCESS/EGRESS POINT
- ROLL–UP DOOR ACCESS
- MITIGATION EQUIPMENT LOCATIONS ARE IDENTIFIED IN RED OR GREEN
- CO_2 20LB CO_2–EXTINGUISHER
- F MANUAL FIRE ALARM PULL STATION
- WET SPRINKLER SYSTEM VALVE STATION
- AREA PROTECTED BY WET PIPE SPRINKLER SYSTEM

BLYTHE ENERGY PROJECT
OWNER: BLYTHE ENERGY LLC.
385 N. BUCK BLVD., BLYTHE, CA 92226

CHILLER BUILDING

HAZARDOUS MATERIAL AND MITIGATION EQUIPMENT LOCATION PLAN

HMMP–7

DATE: 4/12/12
REVISION C

2425–001/HMMP–7

TO RETENTION POND

POSTED FIRE LOOP SCHEMATIC SIGN

PRIMARY PLANT EVACUATION/GATHERING POINT

TRUE N

GATE NO.1 PRIMARY ENTRANCE WITH KNOX-LOCK AND GATE KEY

PROPERTY LINE

FENCE

SWITCHYARD OWNED BY WAPA (WAPA EMERGENCY NUMBER 1-888-428-4396)

BUCK BOULEVARD

TRANSFORMER

CHILLER CONDENSER

CHILLER BUILDING

STEP UP TRANSFORMER

UNIT 11 FUEL GAS ISOLATION AND VENT VALVES - SEE HMMP-10A AND MNMP-10B

STEP UP TRANSFORMER

STEP UP TRANSFORMER

GENERATION BUILDING

COOLING TOWER SULFURIC ACID ISOLATION VALVE AND PUMP EMERGENCY STOP BUTTON SEE HMMP-14A AND HMMP-14B

FENCE

WATER TREATMENT SULFURIC ACID ISOLATION VALVE AND PUMP EMERGENCY STOP BREAKERS SEE HMMP-13 A AND HMMP-13B

PLANT FUEL GAS VENT VALVES SEE HMMP-9B

PLANT FUEL GAS ISOLATION VALVE SEE HMMP-9A

AQUEOUS AMMONIA ISOLATION VALVE AND PUMP EMERGENCY STOP BUTTON SEE HMMP-12A AND HMMP-12B

UNIT 12 FUEL GAS ISOLATION VALVE SEE HMMP-11A

UNIT 12 FUEL GAS VENT VALVES SEE HMMP-11B

CONTROL ADMIN/BUILDING

STEP UP TRANSFORMER

COOLING TOWER SODIUM HYPOCHLORITE ISOLATION VALVE AND PUMP EMERGENCY STOP BUTTON SEE HMMP-15A AND HMMP-15B

RAW WATER WELL NO.1

POSTED FIRE LOOP SCHEMATIC SIGN

FENCE

ALTERNATE PLANT EVACUATION/GATHERING POINT

FENCE

TRANSFORMER

RIVERSIDE AVE

GATE NO.2 SECONDARY ENTRANCE WITH KNOX-LOCK AND GATE KEY

LEGEND

VIEWING DIRECTION

BLYTHE ENERGY PROJECT
OWNER: BLYTHE ENERGY LLC.
385 N. BUCK BLVD., BLYTHE, CA 92226

KEY PLAN

LOCATION OF EMERGENCY ISOLATION AND VENT VALVES AND PUMP SHUTOFF DEVICES

HMMP-8

DATE: 4/12/12
REVISION B

2425-001/HMMP-1

CODE	SECTION	CONDITION	VERIFICATION	Compliance	COMPLIANCE STATUS
AIR QUALITY (AQ) THE FOLLOWING CONDITIONS OF CERTIFICATION APPLY TO THE TWO INDIVIDUAL GAS TURBINE GENERATORS (DISTRICT PERMIT NUMBERS: B007953, B007954)					
AQ-T1	Air Quality	Operation of the turbines shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.	The project owner shall make the site available for inspection by representatives of the District, California Air Resources Board (ARB), the United States Environmental Protection Agency (U.S. EPA) and Energy Commission.	Site Complies with AQ-T1	Ongoing: Annual inspection by MDAQMD, CARB,CEC, EPA
AQ-T2	Air Quality	The turbines shall be exclusively fueled with pipeline quality natural gas with a sulfur content not exceeding 0.5 grains per 100 dscf on a rolling twelve month average basis. The turbines shall be operated and maintained in strict accord with the recommendations of its manufacturer and/or sound engineering principles.	The project owner shall incorporate into the Quarterly Operations Report either a monthly laboratory analysis showing the fuel sulfur content, a monthly fuel sulfur content report from the fuel supplier(s), or the results from a custom fuel monitoring schedule approved by USEPA for compliance with the fuel monitoring provisions of 40 CFR 60 Subpart GG.	Site Complies with AQ-T2	Ongoing: See attachment for Sulfur content
AQ-T4	Air Quality	Emissions from the turbines (including the associated duct burners) shall not exceed the following emission limits at any firing rate, except for CO, NOx and VOC during periods of startup, shutdown and malfunction: a. Hourly rate, computed every 15 minutes, verified by CEMS and annual compliance tests: i. NOx as NO2 — the most stringent of 19.80 lb/hr or 2.5 ppmvd corrected to 15% O2 and averaged over one hour). ii. NOx as NO2 — effective May 7, 2016, 2.0 ppmvd corrected to 15% O2 and averaged over a rolling 12 month period. iii. CO — the most stringent of 17.5 lb/hr or 4.0 ppmvd corrected to 15% O2 and averaged over 3 hours. iv. CO – 10 lb/hr averaged over a rolling 12-month period b. Hourly rates, verified by annual compliance tests or other compliance methods in the case of SOx: i. VOC as CH4 — 2.9 lb/hr (based on 1 ppmvd corrected to 15% O2). ii. SOx as SO2 — 2.7 lb/hr (based on 0.5 grains/100 dscf fuel sulfur). iii. PM10 — 6.2 lb/hr.	The project owner shall submit the following in each Quarterly Operations Report: All continuous emissions data reduced and reported in accordance with the District approved CEMS protocol; a list of maximum hourly, maximum daily, monthly, total quarterly, total calendar year, and rolling 12-month emissions of NOx, CO, PM10, VOC and SOx (including calculation protocol); total monthly and rolling 12-month fuel use in the gas turbines and duct burners; average NO2 concentration and average CO mass emission rate, for all operating periods except during startup, shutdown and malfunction, for each gas turbine and associated duct burner, calculated on a rolling 12-month basis; a log of all excess emissions, including the information regarding malfunctions/breakdowns required by District Rule 430; operating parameters of emission control equipment, including but not limited to ammonia injection rate, NOx emission rate and ammonia slip; any maintenance to any air pollutant control system (recorded on an as-performed basis); and any permanent changes made in the plant process or production that could affect air pollutant emissions, and when the changes were made.	Site Complies with AQ-T4	Ongoing: Quarterly reports are sumitted on time
AQ-T5	Air Quality	Emissions of CO and NOx from the turbines shall only exceed the limits contained in AQ-T4 during startup and shutdown periods as follows: a. Startup is defined as the period beginning with ignition and lasting until either the equipment complies with all condition AQ-T4 operating permit limits for two consecutive 15-minute averaging periods or four hours after ignition, whichever occurs first. Shutdown is defined as the period beginning with the lowering of equipment from base load and lasting until fuel flow is completely off and combustion has ceased. b. The emissions from each startup and shutdown event shall not exceed the following, verified by CEMS: i. NOx — 376 lb. ii. CO — 3600 lb. c. Effective May 7, 2016, the CO emissions from all startup and shutdown events at both power blocks, averaged over a rolling 12-month period, shall not exceed 750 lb/event, verified by CEMS.	The emission limits defined in this condition apply to one combined startup/shutdown event (one cycle). The project owner shall include a detailed record of each startup and shutdown event in the Quarterly Operations Report. Each record shall include, but not be limited to: duration; fuel consumption; total emissions of NOx and CO; average CO emissions from all startups and shutdowns of the gas turbines on a per event basis calculated on a rolling 12-month basis; and the date and time of the beginning and end of each startup and shutdown event. Additionally, the project owner shall report the total plant operation time (hours), number of startups, hours in startup and shutdown, and average plant operation schedule (hours per day, days per week, weeks per year).	Site Complies with AQ-T5	Ongoing: Quarterly reports are sumitted on time
AQ-T6	Air Quality	Aggregate emissions from the turbines, including the duct burner, shall not exceed the following emission limits, based on a calendar day summary: a. NOx — 5762 lb/day, verified by CEMS. b. CO — 8004 lb/day, verified by CEMS. c. VOC as CH4 — 239 lb/day, verified by compliance tests and hours of operation in steady-state, pre-mix mode. d. SOx as SO2 — 130 lb/day, verified by fuel sulfur content and fuel use data. e. PM10 — 298.5 lb/day, verified by compliance tests and hours of operation.	The project owner shall submit the following in each Quarterly Operations Report: All continuous emissions data reduced and reported in accordance with the District approved CEMS protocol; a list of maximum hourly, maximum daily, total quarterly, and total calendar year emissions of NOx, CO, PM10, VOC and SOx (including calculation protocol); a log of all excess emissions, including the information regarding malfunctions/breakdowns required by District Rule 430; operating parameters of emission control equipment, including but not limited to ammonia injection rate, NOx emission rate and ammonia slip; any maintenance to any air pollutant control system (recorded on an as-performed basis); and any permanent changes made in the plant process or production that could affect air pollutant emissions, and when the changes were made.	Site Complies with AQ-T6	Ongoing: Quarterly reports are sumitted on time
AQ-T7	Air Quality	Emissions from all units at this facility, including the cooling towers, shall not exceed the following emission limits, based on a rolling 12 month summary: a. NOx —97 tons/year, verified by CEMS. b. CO —175 tons/year, verified by CEMS. c. VOC as CH4 — 24 tons/year, verified by compliance tests and hours of operation in steady-state, pre-mix mode. d. SOx as SO2 — 12 tons/year, verified by fuel sulfur content and fuel use data. e. PM10 —56.9 tons/year, verified by compliance tests and hours of operation. These limits shall apply to all emissions from all units at this facility, and shall include emissions during all modes of operation, including startup, shutdown and malfunction.	The project owner shall submit the following in each Quarterly Operations Report: All continuous emissions data reduced and reported in accordance with the District approved CEMS protocol; a list of maximum hourly, maximum daily, monthly, total quarterly, total calendar year, and rolling 12-month emissions of NOx, CO, PM10, VOC and SOx (including calculation protocol); total monthly and rolling 12-month fuel use in the gas turbines and duct burners; average NO2 concentration and average CO mass emission rate for all operating periods except during startup, shutdown and malfunction for each gas turbine and associated duct burner, calculated on a rolling 12-month basis; a log of all excess emissions, including the information regarding malfunctions/breakdowns required by District Rule 430; operating parameters of emission control equipment, including but not limited to ammonia injection rate, NOx emission rate and ammonia slip; any maintenance to any air pollutant control system (recorded on an as-performed basis); and any permanent changes made in the plant process or production that could affect air pollutant emissions, and when the changes were made.	Site Complies with AQ-T7	Ongoing: Quarterly reports are sumitted on time
AQ-T8	Air Quality	Particulate emissions from this equipment shall not exceed opacity equal to or greater than twenty percent (20%) for a period aggregating more than three (3) minutes in any one (1) hour, excluding uncombined water vapor.	The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and Energy Commission.	Site Complies with AQ-T8	Ongoing: Annual inspection by MDAQMD, CARB,CEC, EPA
AQ-T10	Air Quality	The project owner shall not operate the turbines after the initial commissioning period without the selective catalytic NOx reduction system with valid District permit, as well as the oxidation catalyst with valid District permit installed and fully functional.	The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and the Energy Commission.	Site Complies with AQ-T10	Ongoing: Annual inspection by MDAQMD, CARB,CEC, EPA
AQ-T11	Air Quality	The project owner shall provide stack sampling ports and platforms necessary to perform source tests required to verify compliance with District rules, regulations and permit conditions. The location of these ports and platforms shall be subject to District approval.	The project owner shall make the site available for inspection by representatives of the District, ARB, EPA and the CEC.	Site Complies with AQ-T11	Ongoing: Annual inspection by MDAQMD, CARB,CEC, EPA

CODE	SECTION	CONDITION	VERIFICATION	Compliance	COMPLIANCE STATUS
AQ-T12	Air Quality	Emissions of NOx, CO, oxygen and ammonia slip shall be monitored using a Continuous Emissions Monitoring System (CEMS). Each CEMS shall be operational whenever the associated combustion turbine generator is in operation, including during periods of startup, shutdown and malfunction. Turbine fuel consumption shall be monitored using a continuous monitoring system. Stack gas flow rate shall be monitored using either a Continuous Emission Rate Monitoring System (CERMS) meeting the requirements of 40 CFR Part 75 Appendix A or a stack flow rate calculation method. The operator shall install, calibrate, maintain, and operate these monitoring systems according to a District approved monitoring plan and MDAQMD Rule 218, and they shall be installed prior to initial equipment startup. Six (6) months prior to installation the operator shall submit a monitoring plan for District review and approval.	The project owner shall make the site available for inspection by representatives of the District, ARB, EPA and the CEC.	Site Complies with AQ-T12	Ongoing: Annual inspection by MDAQMD, CARB,CEC, EPA
AQ-T13	Air Quality	The project owner shall conduct all required compliance/certification tests in accordance with a District-approved test plan.	Thirty (30) days prior to the compliance/certification tests the operator shall provide a written test plan for District review and approval. Written notice of the compliance/certification test shall be provided to the District ten (10) days prior to the tests so that an observer may be present. A written report with the results of such compliance/certification tests shall be submitted to the District within forty-five (45) days after testing.	Site Complies with AQ-T13	Ongoing: Protocal are sumbmitted on time. Test result are submitted on time
AQ-T14	Air Quality	The project owner shall perform the following annual compliance tests in accordance with the MDAQMD Compliance Test Procedural Manual. The test report shall be submitted to the District no later than six weeks prior to the expiration date of this permit. The following compliance tests are required: a. NOx as NO2 in ppmvd at 15% O2 and lb/hr (measured per U.S. EPA Reference Methods 19, 20, or 7E). If testing is performed at 90%-100% of rated capacity, then the annual calibration RATA associated with the NOx CEMS in use on these units may be used in lieu of the required annual U.S. EPA Reference Method 20, as long as all of the requirements of prior test notification, proper test result submittal, etc., are followed. b. VOC as CH4 in ppmvd at 15% O2 and lb/hr (measured per U.S. EPA Reference Methods 25A and 18). c. SOx as SO2 in ppmvd at 15% O2 and lb/hr. d. CO in ppmvd at 15% O2 and lb/hr (measured per U.S. EPA Reference Method 10). e. PM10 in mg/m3 at 15% O2 and lb/hr (measured per U.S. EPA Reference Methods 5 and 202 or CARB Method 5). f. Flue gas flow rate in dscfm. g. Opacity (measured per U.S. EPA reference Method 9). h. Ammonia slip in ppmvd at 15% O2.	The annual source test report shall be submitted to the District and CPM no later than six (6) weeks prior to the expiration date of the District permit.	Site Complies with AQ-T14	Ongoing: Protocal are sumbmitted on time. Test result are submitted on time
AQ-T15	Air Quality	The project owner shall, at least as often as once every five years (commencing with the initial compliance test), include the following supplemental source tests in the annual compliance testing: a. Characterization of cold startup VOC emissions; b. Characterization of warm startup VOC emissions; c. Characterization of hot startup VOC emissions; and c. Characterization of shutdown VOC emissions.	Each annual source test report shall either include the results of these tests for the current year or document the date and results of the last such tests.	Site Complies with AQ-T15	Ongoing: Source test last completed in 2014
AQ-T16	Air Quality	Continuous monitoring systems shall meet the following acceptability testing requirements from 40 CFR 60 Appendix B: a. For NOx, Performance Specification 2. b. For O2, Performance Specification 3. c. For CO, Performance Specification 4. d. For stack gas flow rate, Performance Specification 6 (if CERMS is installed.) e. For ammonia, a District approved procedure that is to be submitted by the project owner.	The project owner shall discuss compliance with these specifications in each Quarterly Operations Report..	Site Complies with AQ-T16	Ongoing: RATA and Stack testing validate the CEMS is in compliance.

CODE	SECTION	CONDITION	VERIFICATION	Compliance	COMPLIANCE STATUS
AQ-T17	Air Quality	The project owner shall submit to the Mojave Desert Air Pollution Control District (District) Air Pollution Control Officer (APCO), the United States Environmental Protection Agency (U.S. EPA) Region IX and the California Energy Commission a Quarterly Operations Report for the preceding calendar quarter by January 30, April 30, July 30 and October 30 of each year this permit is in effect. Each January 30 submittal shall include a summary of the reported information for the previous year. This information shall be maintained on site for a minimum of five (5) years and shall be provided to District or Energy Commission personnel on request. a. Operating parameters of emission control equipment, including but not limited to ammonia injection rate, NOx emission rate and ammonia slip. b. Total plant operation time (hours), number of startups, hours in startup, and hours in shutdown period. c. Date and time of the beginning and end of each startup and shutdown period. d. Average plant operation schedule (hours per day, days per week, weeks per year). e. All continuous emissions data reduced and reported in accordance with the District approved CEMS protocol. f. Maximum hourly, maximum daily, total quarterly, and total calendar year emissions of NOx, CO, PM10, VOC and SOx (including calculation protocol). g. Total monthly and rolling 12-month emissions of NOx, CO and PM10 from all permit units. h. Total monthly and rolling 12-month fuel use in the gas turbines and duct burners. i. Average NO2 concentration and average CO mass emission rate, for all operating periods except during startup, shutdown and malfunction, for each gas turbine and associated duct burner, calculated on a rolling 12-month basis. j. Average CO emissions from all startups and shutdowns of the gas turbines, on a per event basis, calculated on a rolling 12-month basis. k. Fuel sulfur content (monthly laboratory analyses, monthly natural gas sulfur content reports from the natural gas supplier(s), or the results of a custom fuel monitoring schedule approved by U.S. EPA for compliance with the fuel monitoring provisions of 40 CFR 60 Subpart GG). l. A log of all excess emissions, including the information regarding malfunctions/breakdowns required by Rule 430. m. Any permanent changes made in the plant process or production, which would affect air pollutant emissions, and indicate when changes were made. n. Any maintenance to any air pollutant control system (recorded on an as-performed basis).	The project owner shall submit a Quarterly Operations Report for the preceding calendar quarter by January 30, April 30, July 30 and October 30 of each year. The January 30 report shall include an annual summary of the Quarterly Operations Reports for the preceding year. The reports shall be submitted to the Mojave Desert Air Pollution Control District (District), the United States Environmental Protection Agency (U.S. EPA) and the California Energy Commission Compliance Project Manager (CPM).	Site Complies with AQ-T17	Ongoing: Quarterly reports are sumitted on time
AQ-T18	Air Quality	Effective May 7, 2016, total fuel use in the two gas turbines and two duct burners (Permit #B007953 combustion turbine generator power block (CT1), Permit #B007954 combustion turbine generator power block (CT2), Permit #B007955 duct burner unit 1 and Permit #B007956 duct burner unit 2)shall not exceed 31,852,800 MMBtu in any rolling 12-month period.	The project owner shall submit the total monthly and rolling 12-month fuel use in the gas turbines and duct burners in each Quarterly Operations Report.	Site Complies with AQ-T18	Ongoing: Quarterly reports are sumitted on time
The following Conditions of Certification apply to duct burner unit 1 (District Permit Number: B007955) B007955) and duct burner unit 2 (District Permit Number: B007956)					
AQ-DB1	Air Quality	Operation of the duct burners shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.	The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and Energy Commission.	Site Complies with AQ-DB1	Ongoing: Annual inspection by MDAQMD, CARB,CEC, EPA
AQ-DB2	Air Quality	Operation of the duct burners shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.	The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and Energy Commission.	Site Complies with AQ-DB2	Ongoing: Annual inspection by MDAQMD, CARB,CEC, EPA
AQ-DB3	Air Quality	The duct burners shall not be operated unless the combustion turbine generator with valid District permit B007953 (or B007954), selective catalytic reduction system with valid District permit C007959 (or C007960), and oxidation catalyst C010832 (or C010833) are in operation.	A summary of fuel use and equipment operation for each duct burner shall be included in each Quarterly Operations Report.	Site Complies with AQ-DB3	Ongoing: Quarterly reports are sumitted on time
AQ-DB4	Air Quality	Fuel use by duct burners shall be recorded and maintained on site for a minimum of five (5) years and shall be provided to District, ARB, Energy Commission or U.S. EPA personnel on request	Fuel use by duct burners shall be recorded and maintained on site for a minimum of five (5) years and shall be provided to District, ARB, Energy Commission or U.S. EPA personnel on request	Site Complies with AQ-DB4	Ongoing: Files are store for 5 years and available upon request
The following Conditions of Certification apply to the two individual selective catalytic NOx reduction systems (SCR) (District Permit Numbers: C007959, C007960.)					
AQ-SCR1	Air Quality	Operation of the SCR units shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.	The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and Energy Commission.	Site Complies with AQ-SCR1	Ongoing: Annual inspection by MDAQMD, CARB,CEC, EPA
AQ-SCR2	Air Quality	The SCR Units shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles	A summary of significant operation and maintenance events for each selective catalytic reduction system shall be included in the Quarterly Operations Reports.	Site Complies with AQ-SCR2	Ongoing: Quarterly reports are sumitted on time
AQ-SCR3	Air Quality	The SCR Units shall be operated concurrently with the combustion turbine generator with valid MDAQMD permit B007953 (or B007954).	The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and Energy Commission.	Site Complies with AQ-SCR3	Ongoing: Annual inspection by MDAQMD, CARB,CEC, EPA
AQ-SCR4	Air Quality	Ammonia shall be injected whenever the selective catalytic reduction system has reached or exceeded 550 degree Fahrenheit. Except during periods of startup and shutdown, ammonia slip shall not exceed 10 ppmvd (corrected to 15% O2), averaged over three hours.	The project owner shall maintain a log of the SCR temperatures and the commencement of ammonia injection times. This information shall be recorded and maintained on site for a minimum of five (5) years and shall be provided to District and Energy Commission personnel on request.	Site Complies with AQ-SCR4	Ongoing: Files are store for 5 years and available upon request
AQ-SCR5	Air Quality	Ammonia injection by the SCR units in pounds per hour shall be recorded and maintained on site for a minimum of five (5) years and shall be provided to District, ARB, Energy Commission or U.S. EPA personnel on request	The project owner shall maintain a log of the SCR temperatures and the commencement of ammonia injection times. This information shall be recorded and maintained on site for a minimum of five (5) years and shall be provided to District and Energy Commission personnel on request.	Site Complies with AQ-SCR5	Ongoing: Files are store for 5 years and available upon request
The following Conditions of Certification apply to the two oxidation catalyst (OC) units (District Permit Numbers: C010832, C010833.)					
AQ-OC1	Air Quality	Operation of the OC units shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.	The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and Energy Commission.	Site Complies with AQ-OC1	Ongoing: Annual inspection by MDAQMD, CARB,CEC, EPA

CODE	SECTION	CONDITION	VERIFICATION	Compliance	COMPLIANCE STATUS
AQ-OC2	Air Quality	The OC Units shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.	A summary of significant operation and maintenance events for each oxidation system unit shall be included in the Quarterly Operations Reports.	Site Complies with AQ-OC2	Ongoing: Quarterly reports are sumitted on time
AQ-OC3	Air Quality	The OC Units shall be operated concurrently with the combustion turbine generator with valid MDAQMD permit B007953 (or B007954).	The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and Energy Commission.	Site Complies with AQ-OC3	Ongoing: Annual inspection by MDAQMD, CARB,CEC, EPA
The following Conditions of Certification apply to main cooling tower (District Permit Number: B007957) and chiller cooling tower (District Permit Number: B007958)					
AQ-CT1	Air Quality	Operation of the cooling towers shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.	The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and Energy Commission.	Site Complies with AQ-CT1	Ongoing: Annual inspection by MDAQMD, CARB,CEC, EPA
AQ-CT2	Air Quality	The cooling towers shall be operated and maintained in strict accord with the recommendations of their manufacturer or supplier and/or sound engineering principles.	A summary of significant operation and maintenance events for each cooling tower shall be included in the Quarterly Operations Reports.	Site Complies with AQ-CT2	Ongoing: Quarterly reports are sumitted on time
AQ-CT3	Air Quality	The drift rate shall not exceed 0.0006 percent with a maximum circulation rate of 146,000 gallons per minute (gpm) for the Main Cooling Tower and 22,000 gpm for the Chiller Cooling Tower. The maximum hourly PM10 emission rate shall not exceed 0.546 pounds per hour from both cooling towers, as calculated per the written District approved protocol.	Compliance documentation in accordance with the written District approved protocol shall be submitted to the District and the CPM.	Site Complies with AQ-CT3	Ongoing: Quarterly reports are sumitted on time
AQ-CT4	Air Quality	Whenever the power plant is in operation, the operator shall perform tests of the blow-down water quality once in every seven day period at a minimum; to clarify, if at any time during that same seven day period the power plant has run, then the owner operator shall perform blow-down water quality tests. The operator shall maintain a log that contains the date and result of each blow-down water quality test, and the resulting mass emission rate. This log shall be maintained on site for a minimum of five (5) years and shall be provided to District, ARB, Energy Commission or U.S. EPA personnel on request.	A summary of the results of the weekly blow-down water quality tests and the results of the mass emission rate calculations shall be submitted in the Quarterly Operations Report.	Site Complies with AQ-CT4	Ongoing: Quarterly reports are sumitted on time
AQ-CT5	Air Quality	The operator shall conduct all required cooling tower water quality tests in accordance with a District-approved test and emissions calculation protocol. Thirty (30) days prior to the first such test the operator shall provide a written test and emissions calculation protocol for District review and approval.	Thirty (30) days prior to the first such test the operator shall provide a written test and emissions calculation protocol for District and CPM review.	Site Complies with AQ-CT5	Ongoing: water sampling is taken daily when the tower is in service
AQ-CT6	Air Quality	A maintenance procedure shall be established that states how often and what procedures will be used to ensure the integrity of the drift eliminators. This procedure shall be submitted to the District for approval at least thirty (30) days prior to construction and shall be kept on-site and available to District personnel on request.	The project owner shall make the site available for inspection by representatives of the District, ARB, U.S. EPA and Energy Commission.	Site Complies with AQ-CT6	Ongoing: Annual inspection by MDAQMD, CARB,CEC, EPA
The following Conditions of Certification apply to the non-certified diesel IC engine, emergency fire pump (District Permit Number: E007961), propane IC engine, emergency generator (District Permit Number: E009492					
AQ-IC1	Air Quality	The IC engines shall be installed, operated and maintained in strict accord with those recommendations of the manufacturer/supplier and/or sound engineering principles which produce the minimum emissions of contaminants. Unless otherwise noted, the IC engines shall also be operated in accordance with all data and specifications submitted with the application for this permit.	A summary of significant operation and maintenance events for the IC engines shall be included in the Quarterly Operations Reports.	Site Complies with AC-IC1	Ongoing: Quarterly reports are sumitted on time
AQ-IC2	Air Quality	The diesel IC engines shall only be fired on ultra-low sulfur diesel fuel, whose sulfur concentration is less than or equal to 0.0015% (15 ppm) on a weight per weight basis per CARB Diesel or equivalent requirements. The propane IC engine shall only be fired on propane (LPG).	The above information shall be maintained on-site for a minimum of five (5) years and shall be provided to District and/or Energy Commission personnel on request.	Site Complies with AC-IC2	Ongoing: Files are store for 5 years and available upon request
AQ-IC3	Air Quality	A non-resettable hour meter with a minimum display capacity of 9,999 hours shall be installed and maintained on the IC engines to indicate elapsed engine operating time.	The above information shall be maintained on-site for a minimum of five (5) years and shall be provided to District and/or Energy Commission personnel on request.	Site Complies with AC-IC3	Ongoing: Files are store for 5 years and available upon request
AQ-IC4	Air Quality	The diesel IC engines shall be limited to use for emergency power, defined as in response to a fire or due to low fire water pressure. In addition, the diesel IC engine (permit #E007961) shall be operated no more than 20 hours per year for testing and maintenance, excluding compliance source testing. Time required for source testing will not be counted toward the 20 hour per year limit. The propane IC engine shall be limited to use for emergency power, defined as in response to a fire or when commercially available power has been interrupted. In addition, the propane IC engine shall be operated no more than 100 hours per year for testing and maintenance, excluding compliance source testing. Time required for source testing will not be counted toward the 100 hour per year limit.	The above information shall be maintained on-site for a minimum of five (5) years and shall be provided to District and/or Energy Commission personnel on request.	Site Complies with AC-IC4	Ongoing: Files are store for 5 years and available upon request
AQ-IC5	Air Quality	The requirements of section 93115.6 and 93116 of Airborne Toxic Control Measure for Stationary Compression Ignition Engines (ATCM) (Effective October 18, 2007), the hour limits indicated in AQ-IC4, do not apply to in-use emergency fire pump assemblies that are driven directly by stationary diesel-fueled CI engines and only operated the number of hours necessary to comply with the testing requirements of National Fire Protection Association (NFPA) 25 "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," 2002 edition, which is incorporated herein by reference.	The above information shall be maintained on-site for a minimum of five (5) years and shall be provided to District and/or Energy Commission personnel on request.	Site Complies with AC-IC5	Ongoing: Files are store for 5 years and available upon request
AQ-IC6	Air Quality	The project owner shall maintain an operations log for the IC engines current and onsite, either at the engine location or at an on-site location, for a minimum of five (5) years, and provide to District, ARB, Energy Commission or U.S. EPA personnel upon request. The log shall include, at a minimum, the information specified below: a. Date of each use and duration of each use (in hours), using the engines hour meter; b. Reason for use (testing & maintenance, emergency, required emission testing); c. Monthly and calendar year operation in terms of fuel consumption (in gallons) and total hours; d. Monthly and rolling 12-month total CO, NOx and PM10 emissions, calculated based on monthly fuel use and District-approved emission factors; and e. For diesel IC engines, fuel sulfur concentration (the project owner may use the supplier's certification of sulfur content if it is maintained as part of this log).	The above information shall be maintained on-site for a minimum of five (5) years and shall be provided to District and/or Energy Commission personnel on request.	Site Complies with AC-IC6	Ongoing: Files are store for 5 years and available upon request

CODE	SECTION	CONDITION	VERIFICATION	Compliance	COMPLIANCE STATUS
AQ-IC7	Air Quality	The project owner shall conduct inspections in accord with the following schedule. All inspections must occur at least annually regardless of operating hours. a. Change oil and filter every 500 hours of operation or annually, whichever comes first, or use an oil change analysis program to extend oil change frequencies per the requirements in 40 CFR 63.6625(i); b. For diesel IC engines, inspect air cleaner every 1,000 hours of operation or annually, whichever comes first. For propane IC engine, inspect spark plugs every 1,000 hours of operation or annually, whichever comes first; and c. inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	The above information shall be maintained on-site for a minimum of five (5) years and shall be provided to District and/or Energy Commission personnel on request.	Site Complies with AC-IC7	Ongoing: Files are store for 5 years and available upon request
AQ-IC8	Air Quality	The project owner shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.	The above information shall be maintained on-site for a minimum of five (5) years and shall be provided to District and/or Energy Commission personnel on request.	Site Complies with AC-IC8	Ongoing: Files are store for 5 years and available upon request
AQ-IC9	Air Quality	The diesel IC engine (permit #E007961) is subject to the requirements of the Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines Title 17 CCR 93115 and 40 CFR 63 Subpart ZZZZ (RICE NESHAPs). The propane IC engine is subject to the requirements of 40 CFR 63 Subpart ZZZZ (RICE NESHAPs). In the event of conflict between conditions and the referenced regulatory citations, the more stringent requirements shall govern.	The above information shall be maintained on-site for a minimum of five (5) years and shall be provided to District and/or Energy Commission personnel on request.	Site Complies with AC-IC9	Ongoing: Files are store for 5 years and available upon request
HAZARDOUS MATERIALS HANDLING CONDITIONS OF CERTIFICATION					
Haz-1	Hazardous Materials Handling	The project owner shall not use any hazardous material in reportable quantities, as specified in Title 40, C. F.R. Part 355, Subpart J, section 355.50, not listed in Appendix B of the AFC, or in Table 5.11-1 of the Petition for Post-Certification Amendment, unless approved in advance by the CPM.	The project owner shall provide to the CPM, in the Annual Compliance Report, a list of hazardous materials contained at the facility in reportable quantities.	Site Complies with Haz-1	Ongoing: Annual reports are sumitted on time
WASTE MANAGEMENT CONDITIONS OF CERTIFICATION					
WASTE-2	Waste Mgmt.	Upon becoming aware of any impending waste management-related enforcement action, the project owner shall notify the CPM of any such action taken or proposed to be taken against it, or against any waste hauler or disposal facility or treatment operator with which the owner contracts.	The project owner shall notify the CPM in writing within 10 days of becoming aware of an impending enforcement action.	Site Complies with WASTE-2	Ongoing: No violations during this reporting period
WASTE-3	Waste Mgmt.	Prior to the start of construction and prior to the start of operation, the project owner shall prepare and submit to the CEC CPM, for review and comment, a waste management plan for all wastes generated during construction and operation of the facility, respectively. The plans shall contain, at a minimum, the following: • A description of all expected waste streams, including projections of frequency and hazard classifications; and • Methods of managing each waste, including treatment methods and companies contracted with for treatment services, waste testing methods to assure correct classification, methods of transportation, disposal requirements and sites, and recycling and waste minimization/reduction plans. .	No less than Thirty (30) days prior to the start of construction, or a lesser time period mutually agreed upon, the project owner shall submit the construction waste management plan to the CPM for review. The operation waste management plan shall be submitted no less than 30 days prior to the start of project operation. The project owner shall submit any required revisions within 30 days of notification by the CPM (or mutually agreed upon date). In the Annual Compliance Reports, the project owner shall document the actual waste management methods used during the year compared to planned management methods.	Site Complies with WASTE-3	Ongoing: No violations during this reporting period
LAND USE					
LAND-2	Land Use	The proposed water conservation offset program shall not permanently retire lands in the Palo Verde Valley (Priority 1 lands) designated as Prime Farmlands or Farmlands of Statewide Importance as defined by the Department of Conservation, or lands included in a Williamson Act Preserve. Following or retirement of farmlands shall not violate any provision of a Williamson Act Contract. Lands selected for retirement on the Mesa shall not include lands currently involved in active orchard crop production.	At least 60 days prior to implementation of the Water Conservation Offset Program (WCOP), the project owner shall submit detailed information to the CPM regarding the lands involved in the WCOP, including: 1) location and assessor parcel number, 2) Department of Conservation Important Farmland Program Classification, 3) crop and cultivation history, and 4) Williamson Act Preserve and contract status. If the program will fallow or retire any lands under Wiliamson Act contract, the project owner shall provide documentation that such fallowing or retirement has been reviewed and approved by Riverside County Planning Department and does not violate any provision of a Williamson Act contract. Any WCOP agreements that are altered or added to the program shall be submitted to the CPM at least 30 days prior to taking effect.	Site Complies with LAND-2	Ongoing: No Change
NOISE					
NOISE-2	Noise	Throughout the construction and operation of the project, the project owner shall document, investigate, evaluate, and attempt to resolve all project-related noise complaints.	Within 30 days of receiving a noise complaint, the project owner shall file a copy of the Noise Complaint Resolution Form, or similar instrument approved by the CPM, with the City of Blythe (or applicable Agency), and with the CPM, documenting the resolution of the complaint. If mitigation is required to resolve a complaint, and the complaint is not resolved within a 30-day period, the project owner shall submit an updated Noise Complaint Resolution Form when the mitigation is finally implemented.	Site Complies with NOISE-2	Ongoing : No complaints during this reporting period
BIOLOGICAL RESOURCES					
BIO-3	Biological Resources	The CPM approved Designated Biologist shall perform the following during project construction and operation: 1. Advise the project owner's Construction Manager on the implementation of the Biological Resource Conditions of Certification; 2. Supervise or conduct mitigation, monitoring and other biological resources compliance efforts, particularly in areas requiring avoidance or containing sensitive biological resources, such as, wetlands and special status species; and 3. Notify the project owner and the CPM of non-compliance with any Biological Resources Condition of Certification.	During project construction, the Designated Biologist shall maintain written records of the tasks described above, and summaries of these records shall be submitted along with the Monthly Compliance Reports to the CPM. During project operation, the Designated Biologist shall submit record summaries in the Annual Compliance Report.	Site Complies with BIO-3	Ongoing during current operations.
BIO-6	Biological Resources	The evaporation ponds shall be monitored by plant personnel for bird and wildlife losses (see BIO-1). If a substantial number of bird and wildlife are found dead during any year, as determined by the CPM or Designated Biologist, then measures shall be identified and implemented that will substantially reduce or eliminate the problem. This monitoring shall continue for the first three years of plant operations, and depending on the results, could be discontinued at that time.	In the Annual Compliance Report, the project owner shall submit records of all monitoring dates, data collected, annual report, and any corrective actions taken in the Annual Compliance Report to the CPM.	Site Complies with BIO-6	Ongoing: See Biologist annual report

CODE	SECTION	CONDITION	VERIFICATION	Compliance	COMPLIANCE STATUS
BIO-8	Biological Resources	The water quality in the evaporation ponds shall be monitored monthly for the first three years of operation. Collections of invertebrates shall be taken from the evaporation ponds at the same time, and these samples preserved (e.g., alcohol and water in sealed glass containers labeled with date and location).	In the Annual Compliance Report, the project owner shall submit records of all monitoring dates, data collected, annual report, and any corrective actions taken in the Annual Compliance Report to the CPM.	Site Complies with BIO-8	Ongoing: See Biologist annual report
BIO-9	Biological Resources	The project owner shall conduct maintenance monitoring of the desert tortoise exclusion fencing on a monthly basis and complete repairs within one week of a problem being identified. Temporary fencing must be installed at any gaps opened in the project site fence if those gaps will be left open overnight.	The project owner shall submit records of all monitoring dates, identify the locations that required repair, and any corrective actions taken or temporary fence installed in the Annual Compliance Report.	Site Complies with BIO-9	Ongoing: See Biologist annual report
BIO-10	Biological Resources	A comprehensive exotic control program for California Department of Agriculture List A, List B, and Red Alert weeds, shall be implemented at the 76-acre power plant site. This program should be implemented until such time that the adjacent land use on the north and west sides is no longer a natural community or agriculture, or until the plant is permanently closed. At the Colorado River, this exotic control program should be implemented as feasible until the Caltrans ROW is replanted and established. The natural vegetation adjacent to the BEP site shall be monitored to determine if it has been modified or degraded, if so, these changes to the adjacent sites should be documented by the project's Designated Biologist in a report which includes photos of the adjacent land uses.	The project owner shall provide a progress/activity report regarding exotic weed control efforts and document changes (as needed) to the surrounding areas in the Annual Compliance Report.	Site Complies with BIO-10	Ongoing: See Biologist annual report
BIO-11	Biological Resources	If any landscaping must be removed from the directional drill site or laydown areas, the preferred method of revegetation is to follow the Blythe General Plan.	The Designated Biologist shall supervise the selection and installation of landscaping material and inform the CPM of any non-conforming plantings within 2 weeks of the action. If a state (Caltrans) mandated plant palette is on record, then these species can be used in lieu of the Blythe General Plan species. The success of the landscaping shall be monitored for 5 years after installation and corrective actions taken to sustain a survivorship rate of greater than 60% for all plantings. The Designated Biologist shall submit records of all monitoring dates, identify areas needing repair, and any corrective actions taken in the Annual Compliance Report	Site Complies with BIO-11	Ongoing: See Biologist annual report
BIO-15	Biological Resources	The project owner shall implement an Interim Weed and Erosion Prevention Program for the applicable portion of the 66-acre expansion area to mitigate any potential outbreak of noxious weeds on all bare ground sites for the three (3) years (1095 days) following final grading. The Interim Weed and Erosion Prevention Program shall propose a technique that prevents erosion, reduces dependence on herbicides, and prevents the germination of weed seed to the highest level possible. If the 66-acre expansion area remains undeveloped for the entire three (3) year period, and there is no permitted project for the site, then the project owner shall implement a long-term plan to re-establish regionally native vegetation on the site within one year, and remove portions of the desert tortoise proof fencing to allow wildlife to return to the site.	The project owner shall submit an Interim Weed and Erosion Prevention Program at least 30 days prior to the expected completion of grading to the CPM for approval. The Interim Weed and Erosion Prevention Program should: 1. evaluate at least two weed prevention techniques, 2. compare the merits and cost of their implementation at the Expansion Site, and 3. describe in detail the selected alternative. The Interim Weed and Erosion Prevention Program shall be in consultation with the Designated Biologist and be incorporated into the BRMIMP. If the project owner re-establishes vegetation after three (3) years, then they shall submit to the CPM for approval within 90 days prior to the start of re-vegetation on the 66 acre expansion area: 1. the proposed plantings or seed mixture (which includes at least one fast-growing cover crop) with the relative percentages of species types; 2. certification that the mulches and seed mixtures are nearly weed free; 3. a Long-Term Re-vegetation Maintenance and Monitoring Plan for the Expansion Site; and 4. a drawing indicating where the fence line would be altered to allow wildlife to enter the site. The Long-Term Re-vegetation Maintenance and Monitoring Plan shall be incorporated into the BRMIMP. The Long-Term Revegetation Maintenance and Monitoring Plan shall be prepared under the supervision of a botanist with desert restoration expertise, in consultation with the Designated Biologist.	Site Complies with BIO-15	Ongoing: See Biologist annual report
			SOIL & WATER RESOURCES		
SOILS AND WATER 4	Soil & Water Resources	The project owner will record on a monthly basis the amount of groundwater pumped by the project. This information will be supplied to the Energy Commission, the Palo Verde Irrigation District, and the United States Bureau of Reclamation.	The project owner will submit a groundwater use summary to both the CPM and the PVID on an annual basis for the life of the project. The annual summary will include the monthly range, monthly average, and total groundwater use by the project in both gallons-per-minute and acre-feet. For subsequent years the annual summary will also include the yearly range and yearly average groundwater use by the project. This same information will be provided to both the PVID and the Lower Colorado Regional Office of the USBR. Any significant changes in the water supply needs for the project during construction or operation of the plant, will be noticed in writing to the CPM at least 90-days prior to the effective date of the proposed change.	Site Complies with SOIL AND WATER 4	Ongoing - Included in report.
SOIL & WATER 8	Soil & Water Resources	The project owner shall measure groundwater levels in the on-site monitoring well on a monthly basis for the first six months following the project start up and thereafter on a quarterly basis.	The project owner shall submit a quarterly report of the groundwater level monitoring to the CEC CPM on a quarterly basis.	Site Complies with SOIL AND WATER 8	Ongoing: Quarterly reports are submitted ontime
SOILS & WATER 10	Soil & Water Resources	The Applicant will provide the results of an annual analysis of groundwater from the Northeast and Southeast monitoring wells (as identified in the BEP response to Staff Data Request 212), and from at least one of the wells constructed to supply the project with groundwater. The analytes will include the volatile and semi-volatile organic compounds reported in the response to Staff Data Request 212. If there is a significant increase in the concentration of groundwater contaminants, the need for additional pretreatment of water will be reassessed. The need for pretreatment of groundwater prior to use by the project would be based on incompatibility with the WDRs, exceedances of air emissions standards, worker safety standards, or standards of exposure of downwind receptors.	The results of the required analyses will be provided to the CPM in a summary format similar to that of the Applicant's response to Staff Data Request Attachment 212B, on an annual basis beginning after one year of operation on the anniversary date the BEP begins operation and continuing for a total of 5-years. The need for additional pretreatment of water will be assessed on an ongoing basis. The need for continued monitoring will be reassessed at the end of the 5-year period.	Site Complies with SOILS & WATER 10	Ongoing: Samples are sent to independent lab and results are analyzed then provided to the waterboards

Emergency Backup Generator - Operations Log
Fire Backup Pump / Model # 6081HF001 - 14 gal/hr @ 1800 rpm

Blythe Energy Inc.

date	run-time meter start	run-time meter stop	duration (hr)	fuel use (gal)	NOx emissions (lb/hr)	CO emissions @1.55 lb/hr (lb/hr)	PM-10 emissions (lb/hr)	Comments
01.07.18	383.80	384.30	0.50	2.09	2.30	2.85	0.03	weekly auto start test
01.13.18	384.30	384.80	0.50	2.09	2.30	2.85	0.03	weekly auto start test
01.20.18	384.80	385.30	0.50	2.09	2.30	2.85	0.03	weekly auto start test
01.27.18	385.30	385.80	0.50	2.09	2.30	2.85	0.03	weekly auto start test
02.03.18	385.80	386.00	0.20	0.83	0.92	1.14	0.01	weekly auto start test
02.10.18	386.00	386.30	0.30	1.25	1.38	1.71	0.02	weekly auto start test
02.11.18	386.30	386.80	0.50	2.09	2.30	2.85	0.03	Maintenance test
02.17.18	386.80	387.30	0.50	2.09	2.30	2.85	0.03	weekly auto start test
02.25.18	387.30	387.80	0.50	2.09	2.30	2.85	0.03	weekly auto start test
03.04.18	387.80	387.80	0.00	0.00	0.00	0.00	0.00	weekly auto start test
03.07.18	387.80	388.10	0.30	1.25	1.38	1.71	0.02	weekly auto start test
03.10.18	388.10	388.20	0.10	0.42	0.46	0.57	0.00	trouble shooting over heating
03.17.18	388.20	388.20	0.00	0.00	0.00	0.00	0.00	O/S
03.25.18	388.20	388.20	0.00	0.00	0.00	0.00	0.00	O/S
03.27.18	388.20	388.70	0.50	2.09	2.30	2.85	0.03	Repaired - test run
04.07.18	388.70	389.70	1.00	4.17	4.60	5.70	0.05	Repaired - test run
04.14.18	389.70	390.20	0.50	2.09	2.30	2.85	0.03	weekly auto start test
04.22.18	390.20	390.80	0.60	2.50	2.76	3.42	0.03	weekly auto start test
04.28.18	390.80	391.70	0.90	3.75	4.14	5.13	0.04	weekly auto start test
05.05.18	391.70	392.20	0.50	2.09	2.30	2.85	0.03	weekly auto start test
05.12.18	392.20	392.65	0.45	1.88	2.07	2.56	0.02	weekly auto start test

Emergency Backup Generator - Operations Log
Fire Backup Pump / Model # 6081HF001 - 14 gal/hr @ 1800 rpm

Blythe Energy Inc.

date	run-time meter start	run-time meter stop	duration (hr)	fuel use (gal)	NOx emissions (lb/hr)	CO emissions @1.55 lb/hr (lb/hr)	PM-10 emissions (lb/hr)	Comments
05.19.18	392.65	393.20	0.55	2.29	2.53	3.14	0.03	weekly auto start test
05.26.18	393.20	393.60	0.40	1.67	1.84	2.28	0.02	weekly auto start test
06.03.18	393.60	394.10	0.50	2.09	2.30	2.85	0.03	weekly auto start test
06.09.18	394.10	394.70	0.60	2.50	2.76	3.42	0.03	weekly auto start test
06.18.18	394.70	395.10	0.40	1.67	1.84	2.28	0.02	weekly auto start test
06.23.18	395.10	395.70	0.60	2.50	2.76	3.42	0.03	weekly auto start test
06.30.18	395.70	396.30	0.60	2.50	2.76	3.42	0.03	weekly auto start test
07.08.18	396.30	396.80	0.50	2.09	2.30	2.85	0.03	weekly auto start test
07.14.18	396.80	397.20	0.40	1.67	1.84	2.28	0.02	weekly auto start test
07.21.18	397.20	397.70	0.50	2.09	2.30	2.85	0.03	weekly auto start test
07.28.18	397.70	398.20	0.50	2.09	2.30	2.85	0.03	weekly auto start test
08.04.18	398.20	398.70	0.50	2.09	2.30	2.85	0.03	weekly auto start test
08.12.18	398.70	399.20	0.50	2.09	2.30	2.85	0.03	weekly auto start test
08.18.18	399.20	399.70	0.50	2.09	2.30	2.85	0.03	weekly auto start test
08.25.18	399.70	400.20	0.50	2.09	2.30	2.85	0.03	weekly auto start test
09.02.18	400.20	400.70	0.50	2.09	2.30	2.85	0.03	weekly auto start test
09.08.18	400.70	401.20	0.50	2.09	2.30	2.85	0.03	weekly auto start test
09.15.18	401.20	401.70	0.50	2.09	2.30	2.85	0.03	weekly auto start test
09.22.18	401.70	402.30	0.60	2.50	2.76	3.42	0.03	weekly auto start test
09.28.18	402.30	402.90	0.60	2.50	2.76	3.42	0.03	weekly auto start test
10.06.18	402.90	403.40	0.50	2.09	2.30	2.85	0.03	weekly auto start test
10.12.18	403.40	403.90	0.50	2.09	2.30	2.85	0.03	weekly auto start test

Emergency Backup Generator - Operations Log
Fire Backup Pump / Model # 6081HF001 - 14 gal/hr @ 1800 rpm

Blythe Energy Inc.

date	run-time meter start	run-time meter stop	duration (hr)	fuel use (gal)	NOx emissions (lb/hr)	CO emissions @1.55 lb/hr (lb/hr)	PM-10 emissions (lb/hr)	Comments
10.20.18	403.90	404.40	0.50	2.09	2.30	2.85	0.03	weekly auto start test
11.03.18	404.40	405.20	0.80	3.34	3.68	4.56	0.04	weekly auto start test
11.18.18	405.20	406.20	1.00	4.17	4.60	5.70	0.05	weekly auto start test
11.24.18	406.20	406.70	0.50	2.09	2.30	2.85	0.03	weekly auto start test
11.26.18	406.70	406.80	0.10	0.42	0.46	0.57	0.01	Trouble shooting starting
12.07.18	406.80	408.80	2.00	8.34	9.20	11.40	0.10	Trouble shooting starting
12.07.18	408.80	409.00	0.20	0.83	0.92	1.14	0.01	Trouble shooting starting
12.07.18	409.00	410.00	1.00	4.17	4.60	5.70	0.05	Trouble shooting starting
12.07.18	410.00	410.60	0.60	2.50	2.76	3.42	0.03	Trouble shooting starting
12.08.18	410.60	411.30	0.70	2.92	3.22	3.99	0.03	weekly auto start test
12.08.18	410.60	411.50	0.90	3.75	4.14	5.13	0.04	weekly auto start test
12.16.18	411.50	412.80	1.30	5.42	5.98	7.41	0.07	weekly auto start test
12.22.18	412.80	413.70	0.90	3.75	4.14	5.13	0.04	weekly auto start test
12.28.18	413.70	413.90	0.20	0.83	0.92	1.14	0.01	weekly auto start test
01.05.19	413.90	414.30	0.40	1.67	1.84	2.28	0.02	weekly auto start test
01.27.19	414.30	414.30	0.00	0.00	0.00	0.00	0.00	weekly auto start test
02.13.19	414.30	414.80	0.50	2.09	2.30	2.85	0.03	weekly auto start test
02.16.19	414.80	416.30	1.50	6.26	6.90	8.55	0.08	weekly auto start test
02.24.19	416.30	416.80	0.50	2.09	2.30	2.85	0.03	weekly auto start test
03.02.19	416.80	417.30	0.50	2.09	2.30	2.85	0.03	weekly auto start test
03.10.19	417.30	417.80	0.50	2.09	2.30	2.85	0.03	weekly auto start test
03.16.19	417.80	418.80	1.00	4.17	4.60	5.70	0.05	weekly auto start test
03.23.19	418.80	419.30	0.50	2.09	2.30	2.85	0.03	weekly auto start test
03.31.19	419.30	419.80	0.50	2.09	2.30	2.85	0.03	weekly auto start test
04.07.19	419.80	420.30	0.50	2.09	2.30	2.85	0.03	weekly auto start test
04.09.19	420.30	420.40	0.10	0.42	0.46	0.57	0.00	weekly auto start test
04.14.19	420.40	420.90	0.50	2.09	2.30	2.85	0.03	weekly auto start test

Emergency Backup Generator - Operations Log
Fire Backup Pump / Model # 6081HF001 - 14 gal/hr @ 1800 rpm

Blythe Energy Inc.

date	run-time meter start	run-time meter stop	duration (hr)	fuel use (gal)	NOx emissions (lb/hr)	CO emissions @1.55 lb/hr (lb/hr)	PM-10 emissions (lb/hr)	Comments
04.24.19	420.90	421.50	0.60	2.50	2.76	3.42	0.03	weekly auto start test
04.28.19	421.50	422.00	0.50	2.09	2.30	2.85	0.03	weekly auto start test
05.04.19	422.00	422.50	0.50	2.09	2.30	2.85	0.03	weekly auto start test
05.11.19	422.50	423.00	0.50	2.09	2.30	2.85	0.03	weekly auto start test
06.02.19	423.00	424.50	1.50	6.26	6.90	8.55	0.08	weekly auto start test
06.09.19	424.50	425.00	0.50	2.09	2.30	2.85	0.03	weekly auto start test
06.15.19	425.00	425.50	0.50	2.09	2.30	2.85	0.03	weekly auto start test
06.23.19	425.50	426.00	0.50	2.09	2.30	2.85	0.03	weekly auto start test
06.30.19	426.00	426.50	0.50	2.09	2.30	2.85	0.03	weekly auto start test
07.06.19	426.50	427.00	0.50	2.09	2.30	2.85	0.03	weekly auto start test
07.19.19	427.00	427.50	0.50	2.09	2.30	2.85	0.03	weekly auto start test
2019 totals ytd			6.50	27.11	29.90	37.05	0.33	
2018 totals			30.80	128.44	141.68	175.56	1.54	

Emergency Backup Generator - Operations Log
Ford Chiller

Blythe Energy Inc.

date	run-time meter start	run-time meter stop	duration (hr)	fuel use (gal)	NOx emissions (lb/hr)	CO emissions @1.55 lb/hr (lb/hr)	PM-10 emissions (lb/hr)	Comments
eff 05/07/15 - Title V Regs emissions factors					1.67 lb/hr	1.55 lb/hr	0.06 lb/hr	
01/24/16	163.46	163.56	0.10	1.20	0.17	0.15	0.01	monthly test run
02/24/16	163.56	163.73	0.17	2.04	0.28	0.26	0.01	monthly test run
03/26/16	163.73	163.88	0.15	1.80	0.25	0.23	0.01	monthly test run
04/06/16	163.88	166.23	2.35	28.20	3.92	3.64	0.14	SPRING OUTAGE
05/06/16	166.23	166.41	0.18	2.16	0.30	0.28	0.01	monthly test run
07/25/16	166.41	166.58	0.17	2.04	0.28	0.26	0.01	monthly test run
08/26/16	166.58	166.74	0.16	1.92	0.27	0.25	0.01	monthly test run
09/26/16	166.75	166.90	0.15	1.80	0.25	0.23	0.01	monthly test run
10/29/16	166.90	167.05	0.15	1.80	0.25	0.23	0.01	monthly test run
11/30/16	167.05	167.20	0.15	1.80	0.25	0.23	0.01	monthly test run
12/31/16	167.20	167.33	0.13	1.56	0.22	0.20	0.01	monthly test run
02/07/17	167.33	167.58	0.25	1.04	0.42	0.39	0.02	monthly test run
03/12/17	167.58	168.22	0.64	2.67	1.07	0.99	0.04	monthly test run
04/13/17	169.76	169.90	0.14	0.58	0.23	0.22	0.01	monthly test run
05/15/17	169.90	170.00	0.10	0.42	0.17	0.15	0.01	monthly test run
07/19/17	175.98	176.13	0.15	0.63	0.25	0.23	0.01	monthly test run

Emergency Backup Generator - Operations Log
Ford Chiller

Blythe Energy Inc.

date	run-time meter start	run-time meter stop	duration (hr)	fuel use (gal)	NOx emissions (lb/hr)	CO emissions @1.55 lb/hr (lb/hr)	PM-10 emissions (lb/hr)	Comments
08/21/17	176.13	176.28	0.15	0.63	0.25	0.23	0.01	monthly test run
09/22/17	176.28	176.45	0.17	0.71	0.28	0.26	0.01	monthly test run
10/23/17	176.45	176.65	0.20	0.83	0.33	0.31	0.01	monthly test run
11/24/17	176.65	176.82	0.17	0.71	0.28	0.26	0.01	monthly test run
12/24/17	176.82	176.97	0.15	0.63	0.25	0.23	0.01	monthly test run
01/25/18	176.97	177.16	0.19	0.79	0.32	0.29	0.01	monthly test run
03/07/18	178.45	178.64	0.19	0.79	0.32	0.29	0.01	monthly test run
04/16/18	178.64	180.45	1.81	7.55	3.02	2.81	0.11	monthly test run
05/15/18	180.45	180.52	0.07	0.29	0.12	0.11	0.00	monthly test run
05/23/18	180.52	180.70	0.18	0.75	0.30	0.28	0.01	MAINT PM
06/27/18	180.70	180.86	0.16	0.67	0.27	0.25	0.01	monthly test run
07/28/18	180.86	180.86	0.00	0.00	0.00	0.00	0.00	monthly test run
08/29/18	180.86	181.01	0.15	0.63	0.25	0.23	0.01	monthly test run
09/27/18	181.01	181.18	0.17	0.71	0.28	0.26	0.01	monthly test run
10.30.18	181.18	181.29	0.11	0.46	0.18	0.17	0.01	monthly test run
12.02.18	182.65	182.85	0.20	0.83	0.33	0.31	0.01	monthly test run
01.24.19	182.85	183.04	0.19	0.79	0.32	0.29	0.01	monthly test run
03.13.19	185.15	185.25	0.10	0.42	0.17	0.15	0.01	monthly test run
05.15.19	187.83	187.99	0.16	0.67	0.27	0.25	0.01	monthly test run
06.18.19	188.18	188.36	0.18	0.75	0.30	0.28	0.01	monthly test run
2019 totals ytd			0.29	1.21	0.48	0.45	0.02	
2018 totals			2.92	12.18	4.88	4.53	0.18	

Natural Gas Analyses

Analytical Data Summary

Blythe Energy Inc.

sample date	report date	analytical lab	results, grains / 100 ft^3	method	Comments
12//01/17	1219/17	Texas Oil Tech	<0.032	ASTM D 5504	
01/16/18	01/29/18	Texas Oil Tech	<0.032	ASTM D 5504	
02/12/18	02/17/18	Texas Oil Tech	<0.032	ASTM D 5504	
03/12/18	03/29/18	Texas Oil Tech	<0.033	ASTM D 5504	
04/16/18	05/23/18	Texas Oil Tech	<0.032	ASTM D 5504	
05/15/18	05/31/18	Texas Oil Tech	<0.033	ASTM D 5504	
06/16/18	06/28/18	Texas Oil Tech	<0.033	ASTM D 5504	
07/16/18	08/28/18	Texas Oil Tech	<0.032	ASTM D 5504	
08/23/18	09/11/18	Texas Oil Tech	<0.032	ASTM D 5504	
09/21/18	10/04/18	Texas Oil Tech	<0.032	ASTM D 5504	
10/31/18	11/10/18	Texas Oil Tech	<0.032	ASTM D 5504	
11/18/18	12/07/18	Texas Oil Tech	<0.032	ASTM D 5504	
12/14/18	12/20/18	Texas Oil Tech	<0.032	ASTM D 5504	
12/14/18	12/20/18	Texas Oil Tech	<0.033	ASTM D 5504	
01/22/19	01/31/19	Texas Oil Tech	<0.032	ASTM D 5504	
No Sample during Major Outage Feb - April 2019. Gas secured.					
05/14/19	05/23/19	Texas Oil Tech	<0.023	ASTM D 5504	
06/03/19	06/10/19	Texas Oil Tech	<0.009	ASTM D 5504	

GeneratorID	GeneratorName	Generator_Address1	Generator_EPA_ID	Generator_Signature_Date	Transporter_Name1	Transporter1_EPA_ID
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	7/19/2018 9:23	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	7/19/2018 9:23	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	9/13/2018 9:08	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	2/7/2019 14:38	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	2/7/2019 14:38	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	2/7/2019 14:38	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	2/7/2019 14:38	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	2/7/2019 14:38	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	2/7/2019 14:38	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	2/7/2019 14:38	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	2/7/2019 0:00	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	2/7/2019 0:00	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	2/7/2019 14:38	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	2/28/2019 8:37	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	3/27/2019 12:55	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	3/27/2019 12:55	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	3/27/2019 12:55	Safety-Kleen Systems, Inc.	TXR000081205
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BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	3/27/2019 12:55	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	3/27/2019 12:55	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	3/27/2019 12:55	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	3/27/2019 12:55	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	1/31/2019 9:36	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	3/27/2019 0:00	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	3/27/2019 0:00	Safety-Kleen Systems, Inc.	TXR000081205
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BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	3/27/2019 0:00	Safety-Kleen Systems, Inc.	TXR000081205
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BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	3/27/2019 0:00	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	3/27/2019 0:00	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	3/27/2019 0:00	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	3/27/2019 0:00	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	3/27/2019 0:00	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	5/23/2019 12:10	Safety-Kleen Systems, Inc.	TXR000081205
BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	5/16/2019 10:55	Safety-Kleen Systems, Inc.	TXR000081205
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BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	5/16/2019 10:55	Safety-Kleen Systems, Inc.	TXR000081205
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BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	7/19/2018 9:23	Safety-Kleen Systems, Inc.	TXR000081205
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BL15327	Blythe Energy Llc	385 N Buck Blvd	CAL000364934	3/27/2019 12:55	Safety-Kleen Systems, Inc.	TXR000081205

Transporter1_Addess1	Transporter1_City	Transporter1 State	Transporter1 Zip	Transporter2_Name	Transporter2_EPA_ID	Transporter2_Address1
2600 North Central Expressway	Richardson	TX	75080	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive
2600 North Central Expressway	Richardson	TX	75080	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive
2600 North Central Expressway	Richardson	TX	75080	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive
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2600 North Central Expressway	Richardson	TX	75080	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive
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Transporter2_City	Transporter2_State	Transporter2_Zip	Transporter_name_3	Transporter_3_epa_id	Transporter3_Address1	Transporter3 City
Norwell	MA	2061	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive	Norwell
Norwell	MA	2061	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive	Norwell
Norwell	MA	2061				
Norwell	MA	2061	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive	Norwell
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Norwell	MA	2061	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive	Norwell
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Norwell	MA	2061	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive	Norwell
Norwell	MA	2061	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive	Norwell
Norwell	MA	2061	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive	Norwell
Norwell	MA	2061	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive	Norwell
Norwell	MA	2061	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive	Norwell
Norwell	MA	2061	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive	Norwell
Norwell	MA	2061	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive	Norwell
Norwell	MA	2061	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive	Norwell
Norwell	MA	2061	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive	Norwell
Norwell	MA	2061	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive	Norwell
Norwell	MA	2061	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive	Norwell
Norwell	MA	2061	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive	Norwell
Norwell	MA	2061	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive	Norwell
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Norwell	MA	2061	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive	Norwell
Norwell	MA	2061	Clean Harbors Environmental Services, Inc.	MAD039322250	42 Longwater Drive	Norwell

Transporter3 State	Transporter3 Zip	Manifest Facility_Code	Manifest_Facility_Name	Manifest Facility_epa_id	Manifest Facility_Address1	Manifest Facility_City	Manifest Facility_State
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	SJ	San Jose, CA Facility	CAD059494310	1021 Berryessa Road	San Jose	CA
		SAA	Santa Ana, CA (Los Angeles)	CAT000613976	2120 South Yale Street	Santa Ana	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	DR	Deer Trail, CO Facility	COD991300484	108555 East Highway 36	Deer Trail	CO
MA	2061	DR	Deer Trail, CO Facility	COD991300484	108555 East Highway 36	Deer Trail	CO
		SAA	Santa Ana, CA (Los Angeles)	CAT000613976	2120 South Yale Street	Santa Ana	CA
		ADVEXP	ADVANCED ENVIRONMENTAL	CAT080025711	13579 WHITTRAM	Fontana	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
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MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA

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MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
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MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	SJ	San Jose, CA Facility	CAD059494310	1021 Berryessa Road	San Jose	CA
		ADVEXP	ADVANCED ENVIRONMENTAL	CAT080025711	13579 WHITTRAM	Fontana	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
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MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
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MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
		ADVEXP	ADVANCED ENVIRONMENTAL	CAT080025711	13579 WHITTRAM	Fontana	CA
MA	2061	SJ	San Jose, CA Facility	CAD059494310	1021 Berryessa Road	San Jose	CA
MA	2061	SJ	San Jose, CA Facility	CAD059494310	1021 Berryessa Road	San Jose	CA
MA	2061	SJ	San Jose, CA Facility	CAD059494310	1021 Berryessa Road	San Jose	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
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MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA

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MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA
MA	2061	WI	Wilmington, CA Facility	CAD044429835	1737 East Denni Street	Wilmington	CA

Manifest Facility_Zip	Manifest Facility_Receipt_Date	Manifest_Number	Manifest Type	Manifest Line_Number	Profile Number	Hazard Indicator	Liquid Indicator	Waste Description
90744	8/13/2018 16:26	006074362SKS	US	2	1670365	N	N	SPILL CLEANUP - DIRT, SAND, SOIL AND OIL
95133	8/10/2018 10:38	006074363SKS	US	1	1670184	Y	Y	Lab Waste
92704	9/25/2018 9:42	006655100sks	1D	1	156023	N	Y	AQUEOUS SOLUTION PARTS WASHER NHZW
90744	2/21/2019 13:14	006940102SKS	US	2	1409664	N	N	Oil Filters contaminated with ammonia
90744	2/21/2019 13:14	006940102SKS	US	2	1409664	N	N	Oil Filters contaminated with ammonia
90744	2/21/2019 13:14	006940102SKS	US	2	1409664	N	N	Oil Filters contaminated with ammonia
90744	2/21/2019 13:14	006940102SKS	US	3	1759409	N	Y	Oil with ammonia
90744	2/21/2019 13:14	006940102SKS	US	3	1759409	N	Y	Oil with ammonia
90744	2/21/2019 13:14	006940102SKS	US	3	1759409	N	Y	Oil with ammonia
90744	2/21/2019 13:14	006940102SKS	US	3	1759409	N	Y	Oil with ammonia
80105	3/5/2019 9:59	006940104SKS	US	1	40754072	N	N	Oily Debris
80105	3/5/2019 9:59	006940104SKS	US	1	40754072	N	N	Oily Debris
92704	2/13/2019 11:05	006940369SKS	1D	1	156023	N	Y	AQUEOUS SOLUTION PARTS WASHER NHZW
92335		006940422SKS	1D	1	156017	N	Y	OIL, USED NOT-REG
90744	4/11/2019 11:04	006940960SKS	US	1	158613	Y	N	SEALED LEAD ACID BATTERIES - HAZ
90744	4/11/2019 11:04	006940960SKS	US	1	158613	Y	N	SEALED LEAD ACID BATTERIES - HAZ
90744	4/11/2019 11:04	006940960SKS	US	1	158613	Y	N	SEALED LEAD ACID BATTERIES - HAZ
90744	4/11/2019 11:04	006940960SKS	US	1	158613	Y	N	SEALED LEAD ACID BATTERIES - HAZ
90744	4/11/2019 11:04	006940960SKS	US	1	158613	Y	N	SEALED LEAD ACID BATTERIES - HAZ
90744	4/11/2019 11:04	006940960SKS	US	1	158613	Y	N	SEALED LEAD ACID BATTERIES - HAZ
90744	4/11/2019 11:04	006940960SKS	US	1	158613	Y	N	SEALED LEAD ACID BATTERIES - HAZ
90744	4/11/2019 11:04	006940960SKS	US	1	158613	Y	N	SEALED LEAD ACID BATTERIES - HAZ
90744	4/11/2019 11:04	006940960SKS	US	1	158613	Y	N	SEALED LEAD ACID BATTERIES - HAZ
90744	4/11/2019 11:04	006940960SKS	US	1	158613	Y	N	SEALED LEAD ACID BATTERIES - HAZ
90744	4/11/2019 11:04	006940960SKS	US	1	158613	Y	N	SEALED LEAD ACID BATTERIES - HAZ
90744	4/11/2019 11:04	006940960SKS	US	1	158613	Y	N	SEALED LEAD ACID BATTERIES - HAZ
90744	4/11/2019 11:04	006940960SKS	US	1	158613	Y	N	SEALED LEAD ACID BATTERIES - HAZ
90744	4/11/2019 11:04	006940960SKS	US	1	158613	Y	N	SEALED LEAD ACID BATTERIES - HAZ
90744	4/11/2019 11:04	006940960SKS	US	1	158613	Y	N	SEALED LEAD ACID BATTERIES - HAZ
90744	4/11/2019 11:04	006940960SKS	US	1	158613	Y	N	SEALED LEAD ACID BATTERIES - HAZ
90744	4/11/2019 11:04	006940960SKS	US	1	158613	Y	N	SEALED LEAD ACID BATTERIES - HAZ
90744	4/11/2019 11:04	006940960SKS	US	1	158613	Y	N	SEALED LEAD ACID BATTERIES - HAZ

90744	4/11/2019 11:04	006940960SKS	US	2	1409664	N	N	Oil Filters contaminated with ammonia
90744	4/11/2019 11:04	006940960SKS	US	2	1409664	N	N	Oil Filters contaminated with ammonia
90744	4/11/2019 11:04	006940960SKS	US	2	1409664	N	N	Oil Filters contaminated with ammonia
90744	4/11/2019 11:04	006940960SKS	US	2	1409664	N	N	Oil Filters contaminated with ammonia
90744	4/11/2019 11:04	006940960SKS	US	2	1409664	N	N	Oil Filters contaminated with ammonia
90744	4/11/2019 11:04	006940960SKS	US	2	1409664	N	N	Oil Filters contaminated with ammonia
95133	4/5/2019 15:47	006940961SKS	US	1	1670184	Y	Y	Lab Waste
92335		006963118SKS	1D	1	156017	N	Y	OIL, USED NOT-REG
90744	4/15/2019 10:59	007033729SKS	US	1	1670365	N	N	SPILL CLEANUP - DIRT, SAND, SOIL AND OIL
90744	4/15/2019 10:59	007033729SKS	US	1	1670365	N	N	SPILL CLEANUP - DIRT, SAND, SOIL AND OIL
90744	4/15/2019 10:59	007033729SKS	US	1	1670365	N	N	SPILL CLEANUP - DIRT, SAND, SOIL AND OIL
90744	4/15/2019 10:59	007033729SKS	US	1	1670365	N	N	SPILL CLEANUP - DIRT, SAND, SOIL AND OIL
90744	4/15/2019 10:59	007033729SKS	US	1	1670365	N	N	SPILL CLEANUP - DIRT, SAND, SOIL AND OIL
90744	4/15/2019 10:59	007033729SKS	US	1	1670365	N	N	SPILL CLEANUP - DIRT, SAND, SOIL AND OIL
90744	4/15/2019 10:59	007033729SKS	US	1	1670365	N	N	SPILL CLEANUP - DIRT, SAND, SOIL AND OIL
90744	4/15/2019 10:59	007033729SKS	US	1	1670365	N	N	SPILL CLEANUP - DIRT, SAND, SOIL AND OIL
90744	4/15/2019 10:59	007033729SKS	US	1	1670365	N	N	SPILL CLEANUP - DIRT, SAND, SOIL AND OIL
90744	4/15/2019 10:59	007033729SKS	US	1	1670365	N	N	SPILL CLEANUP - DIRT, SAND, SOIL AND OIL
92335		007034945SKS	1D	1	156017	N	Y	OIL, USED NOT-REG
95133	5/31/2019 16:04	007037741SKS	US	1	1855768	N	Y	Well Water & oil 1-5%
95133	5/31/2019 16:04	007037741SKS	US	1	1855768	N	Y	Well Water & oil 1-5%
95133	5/31/2019 16:04	007037741SKS	US	2	1296689	N	N	PIT SLUDGE - NON-HAZARDOUS
90744	5/31/2019 16:51	007037743SKS	US	1	1826564	Y	N	PAINT AND PAINT THINNERS IN CANS - USED
90744	5/31/2019 16:51	007037743SKS	US	1	1826564	Y	N	PAINT AND PAINT THINNERS IN CANS - USED
90744	5/31/2019 16:51	007037743SKS	US	2	1836732	Y	N	PAINT CHIPS/DUST/SANDBLAST MEDIA
90744	5/31/2019 16:51	007037743SKS	US	2	1836732	Y	N	PAINT CHIPS/DUST/SANDBLAST MEDIA
90744	5/31/2019 16:51	007037743SKS	US	2	1836732	Y	N	PAINT CHIPS/DUST/SANDBLAST MEDIA
90744	5/31/2019 16:51	007037743SKS	US	2	1836732	Y	N	PAINT CHIPS/DUST/SANDBLAST MEDIA
90744	5/31/2019 16:51	007037743SKS	US	3	1670365	N	N	SPILL CLEANUP - DIRT, SAND, SOIL AND OIL
90744	5/31/2019 16:51	007037743SKS	US	3	1670365	N	N	SPILL CLEANUP - DIRT, SAND, SOIL AND OIL
90744	8/13/2018 16:26	HH226019392	NR	1	1670355	N	N	MMABLE AEROSOLS - NON-PUNCTURED UNIVERSAL WASTE
90744	2/21/2019 13:14	HH227420714	NR	1	156056	N	N	FLUORESCENT LIGHT BULBS
90744	2/21/2019 13:14	HH227420714	NR	1	156056	N	N	FLUORESCENT LIGHT BULBS

90744	2/21/2019 13:14	HH227420714	NR	1	156056	N	N	FLUORESCENT LIGHT BULBS
90744	2/21/2019 13:14	HH227420714	NR	2	1670355	N	N	MMABLE AEROSOLS - NON-PUNCTURED UNIVERSAL WASTE
90744	2/21/2019 13:14	HH227420714	NR	2	1670355	N	N	MMABLE AEROSOLS - NON-PUNCTURED UNIVERSAL WASTE
90744	4/11/2019 11:04	HH228061673	NR	1	1670355	N	N	MMABLE AEROSOLS - NON-PUNCTURED UNIVERSAL WASTE
90744	4/11/2019 11:04	HH228061673	NR	1	1670355	N	N	MMABLE AEROSOLS - NON-PUNCTURED UNIVERSAL WASTE

Line_Item Container_Quantity	Container Type	Total Quantity	Total Quantity_UOM	Specific Gravity	Container Quantity	Federal_Waste_Code	State Waste_Code	Waste Classification	Tracking Number	Container_Size	Drum_Weight
1	DM	55	P	>1.2	1		352	CNO	67186474	55	300
1	DF	55	P	1.0-1.2	1	D002	791	B26A	67186473	55	300
1	DF	15	G	1	1		134	A24W	68381708	30	125
3	DM	55	P	0.8-1.0	1		181	CBP	77538604	55	200
3	DM	55	P	0.8-1.0	1		181	CBP	77538605	55	200
3	DM	55	P	0.8-1.0	1		181	CBP	77538606	55	200
4	DM	55	P	0.8-1.0	1		223	A31	77538607	55	200
4	DM	55	P	0.8-1.0	1		223	A31	77538608	55	200
4	DM	55	P	0.8-1.0	1		223	A31	77538609	55	200
4	DM	55	P	0.8-1.0	1		223	A31	77598588	55	200
2	DM	236	P	0.8-1.0	1		352	CBP-1	77538601	55	236
2	DM	228	P	0.8-1.0	1		352	CBP-1	77538602	55	228
1	DF	15	G	1	1		134	A24W	77538603	30	125
1	TT		G	0.8-1.0	1		221	RORV		1	2627
17	DF	5	P	>1.2	1	D002, D008	181	LBLA	78538486	5	30
17	DF	5	P	>1.2	1	D002, D008	181	LBLA	78538487	5	33
17	DF	5	P	>1.2	1	D002, D008	181	LBLA	78538488	5	41
17	DF	5	P	>1.2	1	D002, D008	181	LBLA	78538489	5	41
17	DF	5	P	>1.2	1	D002, D008	181	LBLA	78538490	5	41
17	DF	5	P	>1.2	1	D002, D008	181	LBLA	78538491	5	41
17	DF	5	P	>1.2	1	D002, D008	181	LBLA	78538492	5	40
17	DF	5	P	>1.2	1	D002, D008	181	LBLA	78538493	5	26
17	DF	5	P	>1.2	1	D002, D008	181	LBLA	78538494	5	55
17	DF	5	P	>1.2	1	D002, D008	181	LBLA	78538495	5	41
17	DF	5	P	>1.2	1	D002, D008	181	LBLA	78538496	5	48
17	DF	5	P	>1.2	1	D002, D008	181	LBLA	78538497	5	34
17	DF	5	P	>1.2	1	D002, D008	181	LBLA	78538498	5	41
17	DF	5	P	>1.2	1	D002, D008	181	LBLA	78538499	5	42
17	DF	5	P	>1.2	1	D002, D008	181	LBLA	78538500	5	39
17	DF	5	P	>1.2	1	D002, D008	181	LBLA	78538501	5	42
17	DF	5	P	>1.2	1	D002, D008	181	LBLA	78538502	5	41

6	DF	300	P	0.8-1.0	1		181	CBP	78538513	1	300
6	DF	300	P	0.8-1.0	1		181	CBP	78538514	1	300
6	DF	300	P	0.8-1.0	1		181	CBP	78538515	1	300
6	DF	300	P	0.8-1.0	1		181	CBP	78538516	1	300
6	DF	300	P	0.8-1.0	1		181	CBP	78538517	1	300
6	DF	300	P	0.8-1.0	1		181	CBP	78538518	1	300
1	DF	55	P	1.0-1.2	1	D002	791	B26A	78538485	55	300
1	TT		G	0.8-1.0	1		221	RORV		1	2627
11	DM	55	P	>1.2	1		352	CNO	78658860	55	300
11	DM	55	P	>1.2	1		352	CNO	78658861	55	300
11	DM	55	P	>1.2	1		352	CNO	78658862	55	300
11	DM	55	P	>1.2	1		352	CNO	78658863	55	300
11	DM	55	P	>1.2	1		352	CNO	78658864	55	300
11	DM	55	P	>1.2	1		352	CNO	78658865	55	300
11	DM	55	P	>1.2	1		352	CNO	78658866	55	300
11	DM	55	P	>1.2	1		352	CNO	78658867	55	300
11	DM	55	P	>1.2	1		352	CNO	78658868	55	300
11	DM	55	P	>1.2	1		352	CNO	78658869	55	300
11	DM	55	P	>1.2	1		352	CNO	78658870	55	300
1	TT		G	0.8-1.0	1		221	RORV		1	3753
2	DF	95	P	1	1		135	CBPS	79605468	95	300
2	DF	95	P	1	1		135	CBPS	79605470	95	400
1	DF	95	P	1	1		223	CNOS	79605469	95	300
2	DM	200	P	0.8-1.0	1	D008, D035	212	FB2	79605471	55	200
2	DM	200	P	0.8-1.0	1	D008, D035	212	FB2	79605472	55	200
4	DM	55	P	>1.2	1	D006, D007,	181	CCS	79605473	55	100
4	DM	55	P	>1.2	1	D006, D007,	181	CCS	79605474	55	100
4	DM	55	P	>1.2	1	D006, D007,	181	CCS	79683626	55	600
4	DM	55	P	>1.2	1	D006, D007,	181	CCS	79683627	55	600
2	DM	55	P	>1.2	1		352	CNO	79605475	55	143
2	DM	55	P	>1.2	1		352	CNO	79605476	55	121
1	DM	55	P	< 0.8	2	NONE		LCCRQ	67186475	55	200
3	CW	1	P	1	2	NONE		CFL1	77538610	1	16
3	CW	1	P	1	2	NONE		CFL1	77538611	1	18

3	CW	1	P	1	2	NONE		CFL1	77538612	1	15
2	DM	55	P	< 0.8	2	NONE		LCCRQ	77538613	55	100
2	DM	55	P	< 0.8	2	NONE		LCCRQ	77538614	55	100
2	DM	55	P	< 0.8	2	NONE		LCCRQ	78538519	55	200
2	DM	55	P	< 0.8	2	NONE		LCCRQ	78538520	55	200

Drum_Weight_UOM	lbs_per_gallon	Profile_wcc	Disposal_Code	Final_Disposal_Co_Name	Final_Disposal_co_epa_id	Final_Disposal_Facility_Address1	Final_Disposal_co_city
LBS	12.51	CNO					
LBS	9.174	B26A	SJ	San Jose, CA Facility	CAD059494310	1021 Berryessa Road	San Jose
LBS	8.34	A24W	CR0039	Crosby and Overton	CAD028409019	1610 West 17th Street	Long Beach
LBS	7.506	CBP	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	7.506	CBP	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	7.506	CBP	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	7.506	A31	RE0454	LES, AZ	AZR000030452	5159 West Van Buren	Phoenix
LBS	7.506	A31	ISF	ISOC Terminal FAC	CAD099452708	1700 South Soto Street	Los Angeles
LBS	7.506	A31	ISF	ISOC Terminal FAC	CAD099452708	1700 South Soto Street	Los Angeles
LBS	7.506	A31	ISF	ISOC Terminal FAC	CAD099452708	1700 South Soto Street	Los Angeles
LBS	7.506	CBP-1	DR	Deer Trail, CO Facility	COD991300484	108555 East Highway 36	Deer Trail
LBS	7.506	CBP-1	DR	Deer Trail, CO Facility	COD991300484	108555 East Highway 36	Deer Trail
LBS	8.34	A24W	CR0039	Crosby and Overton	CAD028409019	1610 West 17th Street	Long Beach
LBS	7.506						
LBS	12.51	LBLA	KI0181	Kinsbursky Brothers Inc	CAD088504881	1314 North Anaheim Boulevard	Anaheim
LBS	12.51	LBLA	KI0181	Kinsbursky Brothers Inc	CAD088504881	1314 North Anaheim Boulevard	Anaheim
LBS	12.51	LBLA	KI0181	Kinsbursky Brothers Inc	CAD088504881	1314 North Anaheim Boulevard	Anaheim
LBS	12.51	LBLA	KI0181	Kinsbursky Brothers Inc	CAD088504881	1314 North Anaheim Boulevard	Anaheim
LBS	12.51	LBLA	KI0181	Kinsbursky Brothers Inc	CAD088504881	1314 North Anaheim Boulevard	Anaheim
LBS	12.51	LBLA	KI0181	Kinsbursky Brothers Inc	CAD088504881	1314 North Anaheim Boulevard	Anaheim
LBS	12.51	LBLA	KI0181	Kinsbursky Brothers Inc	CAD088504881	1314 North Anaheim Boulevard	Anaheim
LBS	12.51	LBLA	KI0181	Kinsbursky Brothers Inc	CAD088504881	1314 North Anaheim Boulevard	Anaheim
LBS	12.51	LBLA	KI0181	Kinsbursky Brothers Inc	CAD088504881	1314 North Anaheim Boulevard	Anaheim
LBS	12.51	LBLA	KI0181	Kinsbursky Brothers Inc	CAD088504881	1314 North Anaheim Boulevard	Anaheim
LBS	12.51	LBLA	KI0181	Kinsbursky Brothers Inc	CAD088504881	1314 North Anaheim Boulevard	Anaheim
LBS	12.51	LBLA	KI0181	Kinsbursky Brothers Inc	CAD088504881	1314 North Anaheim Boulevard	Anaheim
LBS	12.51	LBLA	KI0181	Kinsbursky Brothers Inc	CAD088504881	1314 North Anaheim Boulevard	Anaheim
LBS	12.51	LBLA	KI0181	Kinsbursky Brothers Inc	CAD088504881	1314 North Anaheim Boulevard	Anaheim
LBS	12.51	LBLA	KI0181	Kinsbursky Brothers Inc	CAD088504881	1314 North Anaheim Boulevard	Anaheim
LBS	12.51	LBLA	KI0181	Kinsbursky Brothers Inc	CAD088504881	1314 North Anaheim Boulevard	Anaheim
LBS	12.51	LBLA	KI0181	Kinsbursky Brothers Inc	CAD088504881	1314 North Anaheim Boulevard	Anaheim

LBS	7.506	CBP	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	7.506	CBP	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	7.506	CBP	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	7.506	CBP	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	7.506	CBP	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	7.506	CBP	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	9.174	B26A	SJ	San Jose, CA Facility	CAD059494310	1021 Berryessa Road	San Jose
LBS	7.506						
LBS	12.51	CNO	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	12.51	CNO	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	12.51	CNO	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	12.51	CNO	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	12.51	CNO	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	12.51	CNO	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	12.51	CNO	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	12.51	CNO	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	12.51	CNO	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	12.51	CNO	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	12.51	CNO	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	7.506						
LBS	8.34	CBPS	GM	Grassy Mountain, UT Facility	UTD991301748	3 Miles East 7 Miles North of Knolls	Grantsville
LBS	8.34	CBPS	GM	Grassy Mountain, UT Facility	UTD991301748	3 Miles East 7 Miles North of Knolls	Grantsville
LBS	8.34	CNOS	GM	Grassy Mountain, UT Facility	UTD991301748	3 Miles East 7 Miles North of Knolls	Grantsville
LBS	7.506	FB2					
LBS	7.506	FB2					
LBS	12.51	CCS	GM	Grassy Mountain, UT Facility	UTD991301748	3 Miles East 7 Miles North of Knolls	Grantsville
LBS	12.51	CCS	GM	Grassy Mountain, UT Facility	UTD991301748	3 Miles East 7 Miles North of Knolls	Grantsville
LBS	12.51	CCS	GM	Grassy Mountain, UT Facility	UTD991301748	3 Miles East 7 Miles North of Knolls	Grantsville
LBS	12.51	CCS	GM	Grassy Mountain, UT Facility	UTD991301748	3 Miles East 7 Miles North of Knolls	Grantsville
LBS	12.51	CNO	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	12.51	CNO	BL	Buttonwillow, CA Facility	CAD980675276	2500 West Lokern Road	Buttonwillow
LBS	5.838	LCCRQ	EL	El Dorado, AR Facility	ARD069748192	309 American Circle	El Dorado
LBS	8.34	CFL1	LTNGCA	Lighting Resources LLC	CAR000156125	805 E. Francis St	Ontario
LBS	8.34	CFL1	LTNGCA	Lighting Resources LLC	CAR000156125	805 E. Francis St	Ontario

LBS	8.34	CFL1	LTNGCA	Lighting Resources LLC	CAR000156125	805 E. Francis St	Ontario
LBS	5.838	LCCRQ	EL	El Dorado, AR Facility	ARD069748192	309 American Circle	El Dorado
LBS	5.838	LCCRQ	EL	El Dorado, AR Facility	ARD069748192	309 American Circle	El Dorado
LBS	5.838	LCCRQ	EL	El Dorado, AR Facility	ARD069748192	309 American Circle	El Dorado
LBS	5.838	LCCRQ	EL	El Dorado, AR Facility	ARD069748192	309 American Circle	El Dorado

Final_Disposal Co_State	Final_Disposal Facility_Zip	Final_Waste Class_Code_Description	Management Method_Code	Expected_Disposal Management_Method_Code	Tracking Actvity_Type
		Non Hazardous Solid	H141	H132	
CA	95133	Acidic Wastewater With Low Metals	H070	H129	NEUT
CA	90813	Aqueous Parts Washer	H141	H129	SHIP
CA	93206	Solids To Hazardous Landfill	H141	H132	LAND
CA	93206	Solids To Hazardous Landfill	H141	H132	LAND
CA	93206	Solids To Hazardous Landfill	H141	H132	LAND
AZ	85063	Specification Oil & Water	H141	H039	SHIP
CA	90023	Specification Oils	H141	H039	PSHP
CA	90023	Specification Oils	H141	H039	PSHP
CA	90023	Specification Oils	H141	H039	PSHP
CO	80105	Solids To Hazardous Landfill		H132	LAND
CO	80105	Solids To Hazardous Landfill		H132	LAND
CA	90813	Aqueous Parts Washer	H141	H129	SHIP
CA	92801	Lead Acid Batteries For Reclamation	H141	H010	SHIP
CA	92801	Lead Acid Batteries For Reclamation	H141	H010	SHIP
CA	92801	Lead Acid Batteries For Reclamation	H141	H010	SHIP
CA	92801	Lead Acid Batteries For Reclamation	H141	H010	SHIP
CA	92801	Lead Acid Batteries For Reclamation	H141	H010	SHIP
CA	92801	Lead Acid Batteries For Reclamation	H141	H010	SHIP
CA	92801	Lead Acid Batteries For Reclamation	H141	H010	SHIP
CA	92801	Lead Acid Batteries For Reclamation	H141	H010	SHIP
CA	92801	Lead Acid Batteries For Reclamation	H141	H010	SHIP
CA	92801	Lead Acid Batteries For Reclamation	H141	H010	SHIP
CA	92801	Lead Acid Batteries For Reclamation	H141	H010	SHIP
CA	92801	Lead Acid Batteries For Reclamation	H141	H010	SHIP
CA	92801	Lead Acid Batteries For Reclamation	H141	H010	SHIP
CA	92801	Lead Acid Batteries For Reclamation	H141	H010	SHIP
CA	92801	Lead Acid Batteries For Reclamation	H141	H010	SHIP
CA	92801	Lead Acid Batteries For Reclamation	H141	H010	SHIP

CA	93206	Solids To Hazardous Landfill	H141	H132	LAND
CA	93206	Solids To Hazardous Landfill	H141	H132	LAND
CA	93206	Solids To Hazardous Landfill	H141	H132	LAND
CA	93206	Solids To Hazardous Landfill	H141	H132	LAND
CA	93206	Solids To Hazardous Landfill	H141	H132	LAND
CA	93206	Solids To Hazardous Landfill	H141	H132	LAND
CA	95133	Acidic Wastewater With Low Metals	H070	H129	NEUT
CA	93206	Non Hazardous Solid	H141	H132	LAND
CA	93206	Non Hazardous Solid	H141	H132	LAND
CA	93206	Non Hazardous Solid	H141	H132	LAND
CA	93206	Non Hazardous Solid	H141	H132	LAND
CA	93206	Non Hazardous Solid	H141	H132	LAND
CA	93206	Non Hazardous Solid	H141	H132	LAND
CA	93206	Non Hazardous Solid	H141	H132	LAND
CA	93206	Non Hazardous Solid	H141	H132	LAND
CA	93206	Non Hazardous Solid	H141	H132	LAND
CA	93206	Non Hazardous Solid	H141	H132	LAND
UT	84029	Semi-Solids To Hazardous Landfill	H141	H132	LAND
UT	84029	Semi-Solids To Hazardous Landfill	H141	H132	LAND
UT	84029	Non Hazardous Semi-Solids	H141	H132	LAND
		Non-Processable Paint & Paint Related Mtrl For Incineration	H141	H061	
		Non-Processable Paint & Paint Related Mtrl For Incineration	H141	H061	
UT	84029	Characteristic Solids For Stabilization	H141	H111	LAND
UT	84029	Characteristic Solids For Stabilization	H141	H111	LAND
UT	84029	Characteristic Solids For Stabilization	H141	H111	LAND
UT	84029	Characteristic Solids For Stabilization	H141	H111	LAND
CA	93206	Non Hazardous Solid	H141	H132	LAND
CA	93206	Non Hazardous Solid	H141	H132	LAND
AR	71730	Aerosols For Incineration	H141	H040	INCN
CA	91761	Mercury Bulbs For Reclamation	H141	H010	SHIP
CA	91761	Mercury Bulbs For Reclamation	H141	H010	SHIP

CA	91761	Mercury Bulbs For Reclamation	H141	H010	SHIP
AR	71730	Aerosols For Incineration	H141	H040	INCN
AR	71730	Aerosols For Incineration	H141	H040	INCN
AR	71730	Aerosols For Incineration	H141	H040	INCN
AR	71730	Aerosols For Incineration	H141	H040	INCN

Tracking Actvity_Description	Actual_Activity_Date	Final_Management Method_Code	Dot_Description
			NONE, NONE, NON D.O.T. REGULATED, OIL, DIRT AND SAND), N/A , N/A, NONE
Neutralization	9/18/2018 6:40	H121	UN2796, WASTE UN2796, WASTE SULFURIC ACID, 8, PG II , 8, PG II
SHIP	9/27/2018 7:37	H135	NONE, NON-RCRA HAZARDOUS WASTE, LIQUID AQUEOUS PARTS WASHER SOLUTION) , N/A, NONE
Landfill	2/26/2019 17:52	H132	NONE, NONE, NON RCRA HAZARDOUS WASTE SOLIDS, FILTERS), N/A , N/A, NONE
Landfill	3/1/2019 16:51	H132	NONE, NONE, NON RCRA HAZARDOUS WASTE SOLIDS, FILTERS), N/A , N/A, NONE
Landfill	2/26/2019 15:58	H132	NONE, NONE, NON RCRA HAZARDOUS WASTE SOLIDS, FILTERS), N/A , N/A, NONE
SHIP	2/27/2019 13:18	H039	NONE, NONE, NON RCRA HAZARDOUS WASTE LIQUIDS , (OIL CONTAINING AMMONIA), N/A , N/A, NONE
Product Shipment	3/25/2019 23:59		NONE, NONE, NON RCRA HAZARDOUS WASTE LIQUIDS , (OIL CONTAINING AMMONIA), N/A , N/A, NONE
Product Shipment	4/9/2019 23:59		NONE, NONE, NON RCRA HAZARDOUS WASTE LIQUIDS , (OIL CONTAINING AMMONIA), N/A , N/A, NONE
Product Shipment	4/9/2019 23:59		NONE, NONE, NON RCRA HAZARDOUS WASTE LIQUIDS , (OIL CONTAINING AMMONIA), N/A , N/A, NONE
Landfill	3/12/2019 14:16	H132	NONE, NON RCRA HAZARDOUS WASTE SOLIDS, OILY DEBRIS) , N/A, NONE
Landfill	3/12/2019 14:16	H132	NONE, NON RCRA HAZARDOUS WASTE SOLIDS, OILY DEBRIS) , N/A, NONE
SHIP	2/15/2019 9:15	H135	NONE, NON-RCRA HAZARDOUS WASTE, LIQUID AQUEOUS PARTS WASHER SOLUTION) , N/A, NONE
			NONE, NON-RCRA HAZARDOUS WASTE, LIQUID USED OIL) , N/A, NONE
SHIP	4/29/2019 16:09	H010	UN2800, UN2800,WASTE BATTERIES,WET,NON-SPILLABLE 8 RQ D008,D002) (ERG#154) , 8, PG III
SHIP	4/29/2019 16:09	H010	UN2800, UN2800,WASTE BATTERIES,WET,NON-SPILLABLE 8 RQ D008,D002) (ERG#154) , 8, PG III
SHIP	4/29/2019 16:09	H010	UN2800, UN2800,WASTE BATTERIES,WET,NON-SPILLABLE 8 RQ D008,D002) (ERG#154) , 8, PG III
SHIP	4/29/2019 16:09	H010	UN2800, UN2800,WASTE BATTERIES,WET,NON-SPILLABLE 8 RQ D008,D002) (ERG#154) , 8, PG III
SHIP	4/29/2019 16:09	H010	UN2800, UN2800,WASTE BATTERIES,WET,NON-SPILLABLE 8 RQ D008,D002) (ERG#154) , 8, PG III
SHIP	4/29/2019 16:09	H010	UN2800, UN2800,WASTE BATTERIES,WET,NON-SPILLABLE 8 RQ D008,D002) (ERG#154) , 8, PG III
SHIP	4/29/2019 16:09	H010	UN2800, UN2800,WASTE BATTERIES,WET,NON-SPILLABLE 8 RQ D008,D002) (ERG#154) , 8, PG III
SHIP	4/29/2019 16:09	H010	UN2800, UN2800,WASTE BATTERIES,WET,NON-SPILLABLE 8 RQ D008,D002) (ERG#154) , 8, PG III
SHIP	4/29/2019 16:09	H010	UN2800, UN2800,WASTE BATTERIES,WET,NON-SPILLABLE 8 RQ D008,D002) (ERG#154) , 8, PG III
SHIP	4/29/2019 16:09	H010	UN2800, UN2800,WASTE BATTERIES,WET,NON-SPILLABLE 8 RQ D008,D002) (ERG#154) , 8, PG III
SHIP	4/29/2019 16:09	H010	UN2800, UN2800,WASTE BATTERIES,WET,NON-SPILLABLE 8 RQ D008,D002) (ERG#154) , 8, PG III
SHIP	4/29/2019 16:09	H010	UN2800, UN2800,WASTE BATTERIES,WET,NON-SPILLABLE 8 RQ D008,D002) (ERG#154) , 8, PG III
SHIP	4/29/2019 16:09	H010	UN2800, UN2800,WASTE BATTERIES,WET,NON-SPILLABLE 8 RQ D008,D002) (ERG#154) , 8, PG III
SHIP	4/29/2019 16:09	H010	UN2800, UN2800,WASTE BATTERIES,WET,NON-SPILLABLE 8 RQ D008,D002) (ERG#154) , 8, PG III
SHIP	4/29/2019 16:09	H010	UN2800, UN2800,WASTE BATTERIES,WET,NON-SPILLABLE 8 RQ D008,D002) (ERG#154) , 8, PG III
SHIP	4/29/2019 16:09	H010	UN2800, UN2800,WASTE BATTERIES,WET,NON-SPILLABLE 8 RQ D008,D002) (ERG#154) , 8, PG III
SHIP	4/29/2019 16:09	H010	UN2800, UN2800,WASTE BATTERIES,WET,NON-SPILLABLE 8 RQ D008,D002) (ERG#154) , 8, PG III

Landfill	4/18/2019 17:52	H132	NONE, NON-RCRA HAZARDOUS WASTE, SOLIDS, N/A, NONE
Landfill	4/18/2019 17:52	H132	NONE, NON-RCRA HAZARDOUS WASTE, SOLIDS, N/A, NONE
Landfill	4/18/2019 17:52	H132	NONE, NON-RCRA HAZARDOUS WASTE, SOLIDS, N/A, NONE
Landfill	4/18/2019 17:52	H132	NONE, NON-RCRA HAZARDOUS WASTE, SOLIDS, N/A, NONE
Landfill	4/18/2019 17:59	H132	NONE, NON-RCRA HAZARDOUS WASTE, SOLIDS, N/A, NONE
Landfill	4/18/2019 17:22	H132	NONE, NON-RCRA HAZARDOUS WASTE, SOLIDS, N/A, NONE
Neutralization	4/12/2019 11:28	H121	UN2796, WASTE UN2796, WASTE SULFURIC ACID, 8, PG II , 8, PG II
			NONE, NON-RCRA HAZARDOUS WASTE, LIQUID USED OIL) , N/A, NONE
Landfill	4/22/2019 19:19	H132	NONE, NONE, NON D.O.T. REGULATED, OIL, DIRT AND SAND), N/A , N/A, NONE
Landfill	4/22/2019 19:19	H132	NONE, NONE, NON D.O.T. REGULATED, OIL, DIRT AND SAND), N/A , N/A, NONE
Landfill	4/22/2019 19:19	H132	NONE, NONE, NON D.O.T. REGULATED, OIL, DIRT AND SAND), N/A , N/A, NONE
Landfill	4/22/2019 19:19	H132	NONE, NONE, NON D.O.T. REGULATED, OIL, DIRT AND SAND), N/A , N/A, NONE
Landfill	4/22/2019 19:19	H132	NONE, NONE, NON D.O.T. REGULATED, OIL, DIRT AND SAND), N/A , N/A, NONE
Landfill	4/22/2019 19:19	H132	NONE, NONE, NON D.O.T. REGULATED, OIL, DIRT AND SAND), N/A , N/A, NONE
Landfill	4/22/2019 19:19	H132	NONE, NONE, NON D.O.T. REGULATED, OIL, DIRT AND SAND), N/A , N/A, NONE
Landfill	4/22/2019 19:19	H132	NONE, NONE, NON D.O.T. REGULATED, OIL, DIRT AND SAND), N/A , N/A, NONE
Landfill	4/23/2019 14:10	H132	NONE, NONE, NON D.O.T. REGULATED, OIL, DIRT AND SAND), N/A , N/A, NONE
Landfill	4/23/2019 14:10	H132	NONE, NONE, NON D.O.T. REGULATED, OIL, DIRT AND SAND), N/A , N/A, NONE
Landfill	4/23/2019 14:10	H132	NONE, NONE, NON D.O.T. REGULATED, OIL, DIRT AND SAND), N/A , N/A, NONE
			NONE, NON-RCRA HAZARDOUS WASTE, LIQUID USED OIL) , N/A, NONE
Landfill	6/28/2019 9:24	H132	NONE, NON-RCRA HAZARDOUS WASTE, LIQUIDS, N/A, NONE
Landfill	6/28/2019 9:24	H132	NONE, NON-RCRA HAZARDOUS WASTE, LIQUIDS, N/A, NONE
Landfill	6/28/2019 9:24	H132	NONE, NON-RCRA HAZARDOUS WASTE, LIQUIDS, N/A, NONE
			UN1263, WASTE UN1263, WASTE PAINT, 3, PG II, 3, PG II
			UN1263, WASTE UN1263, WASTE PAINT, 3, PG II, 3, PG II
Landfill	6/24/2019 13:42	H132	NA3077, NA3077, HAZARDOUS WASTE, SOLID, N.O.S. , (LEAD, CHROMIUM), 9, PG III , 9, PG III
Landfill	6/24/2019 13:42	H132	NA3077, NA3077, HAZARDOUS WASTE, SOLID, N.O.S. , (LEAD, CHROMIUM), 9, PG III , 9, PG III
Landfill	6/24/2019 13:42	H132	NA3077, NA3077, HAZARDOUS WASTE, SOLID, N.O.S. , (LEAD, CHROMIUM), 9, PG III , 9, PG III
Landfill	6/24/2019 13:42	H132	NA3077, NA3077, HAZARDOUS WASTE, SOLID, N.O.S. , (LEAD, CHROMIUM), 9, PG III , 9, PG III
Landfill	6/14/2019 18:34	H132	NONE, NON-RCRA HAZARDOUS WASTE, SOLIDS, N/A, NONE
Landfill	6/14/2019 18:34	H132	NONE, NON-RCRA HAZARDOUS WASTE, SOLIDS, N/A, NONE
Incineration	9/14/2018 6:54	H040	UN1950, UN1950, AEROSOLS, EACH NOT EXCEEDING 1 L CAPACITY), 2.1, UNIVERSAL WASTE- AEROSOLS , 2.1, NONE
SHIP	3/4/2019 9:15	H010	NONE, UNIVERSAL WASTE LAMPS FLUORESCENT LAMPS) , N/A, NONE
SHIP	3/4/2019 9:15	H010	NONE, UNIVERSAL WASTE LAMPS FLUORESCENT LAMPS) , N/A, NONE

SHIP	3/4/2019 9:15	H010	NONE, UNIVERSAL WASTE LAMPS FLUORESCENT LAMPS) , N/A, NONE
Incineration	3/19/2019 12:16	H040	UN1950, UN1950, AEROSOLS, EACH NOT EXCEEDING 1 L CAPACITY), 2.1, UNIVERSAL WASTE- AEROSOLS , 2.1, NONE
Incineration	3/19/2019 12:16	H040	UN1950, UN1950, AEROSOLS, EACH NOT EXCEEDING 1 L CAPACITY), 2.1, UNIVERSAL WASTE- AEROSOLS , 2.1, NONE
Incineration	4/24/2019 18:49	H040	UN1950, UN1950, AEROSOLS, EACH NOT EXCEEDING 1 L CAPACITY), 2.1, UNIVERSAL WASTE- AEROSOLS , 2.1, NONE
Incineration	4/24/2019 16:13	H040	UN1950, UN1950, AEROSOLS, EACH NOT EXCEEDING 1 L CAPACITY), 2.1, UNIVERSAL WASTE- AEROSOLS , 2.1, NONE

Billing_Part_no
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Performance Measures Report

YTD - EFOR

Report Period: 07/01/2018 to 06/30/2019

Rollup Weighting: NMC

Blythe - Unit 1														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
07/01/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/02/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/03/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/04/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/05/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/06/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/07/2018	0.00	0.00	0.00	0.00	0.00	4.42	0.00	100.00	95.58	100.00	0.00	4.42	0.00	4.42
07/08/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/09/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/10/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/11/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/12/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/13/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/14/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/15/2018	0.00	0.00	0.00	0.00	0.00	4.31	0.00	100.00	95.69	100.00	0.00	4.31	0.00	4.31
07/16/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/17/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/18/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/19/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	51.81	100.00	0.00	48.19	0.00	48.19
07/20/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	47.43	100.00	0.00	52.57	0.00	52.57
07/21/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	65.68	100.00	0.00	34.32	0.00	34.32
07/22/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/23/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/24/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/25/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/26/2018	0.00	0.00	0.00	12.71	12.71	12.71	12.71	87.29	87.29	87.29	12.71	12.71	0.00	0.00

Blythe - Unit 1														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
07/27/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	96.79	0.00	0.00	0.00	0.00
07/28/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	82.42	0.00	0.00	0.00	0.00
07/29/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/30/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/31/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/01/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/02/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/03/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/04/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/05/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/06/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/07/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/08/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/09/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/10/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	96.88	0.00	0.00	0.00	0.00
08/11/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	55.75	0.00	0.00	0.00	0.00
08/12/2018	0.00	0.00	0.00	0.00	0.00	4.45	0.00	100.00	97.12	64.88	0.00	2.88	0.00	2.88
08/13/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	55.08	0.00	0.00	0.00	0.00
08/14/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	84.08	0.00	0.00	0.00	0.00
08/15/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/16/2018	0.00	0.00	0.00	0.00	0.00	2.96	0.00	100.00	97.04	100.00	0.00	2.96	0.00	2.96
08/17/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/18/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/19/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/20/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/21/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00

Blythe - Unit 1														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
08/22/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/23/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/24/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/25/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/26/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/27/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/28/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/29/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/30/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/31/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/01/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/02/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/03/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/04/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/05/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/06/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/07/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/08/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/09/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/10/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/11/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/12/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/13/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/14/2018	0.00	0.00	0.00	0.00	0.00	2.32	0.00	100.00	98.39	69.29	0.00	1.61	0.00	1.61
09/15/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/16/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00

Blythe - Unit 1														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
09/17/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/18/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/19/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/20/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/21/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/22/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/23/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/24/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/25/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/26/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/27/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/28/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/29/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/30/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
10/01/2018	99.03	99.03	0.00	0.00	0.00	0.00	0.00	0.97	0.95	0.96	99.03	99.03	0.03	0.00
10/02/2018	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
10/03/2018	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
10/04/2018	65.14	65.14	0.00	0.00	0.00	0.00	0.00	34.86	33.92	0.08	65.14	65.14	0.94	0.00
10/05/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	0.00	0.00	0.00	2.69	0.00
10/06/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	0.00	0.00	0.00	2.69	0.00
10/07/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	29.79	0.00	0.00	2.69	0.00
10/08/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	77.79	0.00	0.00	2.69	0.00
10/09/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	79.17	0.00	0.00	2.69	0.00
10/10/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/11/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	83.54	0.00	0.00	2.69	0.00
10/12/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	77.58	0.00	0.00	2.69	0.00

Blythe - Unit 1														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
10/13/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/14/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/15/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/16/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/17/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	66.88	0.00	0.00	2.69	0.00
10/18/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/19/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/20/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/21/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/22/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/23/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/24/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/25/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/26/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/27/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/28/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/29/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/30/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/31/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
11/01/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/02/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/03/2018	0.00	0.00	0.00	0.00	0.00	2.24	0.00	100.00	97.76	100.00	0.00	2.24	0.00	2.24
11/04/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/05/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/06/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	81.04	0.00	0.00	0.00	0.00
11/07/2018	0.00	0.00	0.00	7.15	7.15	7.15	7.15	92.85	92.85	92.83	7.15	7.15	0.00	0.00

Blythe - Unit 1														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
11/08/2018	0.00	0.00	0.00	48.54	54.19	60.52	48.54	51.46	45.78	41.04	48.54	54.22	0.00	5.67
11/09/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/10/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/11/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/12/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/13/2018	0.00	0.00	0.00	0.00	0.00	3.98	0.00	100.00	96.83	79.71	0.00	3.17	0.00	3.17
11/14/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/15/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/16/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/17/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/18/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/19/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/20/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	82.83	0.00	0.00	0.00	0.00
11/21/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/22/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/23/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/24/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/25/2018	0.00	0.00	0.00	0.00	0.00	2.80	0.00	100.00	97.20	100.00	0.00	2.80	0.00	2.80
11/26/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/27/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/28/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/29/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/30/2018	0.00	0.00	0.00	0.00	0.00	3.55	0.00	100.00	96.45	100.00	0.00	3.55	0.00	3.55
12/01/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	79.50	0.00	0.00	0.19	0.00
12/02/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/03/2018	0.00	0.00	0.00	0.00	0.00	1.94	0.00	100.00	97.87	100.00	0.00	1.94	0.19	1.94

Blythe - Unit 1														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
12/04/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/05/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/06/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/07/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/08/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/09/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/10/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/11/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	98.75	0.00	0.00	0.19	0.00
12/12/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	83.96	0.00	0.00	0.19	0.00
12/13/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/14/2018	0.00	0.00	0.00	0.00	0.00	36.66	0.00	100.00	63.14	100.00	0.00	36.66	0.19	36.66
12/15/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/16/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/17/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/18/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/19/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/20/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/21/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/22/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/23/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/24/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/25/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/26/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/27/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/28/2018	0.00	0.00	0.00	0.00	0.00	1.49	0.00	100.00	98.32	100.00	0.00	1.49	0.19	1.49
12/29/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00

Blythe - Unit 1														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
12/30/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/31/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
01/01/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/02/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/03/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/04/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/05/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/06/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/07/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/08/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/09/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/10/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/11/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/12/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/13/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/14/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/15/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/16/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/17/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/18/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/19/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/20/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/21/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/22/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/23/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/24/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00

Blythe - Unit 1														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
01/25/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/26/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/27/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/28/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/29/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/30/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/31/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
02/01/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
02/02/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
02/03/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
02/04/2019	98.96	98.96	0.00	0.00	0.00	0.00	0.00	1.04	1.04	1.04	98.96	98.96	0.00	0.00
02/05/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/06/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/07/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/08/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/09/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/10/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/11/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/12/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/13/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/14/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/15/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/16/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/17/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/18/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/19/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00

Blythe - Unit 1														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
02/20/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/21/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/22/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/23/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/24/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/25/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/26/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/27/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/28/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/01/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/02/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/03/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/04/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/05/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/06/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/07/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/08/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/09/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/10/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/11/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/12/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/13/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/14/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/15/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/16/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/17/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00

Blythe - Unit 1														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
03/18/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/19/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/20/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/21/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/22/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/23/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/24/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/25/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/26/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/27/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/28/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/29/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/30/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/31/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/01/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/02/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/03/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/04/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/05/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/06/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/07/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/08/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/09/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/10/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/11/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/12/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00

Blythe - Unit 1														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
04/13/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/14/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/15/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/16/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/17/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/18/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/19/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/20/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/21/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/22/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/23/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/24/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/25/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/26/2019	40.28	40.28	0.00	0.00	0.00	0.00	0.00	59.72	58.11	59.71	40.28	40.28	1.61	0.00
04/27/2019	59.65	59.65	0.00	0.00	0.00	0.00	0.00	40.35	39.26	40.33	59.65	59.65	1.09	0.00
04/28/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/29/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/30/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
05/01/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
05/02/2019	78.47	78.47	0.00	0.00	0.00	0.00	0.00	21.53	20.95	21.54	78.47	78.47	0.58	0.00
05/03/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/04/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	49.92	0.00	0.00	2.69	0.00
05/05/2019	0.00	0.00	0.00	0.00	0.00	9.50	0.00	100.00	90.98	66.54	0.00	6.32	2.69	6.32
05/06/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	83.96	0.00	0.00	2.69	0.00
05/07/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	80.50	0.00	0.00	2.69	0.00
05/08/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	79.67	0.00	0.00	2.69	0.00

Blythe - Unit 1														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
05/09/2019	0.00	0.00	0.00	0.00	0.00	0.84	0.00	100.00	96.67	75.96	0.00	0.64	2.69	0.64
05/10/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	84.17	0.00	0.00	2.69	0.00
05/11/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/12/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	34.58	0.00	0.00	2.69	0.00
05/13/2019	0.00	0.00	0.00	0.00	0.00	34.00	0.00	100.00	82.96	42.21	0.00	14.35	2.69	14.35
05/14/2019	0.00	0.00	0.00	1.60	1.60	12.93	1.60	98.40	84.42	98.42	1.60	12.93	2.65	11.33
05/15/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/16/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/17/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/18/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/19/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/20/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/21/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/22/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/23/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	80.08	0.00	0.00	2.69	0.00
05/24/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	72.71	0.00	0.00	2.69	0.00
05/25/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	71.79	0.00	0.00	2.69	0.00
05/26/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/27/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	5.54	0.00	0.00	2.69	0.00
05/28/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	43.33	0.00	0.00	2.69	0.00
05/29/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	75.96	0.00	0.00	2.69	0.00
05/30/2019	0.00	0.00	0.00	0.00	0.00	2.95	0.00	100.00	95.78	51.75	0.00	1.53	2.69	1.53
05/31/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/01/2019	0.00	0.00	0.00	0.00	0.00	2.58	0.00	100.00	96.24	41.25	0.00	1.07	2.69	1.07
06/02/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/03/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00

Blythe - Unit 1														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
06/04/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/05/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/06/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/07/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/08/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/09/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/10/2019	0.00	0.00	0.00	0.00	0.00	3.73	0.00	100.00	93.58	100.00	0.00	3.73	2.69	3.73
06/11/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/12/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/13/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/14/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/15/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/16/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/17/2019	24.44	24.44	0.00	3.75	4.96	4.96	3.75	71.81	69.87	71.79	28.19	28.19	1.93	0.00
06/18/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/19/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/20/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/21/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/22/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/23/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/24/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/25/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/26/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/27/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/28/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/29/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00

Blythe - Unit 1														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
06/30/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
UNIT SUMMARY	24.83	24.83	0.00	0.20	0.28	0.72	0.20	74.97	73.63	71.19	25.03	25.71	0.66	0.68

Blythe Plant Summary														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
07/01/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/02/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/03/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/04/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/05/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/06/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/07/2018	0.00	0.00	0.00	0.00	0.00	4.42	0.00	100.00	95.58	100.00	0.00	4.42	0.00	4.42
07/08/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/09/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/10/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/11/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/12/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/13/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/14/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/15/2018	0.00	0.00	0.00	0.00	0.00	4.31	0.00	100.00	95.69	100.00	0.00	4.31	0.00	4.31
07/16/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/17/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/18/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/19/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	51.81	100.00	0.00	48.19	0.00	48.19
07/20/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	47.43	100.00	0.00	52.57	0.00	52.57
07/21/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	65.68	100.00	0.00	34.32	0.00	34.32
07/22/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/23/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/24/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/25/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/26/2018	0.00	0.00	0.00	12.71	12.71	12.71	12.71	87.29	87.29	87.29	12.71	12.71	0.00	0.00

07/27/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	96.79	0.00	0.00	0.00	0.00
07/28/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	82.42	0.00	0.00	0.00	0.00
07/29/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/30/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/31/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/01/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/02/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/03/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/04/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/05/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/06/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/07/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/08/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/09/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/10/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	96.88	0.00	0.00	0.00	0.00
08/11/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	55.75	0.00	0.00	0.00	0.00
08/12/2018	0.00	0.00	0.00	0.00	0.00	4.45	0.00	100.00	97.12	64.88	0.00	2.88	0.00	2.88
08/13/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	55.08	0.00	0.00	0.00	0.00
08/14/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	84.08	0.00	0.00	0.00	0.00
08/15/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/16/2018	0.00	0.00	0.00	0.00	0.00	2.96	0.00	100.00	97.04	100.00	0.00	2.96	0.00	2.96
08/17/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/18/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/19/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/20/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/21/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/22/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/23/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00

08/24/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/25/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/26/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/27/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/28/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/29/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/30/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/31/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/01/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/02/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/03/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/04/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/05/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/06/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/07/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/08/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/09/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/10/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/11/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/12/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/13/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/14/2018	0.00	0.00	0.00	0.00	0.00	2.32	0.00	100.00	98.39	69.29	0.00	1.61	0.00	1.61
09/15/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/16/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/17/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/18/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/19/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/20/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00

09/21/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/22/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/23/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/24/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/25/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/26/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/27/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/28/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/29/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/30/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
10/01/2018	99.03	99.03	0.00	0.00	0.00	0.00	0.00	0.97	0.95	0.96	99.03	99.03	0.03	0.00
10/02/2018	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
10/03/2018	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
10/04/2018	65.14	65.14	0.00	0.00	0.00	0.00	0.00	34.86	33.92	0.08	65.14	65.14	0.94	0.00
10/05/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	0.00	0.00	0.00	2.69	0.00
10/06/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	0.00	0.00	0.00	2.69	0.00
10/07/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	29.79	0.00	0.00	2.69	0.00
10/08/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	77.79	0.00	0.00	2.69	0.00
10/09/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	79.17	0.00	0.00	2.69	0.00
10/10/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/11/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	83.54	0.00	0.00	2.69	0.00
10/12/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	77.58	0.00	0.00	2.69	0.00
10/13/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/14/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/15/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/16/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/17/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	66.88	0.00	0.00	2.69	0.00
10/18/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00

10/19/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/20/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/21/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/22/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/23/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/24/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/25/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/26/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/27/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/28/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/29/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/30/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/31/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
11/01/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/02/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/03/2018	0.00	0.00	0.00	0.00	0.00	2.24	0.00	100.00	97.76	100.00	0.00	2.24	0.00	2.24
11/04/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/05/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/06/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	81.04	0.00	0.00	0.00	0.00
11/07/2018	0.00	0.00	0.00	7.15	7.15	7.15	7.15	92.85	92.85	92.83	7.15	7.15	0.00	0.00
11/08/2018	0.00	0.00	0.00	48.54	54.19	60.52	48.54	51.46	45.78	41.04	48.54	54.22	0.00	5.67
11/09/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/10/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/11/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/12/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/13/2018	0.00	0.00	0.00	0.00	0.00	3.98	0.00	100.00	96.83	79.71	0.00	3.17	0.00	3.17
11/14/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/15/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00

11/16/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/17/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/18/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/19/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/20/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	82.83	0.00	0.00	0.00	0.00
11/21/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/22/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/23/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/24/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/25/2018	0.00	0.00	0.00	0.00	0.00	2.80	0.00	100.00	97.20	100.00	0.00	2.80	0.00	2.80
11/26/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/27/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/28/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/29/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/30/2018	0.00	0.00	0.00	0.00	0.00	3.55	0.00	100.00	96.45	100.00	0.00	3.55	0.00	3.55
12/01/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	79.50	0.00	0.00	0.19	0.00
12/02/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/03/2018	0.00	0.00	0.00	0.00	0.00	1.94	0.00	100.00	97.87	100.00	0.00	1.94	0.19	1.94
12/04/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/05/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/06/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/07/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/08/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/09/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/10/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/11/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	98.75	0.00	0.00	0.19	0.00
12/12/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	83.96	0.00	0.00	0.19	0.00
12/13/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00

12/14/2018	0.00	0.00	0.00	0.00	0.00	36.66	0.00	100.00	63.14	100.00	0.00	36.66	0.19	36.66
12/15/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/16/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/17/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/18/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/19/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/20/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/21/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/22/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/23/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/24/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/25/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/26/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/27/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/28/2018	0.00	0.00	0.00	0.00	0.00	1.49	0.00	100.00	98.32	100.00	0.00	1.49	0.19	1.49
12/29/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/30/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/31/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
01/01/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/02/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/03/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/04/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/05/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/06/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/07/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/08/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/09/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/10/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00

01/11/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/12/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/13/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/14/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/15/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/16/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/17/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/18/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/19/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/20/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/21/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/22/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/23/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/24/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/25/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/26/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/27/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/28/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/29/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/30/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/31/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
02/01/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
02/02/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
02/03/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
02/04/2019	98.96	98.96	0.00	0.00	0.00	0.00	0.00	1.04	1.04	1.04	98.96	98.96	0.00	0.00
02/05/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/06/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/07/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00

02/08/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/09/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/10/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/11/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/12/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/13/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/14/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/15/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/16/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/17/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/18/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/19/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/20/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/21/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/22/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/23/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/24/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/25/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/26/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/27/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/28/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/01/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/02/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/03/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/04/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/05/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/06/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/07/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00

03/08/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/09/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/10/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/11/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/12/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/13/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/14/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/15/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/16/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/17/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/18/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/19/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/20/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/21/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/22/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/23/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/24/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/25/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/26/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/27/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/28/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/29/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/30/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/31/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/01/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/02/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/03/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/04/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00

04/05/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/06/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/07/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/08/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/09/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/10/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/11/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/12/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/13/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/14/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/15/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/16/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/17/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/18/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/19/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/20/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/21/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/22/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/23/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/24/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/25/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/26/2019	40.28	40.28	0.00	0.00	0.00	0.00	0.00	59.72	58.11	59.71	40.28	40.28	1.61	0.00
04/27/2019	59.65	59.65	0.00	0.00	0.00	0.00	0.00	40.35	39.26	40.33	59.65	59.65	1.09	0.00
04/28/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/29/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/30/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
05/01/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
05/02/2019	78.47	78.47	0.00	0.00	0.00	0.00	0.00	21.53	20.95	21.54	78.47	78.47	0.58	0.00

05/03/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/04/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	49.92	0.00	0.00	2.69	0.00
05/05/2019	0.00	0.00	0.00	0.00	0.00	9.50	0.00	100.00	90.98	66.54	0.00	6.32	2.69	6.32
05/06/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	83.96	0.00	0.00	2.69	0.00
05/07/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	80.50	0.00	0.00	2.69	0.00
05/08/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	79.67	0.00	0.00	2.69	0.00
05/09/2019	0.00	0.00	0.00	0.00	0.00	0.84	0.00	100.00	96.67	75.96	0.00	0.64	2.69	0.64
05/10/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	84.17	0.00	0.00	2.69	0.00
05/11/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/12/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	34.58	0.00	0.00	2.69	0.00
05/13/2019	0.00	0.00	0.00	0.00	0.00	34.00	0.00	100.00	82.96	42.21	0.00	14.35	2.69	14.35
05/14/2019	0.00	0.00	0.00	1.60	1.60	12.93	1.60	98.40	84.42	98.42	1.60	12.93	2.65	11.33
05/15/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/16/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/17/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/18/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/19/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/20/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/21/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/22/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/23/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	80.08	0.00	0.00	2.69	0.00
05/24/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	72.71	0.00	0.00	2.69	0.00
05/25/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	71.79	0.00	0.00	2.69	0.00
05/26/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/27/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	5.54	0.00	0.00	2.69	0.00
05/28/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	43.33	0.00	0.00	2.69	0.00
05/29/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	75.96	0.00	0.00	2.69	0.00
05/30/2019	0.00	0.00	0.00	0.00	0.00	2.95	0.00	100.00	95.78	51.75	0.00	1.53	2.69	1.53

05/31/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/01/2019	0.00	0.00	0.00	0.00	0.00	2.58	0.00	100.00	96.24	41.25	0.00	1.07	2.69	1.07
06/02/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/03/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/04/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/05/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/06/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/07/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/08/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/09/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/10/2019	0.00	0.00	0.00	0.00	0.00	3.73	0.00	100.00	93.58	100.00	0.00	3.73	2.69	3.73
06/11/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/12/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/13/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/14/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/15/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/16/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/17/2019	24.44	24.44	0.00	3.75	4.96	4.96	3.75	71.81	69.87	71.79	28.19	28.19	1.93	0.00
06/18/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/19/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/20/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/21/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/22/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/23/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/24/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/25/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/26/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/27/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00

06/28/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/29/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/30/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
PLANT SUMMARY	24.83	24.83	0.00	0.20	0.28	0.72	0.20	74.97	73.63	71.19	25.03	25.71	0.66	0.68

Report Summary														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
07/01/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/02/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/03/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/04/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/05/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/06/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/07/2018	0.00	0.00	0.00	0.00	0.00	4.42	0.00	100.00	95.58	100.00	0.00	4.42	0.00	4.42
07/08/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/09/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/10/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/11/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/12/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/13/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/14/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/15/2018	0.00	0.00	0.00	0.00	0.00	4.31	0.00	100.00	95.69	100.00	0.00	4.31	0.00	4.31
07/16/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/17/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/18/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/19/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	51.81	100.00	0.00	48.19	0.00	48.19
07/20/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	47.43	100.00	0.00	52.57	0.00	52.57
07/21/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	65.68	100.00	0.00	34.32	0.00	34.32
07/22/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/23/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/24/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/25/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/26/2018	0.00	0.00	0.00	12.71	12.71	12.71	12.71	87.29	87.29	87.29	12.71	12.71	0.00	0.00

Report Summary														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
07/27/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	96.79	0.00	0.00	0.00	0.00
07/28/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	82.42	0.00	0.00	0.00	0.00
07/29/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/30/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
07/31/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/01/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/02/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/03/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/04/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/05/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/06/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/07/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/08/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/09/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/10/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	96.88	0.00	0.00	0.00	0.00
08/11/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	55.75	0.00	0.00	0.00	0.00
08/12/2018	0.00	0.00	0.00	0.00	0.00	4.45	0.00	100.00	97.12	64.88	0.00	2.88	0.00	2.88
08/13/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	55.08	0.00	0.00	0.00	0.00
08/14/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	84.08	0.00	0.00	0.00	0.00
08/15/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/16/2018	0.00	0.00	0.00	0.00	0.00	2.96	0.00	100.00	97.04	100.00	0.00	2.96	0.00	2.96
08/17/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/18/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/19/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/20/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/21/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00

Report Summary														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
08/22/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/23/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/24/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/25/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/26/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/27/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/28/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/29/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/30/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
08/31/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/01/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/02/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/03/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/04/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/05/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/06/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/07/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/08/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/09/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/10/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/11/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/12/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/13/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/14/2018	0.00	0.00	0.00	0.00	0.00	2.32	0.00	100.00	98.39	69.29	0.00	1.61	0.00	1.61
09/15/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/16/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00

Report Summary														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
09/17/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/18/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/19/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/20/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/21/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/22/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/23/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/24/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/25/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/26/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/27/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/28/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/29/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
09/30/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
10/01/2018	99.03	99.03	0.00	0.00	0.00	0.00	0.00	0.97	0.95	0.96	99.03	99.03	0.03	0.00
10/02/2018	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
10/03/2018	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
10/04/2018	65.14	65.14	0.00	0.00	0.00	0.00	0.00	34.86	33.92	0.08	65.14	65.14	0.94	0.00
10/05/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	0.00	0.00	0.00	2.69	0.00
10/06/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	0.00	0.00	0.00	2.69	0.00
10/07/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	29.79	0.00	0.00	2.69	0.00
10/08/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	77.79	0.00	0.00	2.69	0.00
10/09/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	79.17	0.00	0.00	2.69	0.00
10/10/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/11/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	83.54	0.00	0.00	2.69	0.00
10/12/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	77.58	0.00	0.00	2.69	0.00

Report Summary														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
10/13/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/14/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/15/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/16/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/17/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	66.88	0.00	0.00	2.69	0.00
10/18/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/19/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/20/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/21/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/22/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/23/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/24/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/25/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/26/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/27/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/28/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/29/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/30/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
10/31/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
11/01/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/02/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/03/2018	0.00	0.00	0.00	0.00	0.00	2.24	0.00	100.00	97.76	100.00	0.00	2.24	0.00	2.24
11/04/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/05/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/06/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	81.04	0.00	0.00	0.00	0.00
11/07/2018	0.00	0.00	0.00	7.15	7.15	7.15	7.15	92.85	92.85	92.83	7.15	7.15	0.00	0.00

Report Summary														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
11/08/2018	0.00	0.00	0.00	48.54	54.19	60.52	48.54	51.46	45.78	41.04	48.54	54.22	0.00	5.67
11/09/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/10/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/11/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/12/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/13/2018	0.00	0.00	0.00	0.00	0.00	3.98	0.00	100.00	96.83	79.71	0.00	3.17	0.00	3.17
11/14/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/15/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/16/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/17/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/18/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/19/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/20/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	82.83	0.00	0.00	0.00	0.00
11/21/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/22/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/23/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/24/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/25/2018	0.00	0.00	0.00	0.00	0.00	2.80	0.00	100.00	97.20	100.00	0.00	2.80	0.00	2.80
11/26/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/27/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/28/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/29/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
11/30/2018	0.00	0.00	0.00	0.00	0.00	3.55	0.00	100.00	96.45	100.00	0.00	3.55	0.00	3.55
12/01/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	79.50	0.00	0.00	0.19	0.00
12/02/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/03/2018	0.00	0.00	0.00	0.00	0.00	1.94	0.00	100.00	97.87	100.00	0.00	1.94	0.19	1.94

Report Summary														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
12/04/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/05/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/06/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/07/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/08/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/09/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/10/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/11/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	98.75	0.00	0.00	0.19	0.00
12/12/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	83.96	0.00	0.00	0.19	0.00
12/13/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/14/2018	0.00	0.00	0.00	0.00	0.00	36.66	0.00	100.00	63.14	100.00	0.00	36.66	0.19	36.66
12/15/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/16/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/17/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/18/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/19/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/20/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/21/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/22/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/23/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/24/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/25/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/26/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/27/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/28/2018	0.00	0.00	0.00	0.00	0.00	1.49	0.00	100.00	98.32	100.00	0.00	1.49	0.19	1.49
12/29/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00

Report Summary														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
12/30/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
12/31/2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	99.81	100.00	0.00	0.00	0.19	0.00
01/01/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/02/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/03/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/04/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/05/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/06/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/07/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/08/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/09/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/10/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/11/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/12/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/13/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/14/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/15/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/16/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/17/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/18/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/19/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/20/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/21/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/22/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/23/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/24/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00

Report Summary														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
01/25/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/26/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/27/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/28/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/29/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/30/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
01/31/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
02/01/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
02/02/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
02/03/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00
02/04/2019	98.96	98.96	0.00	0.00	0.00	0.00	0.00	1.04	1.04	1.04	98.96	98.96	0.00	0.00
02/05/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/06/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/07/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/08/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/09/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/10/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/11/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/12/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/13/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/14/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/15/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/16/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/17/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/18/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/19/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00

Report Summary														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
02/20/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/21/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/22/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/23/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/24/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/25/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/26/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/27/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
02/28/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/01/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/02/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/03/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/04/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/05/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/06/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/07/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/08/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/09/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/10/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/11/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/12/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/13/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/14/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/15/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/16/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/17/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00

Report Summary														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
03/18/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/19/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/20/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/21/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/22/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/23/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/24/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/25/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/26/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/27/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/28/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/29/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/30/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
03/31/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/01/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/02/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/03/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/04/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/05/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/06/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/07/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/08/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/09/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/10/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/11/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/12/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00

Report Summary														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
04/13/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/14/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/15/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/16/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/17/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/18/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/19/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/20/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/21/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/22/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/23/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/24/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/25/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/26/2019	40.28	40.28	0.00	0.00	0.00	0.00	0.00	59.72	58.11	59.71	40.28	40.28	1.61	0.00
04/27/2019	59.65	59.65	0.00	0.00	0.00	0.00	0.00	40.35	39.26	40.33	59.65	59.65	1.09	0.00
04/28/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/29/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
04/30/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
05/01/2019	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00
05/02/2019	78.47	78.47	0.00	0.00	0.00	0.00	0.00	21.53	20.95	21.54	78.47	78.47	0.58	0.00
05/03/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/04/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	49.92	0.00	0.00	2.69	0.00
05/05/2019	0.00	0.00	0.00	0.00	0.00	9.50	0.00	100.00	90.98	66.54	0.00	6.32	2.69	6.32
05/06/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	83.96	0.00	0.00	2.69	0.00
05/07/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	80.50	0.00	0.00	2.69	0.00
05/08/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	79.67	0.00	0.00	2.69	0.00

Report Summary														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
05/09/2019	0.00	0.00	0.00	0.00	0.00	0.84	0.00	100.00	96.67	75.96	0.00	0.64	2.69	0.64
05/10/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	84.17	0.00	0.00	2.69	0.00
05/11/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/12/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	34.58	0.00	0.00	2.69	0.00
05/13/2019	0.00	0.00	0.00	0.00	0.00	34.00	0.00	100.00	82.96	42.21	0.00	14.35	2.69	14.35
05/14/2019	0.00	0.00	0.00	1.60	1.60	12.93	1.60	98.40	84.42	98.42	1.60	12.93	2.65	11.33
05/15/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/16/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/17/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/18/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/19/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/20/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/21/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/22/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/23/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	80.08	0.00	0.00	2.69	0.00
05/24/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	72.71	0.00	0.00	2.69	0.00
05/25/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	71.79	0.00	0.00	2.69	0.00
05/26/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
05/27/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	5.54	0.00	0.00	2.69	0.00
05/28/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	43.33	0.00	0.00	2.69	0.00
05/29/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	75.96	0.00	0.00	2.69	0.00
05/30/2019	0.00	0.00	0.00	0.00	0.00	2.95	0.00	100.00	95.78	51.75	0.00	1.53	2.69	1.53
05/31/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/01/2019	0.00	0.00	0.00	0.00	0.00	2.58	0.00	100.00	96.24	41.25	0.00	1.07	2.69	1.07
06/02/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/03/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00

Report Summary														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
06/04/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/05/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/06/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/07/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/08/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/09/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/10/2019	0.00	0.00	0.00	0.00	0.00	3.73	0.00	100.00	93.58	100.00	0.00	3.73	2.69	3.73
06/11/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/12/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/13/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/14/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/15/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/16/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/17/2019	24.44	24.44	0.00	3.75	4.96	4.96	3.75	71.81	69.87	71.79	28.19	28.19	1.93	0.00
06/18/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/19/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/20/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/21/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/22/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/23/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/24/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/25/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/26/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/27/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/28/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
06/29/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00

Report Summary														
DATE	WSOF	WPOF	WMOF	WUOF	WFOR	WEFOR	WFOF	WAF	WEAF	WSF	WUF	WEUF	WSDF	WUDF
06/30/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	97.31	100.00	0.00	0.00	2.69	0.00
REPORT SUMMARY	24.83	24.83	0.00	0.20	0.28	0.72	0.20	74.97	73.63	71.19	25.03	25.71	0.66	0.68

AltaGas | Blythe Operations Inc.

Ramon Campos
Blythe Operations Inc.
385 North Buck Blvd.
Blythe, California 92225-3301
ramon.campos@altagas.ca
760.921.1364

July 27, 2018

☑ Mr. Herb Jackson
Engineering Geologist Mohave Desert
California Regional Water Quality Control Board
Colorado River Basin Region
73-720 Fred Waring Drive, Suite 100
Palm Desert, California 92260

via: UPS

Subject: First Semi-Annual 2018 Monitoring Report
Monitoring and Reporting Program Board Order No. R7-2002-0012
Blythe Energy Project, Blythe, California

Mr. Jackson:

Blythe Energy Inc. is pleased to present this report containing field data, laboratory analytical results, and statistical analysis for sampling conducted during the first two quarters of 2018 at our Blythe, California facility. Field sampling was performed under the terms of the California Regional Water Quality Control Board – Colorado River Basin Region (RWQCB) Board Order Number R7-2002-0012. Field sampling was performed by Northstar Environmental Remediation (Northstar) of Lake Forest, California.

Data within this report summarizes the sampling activities that occurred during the first two quarters of 2018. Laboratory data sheets and chain-of-custody records are also included as an appendix to this report.

If you should have any questions regarding this report, please contact Ramon Campos, Compliance Manager at (760) 921-1364.

Blythe Energy Inc.

Digitally signed by Steven Brussee
Date: 2018.07.27 10:57:28 -07'00'

Steve Brussee
Sr. Manager, Environment and Safety – Power

cc: Ramon Campos (Blythe Energy Inc.)
CDFG
USFWS

FIRST SEMI-ANNUAL 2018 MONITORING REPORT
BLYTHE ENERGY INC.
BLYTHE, CALIFORNIA

July 27, 2018

Prepared for:

Blythe Energy Inc.
385 North Buck Boulevard
Blythe, California 92225

Prepared by:

Wood Environment & Infrastructure Solutions, Inc.
121 Innovation Drive, Ste. 200
Irvine, California 92617
(949) 642-0245

Project No. NB11160982

Duane G. Paul, PG 6336, CHG 414
Senior Associate Hydrogeologist

FIRST SEMI-ANNUAL 2018 MONITORING REPORT
BLYTHE ENERGY INC.
BLYTHE, CALIFORNIA

Submitted by:

Blythe Energy Inc.
385 North Buck Boulevard
Blythe, California 92225

Digitally signed by Steven Brussee
Date: 2018.07.27 10:57:59 -07'00'

Steve Brussee
Sr. Manager, Environment and Safety – Power
Agent for Blythe Energy Inc.

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7. Lysimeter Test Records

8. Evaporation Pond Sampling Records

9. Well Sampling Records

10. Leachate Collection and Recovery System (LCRS) & Weekly Lysimeter Records

APPENDIX

Appendix A Laboratory Analytical Data Sheets

FIRST SEMI-ANNUAL 2018 MONITORING REPORT

SECTION 1
FACILITY INFORMATION AND DECLARATION

I. FACILITY INFORMATION

Facility Contact:

Ramon Campos
Compliance Manager
Blythe Energy Inc.

Telephone:

(760) 921-1364

Address:

Blythe Energy Inc.
385 North Buck Boulevard
Blythe, California 92225

Monitoring and Reporting Program:

California Regional Water Quality Control Board Order No. R7-2002-0012

First Semi-Annual 2018 Monitoring Report
Blythe Energy Inc.
Blythe, California
July 27, 2018

Declaration

I declare under the penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information. I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

Digitally signed by Steven Brussee
Date: 2018.07.27 11:08:37 -07'00'

Steve Brussee
Sr. Manager Environment and Safety – Power
Agent for Blythe Energy Inc.

FIRST SEMI-ANNUAL 2018 MONITORING REPORT

SECTION 2
MONITORING

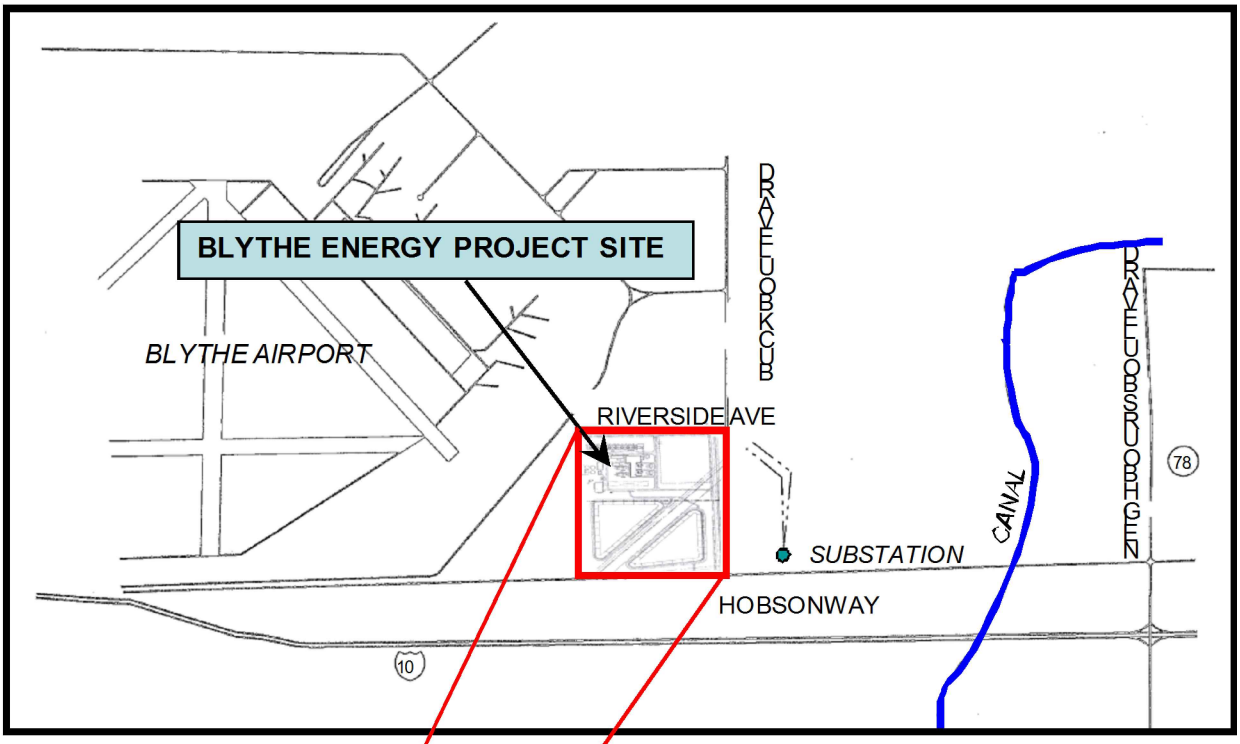
2. MONITORING

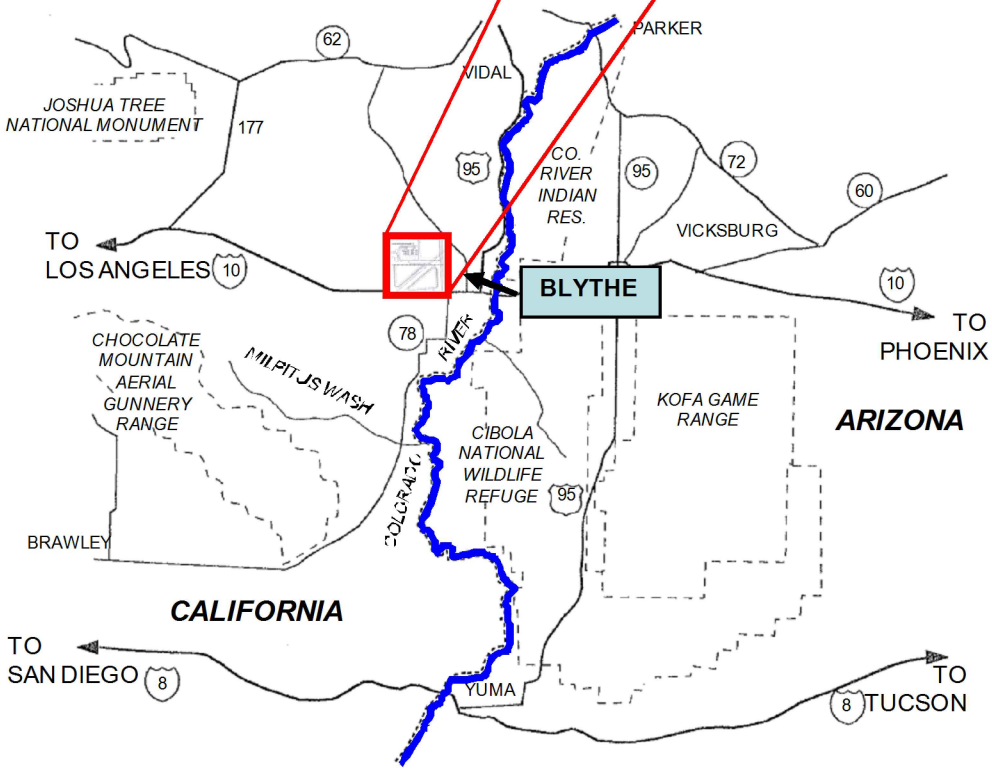
The First Semi-Annual 2018 monitoring event was conducted in compliance with the California Regional Water Quality Control Board- Lahontan Region (RWQCB) Board Order No. R7-2002-012 Waste Discharge Requirements (WDRs) and associated Monitoring and Reporting Program (MRP). First and Second Quarter 2018 groundwater monitoring was performed by Northstar Environmental Remediation (Northstar) of Lake Forest, California on March 24, 2018 and May 31, 2018, respectively.

Site reference maps and First and Second Quarter 2018 potentiometric surface maps are included in Sections 3 and 4, respectively. Groundwater quality laboratory analytical data is presented in Section 5 and the statistical analysis is presented in Section 6. The records for the lysimeter, evaporation pond, monitoring well, and the leakage collection recovery sump (LCRS) are presented in Sections 7 through 10. Laboratory analytical data sheets and chain-of-custody reports are also included in Appendix A.

FIRST SEMI-ANNUAL 2018 MONITORING REPORT

SECTION 3
REFERENCE MAPS



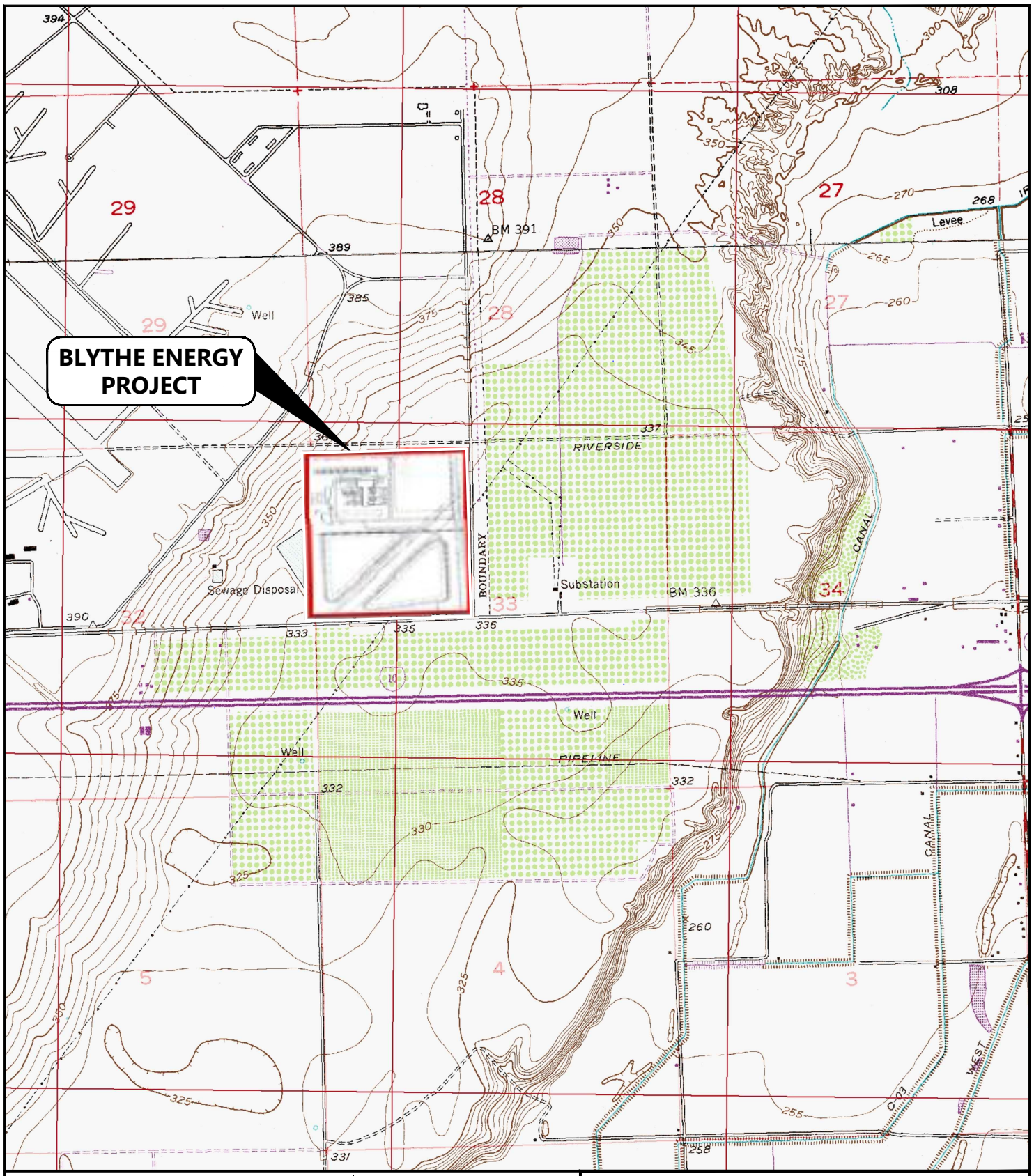


Not To Scale

SITE LOCATION
Blythe Energy Inc.
Blythe, California

By: pah	Date: 07/25/18	Project No. NB11160982
wood.		Figure 3-1

Plot Date: 7/23/2018 3:13:16 PM, Plotted by: pat herring
Drawing Path: Y:\NB11160982 (BLYTHE ENERGY)\ACAD\2018-1ST-SEMIANNUAL\TB-003_SITELOCATIONMAP.DWG, Figure 3-1



0 1000 2000

Approximate Scale in Feet

Basemap modified from U.S.G.S. 7.5 minute quandragle map Ripley 1952, California (photo-revised 1975).

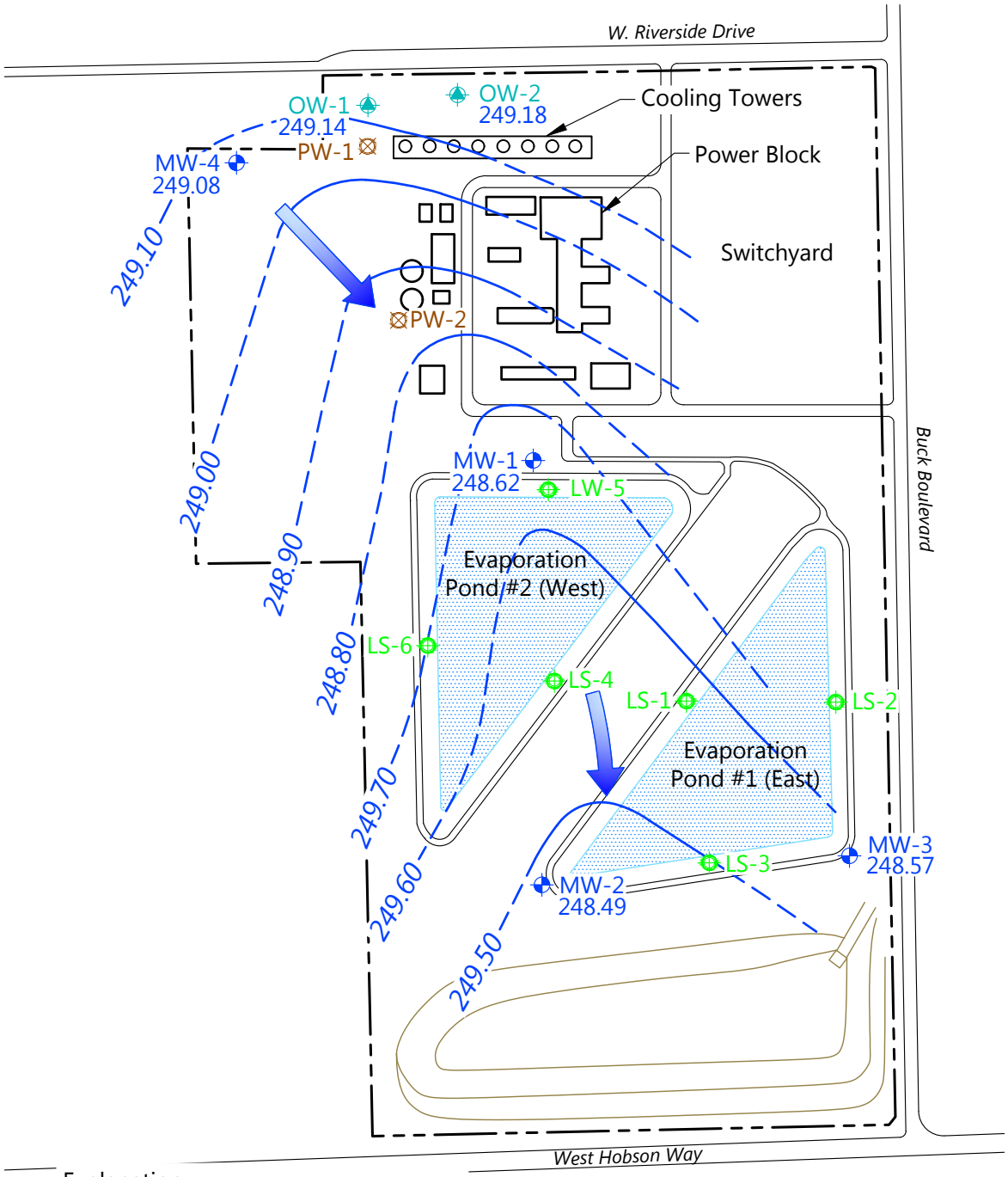
SITE TOPOGRAPHY
Blythe Energy Inc.
Blythe, California

By: pah	Date: 07/25/18	Project No. NB11160982
wood.		Figure 3-2

Plot Date: 7/23/2018 3:14:05 PM, Plotted by: pat.herring
Drawing Path: Y:\NB11160982 (BLYTHE ENERGY)\ACAD\2018-1ST-SEMIANNUAL\TB-003_SITELOCATIONMAP.DWG, Figure 3-2

FIRST SEMI-ANNUAL 2018 MONITORING REPORT

SECTION 4
QUARTERLY POTENTIOMETRIC SURFACE MAPS



Explanation

MW-2 248.57 — Monitoring well location, designation, and groundwater elevation in feet above mean sea level (MSL)

OW-2 — Observation well location,designation, and groundwater elevation in feet above MSL

LS-6 — Lysimeter location and designation

PW-1 — Production well location and designation

Approximate site boundary

249.10 — Groundwater elevation contour in feet above MSL, dashed where inferred

Approximate groundwater flow direction

0 200 400

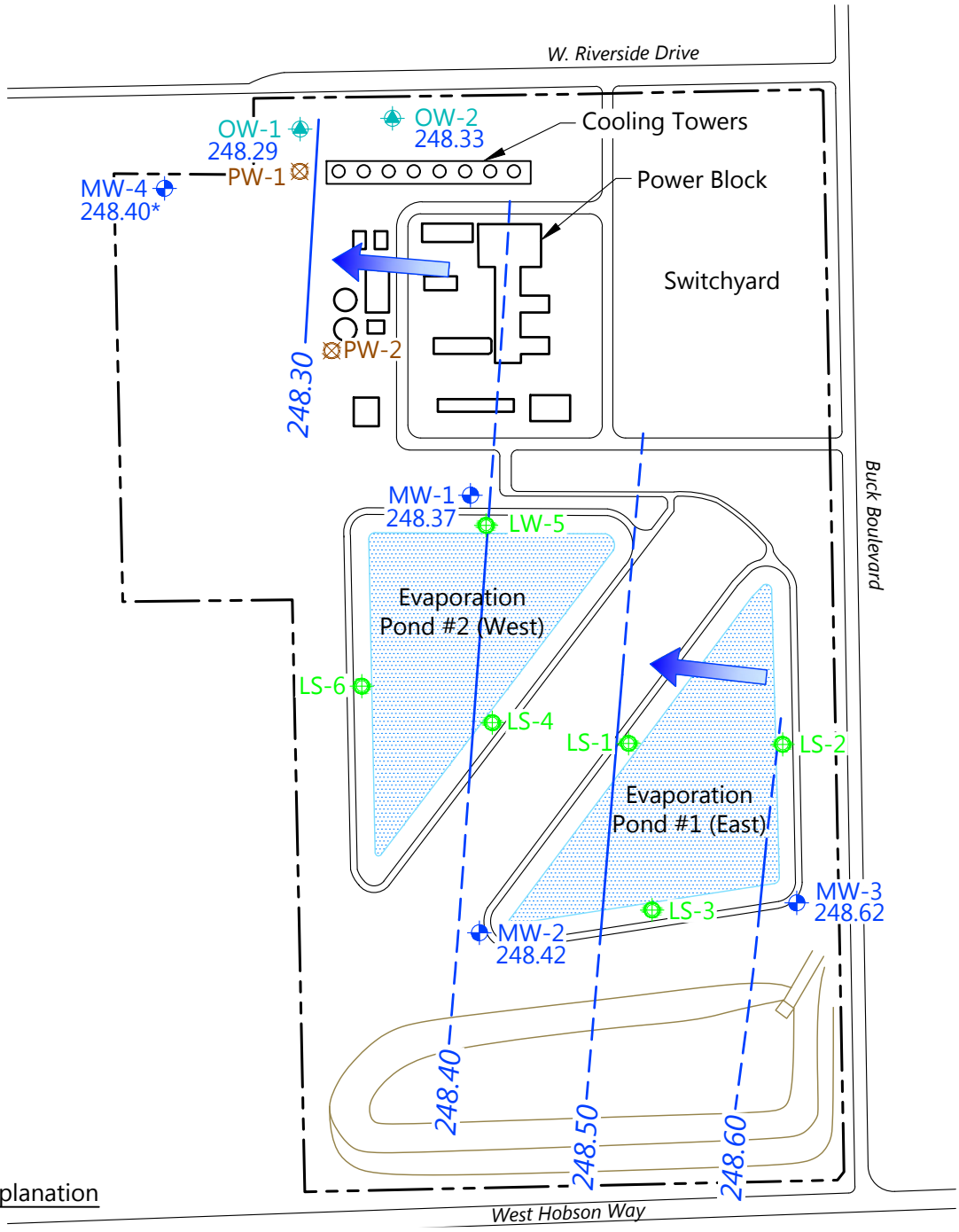
Approximate Scale in Feet

Basemap modified from U.S.G.S. 7.5 minute quadrangle map Ripley 1952, California (photo-revised 1975) and aerial photograph from Bing Maps (Microsoft Corporation© 2011 and DigitalGlobe©, 2010.

POTENTIOMETRIC SURFACE
MARCH 24, 2018
Blythe Energy Inc.
Blythe, California

By: pah	Date: 07/25/18	Project No. NB11160982
wood.		Figure 4-1

Plot Date: 7/23/2018 3:17:25 PM, Plotted by: pat.herring
Drawing Path: Y:\NB11160982 (BLYTHE ENERGY)\ACAD\2018-1ST-SEMIANNUAL\TB-003_POTENTIOMETRIC_SURFACE.DWG, Figure 4-1 2018-03-24



Explanation

MW-2 248.62 — Monitoring well location, designation, and groundwater elevation in feet above mean sea level (MSL)

OW-2 — Observation well location,designation, and groundwater elevation in feet above MSL

LS-6 — Lysimeter location and designation

PW-1 — Production well location and designation

Approximate site boundary

* Groundwater may be affected by local pumping; elevation data not included in interpreted contours

248.60 — Groundwater elevation contour in feet above MSL, dashed where inferred

Approximate groundwater flow direction

0 200 400

Approximate Scale in Feet

Basemap modified from U.S.G.S. 7.5 minute quadrangle map Ripley 1952, California (photo-revised 1975) and aerial photograph from Bing Maps (Microsoft Corporation© 2011 and DigitalGlobe©, 2010.

POTENTIOMETRIC SURFACE
MAY 31, 2018
Blythe Energy Inc.
Blythe, California

By: pah	Date: 07/25/18	Project No. NB11160982
wood.		Figure 4-2

Plot Date: 7/23/2018 3:15:29 PM, Plotted by: pat.herring
Drawing Path: Y:\NB11160982 (BLYTHE ENERGY)\ACAD\2018-1ST-SEMIANNUAL\TB-003_POTENTIOMETRIC_SURFACE.DWG, Figure 4-2 2018-05-31

FIRST SEMI-ANNUAL 2018 MONITORING REPORT

SECTION 5
ANALYTICAL SUMMARY TABLES

TABLE 5-1 SUMMARY OF FIRST SEMI-ANNUAL 2018 COMPOSITE EVAPORATION POND WATER LABORATORY ANALYTICAL RESULTS

Laboratory Analyte	Method	Detection Limit (mg/L)	Result (mg/L)
Antimony	EPA 200.7	0.050	ND
Arsenic	EPA 200.7	0.050	0.12
Barium	EPA 200.7	0.050	0.40
Cadmium	EPA 200.7	0.025	ND
Total Chromium	EPA 200.7	0.025	ND
Cobalt	EPA 200.7	0.050	ND
Copper	EPA 200.7	0.050	ND
Lead	EPA 200.7	0.025	ND
Mercury	EPA 245.1	0.00020	ND
Nickel	EPA 200.7	0.050	0.062
Selenium	EPA 200.7	0.050	0.47
Zinc	EPA 200.7	0.10	0.071 J
Sulfate	EPA 300.0	1000	34,000
Chloride	EPA 300.0	1000	28,000
Total Dissolved Solids	SM2540C	1000	90,000
Specific Conductance	SM2510B	20 µmhos/cm	150,000
pH	SM4500-H,B	0.100 pH units	NA

Parameters (Field)	Units	Value
Water Temperature	Degrees Celsius	33.4 – 33.9
pH	pH Units	8.61 – 8.79
Specific Conductance	ms/cm	>20.00

Water samples collected on May 31, 2018 from both the East and West Ponds.

Notes:
mg/L = milligrams per liter
ND = Not detected at method detection limit indicated
ms/cm = Millisiemens per centimeter
µmhos/cm = Micromhos per centimeter
NA = Not Available
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

TABLE 5-2 (Cont.) SUMMARY OF GROUNDWATER ANAYLTICAL RESULTS
FIRST QUARTER 2018

Analyte	EPA Method	Reporting Limit (mg/L)*	MW-1 (mg/L)	MW-2 (mg/L)	MW-3 (mg/L)	MW-4 (mg/L)	DUP (mg/L)
Chloride	300.0	10 - 25	220	140	140	270	220
Sulfate	300.0	25	390	400	390	340	390
Selenium	200.7	0.010	ND	ND	ND	ND	ND
Total Dissolved Solids	SM2540C	10 - 20	1,200	1,100	1,100	1,200	1,200
Specific Conductance (umhos/cm)	SM2510B	1.0	2,000	1,800	1,700	2,000	2,000

Field Parameters	Units	MW-1	MW-2	MW-3	MW-4	DUP
Static Water Level	Feet Below Measuring Point	88.65	89.28	89.65	93.42	NA
Stabilized pH	pH Units	7.15	7.13	6.68	7.20	NA
Stabilized Water Temperature	Degrees Celsius	31.0	30.2	24.2	32.5	NA

Groundwater samples collected on March 24, 2018.

Notes:
mg/L = milligrams per liter
NA = Not applicable
ND = Not detected
* = Except where noted on laboratory analytical data sheets
Dup = Duplicate sample of MW-1

TABLE 5-2 (Cont.) SUMMARY OF GROUNDWATER ANAYLTICAL RESULTS
SECOND QUARTER 2018

Analyte	EPA Method	Reporting Limit (mg/L)*	MW-1 (mg/L)	MW-2 (mg/L)	MW-3 (mg/L)	MW-4 (mg/L)	DUP (mg/L)
Chloride	300.0	25	220	140	140	270	220
Sulfate	300.0	25	390	380	360	310	390
Selenium	200.7	0.010	0.013	ND	ND	ND	0.010
Total Dissolved Solids	SM2540C	10	1,200	1,100	1,100	1,200	1,200
Specific Conductance (umhos/cm)	SM2510B	1.0	2,000	1,700	1,700	1,900	2,000

Field Parameters	Units	MW-1	MW-2	MW-3	MW-4	DUP
Static Water Level	Feet Below Measuring Point	88.90	89.35	89.60	94.10	NA
Stabilized pH	pH Units	7.21	7.51	6.86	7.27	NA
Stabilized Water Temperature	Degrees Celsius	30.7	29.2	24.9	33.1	NA

Groundwater samples collected on May 31, 2018.

Notes:
mg/L = milligrams per liter
NA = Not applicable
ND = Not detected
* = Except where noted on laboratory analytical data sheets
Dup = Duplicate sample of MW-1

FIRST SEMI-ANNUAL 2018 MONITORING REPORT

SECTION 6
STATISTICAL ANALYSIS

STATISTICAL ANALYSIS –FIRST SEMI-ANNUAL 2018 MONITORING

Statistical analysis is used as an additional method for the detection of leakage from the surface impoundments. The statistical methods used for this program are those specified in the RWQCB Waste Discharge Requirements (WDR) and Monitoring and Reporting Programs (MRPs) of Order Number R7-2002-0012. Statistical analysis of groundwater quality data is based on intra-well rather than inter-well comparisons. The following section presents the technical approach and results of the statistical analysis for the 2018 First Semi-Annual sampling event and the intra-well statistical analysis.

APPROACH AND RESULTS

The Upper Tolerance Limit (UTL) is recalculated for each well based on historical data. Concentrations from subsequent quarterly groundwater samples collected from each well are compared to the corresponding UTLs. An UTL was calculated for each of the four groundwater monitoring wells sampled during the First and Second Quarters of 2018. Calculations of UTLs are presented in Table 6-1.

As shown in Table 6-2, there were no exceedances of the UTLs for wells MW-1, MW-2, MW-3, and MW-4 during the First and Second Quarter 2018 sampling events.

An UTL exceedance may indicate a potential impact to groundwater as a result of a release from an evaporation pond; however, this is not necessarily the case. There are other reasons why an UTL exceedance may occur, such as natural increases in constituent concentration over time, changes in groundwater flow direction, and offsite influences.

Table 6-1: Calculation for Mean and Standard Deviation (Total Dissolved Solids)

MW1				MW2				MW3				MW4			
Days	Date	TDS	ln(TDS)	Days	Date	TDS	ln(TDS)	Days	Date	TDS	ln(TDS)	Days	Date	TDS	ln(TDS)
0	3Q-02	1170	7.0648	0	3Q-02	1180	7.0733	0	3Q-02	1120	7.0211				
270	2Q-03	1160	7.0562	270	2Q-03	1050	6.9565	270	2Q-03	947	6.8533				
450	1Q-04	1100	7.0031	450	1Q-04	1000	6.9078	450	1Q-04	1000	6.9078				
540	2Q-04	1200	7.0901	540	2Q-04	960	6.8669	540	2Q-04	1100	7.0031				
630	3Q-04	1100	7.0031	630	3Q-04	1000	6.9078	630	3Q-04	1000	6.9078				
720	4Q-04	1100	7.0031	720	4Q-04	1000	6.9078	720	4Q-04	1100	7.0031				
810	1Q-05	1100	7.0031	810	1Q-05	1100	7.0031	810	1Q-05	1100	7.0031				
900	2Q-05	1170	7.0648	900	2Q-05	1090	6.9939	900	2Q-05	1080	6.9847				
990	3Q-05	1080	6.9847	990	3Q-05	985	6.8926	990	3Q-05	1000	6.9078				
1080	4Q-05	1100	7.0031	1080	4Q-05	1000	6.9078	1080	4Q-05	1200	7.0901				
1170	1Q-06	1070	6.9754	1170	1Q-06	999	6.9068	1170	1Q-06	1040	6.9470				
1260	2Q-06	1100	7.0031	1260	2Q-06	1000	6.9078	1260	2Q-06	1100	7.0031				
1350	3Q-06	1100	7.0031	1350	3Q-06	1100	7.0031	1350	3Q-06	1100	7.0031				
1440	4Q-06	1100	7.0031	1440	4Q-06	1000	6.9078	1440	4Q-06	1100	7.0031				
1530	1Q-07	1100	7.0031	1530	1Q-07	1000	6.9078	1530	1Q-07	1100	7.0031				
1620	2Q-07	1100	7.0031	1620	2Q-07	1100	7.0031	1620	2Q-07	1200	7.0901				
	RA-07	1200	7.0901		RA-07	1100	7.0031		RA-07	1200	7.0901				
1710	3Q-07	1100	7.0031	1710	3Q-07	1100	7.0031	1710	3Q-07	1100	7.0031				
1800	4Q-07	1200	7.0901	1800	4Q-07	1100	7.0031	1800	4Q-07	1500	7.3132				
1867	12/7/2007	1200	7.0901	1867	12/7/2007	1100	7.0031	1867	12/7/2007	1400	7.2442				
1890	1Q-08	1200	7.0901	1890	1Q-08	1100	7.0031	1890	1Q-08	1300	7.1701				
1966	2Q-08	1200	7.0901	1966	2Q-08	1100	7.0031	1099	2Q-08	1700	7.4384				
2068	3Q-08	1100	7.0031	2068	3Q-08	1100	7.0031	2068	3Q-08	1600	7.3778				
2178	4Q-08	1100	7.0031	2178	4Q-08	1100	7.0031	2178	4Q-08	1400	7.2442				
2349	1Q-09	1100	7.0031	2349	1Q-09	1100	7.0031	2349	1Q-09	1200	7.0901				
2473	2Q-09	1200	7.0901	2473	2Q-09	1100	7.0031	2473	2Q-09	1100	7.0031				
2571	3Q-09	1100	7.0031	2571	3Q-09	1100	7.0031	2571	3Q-09	1400	7.2442	0	3Q-09	1200	7.0901
								2605	10/30/09	1300	7.1701	34	10/30/09	1100	7.0031
2652	4Q-09	1200	7.0901	2652	4Q-09	1100	7.0031	2652	4Q-09	1500	7.3132	81	4Q-09	1200	7.0901
2718	1Q-10	1200	7.0901	2718	1Q-10	1100	7.0031	2718	1Q-10	1800	7.4955	116	1Q-10	1200	7.0901
								2753	4/2/2010	1800	7.4955				
2800	2Q-10	1200	7.0901	2800	2Q-10	1100	7.0031	2800	2Q-10	2300	7.7407	198	2Q-10	1200	7.0901
2828	6/18/2010	1200	7.0901	2828	6/18/2010	1100	7.0031	2828	6/18/2010	2400	7.7832	226	6/18/2010	1200	7.0901
2895	3Q-10	1100	7.0031	2895	3Q-10	1100	7.0031	2895	3Q-10	2500	7.8240	293	3Q-10	1100	7.0031
								2922	9/20/2010R	2200	7.6962				
3014	4Q-10	1200	7.0901	3014	4Q-10	1100	7.0031	3014	4Q-10	1500	7.3132	412	4Q-10	1200	7.0901
3086	1Q-11	1200	7.0901	3086	1Q-11	1100	7.0031	3086	1Q-11	1600	7.3778	576	1Q-11	1200	7.0901
3179	2Q-11	1100	7.0031	3179	2Q-11	1100	7.0031	3179	2Q-11	1800	7.4955	669	2Q-11	1100	7.0031
3286	3Q-11	1200	7.0901	3286	3Q-11	1100	7.0031	3286	3Q-11	1500	7.3132	776	3Q-11	1100	7.0031
3372	4Q-11	1200	7.0901	3372	4Q-11	1100	7.0031	3372	4Q-11	1400	7.2442	862	4Q-11	1200	7.0901
3472	1Q-12	1200	7.0901	3472	1Q-12	1100	7.0031	3472	1Q-12	1500	7.3132	962	1Q-12	1100	7.0031
3572	2Q-12	1100	7.0031	3572	2Q-12	1100	7.0031	3572	2Q-12	1400	7.2442	1062	2Q-12	1100	7.0031
3638	3Q-12	1200	7.0901	3638	3Q-12	1100	7.0031	3638	3Q-12	1200	7.0901	1128	3Q-12	1100	7.0031
3741	4Q-12	1200	7.0901	3741	4Q-12	1100	7.0031	3741	4Q-12	1100	7.0031	1231	4Q-12	1100	7.0031
3840	1Q-13	1100	7.0031	3840	1Q-13	1000	6.9078	3840	1Q-13	1100	7.0031	1330	1Q-13	1000	6.9078
3904	2Q-13	1200	7.0901	3904	2Q-13	1100	7.0031	3904	2Q-13	1200	7.0901	1394	2Q-13	1100	7.0031
4013	3Q-13	1200	7.0901	4013	3Q-13	1100	7.0031	4013	3Q-13	1000	6.9078	1507	3Q-13	1100	7.0031
4088	4Q-13	1200	7.0901	4088	4Q-13	1100	7.0031	4088	4Q-13	1100	7.0031	1583	4Q-13	1100	7.0031
4202	1Q-14	1200	7.0901	4202	1Q-14	1100	7.0031	4202	1Q-14	1100	7.0031	1697	1Q-14	1100	7.0031
4316	2Q-14	1200	7.0901	4316	2Q-14	1100	7.0031	4316	2Q-14	1100	7.0031	1811	2Q-14	1100	7.0031
4395	3Q-14	1200	7.0901	4395	3Q-14	1100	7.0031	4395	3Q-14	1100	7.0031	1890	3Q-14	1100	7.0031
4472	4Q-14	1200	7.0901	4472	4Q-14	1100	7.0031	4472	4Q-14	1000	6.9078	1967	4Q-14	1100	7.0031

Table 6-1 (Cont.): Calculation for Mean and Standard Deviation (Total Dissolved Solids)

MW1				MW2				MW3				MW4			
Days	Date	TDS	ln(TDS)	Days	Date	TDS	ln(TDS)	Days	Date	TDS	ln(TDS)	Days	Date	TDS	ln(TDS)
4579	1Q-15	1200	7.0901	4579	1Q-15	1100	7.0031	4579	1Q-15	970	6.8773	2074	1Q-15	1000	6.9078
4765	2Q-15	1200	7.0901	4765	2Q-15	1100	7.0031	4765	2Q-15	1000	6.9078	2260	2Q-15	1100	7.0031
4848	3Q-15	1300	7.1701	4848	3Q-15	1100	7.0031	4848	3Q-15	1000	6.9078	2343	3Q-15	1100	7.0031
4938	4Q-15	1200	7.0901	4938	4Q-15	1100	7.0031	4938	4Q-15	1000	6.9078	2433	4Q-15	1100	7.0031
5055	1Q-16	1200	7.0901	5055	1Q-16	1100	7.0031	5055	1Q-16	1000	6.9078	2550	1Q-16	1100	7.0031
5122	2Q-16	1200	7.0901	5122	2Q-16	1100	7.0031	5122	2Q-16	1000	6.9078	2617	2Q-16	1100	7.0031
5213	3Q-16	1300	7.1701	5213	3Q-16	1100	7.0031	5213	3Q-16	1000	6.9078	2708	3Q-16	1100	7.0031
5305	4Q-16	1100	7.0031	5305	4Q-16	1100	7.0031	5305	4Q-16	920	6.8244	2800	4Q-16	1100	7.0031
5397	1Q-17	1300	7.1701	5397	1Q-17	1100	7.0031	5397	1Q-17	980	6.8876	2892	1Q-17	1100	7.0031
5487	2Q-17	1200	7.0901	5487	2Q-17	1100	7.0031	5487	2Q-17	1000	6.9078	2982	2Q-17	1100	7.0031
5563	3Q-17	1200	7.0901	5563	3Q-17	1100	7.0031	5563	3Q-17	970	6.8773	3058	3Q-17	1200	7.0901
5672	4Q-17	1300	7.1701	5672	4Q-17	1100	7.0031	5672	4Q-17	950	6.8565	3167	4Q-17	1200	7.0901
5782	1Q-18	1200	7.0901	5782	1Q-18	1100	7.0031	5782	1Q-18	1100	7.0031	3277	1Q-18	1200	7.0901
5850	2Q-18	1200	7.0901	5850	2Q-18	1100	7.0031	5850	2Q-18	1100	7.0031	3345	2Q-18	1200	7.0901
Standard Deviation =		59.1427	0.0502	Standard Deviation =		42.4154	0.0404	Standard Deviation =		359.7396	0.2422	Standard Deviation =		55.4306	0.0493
Mean =		1169.0476	7.0627	Mean =		1081.9683	6.9858	Mean =		1267.8333	7.1131	Mean =		1126.3158	7.0255
n =		63	63	n =		63	63	n =		66	66	n =		38	38
(t{n-1, 0.95}) =		1.669	1.669	(t{n-1, 0.95}) =		1.669	1.669	(t{n-1, 0.95}) =		1.668	1.668	(t{n-1, 0.95}) =		1.686	1.686
$(1 + 1/n)^{½}$ =			1.008	(1 + 1/n)½ =			1.008	(1 + 1/n)½ =			1.008	(1 + 1/n)½ =			1.013
k = $t(1 + 1/n)^{½}$ =			1.682	k = t(1 + 1/n)½ =			1.682	k = t(1 + 1/n)½ =			1.681	k = t(1 + 1/n)½ =			1.708
UTL = Mean + St.Dev.*k =			7.1472	UTL = Mean + St.Dev.*k =			7.0536	UTL = Mean + St.Dev.*k =			7.5201	UTL = Mean + St.Dev.*k =			7.1097
Concentration Significant?			No	Concentration Significant?			No	Concentration Significant?			No	Concentration Significant?			No

Table 6-1 (Cont.): Calculation for Mean and Standard Deviation (Sulphate)

MW1				MW2				MW3				MW4			
Days	Date	SO_4	$ln(SO_4)$	Days	Date	SO_4	$ln(SO_4)$	Days	Date	SO_4	$ln(SO_4)$	Days	Date	SO_4	$ln(SO_4)$
0	3Q-02	348	5.8522	0	3Q-02	419	6.0379	0	3Q-02	403	5.9989				
270	2Q-03	409	6.0137	270	2Q-03	427	6.0568	270	2Q-03	404	6.0014				
450	1Q-04	370	5.9135	450	1Q-04	360	5.8861	450	1Q-04	340	5.8289				
540	2Q-04	330	5.7991	540	2Q-04	340	5.8289	540	2Q-04	330	5.7991				
630	3Q-04	360	5.8861	630	3Q-04	360	5.8861	630	3Q-04	350	5.8579				
720	4Q-04	380	5.9402	720	4Q-04	370	5.9135	720	4Q-04	380	5.9402				
810	1Q-05	350	5.8579	810	1Q-05	360	5.8861	810	1Q-05	340	5.8289				
900	2Q-05	326	5.7869	900	2Q-05	331	5.8021	900	2Q-05	303	5.7137				
990	3Q-05	451	6.1115	990	3Q-05	450	6.1092	990	3Q-05	440	6.0868				
1080	4Q-05	360	5.8861	1080	4Q-05	360	5.8861	1080	4Q-05	330	5.7991				
1170	1Q-06	379	5.9375	1170	1Q-06	369	5.9108	1170	1Q-06	358	5.8805				
1260	2Q-06	390	5.9661	1260	2Q-06	370	5.9135	1260	2Q-06	370	5.9135				
1350	3Q-06	370	5.9135	1350	3Q-06	400	5.9915	1350	3Q-06	380	5.9402				
1440	4Q-06	370	5.9135	1440	4Q-06	380	5.9402	1440	4Q-06	380	5.9402				
1530	1Q-07	380	5.9402	1530	1Q-07	380	5.9402	1530	1Q-07	360	5.8861				
1620	2Q-07	460	6.1312	1620	2Q-07	470	6.1527	1620	2Q-07	450	6.1092				
	RA-07	385	5.9532		RA-07	365	5.8999		RA-07	360	5.8861				
1710	3Q-07	370	5.9135	1710	3Q-07	380	5.9402	1710	3Q-07	380	5.9402				
1800	4Q-07	360	5.8861	1800	4Q-07	360	5.8861	1800	4Q-07	420	6.0403				
1867	12/7/2007	380	5.9402	1867	12/7/2007	360	5.8861	1867	12/7/2007	385	5.9532				
1890	1Q-08	380	5.9402	1890	1Q-08	380	5.9402	1890	1Q-08	390	5.9661				
1966	2Q-08	380	5.9402	1966	2Q-08	370	5.9135	1966	2Q-08	480	6.1738				
2068	3Q-08	390	5.9661	2068	3Q-08	400	5.9915	2068	3Q-08	480	6.1738				
2178	4Q-08	400	5.9915	2178	4Q-08	410	6.0162	2178	4Q-08	460	6.1312				
2349	1Q-09	380	5.9402	2349	1Q-09	390	5.9661	2349	1Q-09	360	5.8861				
2473	2Q-09	390	5.9661	2473	2Q-09	390	5.9661	2473	2Q-09	340	5.8289				
2571	3Q-09	370	5.9135	2571	3Q-09	350	5.8579	2571	3Q-09	560	6.3279	0	3Q-09	380	5.9402
								2618	10/30/09	430	6.0638	34	10/30/09	350	5.8579
2652	4Q-09	370	5.9135	2652	4Q-09	380	5.9402	2652	4Q-09	500	6.2146	81	4Q-09	350	5.8579
2718	1Q-10	370	5.9135	2718	1Q-10	400	5.9915	2718	1Q-10	610	6.4135	116	1Q-10	370	5.9135
								2753	4/2/2010	620	6.4297				
2800	2Q-10	390	5.9661	2800	2Q-10	420	6.0403	2800	2Q-10	620	6.4297	198	2Q-10	380	5.9402
2828	6/18/2010	330	5.7991	2828	6/18/2010	360	5.8861	2828	6/18/2010	690	6.5367	226	6/18/2010	340	5.8289
2895	3Q-10	380	5.9402	2895	3Q-10	370	5.9135	2895	3Q-10	700	6.5511	293	3Q-10	370	5.9135
								2922	9/20/2010R	750	6.6201				
3014	4Q-10	340	5.8289	3014	4Q-10	380	5.9402	3014	4Q-10	510	6.2344	412	4Q-10	380	5.9402
3086	1Q-11	360	5.8861	3086	1Q-11	370	5.9135	3086	1Q-11	490	6.1944	576	1Q-11	340	5.8289
3179	2Q-11	400	5.9915	3179	2Q-11	410	6.0162	3179	2Q-11	640	6.4615	669	2Q-11	370	5.9135
3286	3Q-11	380	5.9402	3286	3Q-11	410	6.0162	3286	3Q-11	510	6.2344	776	3Q-11	360	5.8861
3372	4Q-11	390	5.9661	3372	4Q-11	410	6.0162	3372	4Q-11	500	6.2146	862	4Q-11	370	5.9135
3472	1Q-12	340	5.8289	3472	1Q-12	360	5.8861	3472	1Q-12	510	6.2344	962	1Q-12	300	5.7038
3572	2Q-12	500	6.2146	3572	2Q-12	420	6.0403	3572	2Q-12	480	6.1738	1062	2Q-12	350	5.8579
3638	3Q-12	380	5.9402	3638	3Q-12	400	5.9915	3638	3Q-12	420	6.0403	1128	3Q-12	320	5.7683
3741	4Q-12	410	6.0162	3741	4Q-12	420	6.0403	3741	4Q-12	390	5.9661	1231	4Q-12	340	5.8289
3840	1Q-13	400	5.9915	3840	1Q-13	410	6.0162	3840	1Q-13	370	5.9135	1330	1Q-13	330	5.7991
3904	2Q-13	380	5.9402	3904	2Q-13	390	5.9661	3904	2Q-13	350	5.8579	1394	2Q-13	300	5.7038
4013	3Q-13	390	5.9661	4013	3Q-13	420	6.0403	4013	3Q-13	330	5.7991	1507	3Q-13	310	5.7366
4088	4Q-13	420	6.0403	4088	4Q-13	410	6.0162	4088	4Q-13	340	5.8289	1583	4Q-13	310	5.7366
4202	1Q-14	420	6.0403	4202	1Q-14	440	6.0868	4202	1Q-14	450	6.1092	1697	1Q-14	330	5.7991
4316	2Q-14	410	6.0162	4316	2Q-14	480	6.1738	4316	2Q-14	400	5.9915	1811	2Q-14	360	5.8861
4395	3Q-14	440	6.0868	4395	3Q-14	410	6.0162	4395	3Q-14	370	5.9135	1890	3Q-14	310	5.7366
4472	4Q-14	340	5.8289	4472	4Q-14	360	5.8861	4472	4Q-14	290	5.6699	1967	4Q-14	270	5.5984

Table 6-1 (Cont.): Calculation for Mean and Standard Deviation (Sulphate)

MW1				MW2				MW3				MW4			
Days	Date	SO_4	$ln(SO_4)$	Days	Date	SO_4	$ln(SO_4)$	Days	Date	SO_4	$ln(SO_4)$	Days	Date	SO_4	$ln(SO_4)$
4579	1Q-15	390	5.9661	4579	1Q-15	360	5.8861	4579	1Q-15	290	5.6699	2074	1Q-15	270	5.5984
4765	2Q-15	370	5.9135	4765	2Q-15	360	5.8861	4765	2Q-15	280	5.6348	2260	2Q-15	270	5.5984
4848	3Q-15	430	6.0638	4848	3Q-15	410	6.0162	4848	3Q-15	330	5.7991	2343	3Q-15	320	5.7683
4938	4Q-15	410	6.0162	4938	4Q-15	410	6.0162	4938	4Q-15	330	5.7991	2433	4Q-15	320	5.7683
5055	1Q-16	370	5.9135	5055	1Q-16	380	5.9402	5055	1Q-16	340	5.8289	2550	1Q-16	310	5.7366
5122	2Q-16	390	5.9661	5122	2Q-16	420	6.0403	5122	2Q-16	330	5.7991	2617	2Q-16	310	5.7366
5213	3Q-16	420	6.0403	5213	3Q-16	390	5.9661	5213	3Q-16	300	5.7038	2708	3Q-16	310	5.7366
5305	4Q-16	400	5.9915	5305	4Q-16	420	6.0403	5305	4Q-16	330	5.7991	2800	4Q-16	360	5.8861
5397	1Q-17	450	6.1092	5397	1Q-17	400	5.9915	5397	1Q-17	310	5.7366	2892	1Q-17	340	5.8289
5487	2Q-17	440	6.0868	5487	2Q-17	400	5.9915	5487	2Q-17	330	5.7991	2982	2Q-17	340	5.8289
5563	3Q-17	430	6.0638	5563	3Q-17	400	5.9915	5563	3Q-17	310	5.7366	3058	3Q-17	330	5.7991
5672	4Q-17	400	5.9915	5672	4Q-17	380	5.9402	5672	4Q-17	290	5.6699	3167	4Q-17	310	5.7366
5782	1Q-18	390	5.9661	5782	1Q-18	400	5.9915	5782	1Q-18	390	5.9661	3277	1Q-18	340	5.8289
5850	2Q-18	390	5.9661	5850	2Q-18	380	5.9402	5850	2Q-18	360	5.8861	3345	2Q-18	310	5.7366
Standard Deviation =		32.9984	0.0833	Standard Deviation =		29.5059	0.0743	Standard Deviation =		108.4730	0.2374	Standard Deviation =		30.4413	0.0935
Mean =		387.9048	5.9573	Mean =		391.1270	5.9663	Mean =		413.9848	5.9963	Mean =		332.3684	5.8021
n =		63	63	n =		63	63	n =		66	66	n =		38	38
(t{n-1, 0.95}) =		1.669	1.669	(t{n-1, 0.95}) =		1.669	1.669	(t{n-1, 0.95}) =		1.668	1.668	(t{n-1, 0.95}) =		1.686	1.686
$(1 + 1/n)^{½}$ =			1.008	(1 + 1/n)½ =			1.008	(1 + 1/n)½ =			1.008	(1 + 1/n)½ =			1.013
k = $t(1 + 1/n)^{½}$ =			1.682	k = t(1 + 1/n)½ =			1.682	k = t(1 + 1/n)½ =			1.681	k = t(1 + 1/n)½ =			1.708
UTL = Mean + St.Dev.*k =			6.0975	UTL = Mean + St.Dev.*k =			6.0913	UTL = Mean + St.Dev.*k =			6.3954	UTL = Mean + St.Dev.*k =			5.9617
Concentration Significant?			No	Concentration Significant?			No	Concentration Significant?			No	Concentration Significant?			No

Table 6-1 (Cont.): Calculation for Mean and Standard Deviation (Chloride)

MW1				MW2				MW3				MW4			
Days	Date	Cl	ln(Cl)	Days	Date	Cl	ln(Cl)	Days	Date	Cl	ln(Cl)	Days	Date	Cl	ln(Cl)
0	3Q-02	294	5.6836	0	3Q-02	225	5.4161	0	3Q-02	202	5.3083				
270	2Q-03	272	5.6058	270	2Q-03	209	5.3423	270	2Q-03	117	4.7622				
450	1Q-04	200	5.2983	450	1Q-04	180	5.1930	450	1Q-04	110	4.7005				
540	2Q-04	220	5.3936	540	2Q-04	190	5.2470	540	2Q-04	120	4.7875				
630	3Q-04	200	5.2983	630	3Q-04	180	5.1930	630	3Q-04	120	4.7875				
720	4Q-04	210	5.3471	720	4Q-04	180	5.1930	720	4Q-04	210	5.3471				
810	1Q-05	230	5.4381	810	1Q-05	180	5.1930	810	1Q-05	130	4.8675				
900	2Q-05	182	5.2040	900	2Q-05	158	5.0626	900	2Q-05	109	4.6913				
990	3Q-05	255	5.5413	990	3Q-05	211	5.3519	990	3Q-05	156	5.0499				
1080	4Q-05	230	5.4381	1080	4Q-05	180	5.1930	1080	4Q-05	130	4.8675				
1170	1Q-06	219	5.3891	1170	1Q-06	189	5.2417	1170	1Q-06	149	5.0039				
1260	2Q-06	210	5.3471	1260	2Q-06	190	5.2470	1260	2Q-06	160	5.0752				
1350	3Q-06	210	5.3471	1350	3Q-06	190	5.2470	1350	3Q-06	180	5.1930				
1440	4Q-06	210	5.3471	1440	4Q-06	190	5.2470	1440	4Q-06	210	5.3471				
1530	1Q-07	230	5.4381	1530	1Q-07	190	5.2470	1530	1Q-07	200	5.2983				
1620	2Q-07	210	5.3471	1620	2Q-07	210	5.3471	1620	2Q-07	230	5.4381				
	RA-07	220	5.3936		RA-07	205	5.3230		RA-07	240	5.4806				
1710	3Q-07	250	5.5215	1710	3Q-07	190	5.2470	1710	3Q-07	190	5.2470				
1800	4Q-07	230	5.4381	1800	4Q-07	180	5.1930	1800	4Q-07	300	5.7038				
1867	12/7/2007	270	5.5984	1867	12/7/2007	190	5.2470	1867	12/7/2007	270	5.5984				
1890	1Q-08	250	5.5215	1890	1Q-08	190	5.2470	1890	1Q-08	280	5.6348				
1966	2Q-08	230	5.4381	1966	2Q-08	200	5.2983	1966	2Q-08	350	5.8579				
2068	3Q-08	250	5.5215	2068	3Q-08	200	5.2983	2068	3Q-08	400	5.9915				
2178	4Q-08	240	5.4806	2178	4Q-08	180	5.1930	2178	4Q-08	320	5.7683				
2349	1Q-09	230	5.4381	2349	1Q-09	190	5.2470	2349	1Q-09	230	5.4381				
2473	2Q-09	230	5.4381	2473	2Q-09	170	5.1358	2473	2Q-09	220	5.3936				
2571	3Q-09	230	5.4381	2571	3Q-09	220	5.3936	2571	3Q-09	370	5.9135	0	3Q-09	270	5.5984
								2618	10/30/09	220	5.3936	34	10/30/09	250	5.5215
2652	4Q-09	220	5.3936	2652	4Q-09	170	5.1358	2652	4Q-09	250	5.5215	81	4Q-09	250	5.5215
2718	1Q-10	230	5.4381	2718	1Q-10	170	5.1358	2718	1Q-10	360	5.8861	116	1Q-10	260	5.5607
								2753	4/2/2010	400	5.9915				
2800	2Q-10	260	5.5607	2800	2Q-10	180	5.1930	2800	2Q-10	580	6.3630	198	2Q-10	280	5.6348
2828	6/18/2010	250	5.5215	2828	6/18/2010	170	5.1358	2828	6/18/2010	660	6.4922	226	6/18/2010	250	5.5215
2895	3Q-10	220	5.3936	2895	3Q-10	220	5.3936	2895	3Q-10	670	6.5073	293	3Q-10	260	5.5607
								2922	9/20/2010R	460	6.1312				
3014	4Q-10	220	5.3936	3014	4Q-10	160	5.0752	3014	4Q-10	200	5.2983	412	4Q-10	260	5.5607
3086	1Q-11	210	5.3471	3086	1Q-11	160	5.0752	3086	1Q-11	240	5.4806	576	1Q-11	250	5.5215
3179	2Q-11	200	5.2983	3179	2Q-11	160	5.0752	3179	2Q-11	340	5.8289	669	2Q-11	260	5.5607
3286	3Q-11	190	5.2470	3286	3Q-11	160	5.0752	3286	3Q-11	190	5.2470	776	3Q-11	250	5.5215
3372	4Q-11	230	5.4381	3372	4Q-11	170	5.1358	3372	4Q-11	180	5.1930	862	4Q-11	270	5.5984
3472	1Q-12	210	5.3471	3472	1Q-12	160	5.0752	3472	1Q-12	220	5.3936	962	1Q-12	280	5.6348
3572	2Q-12	270	5.5984	3572	2Q-12	160	5.0752	3572	2Q-12	190	5.2470	1062	2Q-12	260	5.5607
3638	3Q-12	220	5.3936	3638	3Q-12	150	5.0106	3638	3Q-12	140	4.9416	1128	3Q-12	260	5.5607
3741	4Q-12	230	5.4381	3741	4Q-12	170	5.1358	3741	4Q-12	160	5.0752	1231	4Q-12	270	5.5984
3840	1Q-13	220	5.3936	3840	1Q-13	160	5.0752	3840	1Q-13	140	4.9416	1330	1Q-13	270	5.5984
3904	2Q-13	200	5.2983	3904	2Q-13	140	4.9416	3904	2Q-13	120	4.7875	1394	2Q-13	250	5.5215
4013	3Q-13	240	5.4806	4013	3Q-13	160	5.0752	4013	3Q-13	120	4.7875	1507	3Q-13	270	5.5984
4088	4Q-13	210	5.3471	4088	4Q-13	150	5.0106	4088	4Q-13	120	4.7875	1583	4Q-13	260	5.5607
4202	1Q-14	250	5.5215	4202	1Q-14	180	5.1930	4202	1Q-14	170	5.1358	1697	1Q-14	300	5.7038
4316	2Q-14	240	5.4806	4316	2Q-14	180	5.1930	4316	2Q-14	140	4.9416	1811	2Q-14	300	5.7038
4395	3Q-14	240	5.4806	4395	3Q-14	160	5.0752	4395	3Q-14	130	4.8675	1890	3Q-14	290	5.6699
4472	4Q-14	240	5.4806	4472	4Q-14	150	5.0106	4472	4Q-14	110	4.7005	1967	4Q-14	270	5.5984

Table 6-1 (Cont.): Calculation for Mean and Standard Deviation (Chloride)

MW1				MW2				MW3				MW4			
Days	Date	Cl	ln(Cl)	Days	Date	Cl	ln(Cl)	Days	Date	Cl	ln(Cl)	Days	Date	Cl	ln(Cl)
4579	1Q-15	210	5.3471	4579	1Q-15	140	4.9416	4579	1Q-15	110	4.7005	2074	1Q-15	260	5.5607
4765	2Q-15	210	5.3471	4765	2Q-15	140	4.9416	4765	2Q-15	110	4.7005	2260	2Q-15	260	5.5607
4848	3Q-15	220	5.3936	4848	3Q-15	150	5.0106	4848	3Q-15	110	4.7005	2343	3Q-15	280	5.6348
4938	4Q-15	220	5.3936	4938	4Q-15	150	5.0106	4938	4Q-15	120	4.7875	2433	4Q-15	270	5.5984
5055	1Q-16	230	5.4381	5055	1Q-16	140	4.9416	5055	1Q-16	120	4.7875	2550	1Q-16	270	5.5984
5122	2Q-16	230	5.4381	5122	2Q-16	150	5.0106	5122	2Q-16	120	4.7875	2617	2Q-16	280	5.6348
5213	3Q-16	210	5.3471	5213	3Q-16	150	5.0106	5213	3Q-16	110	4.7005	2708	3Q-16	260	5.5607
5305	4Q-16	250	5.5215	5305	4Q-16	160	5.0752	5305	4Q-16	120	4.7875	2800	4Q-16	290	5.6699
5397	1Q-17	200	5.2983	5397	1Q-17	140	4.9416	5397	1Q-17	110	4.7005	2892	1Q-17	270	5.5984
5487	2Q-17	210	5.3471	5487	2Q-17	140	4.9416	5487	2Q-17	110	4.7005	2982	2Q-17	270	5.5984
5563	3Q-17	190	5.2470	5563	3Q-17	140	4.9416	5563	3Q-17	100	4.6052	3058	3Q-17	260	5.5607
5672	4Q-17	190	5.2470	5672	4Q-17	140	4.9416	5672	4Q-17	120	4.7875	3167	4Q-17	270	5.5984
5782	1Q-18	220	5.3936	5782	1Q-18	140	4.9416	5782	1Q-18	140	4.9416	3277	1Q-18	270	5.5984
5850	2Q-18	220	5.3936	5850	2Q-18	140	4.9416	5850	2Q-18	140	4.9416	3345	2Q-18	270	5.5984
Standard Deviation =		21.9860	0.0957	Standard Deviation =		23.2586	0.1342	Standard Deviation =		127.4393	0.4868	Standard Deviation =		13.0351	0.0480
Mean =		225.7460	5.4149	Mean =		171.8571	5.1378	Mean =		209.8939	5.2140	Mean =		267.6316	5.5885
n =		63	63	n =		63	63	n =		66	66	n =		38	38
(t{n-1, 0.95}) =		1.669	1.669	(t{n-1, 0.95}) =		1.669	1.669	(t{n-1, 0.95}) =		1.668	1.668	(t{n-1, 0.95}) =		1.686	1.686
(1 + 1/n)½ =			1.008	(1 + 1/n)½ =			1.008	(1 + 1/n)½ =			1.008	(1 + 1/n)½ =			1.013
k = t(1 + 1/n)½ =			1.682	k = t(1 + 1/n)½ =			1.682	k = t(1 + 1/n)½ =			1.681	k = t(1 + 1/n)½ =			1.708
UTL = Mean + St.Dev.*k =			5.5758	UTL = Mean + St.Dev.*k =			5.3636	UTL = Mean + St.Dev.*k =			6.0321	UTL = Mean + St.Dev.*k =			5.6704
Concentration Significant?			No	Concentration Significant?			No	Concentration Significant?			No	Concentration Significant?			No

Table 6-2
Comparison to Tolerance Interval[1]

WELL	PARAMETER	Q1 2018				Q2 2018			
		RESULT	ln(RESULT)	UPPER TOLERANCE LIMIT	UTL EXCEEDED (YES/NO)	RESULT	ln(RESULT)	UPPER TOLERANCE LIMIT	UTL EXCEEDED (YES/NO)
MW-1	TDS	1200	7.0901	7.1473	No	1200	7.0901	7.1472	No
	SO_4	390	5.9661	6.0986	No	390	5.9661	6.0975	No
	Cl_2	220	5.3936	5.5775	No	220	5.3936	5.5758	No
MW-2	TDS	1100	7.0031	7.0539	No	1100	7.0031	7.0536	No
	SO_4	400	5.9915	6.0927	No	380	5.9402	6.0913	No
	Cl_2	140	4.9416	5.3647	No	140	4.9416	5.3636	No
MW-3	TDS	1100	7.0031	7.5246	No	1100	7.0031	7.5201	No
	SO_4	390	5.9661	6.3998	No	360	5.8861	6.3954	No
	Cl_2	140	4.9416	6.0412	No	140	4.9416	6.0321	No
MW-4	TDS	1200	7.0901	7.1071	No	1200	7.0901	7.1097	No
	SO_4	340	5.8289	5.9647	No	310	5.7366	5.9617	No
	Cl_2	270	5.5984	5.6713	No	270	5.5984	5.6704	No

[1]Upper tolerance limit (UTL) calculated using 95% distribution and 95% probability

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SECTION 7
LYSIMETER TEST RECORDS

LYSIMETER TEST RECORD

Project Name/Client: Blythe Energy Inc.	Site Name: Blythe Energy Project
Project No. NB11160982	Date: March 24, 2018
Weather Conditions: Sunny 75˚	Sampler: Ralph De La Parra

EAST POND Lysimeter No.: 1 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 2 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 3 TEST RESULTS: Dry	Notes: *
WEST POND Lysimeter No.: 4 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 5 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 6 TEST RESULTS: Dry	Notes: *

LYSIMETER TEST RECORD

Project Name/Client: Blythe Energy Inc.	Site Name: Blythe Energy Project
Project No. NB11160982	Date: May 31, 2018
Weather Conditions: Sunny	Sampler: Ralph De La Parra

EAST POND Lysimeter No.: 1 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 2 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 3 TEST RESULTS: Dry	Notes: *
WEST POND Lysimeter No.: 4 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 5 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 6 TEST RESULTS: Dry	Notes: *

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SECTION 8
EVAPORATION POND SAMPLING RECORDS

EVAPORATION POND SAMPLING RECORD

Project Name/Client: Blythe Energy Inc.	Site Name: Blythe Energy Project
Project No.: NB11160982	Date: March 24, 2018
Weather Conditions: Warm, Sunny	Sampler: Ralph De La Parra
Pond No./Designation: #1 East Time: 1100 Color/Clarity: slightly green Temp.: 25.3°C pH: 8.57 Ec: >20.00 ms/cm	Comments:
Pond No./Designation: #2 West Time: 1105 Color/Clarity: slightly green Temp.: 21.4°C pH: 8.49 Ec: >20.00 ms/cm	Comments:

Notes:

- Temperature reported in degrees Celsius
- pH reported in pH units
- Ec reported in millisiemens per centimeter (ms/cm)

EVAPORATION POND SAMPLING RECORD

Project Name/Client: Blythe Energy Inc.	Site Name: Blythe Energy Project
Project No.: NB11160982	Date: May 31, 2018
Weather Conditions: Warm, Sunny	Sampler: Ralph De La Parra
Pond No./Designation: #1 East Time: 1110 Color/Clarity: slightly green Temp.: 33.4°C pH: 8.61 Ec: >20.00 ms/cm	Comments:
Pond No./Designation: #2 West Time: 1120 Color/Clarity: slightly green Temp.: 33.9 °C pH: 8.79 Ec: >20.00 ms/cm	Comments:

Notes:

- Temperature reported in degrees Celsius
- pH reported in pH units
- Ec reported in millisiemens per centimeter (ms/cm)

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SECTION 9
WELL SAMPLING RECORDS

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-1**	Date: **March 24, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**337.27**	ft. (a)
Elevation of Ground Surface	**337.76**	ft. (b)
Well Depth (below MP)	**120.00**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**88.65**	ft. (e)
Water Level Elevation (a-e)	**248.62**	ft. (f)
Height of Water in Well	**31.35**	ft.
Volume of Water in Casing	**31.35 x 0.66 = 20.69**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos electric submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water rinse**

FIELD OBSERVATIONS

Weather Conditions **Clear, cool**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-1** Date **March 24, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
09:06	2	2	30.2	7.19	1.86	Clear, odorless
09:10	2	10	30.3	7.18	1.86	Clear, odorless
09:15	2	20	30.4	7.17	1.86	Clear, odorless
09:20	2	30	30.7	7.15	1.85	Clear, odorless
09:25	2	40	30.8	7.15	1.85	Clear, odorless
09:30	2	50	30.9	7.15	1.85	Clear, odorless
09:40	2	70	31.0	7.15	1.85	Clear, odorless

Total Vol. Purged **70** (gal) Casing Vol. Purged **3.38**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-1-3-24-18	09:40	2	Quarterly	N	NA	Duplicate Collected (Dup-3-24-18)

F = Filtered (Y,N), P = Preservative (Type)

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-2**	Date: **March 24, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**337.77**	ft. (a)
Elevation of Ground Surface	**337.17**	ft. (b)
Well Depth (below MP)	**120.00**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**89.28**	ft. (e)
Water Level Elevation (a-e)	**248.49**	ft. (f)
Height of Water in Well	**30.72**	ft.
Volume of Water in Casing	**30.72 x 0.66 = 20.28**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos electric submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water rinse**

FIELD OBSERVATIONS

Weather Conditions **Clear, cool**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-2** Date **March 24, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
08:16	2	2	28.3	7.34	1.68	Clear, odorless
08:20	2	10	28.6	7.31	1.68	Clear, odorless
08:25	2	20	29.2	7.25	1.67	Clear, odorless
08:35	2	40	30.1	7.13	1.66	Clear, odorless
08:40	2	50	30.1	7.13	1.66	Clear, odorless
08:45	2	60	30.2	7.13	1.66	Clear, odorless
08:50	2	70	30.2	7.13	1.66	Clear, odorless

Total Vol. Purged **70** (gal) Casing Vol. Purged **3.45**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-2-3-24-18	08:50	1	Quarterly	N	NA	1 Liter poly

F = Filtered (Y,N), P = Preservative (Type)

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-3**	Date: **March 24, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**338.22**	ft. (a)
Elevation of Ground Surface	**336.28**	ft. (b)
Well Depth (below MP)	**115.00**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**89.65**	ft. (e)
Water Level Elevation (a-e)	**248.57**	ft. (f)
Height of Water in Well	**25.35**	ft.
Volume of Water in Casing	**25.35 x 0.66 = 16.73**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos electric submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water**

Rinse

FIELD OBSERVATIONS

Weather Conditions **Clear, cool**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-3** Date **March 24, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
07:31	2	2	23.8	6.62	1.61	Clear, odorless
07:35	2	10	24.1	6.62	1.60	Clear, odorless
07:40	2	20	24.1	6.62	1.59	Clear, odorless
07:45	2	30	24.2	6.63	1.58	Clear, odorless
07:50	2	40	24.2	6.64	1.58	Clear, odorless
07:55	2	50	24.2	6.67	1.58	Clear, odorless
08:00	2	60	24.2	6.68	1.58	Clear, odorless

Total Vol. Purged **60** (gal) Casing Vol. Purged **3.59**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-3-3-24-18	08:00	1	Quarterly	N	NA	1 Liter poly

F = Filtered (Y,N), P = Preservative (Type)

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-4**	Date: **March 24, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**342.50**	ft. (a)
Elevation of Ground Surface	**339.95**	ft. (b)
Well Depth (below MP)	**118.95**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**93.42**	ft. (e)
Water Level Elevation (a-e)	**249.08**	ft. (f)
Height of Water in Well	**25.53**	ft.
Volume of Water in Casing	**25.53 x 0.66 = 16.85**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water**

Rinse

FIELD OBSERVATIONS

Weather Conditions **Clear, warm**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-4** Date **March 24, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
10:01	2	2	32.3	7.24	1.87	Clear, odorless
10:05	2	10	32.4	7.24	1.87	Clear, odorless
10:10	2	20	32.5	7.21	1.87	Clear, odorless
10:15	2	30	32.5	7.20	1.87	Clear, odorless
10:20	2	40	32.5	7.20	1.87	Clear, odorless
10:25	2	50	32.5	7.20	1.87	Clear, odorless
10:30	2	60	32.5	7.20	1.87	Clear, odorless

Total Vol. Purged **60** (gal) Casing Vol. Purged **3.56**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-4-3-24-18	10:30	1	Quarterly	N	NA	1 Liter poly

F = Filtered (Y,N), P = Preservative (Type)

Depth to Water Readings:
OW-1 = 91.55 feet
OW-2 = 88.25 feet

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-1**	Date: **May 31, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**337.27**	ft. (a)
Elevation of Ground Surface	**337.76**	ft. (b)
Well Depth (below MP)	**109.75**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**88.90**	ft. (e)
Water Level Elevation (a-e)	**248.37**	ft. (f)
Height of Water in Well	**20.85**	ft.
Volume of Water in Casing	**20.85 x 0.66 = 13.76**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos electric submersible pump**

Sampling Apparatus: Type **1.56" diameter disposable bailer**

Cleaning Methods **Alconox and potable water wash, double distilled water rinse**

FIELD OBSERVATIONS

Weather Conditions **Clear, warm**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-1** Date **May 31, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
08:55	1	5	30.4	7.15	1.89	Clear, odorless
09:00	1	10	30.0	7.18	1.89	Clear, odorless
09:10	1	20	30.1	7.19	1.89	Clear, odorless
09:20	1	30	30.3	7.20	1.89	Clear, odorless
09:30	1	40	30.6	7.21	1.89	Clear, odorless
09:40	1	50	30.7	7.21	1.89	Clear, odorless

Total Vol. Purged **50** (gal) Casing Vol. Purged **3.63**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-1-5-31-18	09:40	2	Quarterly	N	NA	Duplicate Collected (DUP-5-31-18)

F = Filtered (Y,N), P = Preservative (Type)

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-2**	Date: **May 31, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**337.77**	ft. (a)
Elevation of Ground Surface	**337.17**	ft. (b)
Well Depth (below MP)	**109.80**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**89.35**	ft. (e)
Water Level Elevation (a-e)	**248.42**	ft. (f)
Height of Water in Well	**20.45**	ft.
Volume of Water in Casing	**20.45 x 0.66 = 13.50**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos electric submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water rinse**

FIELD OBSERVATIONS

Weather Conditions **Clear, warm**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-2** Date **May 31, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
07:45	1	5	28.5	7.57	1.72	Clear, odorless
07:50	1	10	28.7	7.53	1.70	Clear, odorless
08:00	1	20	28.9	7.52	1.69	Clear, odorless
08:10	1	30	29.0	7.51	1.69	Clear, odorless
08:20	1	40	29.1	7.51	1.69	Clear, odorless
08:30	1	50	29.2	7.51	1.69	Clear, odorless

Total Vol. Purged **50** (gal) Casing Vol. Purged **3.70**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-2-5-31-18	08:30	1	Quarterly	N	NA	1 Liter poly

F = Filtered (Y,N), P = Preservative (Type)

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-3**	Date: **May 31, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**338.22**	ft. (a)
Elevation of Ground Surface	**336.28**	ft. (b)
Well Depth (below MP)	**108.90**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**89.60**	ft. (e)
Water Level Elevation (a-e)	**248.62**	ft. (f)
Height of Water in Well	**19.30**	ft.
Volume of Water in Casing	**19.30 x 0.66 = 12.73**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water rinse**

FIELD OBSERVATIONS

Weather Conditions **Clear, warm**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-3** Date **May 31, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
06:45	1	10	23.5	7.28	1.71	Clear, odorless
06:55	1	20	24.2	6.90	1.65	Clear, odorless
07:05	1	30	24.8	6.87	1.62	Clear, odorless
07:15	1	40	24.8	6.86	1.63	Clear, odorless
07:25	1	50	24.9	6.86	1.63	Clear, odorless

Total Vol. Purged **50** (gal) Casing Vol. Purged **3.92**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-3-5-31-18	07:25	1	Quarterly	N	NA	1 Liter poly

F = Filtered (Y,N), P = Preservative (Type)

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-4**	Date: **May 31, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**342.50**	ft. (a)
Elevation of Ground Surface	**337.76**	ft. (b)
Well Depth (below MP)	**119.55**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**94.10**	ft. (e)
Water Level Elevation (a-e)	**248.40**	ft. (f)
Height of Water in Well	**25.45**	ft.
Volume of Water in Casing	**25.45 x 0.66 = 16.80**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water**

Rinse

FIELD OBSERVATIONS

Weather Conditions **Clear, warm**

Well Head Conditions **Dry, good**

Comments

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Blythe Energy Inc.
Blythe, California
July 27, 2018

Project Name/Client **Blythe Energy Inc.** Well Number **MW-4** Date **May 31, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
10:05	1	5	32.5	7.34	1.81	Clear, odorless
10:10	1	10	32.7	7.28	1.80	Clear, odorless
10:20	1	20	32.8	7.27	1.80	Clear, odorless
10:30	1	30	32.9	7.27	1.80	Clear, odorless
10:40	1	40	33.0	7.27	1.80	Clear, odorless
11:00	1	60	33.1	7.27	1.80	Clear, odorless

Total Vol. Purged **60** (gal) Casing Vol. Purged **3.57**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-4-5-31-18	11:00	1	Quarterly	N	NA	1 Liter poly

F = Filtered (Y,N), P = Preservative (Type)

Depth to Water Readings:
OW-1 = 92.40 feet
OW-2 = 89.10 feet

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SECTION 10
LEACHATE COLLECTION AND RECOVERY SYSTEM (LCRS) & WEEKLY LYSIMETER RECORDS

Table 10-1 Leachate Collection and Recovery System (LCRS) & Weekly Lysimeter Results

Date	Operator	LRS Measurement	East Pond Level	Pumped Y/N	Lysimeter checked	Water Present? Y/N	LRS Measurement	West Pond Level	Pumped Y/N	Lysimeter checked	Water Present? Y/N	Comments
1/1/2018		NA	50%	Y	Y	N	NA	30%	Y	Y	N	Weekly Inspection
1/8/201		NA	50%	Y	Y	N	NA	40%	Y	Y	N	Weekly Inspection
1/14/2018		3'10"	50%	N	Y	N	1'8"	40%	N	Y	N	Weekly Inspection
1/21/2018		4'11"	30%	N	Y	N	5'3"	25%	Y	Y	N	Weekly Inspection
1/28/2018		4'6"	30%	N	Y	N	4'7"	20%	N	Y	N	Weekly Inspection
2/4/2018		4'11"	25%	Y	Y	N	5'2"	30%	Y	Y	N	Weekly Inspection
2/11/2018		4'10"	30%	N	Y	N	4'9"	20%	N	Y	N	Weekly Inspection
2/18/2018		4'10"	40%	N	Y	N	4'10"	30%	N	Y	N	Weekly Inspection
2/25/2018		5'2"	30%	Y	Y	N	5'5"	50%	Y	Y	N	Weekly Inspection
3/6/2018		1'8"	35%	N	Y	N	5'	30%	Y	Y	N	Weekly Inspection
3/11/2018		2'7"	60%	N	Y	N	3'10"	35%	N	Y	N	Weekly Inspection
3/18/2018		3'1"	35%	N	Y	N	5'3"	35%	Y	Y	N	Weekly Inspection
3/25/2018		3'4"	80%	N	Y	N	4'7"	50%	N	Y	N	Weekly Inspection
4/1/2018		3'9"	50%	N	Y	N	4'11"	30%	N	Y	N	Weekly Inspection
4/7/2018		4'6"	60%	Y	Y	N	5'8"	40%	Y	Y	N	Weekly Inspection
4/15/2018		1'	75%	N	Y	N	3'5"	45%	N	Y	N	Weekly Inspection
4/22/2018		10"	40%	N	Y	N	4'1"	40%	N	Y	N	Weekly Inspection
4/30/2018		1'6"	30%	N	Y	N	5'3"	25%	Y	Y	N	Weekly Inspection
5/6/2018		5'8"	70%	Y	Y	N	5'2"	50%	Y	Y	N	Weekly Inspection
5/13/2018		10"	70%	N	Y	N	4'3"	50%	N	Y	N	Weekly Inspection
5/20/2018		10"	75%	N	Y	N	4'9"	50%	N	Y	N	Weekly Inspection
5/27/2018		1'1"	70%	N	Y	N	5'2"	40%	N	Y	N	Weekly Inspection
6/3/2018		6"	50%	N	Y	N	4'3"	40%	N	Y	N	Weekly Inspection
6/10/2018		10"	30%	N	Y	N	10"	50%	N	Y	N	Weekly Inspection
6/17/2018		8'4"	40%	N	Y	N	6'6"	50%	N	Y	N	Weekly Inspection
6/24/2018		2'	90%	N	Y	N	4'2"	50%	N	Y	N	Weekly Inspection

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APPENDIX A

LABORATORY ANALYTICAL DATA SHEETS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

TestAmerica Job ID: 440-207051-1
Client Project/Site: AltaGas-Blythe

For:
Northstar Environmental Remediation
26225 Enterprise Court
Lake Forest, California 92630

Attn: Ralph DeLaParra

Authorized for release by:
4/9/2018 10:43:44 AM

Patty Mata, Senior Project Manager
(949)261-1022
patty.mata@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-207051-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-207051-1	MW-3-3-24-18	Water	03/24/18 08:00	03/26/18 11:35
440-207051-2	MW-2-3-24-18	Water	03/24/18 08:50	03/26/18 11:35
440-207051-3	MW-1-3-24-18	Water	03/24/18 09:40	03/26/18 11:35
440-207051-4	MW-4-3-24-18	Water	03/24/18 10:30	03/26/18 11:35
440-207051-5	DUP-3-24-18	Water	03/24/18 00:01	03/26/18 11:35

Job ID: 440-207051-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-207051-1

Comments
No additional comments.

Receipt
The samples were received on 3/26/2018 11:35 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.9º C.

HPLC/IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-207051-1

Client Sample ID: MW-3-3-24-18

Lab Sample ID: 440-207051-1
Date Collected: 03/24/18 08:00
Matrix: Water
Date Received: 03/26/18 11:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		10		mg/L			03/26/18 16:45	20
Sulfate	390		10		mg/L			03/26/18 16:45	20

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.010		mg/L		04/03/18 09:39	04/03/18 18:14	1

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1700		1.0		umhos/cm			04/06/18 10:00	1
Total Dissolved Solids	1100		10		mg/L			03/30/18 09:40	1
pH	7.7	HF	0.1		SU			03/28/18 15:07	1

Client Sample ID: MW-2-3-24-18

Lab Sample ID: 440-207051-2
Date Collected: 03/24/18 08:50
Matrix: Water
Date Received: 03/26/18 11:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		25		mg/L			03/26/18 17:24	50
Sulfate	400		25		mg/L			03/26/18 17:24	50

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.010		mg/L		04/03/18 09:39	04/03/18 18:16	1

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1800		1.0		umhos/cm			04/06/18 10:00	1
Total Dissolved Solids	1100		10		mg/L			03/30/18 09:40	1
pH	8.0	HF	0.1		SU			03/28/18 15:07	1

Client Sample ID: MW-1-3-24-18

Lab Sample ID: 440-207051-3
Date Collected: 03/24/18 09:40
Matrix: Water
Date Received: 03/26/18 11:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	220		25		mg/L			03/26/18 17:37	50
Sulfate	390		25		mg/L			03/26/18 17:37	50

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.010		mg/L		04/03/18 09:39	04/03/18 18:19	1

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	2000		1.0		umhos/cm			04/06/18 10:00	1
Total Dissolved Solids	1200		10		mg/L			03/30/18 09:40	1
pH	8.0	HF	0.1		SU			03/28/18 15:07	1

Client Sample Results

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-207051-1

Client Sample ID: MW-4-3-24-18

Lab Sample ID: 440-207051-4

Date Collected: 03/24/18 10:30
Matrix: Water
Date Received: 03/26/18 11:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	270		25	mg/L			03/26/18 17:50	50
Sulfate	340		25	mg/L			03/26/18 17:50	50

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.010	mg/L		04/03/18 09:39	04/03/18 18:21	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	2000		1.0	umhos/cm			04/06/18 10:00	1
Total Dissolved Solids	1200		20	mg/L			03/30/18 09:40	1
pH	8.0	HF	0.1	SU			03/28/18 15:07	1

Client Sample ID: DUP-3-24-18

Lab Sample ID: 440-207051-5

Date Collected: 03/24/18 00:01
Matrix: Water
Date Received: 03/26/18 11:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	220		25	mg/L			03/26/18 18:03	50
Sulfate	390		25	mg/L			03/26/18 18:03	50

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.010	mg/L		04/03/18 09:39	04/03/18 18:23	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	2000		1.0	umhos/cm			04/06/18 10:00	1
Total Dissolved Solids	1200		20	mg/L			03/30/18 09:40	1
pH	8.0	HF	0.1	SU			03/28/18 15:07	1

Method Summary

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-207051-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
200.7 Rev 4.4	Metals (ICP)	EPA	TAL IRV
SM 2510B	Conductivity, Specific Conductance	SM	TAL IRV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL IRV
SM 4500 H+ B	pH	SM	TAL IRV

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-207051-1

Client Sample ID: MW-3-3-24-18 — Lab Sample ID: 440-207051-1

Date Collected: 03/24/18 08:00 — **Matrix: Water**
Date Received: 03/26/18 11:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20			465992	03/26/18 16:45	NN	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	467743	04/03/18 09:39	Q1N	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1			467938	04/03/18 18:14	K1E	TAL IRV
Total/NA	Analysis	SM 2510B		1			468661	04/06/18 10:00	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	467097	03/30/18 09:40	XL	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1			466611	03/28/18 15:07	ST	TAL IRV

Client Sample ID: MW-2-3-24-18 — Lab Sample ID: 440-207051-2

Date Collected: 03/24/18 08:50 — **Matrix: Water**
Date Received: 03/26/18 11:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			465992	03/26/18 17:24	NN	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	467743	04/03/18 09:39	Q1N	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1			467938	04/03/18 18:16	K1E	TAL IRV
Total/NA	Analysis	SM 2510B		1			468661	04/06/18 10:00	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	467097	03/30/18 09:40	XL	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1			466611	03/28/18 15:07	ST	TAL IRV

Client Sample ID: MW-1-3-24-18 — Lab Sample ID: 440-207051-3

Date Collected: 03/24/18 09:40 — **Matrix: Water**
Date Received: 03/26/18 11:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			465992	03/26/18 17:37	NN	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	467743	04/03/18 09:39	Q1N	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1			467938	04/03/18 18:19	K1E	TAL IRV
Total/NA	Analysis	SM 2510B		1			468661	04/06/18 10:00	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	467097	03/30/18 09:40	XL	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1			466611	03/28/18 15:07	ST	TAL IRV

Client Sample ID: MW-4-3-24-18 — Lab Sample ID: 440-207051-4

Date Collected: 03/24/18 10:30 — **Matrix: Water**
Date Received: 03/26/18 11:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			465992	03/26/18 17:50	NN	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	467743	04/03/18 09:39	Q1N	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1			467938	04/03/18 18:21	K1E	TAL IRV
Total/NA	Analysis	SM 2510B		1			468661	04/06/18 10:00	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	467097	03/30/18 09:40	XL	TAL IRV

Lab Chronicle

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-207051-1

Client Sample ID: MW-4-3-24-18

Lab Sample ID: 440-207051-4

Date Collected: 03/24/18 10:30

Matrix: Water

Date Received: 03/26/18 11:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 H+ B		1			466611	03/28/18 15:07	ST	TAL IRV

Client Sample ID: DUP-3-24-18

Lab Sample ID: 440-207051-5

Date Collected: 03/24/18 00:01

Matrix: Water

Date Received: 03/26/18 11:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			465992	03/26/18 18:03	NN	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	467743	04/03/18 09:39	Q1N	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1			467938	04/03/18 18:23	K1E	TAL IRV
Total/NA	Analysis	SM 2510B		1			468661	04/06/18 10:00	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	467097	03/30/18 09:40	XL	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1			466611	03/28/18 15:07	ST	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

QC Sample Results

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-207051-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-465992/6
Matrix: Water
Analysis Batch: 465992

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50		mg/L			03/26/18 12:08	1
Sulfate	ND		0.50		mg/L			03/26/18 12:08	1

Lab Sample ID: LCS 440-465992/5
Matrix: Water
Analysis Batch: 465992

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			5.00	4.65		mg/L		93	90 - 110		
Sulfate			5.00	4.96		mg/L		99	90 - 110		

Lab Sample ID: 440-207051-1 MS
Matrix: Water
Analysis Batch: 465992

Client Sample ID: MW-3-3-24-18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	140		100	237		mg/L		102	80 - 120		
Sulfate	390		100	494	E	mg/L		102	80 - 120		

Lab Sample ID: 440-207051-1 MSD
Matrix: Water
Analysis Batch: 465992

Client Sample ID: MW-3-3-24-18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	140		100	237		mg/L		102	80 - 120	0	20
Sulfate	390		100	495	E	mg/L		103	80 - 120	0	20

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 440-467743/1-A
Matrix: Water
Analysis Batch: 467938

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 467743

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.010		mg/L		04/03/18 09:39	04/03/18 18:02	1

Lab Sample ID: LCS 440-467743/2-A
Matrix: Water
Analysis Batch: 467938

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 467743

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Selenium			0.500	0.465		mg/L		93	85 - 115		

Lab Sample ID: 440-207100-C-1-B MS
Matrix: Water
Analysis Batch: 467938

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 467743

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Selenium	ND		0.500	0.461		mg/L		92	70 - 130		

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: 440-207100-C-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 467938 — **Prep Batch: 467743**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Selenium	ND		0.500	0.457		mg/L		91	70 - 130	1	20

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 440-468661/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 468661

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		1.0	umhos/cm			04/06/18 10:00	1

Lab Sample ID: LCS 440-468661/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 468661

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	1010	1030		umhos/cm		102	90 - 110

Lab Sample ID: 440-207688-J-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 468661

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	240		231		umhos/cm		3	5

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 440-467097/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 467097

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	mg/L			03/30/18 09:40	1

Lab Sample ID: LCS 440-467097/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 467097

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1000	1000		mg/L		100	90 - 110

Lab Sample ID: 440-207051-2 DU — **Client Sample ID: MW-2-3-24-18**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 467097

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1100		1110		mg/L		2	5

QC Sample Results

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-207051-1

Method: SM 4500 H+ B - pH

Lab Sample ID: 440-207051-4 DU
Matrix: Water
Analysis Batch: 466611

Client Sample ID: MW-4-3-24-18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	8.0	HF		8.0		SU				0.1	2

QC Association Summary

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-207051-1

HPLC/IC

Analysis Batch: 465992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-207051-1	MW-3-3-24-18	Total/NA	Water	300.0	
440-207051-2	MW-2-3-24-18	Total/NA	Water	300.0	
440-207051-3	MW-1-3-24-18	Total/NA	Water	300.0	
440-207051-4	MW-4-3-24-18	Total/NA	Water	300.0	
440-207051-5	DUP-3-24-18	Total/NA	Water	300.0	
MB 440-465992/6	Method Blank	Total/NA	Water	300.0	
LCS 440-465992/5	Lab Control Sample	Total/NA	Water	300.0	
440-207051-1 MS	MW-3-3-24-18	Total/NA	Water	300.0	
440-207051-1 MSD	MW-3-3-24-18	Total/NA	Water	300.0	

Metals

Prep Batch: 467743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-207051-1	MW-3-3-24-18	Total Recoverable	Water	200.2	
440-207051-2	MW-2-3-24-18	Total Recoverable	Water	200.2	
440-207051-3	MW-1-3-24-18	Total Recoverable	Water	200.2	
440-207051-4	MW-4-3-24-18	Total Recoverable	Water	200.2	
440-207051-5	DUP-3-24-18	Total Recoverable	Water	200.2	
MB 440-467743/1-A	Method Blank	Total Recoverable	Water	200.2	
LCS 440-467743/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
440-207100-C-1-B MS	Matrix Spike	Total Recoverable	Water	200.2	
440-207100-C-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.2	

Analysis Batch: 467938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-207051-1	MW-3-3-24-18	Total Recoverable	Water	200.7 Rev 4.4	467743
440-207051-2	MW-2-3-24-18	Total Recoverable	Water	200.7 Rev 4.4	467743
440-207051-3	MW-1-3-24-18	Total Recoverable	Water	200.7 Rev 4.4	467743
440-207051-4	MW-4-3-24-18	Total Recoverable	Water	200.7 Rev 4.4	467743
440-207051-5	DUP-3-24-18	Total Recoverable	Water	200.7 Rev 4.4	467743
MB 440-467743/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	467743
LCS 440-467743/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	467743
440-207100-C-1-B MS	Matrix Spike	Total Recoverable	Water	200.7 Rev 4.4	467743
440-207100-C-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.7 Rev 4.4	467743

General Chemistry

Analysis Batch: 466611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-207051-1	MW-3-3-24-18	Total/NA	Water	SM 4500 H+ B	
440-207051-2	MW-2-3-24-18	Total/NA	Water	SM 4500 H+ B	
440-207051-3	MW-1-3-24-18	Total/NA	Water	SM 4500 H+ B	
440-207051-4	MW-4-3-24-18	Total/NA	Water	SM 4500 H+ B	
440-207051-5	DUP-3-24-18	Total/NA	Water	SM 4500 H+ B	
440-207051-4 DU	MW-4-3-24-18	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 467097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-207051-1	MW-3-3-24-18	Total/NA	Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 467097 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-207051-2	MW-2-3-24-18	Total/NA	Water	SM 2540C	
440-207051-3	MW-1-3-24-18	Total/NA	Water	SM 2540C	
440-207051-4	MW-4-3-24-18	Total/NA	Water	SM 2540C	
440-207051-5	DUP-3-24-18	Total/NA	Water	SM 2540C	
MB 440-467097/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-467097/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-207051-2 DU	MW-2-3-24-18	Total/NA	Water	SM 2540C	

Analysis Batch: 468661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-207051-1	MW-3-3-24-18	Total/NA	Water	SM 2510B	
440-207051-2	MW-2-3-24-18	Total/NA	Water	SM 2510B	
440-207051-3	MW-1-3-24-18	Total/NA	Water	SM 2510B	
440-207051-4	MW-4-3-24-18	Total/NA	Water	SM 2510B	
440-207051-5	DUP-3-24-18	Total/NA	Water	SM 2510B	
MB 440-468661/3	Method Blank	Total/NA	Water	SM 2510B	
LCS 440-468661/4	Lab Control Sample	Total/NA	Water	SM 2510B	
440-207688-J-1 DU	Duplicate	Total/NA	Water	SM 2510B	

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
E	Result exceeded calibration range.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-207051-1

Laboratory: TestAmerica Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-18
Arizona	State Program	9	AZ0671	10-14-18
California	LA Cty Sanitation Districts	9	10256	06-30-18
California	State Program	9	CA ELAP 2706	06-30-18
Guam	State Program	9	Cert. No. 17-003R	01-23-19
Hawaii	State Program	9	N/A	01-29-19
Kansas	NELAP	7	E-10420	07-31-18
Nevada	State Program	9	CA015312018-1	07-31-18
New Mexico	State Program	6	N/A	01-29-19
Northern Mariana Islands	State Program	9	MP0002	01-29-17 *
Oregon	NELAP	10	4028	01-29-19
USDA	Federal		P330-15-00184	07-08-18
Washington	State Program	10	C900	09-03-18

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
Phone: 949.261.1022 Fax:

Chain of Custody Record

201381

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Ralph DeLaPerra	Site Contact:	Date: 3-24-18	COC No: 1 of 1 COCs
Company Name: NorthStar Environmental	Tel/Fax:	Lab Contact:	Carrier:	Sampler:
Address 26225 Enterprise Ct	Analysis Turnaround Time			For Lab Use Only:
City/State/Zip: Lake Forest, CA 92630	☐ CALENDAR DAYS ☐ WORKING DAYS			Walk-in Client:
Phone:	TAT if different from Below _____			Lab Sampling:
Fax:	☒ 2 weeks			
Project Name: AltaGas-Blythe	☐ 1 week			Job / SDG No.:
Site	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	pH	Chloride	TDS	Specific Conductance	Sulfate	Selenium	Sample Specific Notes:
MW-3-3-24-18	3-24-18	0800	G	GW	1	N	N	X	X	X	X	X	X	
MW-2- "		0850			1			X	X	X	X	X	X	
MW-1- "		0940			1			X	X	X	X	X	X	
MW-4- "		1030			1			X	X	X	X	X	X	
Dup - "		—			1			X	X	X	X	X	X	

3/26/18

440-207051 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: 3-26-18 | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | Therm ID No. _____

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
[signature]	NorthStar	~~3-24-18~~	[signature]	TA	3/26/18 9:25
Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Relinquished by: [signature]	Company: TA	Date/Time: 3/26/18 1135	Received in Laboratory by: [signature]	Company: TA-IRV	Date/Time: 3/26/18 1135

TR-66 4/.9

Page 17 of 18

4/6/2018

Login Sample Receipt Checklist

Client: Northstar Environmental Remediation

Job Number: 440-207051-1

Login Number: 207051

List Source: TestAmerica Irvine

List Number: 1

Creator: Escalante, Maria I

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

TestAmerica Job ID: 440-212603-1
Client Project/Site: AltaGas - Blythe

For:
Northstar Environmental Remediation
26225 Enterprise Court
Lake Forest, California 92630

Attn: Ralph DeLaParra

Authorized for release by:
6/19/2018 12:05:14 PM

Dennis Tran, Project Manager I
(949)261-1022
dennis.tran@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Northstar Environmental Remediation
Project/Site: AltaGas - Blythe

TestAmerica Job ID: 440-212603-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-212603-1	MW-3-5-31-18	Water	05/31/18 07:25	06/01/18 17:00
440-212603-2	MW-2-5-31-18	Water	05/31/18 08:30	06/01/18 17:00
440-212603-3	MW-1-5-31-18	Water	05/31/18 09:40	06/01/18 17:00
440-212603-4	MW-4-5-31-18	Water	05/31/18 11:00	06/01/18 17:00
440-212603-5	DUP-5-31-18	Water	05/31/18 00:01	06/01/18 17:00
440-212603-8	EP EAST&WEST Composite	Water	05/31/18 11:15	06/01/18 17:00

Job ID: 440-212603-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-212603-1

Comments
No additional comments.

Receipt
The samples were received on 6/1/2018 5:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.8º C.

HPLC/IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
The following samples for metals were received unpreserved and were preserved upon receipt to the laboratory: MW-3-5-31-18 (440-212603-1), MW-2-5-31-18 (440-212603-2), MW-1-5-31-18 (440-212603-3), MW-4-5-31-18 (440-212603-4), DUP-5-31-18 (440-212603-5) and EP EAST&WEST Composite (440-212603-8). Regulatory documents require a 24-hour waiting period from the time of the addition of the acid preservative to the time of digestion.

Preserved at 12:40 on 06-11-18
Nitric Acid lot# :0000192582
Added 1.0 mL

Method(s) 200.7 Rev 4.4: The following sample was diluted due to the nature of the sample matrix: EP EAST&WEST Composite (440-212603-8). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
Method(s) SM 2510B: Conductivity result was reported at a dilution and may have increased error compared to an undiluted sample. SM2510B.
EP EAST&WEST Composite (440-212603-8)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample Results

Client: Northstar Environmental Remediation
Project/Site: AltaGas - Blythe

TestAmerica Job ID: 440-212603-1

Client Sample ID: MW-3-5-31-18

Lab Sample ID: 440-212603-1
Date Collected: 05/31/18 07:25
Matrix: Water
Date Received: 06/01/18 17:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		25	mg/L			06/01/18 22:04	50
Sulfate	360		25	mg/L			06/01/18 22:04	50

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.010	mg/L		06/12/18 11:06	06/18/18 10:57	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1700		1.0	umhos/cm			06/13/18 08:08	1
Total Dissolved Solids	1100		10	mg/L			06/05/18 08:48	1
pH	8.1	HF	0.1	SU			06/03/18 14:36	1
Temperature	22.8	HF	1.0	Degrees C			06/03/18 14:36	1

Client Sample ID: MW-2-5-31-18

Lab Sample ID: 440-212603-2
Date Collected: 05/31/18 08:30
Matrix: Water
Date Received: 06/01/18 17:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		25	mg/L			06/01/18 22:20	50
Sulfate	380		25	mg/L			06/01/18 22:20	50

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.010	mg/L		06/12/18 11:06	06/18/18 11:11	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1700		1.0	umhos/cm			06/13/18 08:08	1
Total Dissolved Solids	1100		10	mg/L			06/05/18 08:48	1
pH	8.3	HF	0.1	SU			06/03/18 14:36	1
Temperature	22.9	HF	1.0	Degrees C			06/03/18 14:36	1

Client Sample ID: MW-1-5-31-18

Lab Sample ID: 440-212603-3
Date Collected: 05/31/18 09:40
Matrix: Water
Date Received: 06/01/18 17:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	220		25	mg/L			06/01/18 22:36	50
Sulfate	390		25	mg/L			06/01/18 22:36	50

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	0.013		0.010	mg/L		06/12/18 11:06	06/18/18 11:14	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	2000		1.0	umhos/cm			06/13/18 08:08	1
Total Dissolved Solids	1200		10	mg/L			06/05/18 08:48	1

Client Sample ID: MW-1-5-31-18 — Lab Sample ID: 440-212603-3

Date Collected: 05/31/18 09:40 — **Matrix: Water**
Date Received: 06/01/18 17:00

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.3	HF	0.1	SU			06/03/18 14:36	1
Temperature	23.1	HF	1.0	Degrees C			06/03/18 14:36	1

Client Sample ID: MW-4-5-31-18 — Lab Sample ID: 440-212603-4

Date Collected: 05/31/18 11:00 — **Matrix: Water**
Date Received: 06/01/18 17:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	270		25	mg/L			06/01/18 22:52	50
Sulfate	310		25	mg/L			06/01/18 22:52	50

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.010	mg/L		06/12/18 11:06	06/18/18 11:18	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1900		1.0	umhos/cm			06/13/18 08:08	1
Total Dissolved Solids	1200		10	mg/L			06/05/18 08:48	1
pH	8.2	HF	0.1	SU			06/03/18 14:36	1
Temperature	22.8	HF	1.0	Degrees C			06/03/18 14:36	1

Client Sample ID: DUP-5-31-18 — Lab Sample ID: 440-212603-5

Date Collected: 05/31/18 00:01 — **Matrix: Water**
Date Received: 06/01/18 17:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	220		25	mg/L			06/01/18 23:08	50
Sulfate	390		25	mg/L			06/01/18 23:08	50

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	0.010		0.010	mg/L		06/12/18 11:06	06/18/18 11:22	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	2000		1.0	umhos/cm			06/13/18 08:08	1
Total Dissolved Solids	1200		10	mg/L			06/05/18 08:48	1
pH	8.2	HF	0.1	SU			06/03/18 14:36	1
Temperature	22.8	HF	1.0	Degrees C			06/03/18 14:36	1

Client Sample ID: EP EAST&WEST Composite — Lab Sample ID: 440-212603-8

Date Collected: 05/31/18 11:15 — **Matrix: Water**
Date Received: 06/01/18 17:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	28000		1000	mg/L			06/01/18 23:24	2000
Sulfate	34000		1000	mg/L			06/01/18 23:24	2000

Client Sample Results

Client: Northstar Environmental Remediation
Project/Site: AltaGas - Blythe

TestAmerica Job ID: 440-212603-1

Client Sample ID: EP EAST&WEST Composite

Lab Sample ID: 440-212603-8

Date Collected: 05/31/18 11:15
Matrix: Water
Date Received: 06/01/18 17:00

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.050	mg/L		06/12/18 11:06	06/18/18 18:14	5
Arsenic	**0.12**		0.050	mg/L		06/12/18 11:06	06/18/18 18:14	5
Barium	**0.40**		0.050	mg/L		06/12/18 11:06	06/18/18 18:14	5
Cadmium	ND		0.025	mg/L		06/12/18 11:06	06/18/18 18:14	5
Chromium	ND		0.025	mg/L		06/12/18 11:06	06/18/18 18:14	5
Cobalt	ND		0.050	mg/L		06/12/18 11:06	06/18/18 18:14	5
Copper	ND		0.050	mg/L		06/12/18 11:06	06/18/18 18:14	5
Lead	ND		0.025	mg/L		06/12/18 11:06	06/18/18 18:14	5
Nickel	**0.062**		0.050	mg/L		06/12/18 11:06	06/18/18 18:14	5
Selenium	**0.47**		0.050	mg/L		06/12/18 11:06	06/18/18 18:14	5
Zinc	**0.071**	**J**	0.10	mg/L		06/12/18 11:06	06/18/18 18:14	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	mg/L		06/12/18 14:32	06/12/18 22:34	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	**150000**		20	umhos/cm			06/13/18 08:08	20
Total Dissolved Solids	**90000**		1000	mg/L			06/05/18 08:48	1

Method Summary

Client: Northstar Environmental Remediation
Project/Site: AltaGas - Blythe

TestAmerica Job ID: 440-212603-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
200.7 Rev 4.4	Metals (ICP)	EPA	TAL IRV
245.1	Mercury (CVAA)	EPA	TAL IRV
SM 2510B	Conductivity, Specific Conductance	SM	TAL IRV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL IRV
SM 4500 H+ B	pH	SM	TAL IRV
200.2	Preparation, Total Recoverable Metals	EPA	TAL IRV
245.1	Preparation, Mercury	EPA	TAL IRV

Protocol References:

EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: Northstar Environmental Remediation
Project/Site: AltaGas - Blythe

TestAmerica Job ID: 440-212603-1

Client Sample ID: MW-3-5-31-18 — Lab Sample ID: 440-212603-1

Date Collected: 05/31/18 07:25 — **Matrix: Water**
Date Received: 06/01/18 17:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			479778	06/01/18 22:04	NTN	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	481593	06/12/18 11:06	MN1	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1			482765	06/18/18 10:57	VS	TAL IRV
Total/NA	Analysis	SM 2510B		1			481329	06/13/18 08:08	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	480303	06/05/18 08:48	XL	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1			479987	06/03/18 14:36	CMM	TAL IRV

Client Sample ID: MW-2-5-31-18 — Lab Sample ID: 440-212603-2

Date Collected: 05/31/18 08:30 — **Matrix: Water**
Date Received: 06/01/18 17:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			479778	06/01/18 22:20	NTN	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	481593	06/12/18 11:06	MN1	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1			482765	06/18/18 11:11	VS	TAL IRV
Total/NA	Analysis	SM 2510B		1			481329	06/13/18 08:08	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	480303	06/05/18 08:48	XL	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1			479987	06/03/18 14:36	CMM	TAL IRV

Client Sample ID: MW-1-5-31-18 — Lab Sample ID: 440-212603-3

Date Collected: 05/31/18 09:40 — **Matrix: Water**
Date Received: 06/01/18 17:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			479778	06/01/18 22:36	NTN	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	481593	06/12/18 11:06	MN1	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1			482765	06/18/18 11:14	VS	TAL IRV
Total/NA	Analysis	SM 2510B		1			481329	06/13/18 08:08	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	480303	06/05/18 08:48	XL	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1			479987	06/03/18 14:36	CMM	TAL IRV

Client Sample ID: MW-4-5-31-18 — Lab Sample ID: 440-212603-4

Date Collected: 05/31/18 11:00 — **Matrix: Water**
Date Received: 06/01/18 17:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			479778	06/01/18 22:52	NTN	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	481593	06/12/18 11:06	MN1	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1			482765	06/18/18 11:18	VS	TAL IRV
Total/NA	Analysis	SM 2510B		1			481329	06/13/18 08:08	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	480303	06/05/18 08:48	XL	TAL IRV

Lab Chronicle

Client: Northstar Environmental Remediation
Project/Site: AltaGas - Blythe

TestAmerica Job ID: 440-212603-1

Client Sample ID: MW-4-5-31-18

Lab Sample ID: 440-212603-4
Date Collected: 05/31/18 11:00
Matrix: Water
Date Received: 06/01/18 17:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 H+ B		1			479987	06/03/18 14:36	CMM	TAL IRV

Client Sample ID: DUP-5-31-18

Lab Sample ID: 440-212603-5
Date Collected: 05/31/18 00:01
Matrix: Water
Date Received: 06/01/18 17:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			479778	06/01/18 23:08	NTN	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	481593	06/12/18 11:06	MN1	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1			482765	06/18/18 11:22	VS	TAL IRV
Total/NA	Analysis	SM 2510B		1			481329	06/13/18 08:08	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	480303	06/05/18 08:48	XL	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1			479987	06/03/18 14:36	CMM	TAL IRV

Client Sample ID: EP EAST&WEST Composite

Lab Sample ID: 440-212603-8
Date Collected: 05/31/18 11:15
Matrix: Water
Date Received: 06/01/18 17:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2000			479778	06/01/18 23:24	NTN	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	481593	06/12/18 11:06	MN1	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		5			482788	06/18/18 18:14	VS	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	481658	06/12/18 14:32	DB	TAL IRV
Total/NA	Analysis	245.1		1			481764	06/12/18 22:34	P1P	TAL IRV
Total/NA	Analysis	SM 2510B		20			481329	06/13/18 08:08	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	480303	06/05/18 08:48	XL	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

QC Sample Results

Client: Northstar Environmental Remediation
Project/Site: AltaGas - Blythe

TestAmerica Job ID: 440-212603-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-479778/6
Matrix: Water
Analysis Batch: 479778

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50		mg/L			06/01/18 11:31	1
Sulfate	ND		0.50		mg/L			06/01/18 11:31	1

Lab Sample ID: LCS 440-479778/5
Matrix: Water
Analysis Batch: 479778

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.74		mg/L		95	90 - 110
Sulfate	5.00	4.68		mg/L		94	90 - 110

Lab Sample ID: 440-212585-S-12 MS
Matrix: Water
Analysis Batch: 479778

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	91	E	5.00	97.7	E 4	mg/L		126	80 - 120
Sulfate	19		5.00	24.3		mg/L		114	80 - 120

Lab Sample ID: 440-212585-S-12 MSD
Matrix: Water
Analysis Batch: 479778

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	91	E	5.00	97.8	E 4	mg/L		127	80 - 120	0	20
Sulfate	19		5.00	24.3		mg/L		113	80 - 120	0	20

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 440-481593/1-A
Matrix: Water
Analysis Batch: 482765

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 481593

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010		mg/L		06/12/18 11:06	06/18/18 10:51	1
Arsenic	ND		0.010		mg/L		06/12/18 11:06	06/18/18 10:51	1
Barium	ND		0.010		mg/L		06/12/18 11:06	06/18/18 10:51	1
Cadmium	ND		0.0050		mg/L		06/12/18 11:06	06/18/18 10:51	1
Chromium	ND		0.0050		mg/L		06/12/18 11:06	06/18/18 10:51	1
Cobalt	ND		0.010		mg/L		06/12/18 11:06	06/18/18 10:51	1
Copper	ND		0.010		mg/L		06/12/18 11:06	06/18/18 10:51	1
Lead	ND		0.0050		mg/L		06/12/18 11:06	06/18/18 10:51	1
Nickel	ND		0.010		mg/L		06/12/18 11:06	06/18/18 10:51	1
Selenium	ND		0.010		mg/L		06/12/18 11:06	06/18/18 10:51	1
Zinc	ND		0.020		mg/L		06/12/18 11:06	06/18/18 10:51	1

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: LCS 440-481593/2-A
Matrix: Water
Analysis Batch: 482765

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 481593

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.477		mg/L		95	85 - 115
Arsenic	0.500	0.464		mg/L		93	85 - 115
Barium	0.500	0.472		mg/L		94	85 - 115
Cadmium	0.500	0.472		mg/L		94	85 - 115
Chromium	0.500	0.473		mg/L		95	85 - 115
Cobalt	0.500	0.471		mg/L		94	85 - 115
Copper	0.500	0.465		mg/L		93	85 - 115
Lead	0.500	0.473		mg/L		95	85 - 115
Nickel	0.500	0.473		mg/L		95	85 - 115
Selenium	0.500	0.471		mg/L		94	85 - 115
Zinc	0.500	0.472		mg/L		94	85 - 115

Lab Sample ID: 440-212603-1 MS
Matrix: Water
Analysis Batch: 482765

Client Sample ID: MW-3-5-31-18
Prep Type: Total Recoverable
Prep Batch: 481593

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		0.500	0.490		mg/L		98	70 - 130
Arsenic	0.0089	J	0.500	0.492		mg/L		97	70 - 130
Barium	0.022		0.500	0.493		mg/L		94	70 - 130
Cadmium	ND		0.500	0.457		mg/L		91	70 - 130
Chromium	ND		0.500	0.475		mg/L		95	70 - 130
Cobalt	ND		0.500	0.464		mg/L		93	70 - 130
Copper	ND		0.500	0.490		mg/L		98	70 - 130
Lead	ND		0.500	0.460		mg/L		92	70 - 130
Nickel	ND		0.500	0.461		mg/L		92	70 - 130
Selenium	ND		0.500	0.468		mg/L		94	70 - 130
Zinc	ND		0.500	0.463		mg/L		93	70 - 130

Lab Sample ID: 440-212603-1 MSD
Matrix: Water
Analysis Batch: 482765

Client Sample ID: MW-3-5-31-18
Prep Type: Total Recoverable
Prep Batch: 481593

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		0.500	0.481		mg/L		96	70 - 130	2	20
Arsenic	0.0089	J	0.488	0.484		mg/L		97	70 - 130	2	20
Barium	0.022		0.488	0.485		mg/L		95	70 - 130	2	20
Cadmium	ND		0.488	0.451		mg/L		92	70 - 130	1	20
Chromium	ND		0.488	0.467		mg/L		96	70 - 130	2	20
Cobalt	ND		0.488	0.456		mg/L		93	70 - 130	2	20
Copper	ND		0.488	0.482		mg/L		99	70 - 130	2	20
Lead	ND		0.488	0.451		mg/L		92	70 - 130	2	20
Nickel	ND		0.488	0.452		mg/L		93	70 - 130	2	20
Selenium	ND		0.488	0.462		mg/L		95	70 - 130	1	20
Zinc	ND		0.488	0.455		mg/L		93	70 - 130	2	20

QC Sample Results

Client: Northstar Environmental Remediation
Project/Site: AltaGas - Blythe

TestAmerica Job ID: 440-212603-1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 440-481658/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 481764 — **Prep Batch: 481658**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		06/12/18 14:32	06/12/18 22:21	1

Lab Sample ID: LCS 440-481658/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 481764 — **Prep Batch: 481658**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00800	0.00763		mg/L		95	85 - 115		

Lab Sample ID: 440-213147-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 481764 — **Prep Batch: 481658**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	0.00059		0.00800	0.00673		mg/L		77	70 - 130		

Lab Sample ID: 440-213147-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 481764 — **Prep Batch: 481658**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00059		0.00800	0.00685		mg/L		78	70 - 130	2	20

Lab Sample ID: MRL 440-481237/4-C — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 481764 — **Prep Batch: 481694**

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			10.0	10.6		ug/L		106	10 - 200		

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 440-481329/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 481329

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		1.0		umhos/cm			06/13/18 08:00	1

Lab Sample ID: LCS 440-481329/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 481329

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Specific Conductance			953	1000		umhos/cm		105	90 - 110		

Method: SM 2510B - Conductivity, Specific Conductance (Continued)

Lab Sample ID: 440-212603-1 DU — **Client Sample ID: MW-3-5-31-18**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 481329

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Specific Conductance	1700			1720		umhos/cm				0.2	5

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 440-480303/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 480303

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10		mg/L			06/05/18 08:48	1

Lab Sample ID: LCS 440-480303/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 480303

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids			1000	980		mg/L		98	90 - 110		

Lab Sample ID: 440-212603-1 DU — **Client Sample ID: MW-3-5-31-18**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 480303

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	1100			1120		mg/L				2	5

Method: SM 4500 H+ B - pH

Lab Sample ID: 440-212603-1 DU — **Client Sample ID: MW-3-5-31-18**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 479987

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	8.1	HF		8.0		SU				0.2	2
Temperature	22.8	HF		22.7		Degrees C				0.4	2

QC Association Summary

Client: Northstar Environmental Remediation
Project/Site: AltaGas - Blythe

TestAmerica Job ID: 440-212603-1

HPLC/IC

Analysis Batch: 479778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-212603-1	MW-3-5-31-18	Total/NA	Water	300.0	
440-212603-2	MW-2-5-31-18	Total/NA	Water	300.0	
440-212603-3	MW-1-5-31-18	Total/NA	Water	300.0	
440-212603-4	MW-4-5-31-18	Total/NA	Water	300.0	
440-212603-5	DUP-5-31-18	Total/NA	Water	300.0	
440-212603-8	EP EAST&WEST Composite	Total/NA	Water	300.0	
MB 440-479778/6	Method Blank	Total/NA	Water	300.0	
LCS 440-479778/5	Lab Control Sample	Total/NA	Water	300.0	
440-212585-S-12 MS	Matrix Spike	Total/NA	Water	300.0	
440-212585-S-12 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Leach Batch: 481237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 440-481237/4-C	Lab Control Sample	Total/NA	Water	1311	

Prep Batch: 481593

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-212603-1	MW-3-5-31-18	Total Recoverable	Water	200.2	
440-212603-2	MW-2-5-31-18	Total Recoverable	Water	200.2	
440-212603-3	MW-1-5-31-18	Total Recoverable	Water	200.2	
440-212603-4	MW-4-5-31-18	Total Recoverable	Water	200.2	
440-212603-5	DUP-5-31-18	Total Recoverable	Water	200.2	
440-212603-8	EP EAST&WEST Composite	Total Recoverable	Water	200.2	
MB 440-481593/1-A	Method Blank	Total Recoverable	Water	200.2	
LCS 440-481593/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
440-212603-1 MS	MW-3-5-31-18	Total Recoverable	Water	200.2	
440-212603-1 MSD	MW-3-5-31-18	Total Recoverable	Water	200.2	

Prep Batch: 481658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-212603-8	EP EAST&WEST Composite	Total/NA	Water	245.1	
MB 440-481658/1-A	Method Blank	Total/NA	Water	245.1	
LCS 440-481658/2-A	Lab Control Sample	Total/NA	Water	245.1	
440-213147-A-1-B MS	Matrix Spike	Total/NA	Water	245.1	
440-213147-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

Prep Batch: 481694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 440-481237/4-C	Lab Control Sample	Total/NA	Water	7470A	481237

Analysis Batch: 481764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-212603-8	EP EAST&WEST Composite	Total/NA	Water	245.1	481658
MB 440-481658/1-A	Method Blank	Total/NA	Water	245.1	481658
LCS 440-481658/2-A	Lab Control Sample	Total/NA	Water	245.1	481658
MRL 440-481237/4-C	Lab Control Sample	Total/NA	Water	245.1	481694
440-213147-A-1-B MS	Matrix Spike	Total/NA	Water	245.1	481658
440-213147-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	481658

Metals (Continued)

Analysis Batch: 482765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-212603-1	MW-3-5-31-18	Total Recoverable	Water	200.7 Rev 4.4	481593
440-212603-2	MW-2-5-31-18	Total Recoverable	Water	200.7 Rev 4.4	481593
440-212603-3	MW-1-5-31-18	Total Recoverable	Water	200.7 Rev 4.4	481593
440-212603-4	MW-4-5-31-18	Total Recoverable	Water	200.7 Rev 4.4	481593
440-212603-5	DUP-5-31-18	Total Recoverable	Water	200.7 Rev 4.4	481593
MB 440-481593/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	481593
LCS 440-481593/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	481593
440-212603-1 MS	MW-3-5-31-18	Total Recoverable	Water	200.7 Rev 4.4	481593
440-212603-1 MSD	MW-3-5-31-18	Total Recoverable	Water	200.7 Rev 4.4	481593

Analysis Batch: 482788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-212603-8	EP EAST&WEST Composite	Total Recoverable	Water	200.7 Rev 4.4	481593

General Chemistry

Analysis Batch: 479987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-212603-1	MW-3-5-31-18	Total/NA	Water	SM 4500 H+ B	
440-212603-2	MW-2-5-31-18	Total/NA	Water	SM 4500 H+ B	
440-212603-3	MW-1-5-31-18	Total/NA	Water	SM 4500 H+ B	
440-212603-4	MW-4-5-31-18	Total/NA	Water	SM 4500 H+ B	
440-212603-5	DUP-5-31-18	Total/NA	Water	SM 4500 H+ B	
440-212603-1 DU	MW-3-5-31-18	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 480303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-212603-1	MW-3-5-31-18	Total/NA	Water	SM 2540C	
440-212603-2	MW-2-5-31-18	Total/NA	Water	SM 2540C	
440-212603-3	MW-1-5-31-18	Total/NA	Water	SM 2540C	
440-212603-4	MW-4-5-31-18	Total/NA	Water	SM 2540C	
440-212603-5	DUP-5-31-18	Total/NA	Water	SM 2540C	
440-212603-8	EP EAST&WEST Composite	Total/NA	Water	SM 2540C	
MB 440-480303/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-480303/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-212603-1 DU	MW-3-5-31-18	Total/NA	Water	SM 2540C	

Analysis Batch: 481329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-212603-1	MW-3-5-31-18	Total/NA	Water	SM 2510B	
440-212603-2	MW-2-5-31-18	Total/NA	Water	SM 2510B	
440-212603-3	MW-1-5-31-18	Total/NA	Water	SM 2510B	
440-212603-4	MW-4-5-31-18	Total/NA	Water	SM 2510B	
440-212603-5	DUP-5-31-18	Total/NA	Water	SM 2510B	
440-212603-8	EP EAST&WEST Composite	Total/NA	Water	SM 2510B	
MB 440-481329/3	Method Blank	Total/NA	Water	SM 2510B	
LCS 440-481329/4	Lab Control Sample	Total/NA	Water	SM 2510B	
440-212603-1 DU	MW-3-5-31-18	Total/NA	Water	SM 2510B	

Definitions/Glossary

Client: Northstar Environmental Remediation
Project/Site: AltaGas - Blythe

TestAmerica Job ID: 440-212603-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Northstar Environmental Remediation
Project/Site: AltaGas - Blythe

TestAmerica Job ID: 440-212603-1

Laboratory: TestAmerica Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-18 *
Arizona	State Program	9	AZ0671	10-14-18
California	LA Cty Sanitation Districts	9	10256	06-30-18 *
California	State Program	9	CA ELAP 2706	06-30-18 *
Guam	State Program	9	Cert. No. 17-003R	01-23-19
Hawaii	State Program	9	N/A	01-29-19
Kansas	NELAP	7	E-10420	07-31-18
Nevada	State Program	9	CA015312018-1	07-31-18
New Mexico	State Program	6	N/A	01-29-19
Oregon	NELAP	10	4028	01-29-19
USDA	Federal		P330-15-00184	07-08-18 *
Washington	State Program	10	C900	09-03-18

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
Phone: 949.261.1022 Fax:

Chain of Custody Record 210444

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact			
Company Name: NorthStar Environmental	Project Manager: Ralph DelaParra	Site Contact:	Date: 6-1-18
Address: 26225 Enterprise Ct	Tel/Fax:	Lab Contact:	Carrier:
City/State/Zip: ~~CA~~ Lake Forest, CA 92630	Analysis Turnaround Time: ☐ CALENDAR DAYS ☐ WORKING DAYS		
Phone: (949) 580-2800	TAT if different from Below ____		
Fax:	☒ 2 weeks		
Project Name: Alta Gas - Blythe	☐ 1 week		
Site:	☐ 2 days		
P O #	☐ 1 day		

COC No: 1 of 1 COCs
Sampler
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	PH	Chloride	TDS	Specific Conductance	Sulfate	Selenium	Antimony, Arsenic	Barium, Cadmium	Total Chromium	Cobalt, Copper	Lead, Mercury	Nickel, Zinc	Sample Specific Notes
MW-3-5-31-18	5-31-18	0725	G	GW	1	N	N	X	X	X	X	X	X							
MW-2 "		0830		"	1			X	X	X	X	X	X							
MW-1 "		0940		"	1			X	X	X	X	X	X							
MW-4 "		1100		"	1			X	X	X	X	X	X							
Dup - "		—		"	1			X	X	X	X	X	X							
EP - "		1115		H2O	2				X	X	X	X	X	X	X	X	X	X	X	Composite EP East & West + Report as EP-5-31-18 @1115

440-212603 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact ☐ Yes ☐ No | Custody Seal No | Cooler Temp. (°C) Obs'd 2.8 Corr'd 2.8 Therm ID No SC6

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
[signature]	NorthStar	6/1/18 1700			
Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Relinquished by	Company	Date/Time	Received in Laboratory by	Company TA IRV	Date/Time 6/01/18 1700

1/9 6/1

6/19/2018

Login Sample Receipt Checklist

Client: Northstar Environmental Remediation

Job Number: 440-212603-1

Login Number: 212603
List Number: 1
Creator: Garcia, Veronica G

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

SECOND SEMI-ANNUAL 2018 MONITORING REPORT BLYTHE ENERGY PROJECT BLYTHE, CALIFORNIA

Submitted by:
Blythe Energy Inc.
385 North Buck Boulevard
Blythe, California 92225
(760) 922-9950

Submittal to:
The California Regional Water Quality Control Board
Colorado River Basin Region
73-720 Fred Waring Drive, Suite 100
Palm Desert, California 92260

JANUARY 2019

AltaGas | Blythe Operations Inc.

Ramon Campos
Blythe Operations Inc.
385 North Buck Blvd.
Blythe, California 92225-3301
ramon.campos@altagas,ca
760.921.1364

January 25, 2019

☑ Mr. Herb Jackson
Engineering Geologist Mohave Desert
California Regional Water Quality Control Board
Colorado River Basin Region
73-720 Fred Waring Drive, Suite 100
Palm Desert, California 92260

via: Electronic Submission

Subject: Second Semi-Annual 2018 Monitoring Report
Monitoring and Reporting Program Board Order No. R7-2002-0012
Blythe Energy Project, Blythe, California

Dear Mr. Jackson:

Blythe Energy Inc. is pleased to present this report containing field data, laboratory analytical results, and statistical analyses for sampling conducted during the last two quarters of 2018 at our Blythe, California facility. Field sampling was performed under the terms of the California Regional Water Quality Control Board – Colorado River Basin Region (RWQCB) Board Order Number R7-2002-0012. Field sampling was performed by Northstar Environmental Remediation (Northstar) of Lake Forest, California.

Data within this report summarizes the sampling activities that occurred during the last two quarters of 2018. Laboratory data sheets and chain-of-custody records are also included as an appendix to this report.

If you should have any questions regarding this report, please contact Ramon Campos, Compliance Manager at (760) 921-1364

Sincerely,

Blythe Energy Inc.

Steve Brussee
Sr. Manager Environment and Safety - Power

cc: Ramon Campos (Blythe Energy Inc.)
CDFG
USFWS

wood.

SECOND SEMI-ANNUAL 2018 MONITORING REPORT
BLYTHE ENERGY INC.
BLYTHE, CALIFORNIA

January 25, 2019

Prepared for:

Blythe Energy Inc.
385 North Buck Boulevard
Blythe, California 92225

Prepared by:

Wood Environment & Infastructure Solutions, Inc.
3560 Hyland Avenue, Ste. 100
Costa Mesa, California 92626
(949) 642-0245

Project No. NB11160982

PROFESSIONAL GEOLOGIST
DUANE G. PAUL
No. 414
Exp. 12/31/19
CERTIFIED HYDROGEOLOGIST
STATE OF CALIFORNIA

Duane G. Paul, PG 6336, CHG 414
Principal Hydrogeologist

SECOND SEMI-ANNUAL 2018 MONITORING REPORT
BLYTHE ENERGY INC.
BLYTHE, CALIFORNIA

Submitted by:

Blythe Energy Inc.
385 North Buck Boulevard
Blythe, California 92225

Steve Brussee
Sr. Manager Environment and Safety – Power
Agent for Blythe Energy Inc.

TABLE OF CONTENTS

1. Facility Information and Declaration

2. Monitoring

3. Reference Maps

4. Quarterly Potentiometric Surface Maps

5. Analytical Summary Tables

6. Statistical Analysis

7. Lysimeter Test Records

8. Evaporation Pond Sampling Records

9. Well Sampling Records

10. Leachate Collection and Recovery System (LCRS) & Weekly Lysimeter Records

APPENDIX

Appendix A Laboratory Analytical Data Sheets

SECOND SEMI-ANNUAL 2018 MONITORING REPORT

SECTION 1
FACILITY INFORMATION AND DECLARATION

FACILITY INFORMATION

Facility Contact:

Ramon Campos
Compliance Manager
Blythe Energy Inc.

Telephone:

(760) 921-1364

Address:

Blythe Energy Inc.
385 North Buck Boulevard
Blythe, California 92225

Monitoring and Reporting Program:

California Regional Water Quality Control Board Order No. R7-2002-0012

First Semi-Annual 2018 Monitoring Report
Blythe Energy Inc.
Blythe, California
January 25, 2019

Declaration

I declare under the penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information. I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

Digitally signed by Steven Brussee
DN: cn=Steven Brussee, o=ASUS, ou=AltaGas Services (U.S.) Inc., email=steven.brussee@altagas.ca, c=US
Date: 2019.01.25 08:12:53 -08'00'

Steve Brussee
Sr. Manager Environment and Safety – Power
Agent for Blythe Energy Inc.

SECOND SEMI-ANNUAL 2018 MONITORING REPORT

SECTION 2
MONITORING

MONITORING

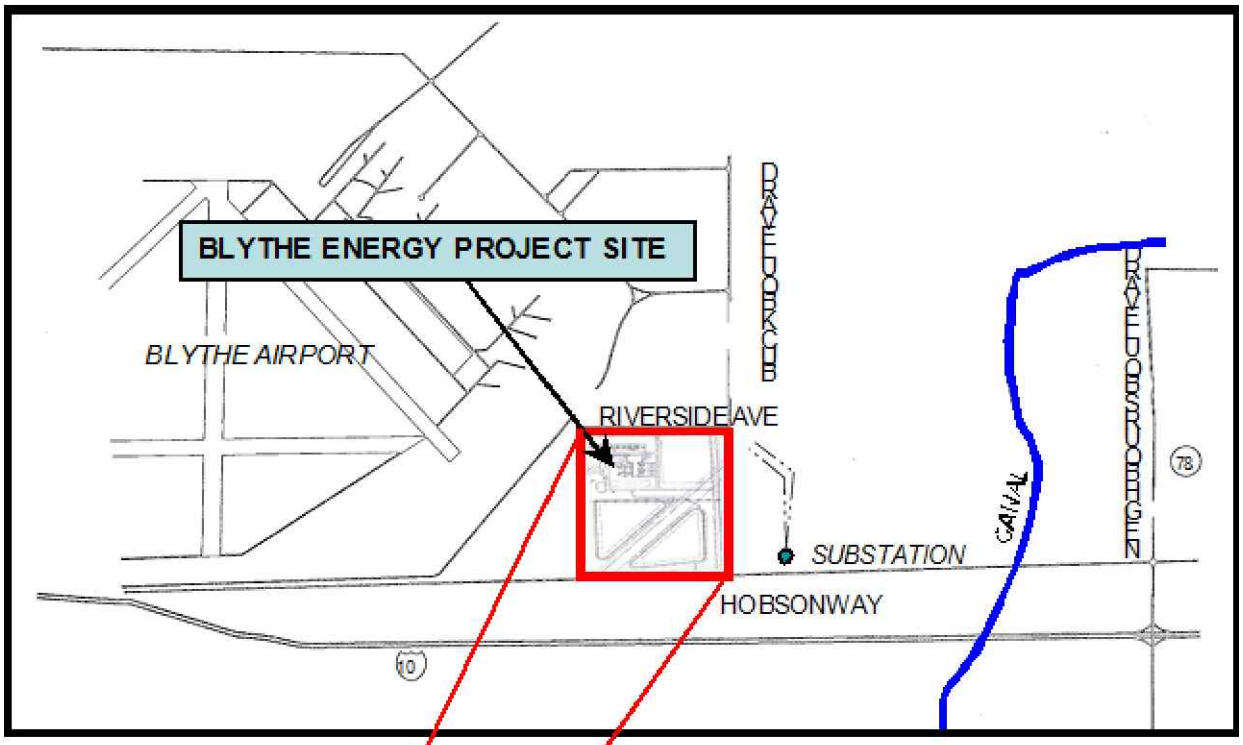
The Second Semi-Annual 2018 monitoring event was conducted in compliance with the California Regional Water Quality Control Board- Lahontan Region (RWQCB) Board Order No. R7-2002-012 Waste Discharge Requirements (WDRs) and associated Monitoring and Reporting Program (MRP). Third and Fourth Quarter 2018 groundwater monitoring was performed by Northstar Environmental Remediation (Northstar) of Lake Forest, California on, September 13, 2018 and October 30,2018 (MW-1 Resample), and December 3, 2018 respectively.

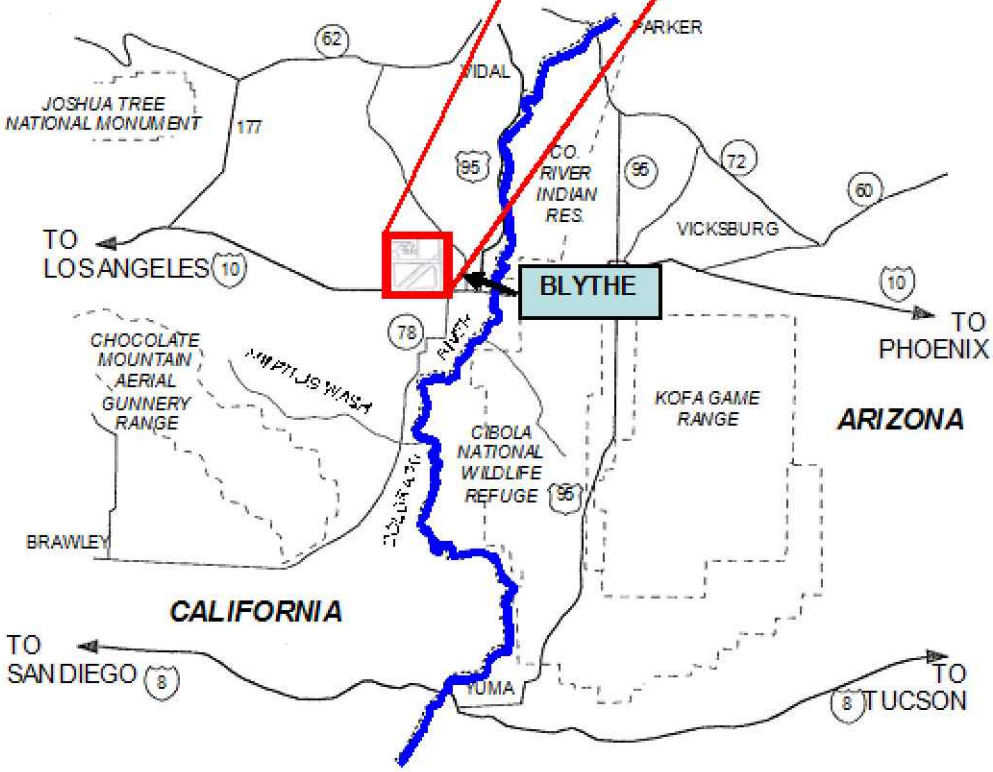
Site reference maps and First through Fourth Quarter 2018 potentiometric surface maps are included in Sections 3 and 4. Groundwater quality laboratory analytical data is presented in Section 5 and the statistical analysis is presented in Section 6. The records for the lysimeter, evaporation pond, monitoring well, and the leakage collection recovery sump (LCRS) are presented in Sections 7 through 10. Laboratory analytical data sheets and chain-of-custody reports are also included in Appendix A.

wood.

SECOND SEMI-ANNUAL 2018 MONITORING REPORT

SECTION 3
REFERENCE MAPS





Not To Scale

SITE LOCATION
Blythe Energy Inc.
Blythe, California

By: pah	Date: 01/25/19	Project No. NB11160982
wood.		Figure 3-1

Plot Date: 1/23/2019 2:01:47 PM, Plotted by: pat.herring
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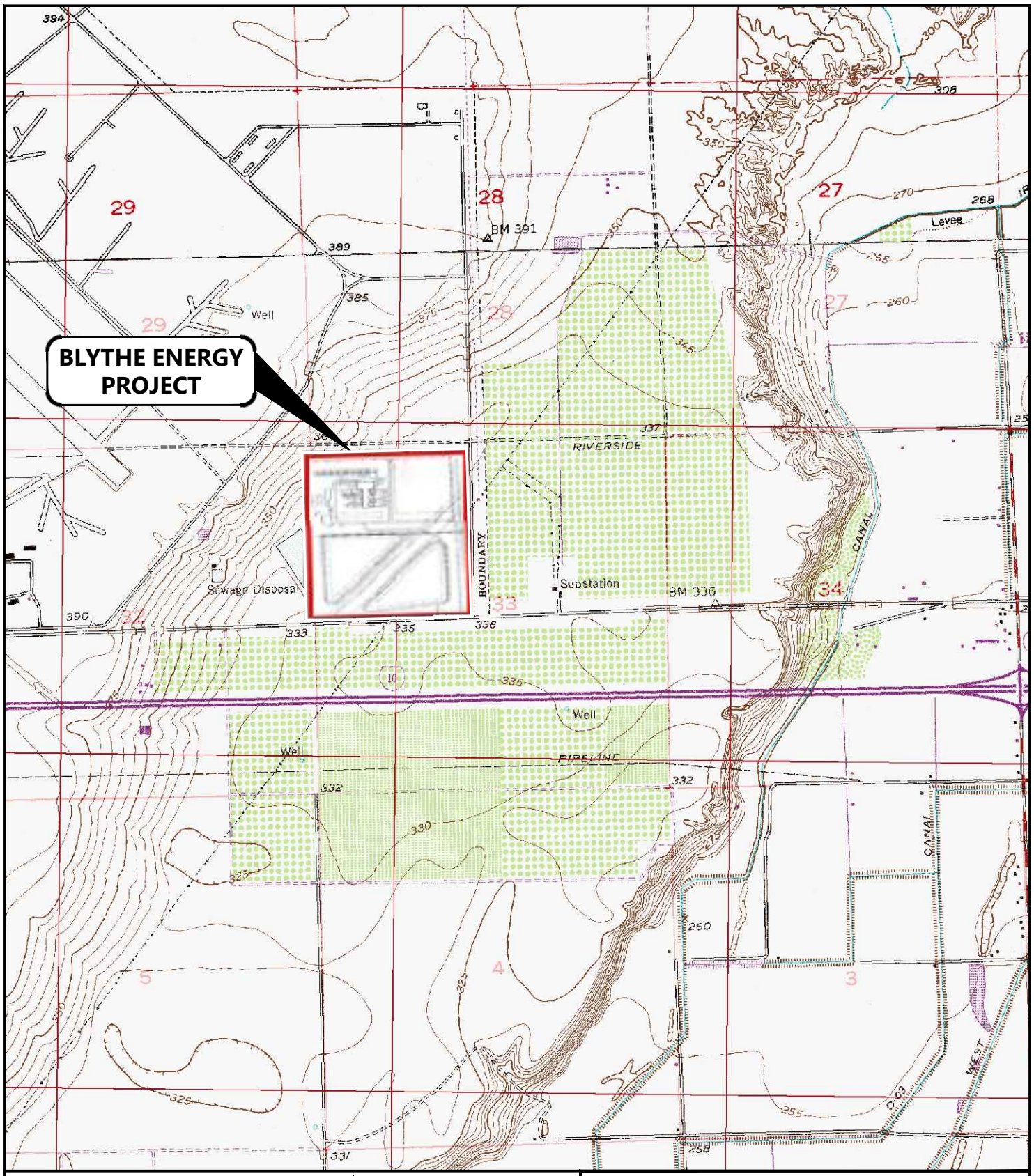

0 1000 2000

Approximate Scale in Feet

Basemap modified from U.S.G.S. 7.5 minute quandragle map Ripley 1952, California (photo-revised 1975).

SITE TOPOGRAPHY
Blythe Energy Inc.
Blythe, California

By: pah	Date: 01/25/19	Project No. NB11160982
wood.		Figure 3-2

Plot Date: 1/23/2019 2:00:39 PM, Plotted by: pat.herring
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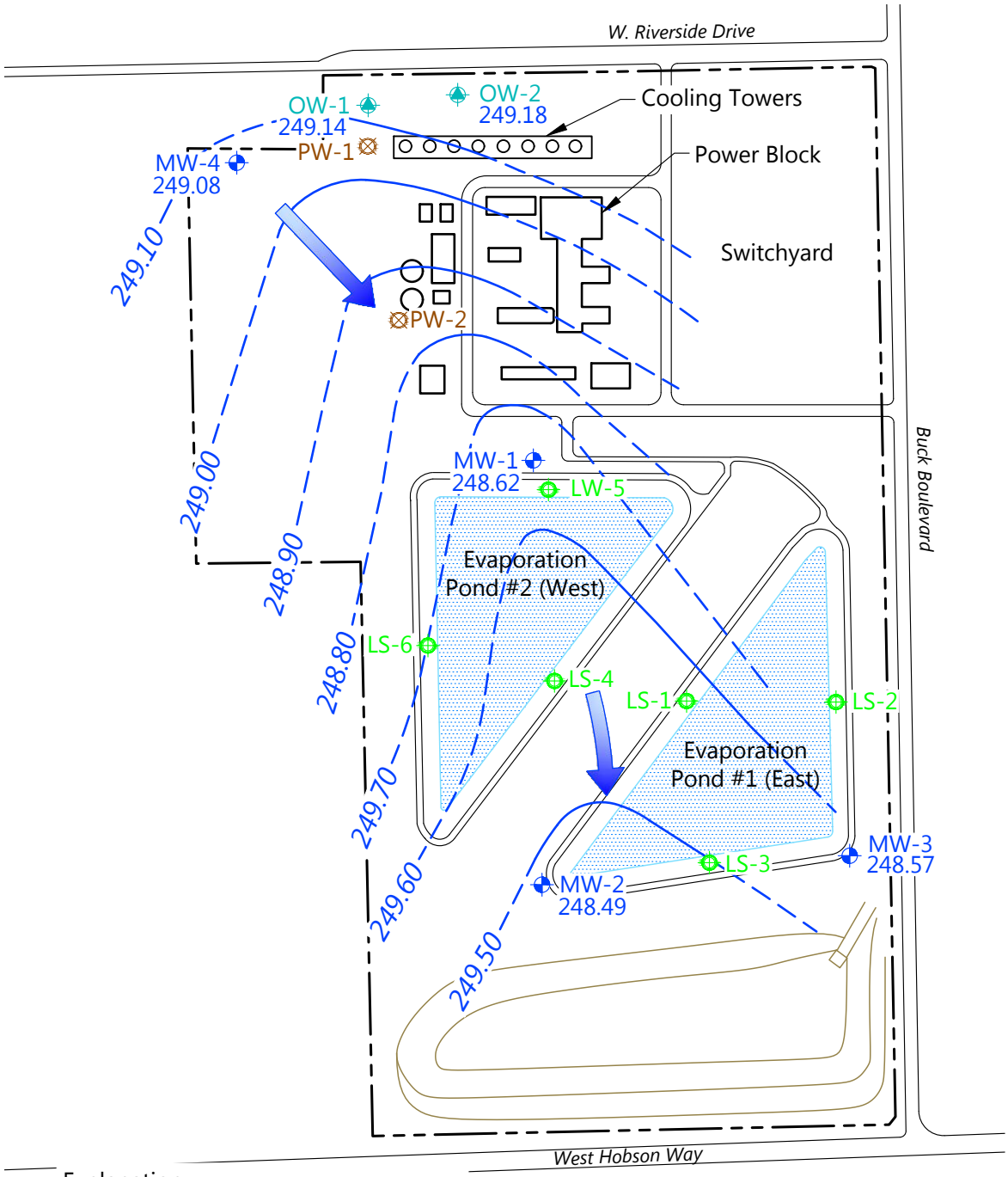
wood.

SECOND SEMI-ANNUAL 2018 MONITORING REPORT

SECTION 4
QUARTERLY POTENTIOMETRIC SURFACE MAPS



Explanation

MW-2 248.49 — Monitoring well location, designation, and groundwater elevation in feet above mean sea level (MSL)

OW-2 — Observation well location,designation, and groundwater elevation in feet above MSL

LS-6 — Lysimeter location and designation

PW-1 — Production well location and designation

Approximate site boundary

249.10 — Groundwater elevation contour in feet above MSL, dashed where inferred

Approximate groundwater flow direction

0 200 400

Approximate Scale in Feet

Basemap modified from U.S.G.S. 7.5 minute quadrangle map Ripley 1952, California (photo-revised 1975) and aerial photograph from Bing Maps (Microsoft Corporation© 2011 and DigitalGlobe©, 2010.

POTENTIOMETRIC SURFACE
MARCH 24, 2018
Blythe Energy Inc.
Blythe, California

By: pah	Date: 01/25/19	Project No. NB11160982
wood.		Figure 4-1

Plot Date: 1/24/2019 1:57:00 PM, Plotted by: pat.herring
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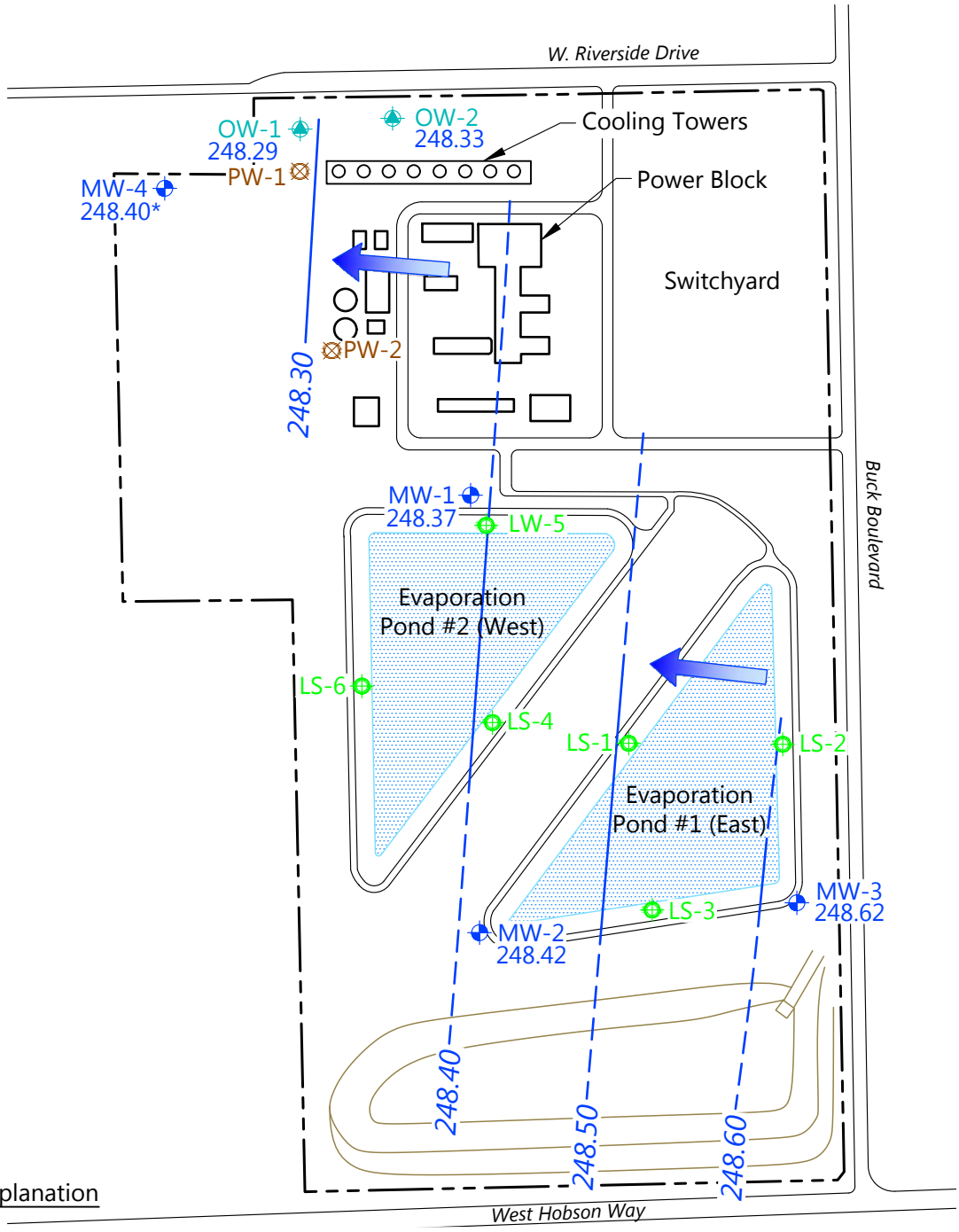

Explanation

MW-2 248.42 — Monitoring well location, designation, and groundwater elevation in feet above mean sea level (MSL)

OW-2 — Observation well location,designation, and groundwater elevation in feet above MSL

LS-6 — Lysimeter location and designation

PW-1 — Production well location and designation

Approximate site boundary

* Groundwater may be affected by local pumping; elevation data not included in interpreted contours

248.60 — Groundwater elevation contour in feet above MSL, dashed where inferred

Approximate groundwater flow direction

0 200 400
Approximate Scale in Feet

Basemap modified from U.S.G.S. 7.5 minute quadrangle map Ripley 1952, California (photo-revised 1975) and aerial photograph from Bing Maps (Microsoft Corporation© 2011 and DigitalGlobe©, 2010.

POTENTIOMETRIC SURFACE
MAY 31, 2018
Blythe Energy Inc.
Blythe, California

By: pah	Date: 01/25/19	Project No. NB11160982
wood.		Figure 4-2

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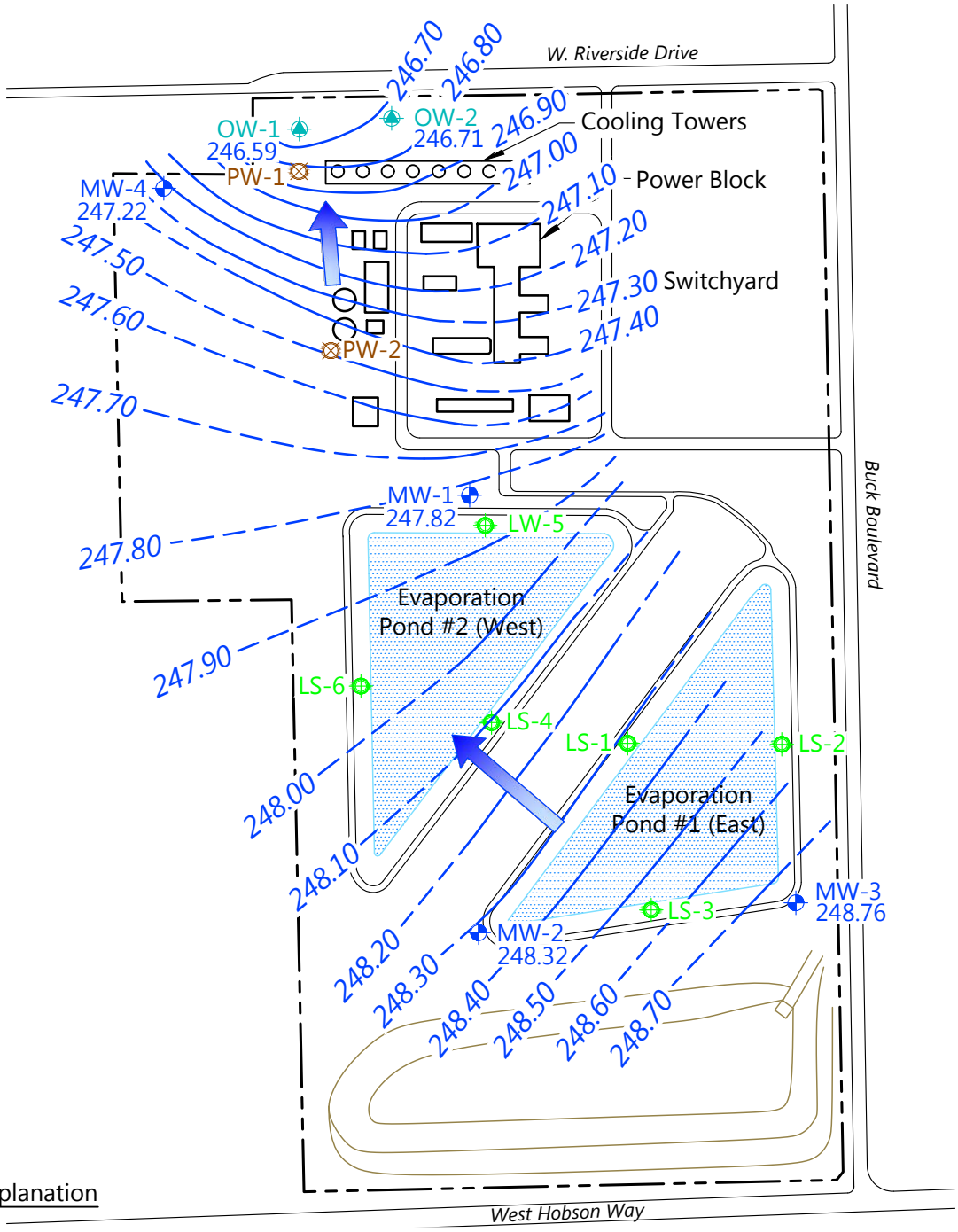

Explanation

MW-2 248.32 — Monitoring well location, designation, and groundwater elevation in feet above mean sea level (MSL)

OW-2 — Observation well location,designation, and groundwater elevation in feet above MSL

LS-6 — Lysimeter location and designation

PW-1 — Production well location and designation

Approximate site boundary

248.70 — Groundwater elevation contour in feet above MSL, dashed where inferred

Approximate groundwater flow direction

0 200 400

Approximate Scale in Feet

Basemap modified from U.S.G.S. 7.5 minute quadrangle map Ripley 1952, California (photo-revised 1975) and aerial photograph from Bing Maps (Microsoft Corporation© 2011 and DigitalGlobe©, 2010.

POTENTIOMETRIC SURFACE
SEPTEMBER 13, 2018
Blythe Energy Inc.
Blythe, California

By: pah	Date: 01/25/19	Project No. NB11160982
wood.		Figure 4-3

Plot Date: 1/23/2019 4:37:23 PM, Plotted by: pat.herring
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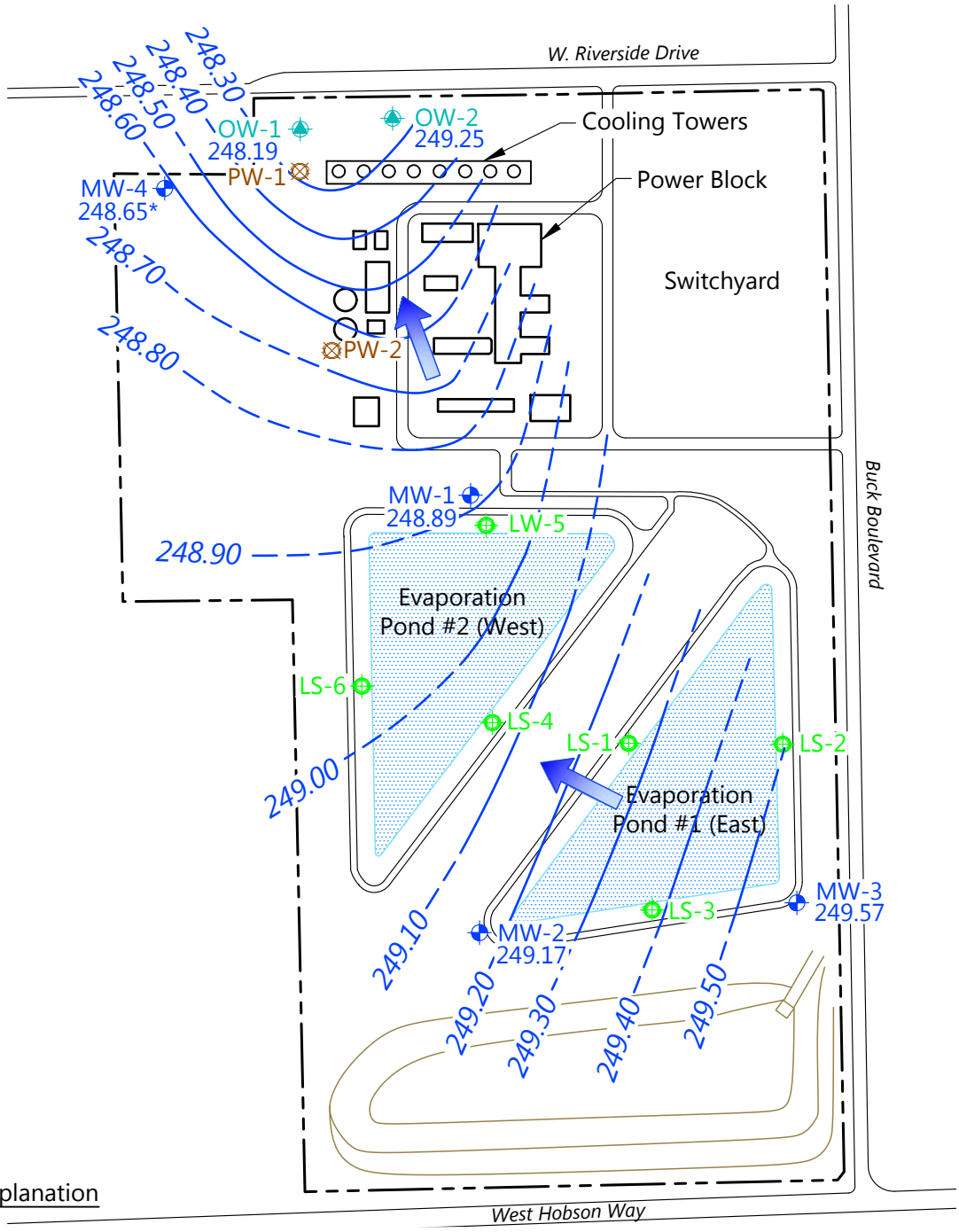

Explanation

MW-2 249.17 — Monitoring well location, designation, and groundwater elevation in feet above mean sea level (MSL)

OW-2 — Observation well location,designation, and groundwater elevation in feet above MSL

LS-6 — Lysimeter location and designation

PW-1 — Production well location and designation

Approximate site boundary

* Groundwater may be affected by local pumping; elevation data not included in interpreted contours

249.50 — Groundwater elevation contour in feet above MSL, dashed where inferred

Approximate groundwater flow direction

0 200 400

Approximate Scale in Feet

Basemap modified from U.S.G.S. 7.5 minute quadrangle map Ripley 1952, California (photo-revised 1975) and aerial photograph from Bing Maps (Microsoft Corporation© 2011 and DigitalGlobe©, 2010.

POTENTIOMETRIC SURFACE
DECEMBER 3, 2018
Blythe Energy Inc.
Blythe, California

By: pah	Date: 01/25/19	Project No. NB11160982
wood.		Figure 4-4

Plot Date: 1/23/2019 4:44:33 PM, Plotted by: pat.herring
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SECOND SEMI-ANNUAL 2018 MONITORING REPORT

SECTION 5
ANALYTICAL SUMMARY TABLES

TABLE 5-1 SUMMARY OF FIRST SEMI-ANNUAL 2018 COMPOSITE EVAPORATION POND WATER LABORATORY ANALYTICAL RESULTS

Laboratory Analyte	Method	Detection Limit (mg/L)	Result (mg/L)
Antimony	EPA 200.7	0.050	ND
Arsenic	EPA 200.7	0.050	0.12
Barium	EPA 200.7	0.050	0.40
Cadmium	EPA 200.7	0.025	ND
Total Chromium	EPA 200.7	0.025	ND
Cobalt	EPA 200.7	0.050	ND
Copper	EPA 200.7	0.050	ND
Lead	EPA 200.7	0.025	ND
Mercury	EPA 245.1	0.00020	ND
Nickel	EPA 200.7	0.050	0.062
Selenium	EPA 200.7	0.050	0.47
Zinc	EPA 200.7	0.10	0.071 J
Sulfate	EPA 300.0	1000	34,000
Chloride	EPA 300.0	1000	28,000
Total Dissolved Solids	SM2540C	1000	90,000
Specific Conductance	SM2510B	20 µmhos/cm	150,000
pH	SM4500-H,B	0.100 pH units	NA

Parameters (Field)	Units	Value
Water Temperature	Degrees Celsius	33.4 – 33.9
pH	pH Units	8.61 – 8.79
Specific Conductance	ms/cm	>20.00

Water samples collected on May 31, 2018 from both the East and West Ponds.

Notes:
mg/L = milligrams per liter
ND = Not detected at method detection limit indicated
ms/cm = Millisiemens per centimeter
µmhos/cm = Micromhos per centimeter
NA = Not Available
HF = Field holding time of 15 minutes. Test performed by laboratory at client's request.
** = MS and/or MSD recovery is outside acceptance limits

TABLE 5-1 SUMMARY OF SECOND SEMI-ANNUAL 2018 COMPOSITE EVAPORATION POND WATER LABORATORY ANALYTICAL RESULTS

Laboratory Analyte	Method	Detection Limit (mg/L)	Result (mg/L)
Antimony	EPA 200.7	0.020	0.13
Arsenic	EPA 200.7	0.020	0.14
Barium	EPA 200.7	0.020	0.34
Cadmium	EPA 200.7	0.010	ND
Total Chromium	EPA 200.7	0.010	ND
Cobalt	EPA 200.7	0.020	ND
Copper	EPA 200.7	0.020	0.041
Lead	EPA 200.7	0.010	ND
Mercury	EPA 245.1	0.00020	ND
Nickel	EPA 200.7	0.020	0.13
Selenium	EPA 200.7	0.020	0.36
Zinc	EPA 200.7	0.040	0.41
Sulfate	EPA 300.0	1000	21,000
Chloride	EPA 300.0	5000	43,000
Total Dissolved Solids	SM2540C	2000	120,000
Specific Conductance	SM2510B	20 µmhos/cm	180,000
pH	SM4500-H,B	0.1 pH units	NA

Parameters (Field)	Units	Value
Water Temperature	Degrees Celsius	14.9 – 15.1
pH	pH Units	8.03 – 8.41
Specific Conductance	ms/cm	>20.00

Water samples collected on December 3, 2018 from both the East and West Ponds.

Notes:
mg/L = milligrams per liter
ND = Not detected at method detection limit indicated
ms/cm = Millisiemens per centimeter
µmhos/cm = Micromhos per centimeter
NA = Not Available
HF = Field holding time of 15 minutes. Test performed by laboratory at client's request.
** = MS and/or MSD recovery is outside acceptance limits

TABLE 5-2 SUMMARY OF GROUNDWATER ANAYLTICAL RESULTS
FIRST QUARTER 2018

Analyte	EPA Method	Reporting Limit (mg/L)*	MW-1 (mg/L)	MW-2 (mg/L)	MW-3 (mg/L)	MW-4 (mg/L)	DUP (mg/L)
Chloride	300.0	10 - 25	220	140	140	270	220
Sulfate	300.0	25	390	400	390	340	390
Selenium	200.7	0.010	ND	ND	ND	ND	ND
Total Dissolved Solids	SM2540C	10 - 20	1,200	1,100	1,100	1,200	1,200
Specific Conductance (umhos/cm)	SM2510B	1.0	2,000	1,800	1,700	2,000	2,000

Field Parameters	Units	MW-1	MW-2	MW-3	MW-4	DUP
Static Water Level	Feet Below Measuring Point	88.65	89.28	89.65	93.42	NA
Stabilized pH	pH Units	7.15	7.13	6.68	7.20	NA
Stabilized Water Temperature	Degrees Celsius	31.0	30.2	24.2	32.5	NA

Groundwater samples collected on March 24, 2018.

Notes:
mg/L = milligrams per liter
NA = Not applicable
ND = Not detected
Dup = Duplicate sample of MW-1
* = Except where noted on laboratory analytical data sheets
** = Laboratory MS and/or MSD Recovery is outside of acceptable limits

TABLE 5-2 (Cont.) SUMMARY OF GROUNDWATER ANAYLTICAL RESULTS
SECOND QUARTER 2018

Analyte	EPA Method	Reporting Limit (mg/L)*	MW-1 (mg/L)	MW-2 (mg/L)	MW-3 (mg/L)	MW-4 (mg/L)	DUP (mg/L)
Chloride	300.0	25	220	140	140	270	220
Sulfate	300.0	25	390	380	360	310	390
Selenium	200.7	0.010	0.013	ND	ND	ND	0.010
Total Dissolved Solids	SM2540C	10	1,200	1,100	1,100	1,200	1,200
Specific Conductance (umhos/cm)	SM2510B	1.0	2,000	1,700	1,700	1,900	2,000

Field Parameters	Units	MW-1	MW-2	MW-3	MW-4	DUP
Static Water Level	Feet Below Measuring Point	88.90	89.35	89.60	94.10	NA
Stabilized pH	pH Units	7.21	7.51	6.86	7.27	NA
Stabilized Water Temperature	Degrees Celsius	30.7	29.2	24.9	33.1	NA

Groundwater samples collected on May 31, 2018.

Notes:
mg/L = milligrams per liter
NA = Not applicable
ND = Not detected
Dup = Duplicate sample of MW-1
* = Except where noted on laboratory analytical data sheets
** = Laboratory MS and/or MSD Recovery is outside of acceptable limits

TABLE 5-2 (Cont.) SUMMARY OF GROUNDWATER ANAYLTICAL RESULTS
THIRD QUARTER 2018

Analyte	EPA Method	Reporting Limit (mg/L)*	MW-1 (mg/L)	MW-2 (mg/L)	MW-3 (mg/L)	MW-4 (mg/L)	DUP (mg/L)
Chloride	300.0	10	220/200[1]	150	150	280	150
Sulfate	300.0	25/50[1]	430/410[1]	390	380	300	400
Selenium	200.7	0.010	ND/0.014[1]	ND	ND	ND	ND
Total Dissolved Solids	SM2540C	10	1,300/1,200[1]	1,100	1,100	1,100	1,100
Specific Conductance (umhos/cm)	SM2510B	1.0	1,900/1,700[1]	1,700	1,600	1,800	1700

Field Parameters	Units	MW-1	MW-2	MW-3	MW-4	DUP
Static Water Level	Feet Below Measuring Point	89.45/88.80[1]	89.45	89.46	95.28	NA
Stabilized pH	pH Units	7.27/7.11[1]	7.29	6.89	7.37	NA
Stabilized Water Temperature	Degrees Celsius	31.7/31.0[1]	29.7	23.7	34.6	NA

Groundwater samples collected on September 13, 2018.
[1] MW-1 was resampled October 30,2018

Notes:
mg/L = milligrams per liter
NA = Not applicable
ND = Not detected
Dup = Duplicate sample of MW-2
* = Except where noted on laboratory analytical data sheets
** = Laboratory MS and/or MSD Recovery is outside of acceptable limits

TABLE 5-2 (Cont.) SUMMARY OF GROUNDWATER ANAYLTICAL RESULTS
FOURTH QUARTER 2018

Analyte	EPA Method	Reporting Limit (mg/L)*	MW-1 (mg/L)	MW-2 (mg/L)	MW-3 (mg/L)	MW-4 (mg/L)	DUP (mg/L)
Chloride	300.0	25	230	150	140	260	220
Sulfate	300.0	25	380	380	380	280	380
Selenium	200.7	0.010	0.011	ND	ND	ND	ND
Total Dissolved Solids	SM2540C	10	1,200	1,100	1,100	1,100	1,200
Specific Conductance (umhos/cm)	SM2510B	1.0	1,600	1,500	1,500	1,500	1,600

Field Parameters	Units	MW-1	MW-2	MW-3	MW-4	DUP
Static Water Level	Feet Below Measuring Point	88.38	88.60	88.65	93.85	NA
Stabilized pH	pH Units	7.21	7.18	7.01	7.31	NA
Stabilized Water Temperature	Degrees Celsius	29.8	29.2	23.3	32.6	NA

Groundwater samples collected on December 3, 2018.

Notes:
mg/L = milligrams per liter
NA = Not applicable
ND = Not detected
Dup = Duplicate sample of MW-2
* = Except where noted on laboratory analytical data sheets
** = Laboratory MS and/or MSD Recovery is outside of acceptable limits

SECOND SEMI-ANNUAL 2018 MONITORING REPORT

SECTION 6
STATISTICAL ANALYSIS

STATISTICAL ANALYSIS – SECOND SEMI-ANNUAL 2018 MONITORING

Statistical analysis is used as an additional method for the detection of leakage from the surface impoundments. The statistical methods used for this program are those specified in the RWQCB Waste Discharge Requirements (WDR) and Monitoring and Reporting Programs (MRPs) of Order Number R7-2002-0012. Statistical analysis of groundwater quality data is based on intra-well rather than inter-well comparisons. The following section presents the technical approach and results of the statistical analysis for the 2018 Second Semi-Annual sampling event and the intra-well statistical analysis.

APPROACH AND RESULTS

The Upper Tolerance Limit (UTL) is recalculated for each well based on historical data. Concentrations from subsequent quarterly groundwater samples collected from each well are compared to the corresponding UTLs. An UTL was calculated for each of the four groundwater monitoring wells sampled during the Third and Fourth Quarters of 2018. Calculations of UTLs are presented in Table 6-1.

As shown in Table 6-2, there was an UTL exceedance for total dissolved solids (TDS) in the water sample collected from well MW-1 during the Third Quarter 2018 sampling event. The reported TDS value for MW-1 was 1300 mg/L. Consistent with evaluation of previous UTL exceedances, the laboratory was contacted to obtain the raw TDS value. The laboratory indicated that the raw TDS value for MW-1 was 1298 mg/L, a concentration which also exceeded the UTL for TDS.

In accordance with the MRP, MW-1 was resampled October 30, 2018. The reported TDS concentrations in the primary and duplicate groundwater samples collected from MW-1 were both 1200 mg/L, a concentration which does not exceed the UTL for TDS. As such, the UTL exceedance observed for TDS at MW-1 during the Third Quarter 2018 sampling event is not considered significant.

An UTL exceedance may indicate a potential impact to groundwater because of a release from an evaporation pond; however, that does not appear to be the case in this instance. Other potential reasons why an UTL exceedance may occur include: natural increases in constituent concentration over time, changes in groundwater flow direction, and offsite influences.

Table 6-1: Calculation for Mean and Standard Deviation (Total Dissolved Solids)

MW1				MW2				MW3				MW4			
Days	Date	TDS	ln(TDS)	Days	Date	TDS	ln(TDS)	Days	Date	TDS	ln(TDS)	Days	Date	TDS	ln(TDS)
0	3Q-02	1170	7.0648	0	3Q-02	1180	7.0733	0	3Q-02	1120	7.0211				
270	2Q-03	1160	7.0562	270	2Q-03	1050	6.9565	270	2Q-03	947	6.8533				
450	1Q-04	1100	7.0031	450	1Q-04	1000	6.9078	450	1Q-04	1000	6.9078				
540	2Q-04	1200	7.0901	540	2Q-04	960	6.8669	540	2Q-04	1100	7.0031				
630	3Q-04	1100	7.0031	630	3Q-04	1000	6.9078	630	3Q-04	1000	6.9078				
720	4Q-04	1100	7.0031	720	4Q-04	1000	6.9078	720	4Q-04	1100	7.0031				
810	1Q-05	1100	7.0031	810	1Q-05	1100	7.0031	810	1Q-05	1100	7.0031				
900	2Q-05	1170	7.0648	900	2Q-05	1090	6.9939	900	2Q-05	1080	6.9847				
990	3Q-05	1080	6.9847	990	3Q-05	985	6.8926	990	3Q-05	1000	6.9078				
1080	4Q-05	1100	7.0031	1080	4Q-05	1000	6.9078	1080	4Q-05	1200	7.0901				
1170	1Q-06	1070	6.9754	1170	1Q-06	999	6.9068	1170	1Q-06	1040	6.9470				
1260	2Q-06	1100	7.0031	1260	2Q-06	1000	6.9078	1260	2Q-06	1100	7.0031				
1350	3Q-06	1100	7.0031	1350	3Q-06	1100	7.0031	1350	3Q-06	1100	7.0031				
1440	4Q-06	1100	7.0031	1440	4Q-06	1000	6.9078	1440	4Q-06	1100	7.0031				
1530	1Q-07	1100	7.0031	1530	1Q-07	1000	6.9078	1530	1Q-07	1100	7.0031				
1620	2Q-07	1100	7.0031	1620	2Q-07	1100	7.0031	1620	2Q-07	1200	7.0901				
	RA-07	1200	7.0901		RA-07	1100	7.0031		RA-07	1200	7.0901				
1710	3Q-07	1100	7.0031	1710	3Q-07	1100	7.0031	1710	3Q-07	1100	7.0031				
1800	4Q-07	1200	7.0901	1800	4Q-07	1100	7.0031	1800	4Q-07	1500	7.3132				
1867	12/7/2007	1200	7.0901	1867	12/7/2007	1100	7.0031	1867	12/7/2007	1400	7.2442				
1890	1Q-08	1200	7.0901	1890	1Q-08	1100	7.0031	1890	1Q-08	1300	7.1701				
1966	2Q-08	1200	7.0901	1966	2Q-08	1100	7.0031	1099	2Q-08	1700	7.4384				
2068	3Q-08	1100	7.0031	2068	3Q-08	1100	7.0031	2068	3Q-08	1600	7.3778				
2178	4Q-08	1100	7.0031	2178	4Q-08	1100	7.0031	2178	4Q-08	1400	7.2442				
2349	1Q-09	1100	7.0031	2349	1Q-09	1100	7.0031	2349	1Q-09	1200	7.0901				
2473	2Q-09	1200	7.0901	2473	2Q-09	1100	7.0031	2473	2Q-09	1100	7.0031				
2571	3Q-09	1100	7.0031	2571	3Q-09	1100	7.0031	2571	3Q-09	1400	7.2442	0	3Q-09	1200	7.0901
								2605	10/30/09	1300	7.1701	34	10/30/09	1100	7.0031
2652	4Q-09	1200	7.0901	2652	4Q-09	1100	7.0031	2652	4Q-09	1500	7.3132	81	4Q-09	1200	7.0901
2718	1Q-10	1200	7.0901	2718	1Q-10	1100	7.0031	2718	1Q-10	1800	7.4955	116	1Q-10	1200	7.0901
								2753	4/2/2010	1800	7.4955				
2800	2Q-10	1200	7.0901	2800	2Q-10	1100	7.0031	2800	2Q-10	2300	7.7407	198	2Q-10	1200	7.0901
2828	6/18/2010	1200	7.0901	2828	6/18/2010	1100	7.0031	2828	6/18/2010	2400	7.7832	226	6/18/2010	1200	7.0901
2895	3Q-10	1100	7.0031	2895	3Q-10	1100	7.0031	2895	3Q-10	2500	7.8240	293	3Q-10	1100	7.0031
								2922	9/20/2010R	2200	7.6962				
3014	4Q-10	1200	7.0901	3014	4Q-10	1100	7.0031	3014	4Q-10	1500	7.3132	412	4Q-10	1200	7.0901
3086	1Q-11	1200	7.0901	3086	1Q-11	1100	7.0031	3086	1Q-11	1600	7.3778	576	1Q-11	1200	7.0901
3179	2Q-11	1100	7.0031	3179	2Q-11	1100	7.0031	3179	2Q-11	1800	7.4955	669	2Q-11	1100	7.0031
3286	3Q-11	1200	7.0901	3286	3Q-11	1100	7.0031	3286	3Q-11	1500	7.3132	776	3Q-11	1100	7.0031
3372	4Q-11	1200	7.0901	3372	4Q-11	1100	7.0031	3372	4Q-11	1400	7.2442	862	4Q-11	1200	7.0901
3472	1Q-12	1200	7.0901	3472	1Q-12	1100	7.0031	3472	1Q-12	1500	7.3132	962	1Q-12	1100	7.0031
3572	2Q-12	1100	7.0031	3572	2Q-12	1100	7.0031	3572	2Q-12	1400	7.2442	1062	2Q-12	1100	7.0031
3638	3Q-12	1200	7.0901	3638	3Q-12	1100	7.0031	3638	3Q-12	1200	7.0901	1128	3Q-12	1100	7.0031
3741	4Q-12	1200	7.0901	3741	4Q-12	1100	7.0031	3741	4Q-12	1100	7.0031	1231	4Q-12	1100	7.0031
3840	1Q-13	1100	7.0031	3840	1Q-13	1000	6.9078	3840	1Q-13	1100	7.0031	1330	1Q-13	1000	6.9078
3904	2Q-13	1200	7.0901	3904	2Q-13	1100	7.0031	3904	2Q-13	1200	7.0901	1394	2Q-13	1100	7.0031
4013	3Q-13	1200	7.0901	4013	3Q-13	1100	7.0031	4013	3Q-13	1000	6.9078	1507	3Q-13	1100	7.0031
4088	4Q-13	1200	7.0901	4088	4Q-13	1100	7.0031	4088	4Q-13	1100	7.0031	1583	4Q-13	1100	7.0031
4202	1Q-14	1200	7.0901	4202	1Q-14	1100	7.0031	4202	1Q-14	1100	7.0031	1697	1Q-14	1100	7.0031
4316	2Q-14	1200	7.0901	4316	2Q-14	1100	7.0031	4316	2Q-14	1100	7.0031	1811	2Q-14	1100	7.0031
4395	3Q-14	1200	7.0901	4395	3Q-14	1100	7.0031	4395	3Q-14	1100	7.0031	1890	3Q-14	1100	7.0031
4472	4Q-14	1200	7.0901	4472	4Q-14	1100	7.0031	4472	4Q-14	1000	6.9078	1967	4Q-14	1100	7.0031

Table 6-1 (Cont.): Calculation for Mean and Standard Deviation (Total Dissolved Solids)

4579	1Q-15	1200	7.0901	4579	1Q-15	1100	7.0031	4579	1Q-15	970	6.8773	2074	1Q-15	1000	6.9078
4765	2Q-15	1200	7.0901	4765	2Q-15	1100	7.0031	4765	2Q-15	1000	6.9078	2260	2Q-15	1100	7.0031
4848	3Q-15	1300	7.1701	4848	3Q-15	1100	7.0031	4848	3Q-15	1000	6.9078	2343	3Q-15	1100	7.0031
4938	4Q-15	1200	7.0901	4938	4Q-15	1100	7.0031	4938	4Q-15	1000	6.9078	2433	4Q-15	1100	7.0031
5055	1Q-16	1200	7.0901	5055	1Q-16	1100	7.0031	5055	1Q-16	1000	6.9078	2550	1Q-16	1100	7.0031
5122	2Q-16	1200	7.0901	5122	2Q-16	1100	7.0031	5122	2Q-16	1000	6.9078	2617	2Q-16	1100	7.0031
5213	3Q-16	1300	7.1701	5213	3Q-16	1100	7.0031	5213	3Q-16	1000	6.9078	2708	3Q-16	1100	7.0031
5305	4Q-16	1100	7.0031	5305	4Q-16	1100	7.0031	5305	4Q-16	920	6.8244	2800	4Q-16	1100	7.0031
5397	1Q-17	1300	7.1701	5397	1Q-17	1100	7.0031	5397	1Q-17	980	6.8876	2892	1Q-17	1100	7.0031
5487	2Q-17	1200	7.0901	5487	2Q-17	1100	7.0031	5487	2Q-17	1000	6.9078	2982	2Q-17	1100	7.0031
5563	3Q-17	1200	7.0901	5563	3Q-17	1100	7.0031	5563	3Q-17	970	6.8773	3058	3Q-17	1200	7.0901
5672	4Q-17	1300	7.1701	5672	4Q-17	1100	7.0031	5672	4Q-17	950	6.8565	3167	4Q-17	1200	7.0901
5782	1Q-18	1200	7.0901	5782	1Q-18	1100	7.0031	5782	1Q-18	1100	7.0031	3277	1Q-18	1200	7.0901
5850	2Q-18	1200	7.0901	5850	2Q-18	1100	7.0031	5850	2Q-18	1100	7.0031	3345	2Q-18	1200	7.0901
5960	3Q-18	1300	7.1701	5960	3Q-18	1100	7.0031	5960	3Q-18	1100	7.0031	3455	3Q-18	1100	7.0031
6007	10/30/2018	1200	7.0901												
6041	4Q-18	1200	7.0901	6041	4Q-18	1100	7.0031	6041	4Q-18	1100	7.0031	3536	4Q-18	1100	7.0031
Standard Deviation =		59.8516	0.0510	Standard Deviation =		41.8652	0.0398	Standard Deviation =		355.4795	0.2393	Standard Deviation =		54.3021	0.0483
Mean =		1171.9697	7.0652	Mean =		1082.5231	6.9863	Mean =		1262.8971	7.1099	Mean =		1125.0000	7.0244
n =		66	66	n =		65	65	n =		68	68	n =		40	40
(t{n-1, 0.95}) =		1.668	1.668	(t{n-1, 0.95}) =		1.669	1.669	(t{n-1, 0.95}) =		1.668	1.668	(t{n-1, 0.95}) =		1.684	1.684
$(1 + 1/n)^{½}$ =			1.008	(1 + 1/n)½ =			1.008	(1 + 1/n)½ =			1.007	(1 + 1/n)½ =			1.012
k = $t(1 + 1/n)^{½}$ =			1.681	k = t(1 + 1/n)½ =			1.682	k = t(1 + 1/n)½ =			1.680	k = t(1 + 1/n)½ =			1.705
UTL = Mean + St.Dev.*k =			7.1509	UTL = Mean + St.Dev.*k =			7.0533	UTL = Mean + St.Dev.*k =			7.5119	UTL = Mean + St.Dev.*k =			7.1067
Concentration Significant?			No	Concentration Significant?			No	Concentration Significant?			No	Concentration Significant?			No

Table 6-1 (Cont.): Calculation for Mean and Standard Deviation (Sulfate)

MW1				MW2				MW3				MW4			
Days	Date	SO_4	$ln(SO_4)$	Days	Date	SO_4	$ln(SO_4)$	Days	Date	SO_4	$ln(SO_4)$	Days	Date	SO_4	$ln(SO_4)$
0	3Q-02	348	5.8522	0	3Q-02	419	6.0379	0	3Q-02	403	5.9989				
270	2Q-03	409	6.0137	270	2Q-03	427	6.0568	270	2Q-03	404	6.0014				
450	1Q-04	370	5.9135	450	1Q-04	360	5.8861	450	1Q-04	340	5.8289				
540	2Q-04	330	5.7991	540	2Q-04	340	5.8289	540	2Q-04	330	5.7991				
630	3Q-04	360	5.8861	630	3Q-04	360	5.8861	630	3Q-04	350	5.8579				
720	4Q-04	380	5.9402	720	4Q-04	370	5.9135	720	4Q-04	380	5.9402				
810	1Q-05	350	5.8579	810	1Q-05	360	5.8861	810	1Q-05	340	5.8289				
900	2Q-05	326	5.7869	900	2Q-05	331	5.8021	900	2Q-05	303	5.7137				
990	3Q-05	451	6.1115	990	3Q-05	450	6.1092	990	3Q-05	440	6.0868				
1080	4Q-05	360	5.8861	1080	4Q-05	360	5.8861	1080	4Q-05	330	5.7991				
1170	1Q-06	379	5.9375	1170	1Q-06	369	5.9108	1170	1Q-06	358	5.8805				
1260	2Q-06	390	5.9661	1260	2Q-06	370	5.9135	1260	2Q-06	370	5.9135				
1350	3Q-06	370	5.9135	1350	3Q-06	400	5.9915	1350	3Q-06	380	5.9402				
1440	4Q-06	370	5.9135	1440	4Q-06	380	5.9402	1440	4Q-06	380	5.9402				
1530	1Q-07	380	5.9402	1530	1Q-07	380	5.9402	1530	1Q-07	360	5.8861				
1620	2Q-07	460	6.1312	1620	2Q-07	470	6.1527	1620	2Q-07	450	6.1092				
	RA-07	385	5.9532		RA-07	365	5.8999		RA-07	360	5.8861				
1710	3Q-07	370	5.9135	1710	3Q-07	380	5.9402	1710	3Q-07	380	5.9402				
1800	4Q-07	360	5.8861	1800	4Q-07	360	5.8861	1800	4Q-07	420	6.0403				
1867	12/7/2007	380	5.9402	1867	12/7/2007	360	5.8861	1867	12/7/2007	385	5.9532				
1890	1Q-08	380	5.9402	1890	1Q-08	380	5.9402	1890	1Q-08	390	5.9661				
1966	2Q-08	380	5.9402	1966	2Q-08	370	5.9135	1966	2Q-08	480	6.1738				
2068	3Q-08	390	5.9661	2068	3Q-08	400	5.9915	2068	3Q-08	480	6.1738				
2178	4Q-08	400	5.9915	2178	4Q-08	410	6.0162	2178	4Q-08	460	6.1312				
2349	1Q-09	380	5.9402	2349	1Q-09	390	5.9661	2349	1Q-09	360	5.8861				
2473	2Q-09	390	5.9661	2473	2Q-09	390	5.9661	2473	2Q-09	340	5.8289				
2571	3Q-09	370	5.9135	2571	3Q-09	350	5.8579	2571	3Q-09	560	6.3279	0	3Q-09	380	5.9402
								2618	10/30/09	430	6.0638	34	10/30/09	350	5.8579
2652	4Q-09	370	5.9135	2652	4Q-09	380	5.9402	2652	4Q-09	500	6.2146	81	4Q-09	350	5.8579
2718	1Q-10	370	5.9135	2718	1Q-10	400	5.9915	2718	1Q-10	610	6.4135	116	1Q-10	370	5.9135
								2753	4/2/2010	620	6.4297				
2800	2Q-10	390	5.9661	2800	2Q-10	420	6.0403	2800	2Q-10	620	6.4297	198	2Q-10	380	5.9402
2828	6/18/2010	330	5.7991	2828	6/18/2010	360	5.8861	2828	6/18/2010	690	6.5367	226	6/18/2010	340	5.8289
2895	3Q-10	380	5.9402	2895	3Q-10	370	5.9135	2895	3Q-10	700	6.5511	293	3Q-10	370	5.9135
								2922	9/20/2010R	750	6.6201				
3014	4Q-10	340	5.8289	3014	4Q-10	380	5.9402	3014	4Q-10	510	6.2344	412	4Q-10	380	5.9402
3086	1Q-11	360	5.8861	3086	1Q-11	370	5.9135	3086	1Q-11	490	6.1944	576	1Q-11	340	5.8289
3179	2Q-11	400	5.9915	3179	2Q-11	410	6.0162	3179	2Q-11	640	6.4615	669	2Q-11	370	5.9135
3286	3Q-11	380	5.9402	3286	3Q-11	410	6.0162	3286	3Q-11	510	6.2344	776	3Q-11	360	5.8861
3372	4Q-11	390	5.9661	3372	4Q-11	410	6.0162	3372	4Q-11	500	6.2146	862	4Q-11	370	5.9135
3472	1Q-12	340	5.8289	3472	1Q-12	360	5.8861	3472	1Q-12	510	6.2344	962	1Q-12	300	5.7038
3572	2Q-12	500	6.2146	3572	2Q-12	420	6.0403	3572	2Q-12	480	6.1738	1062	2Q-12	350	5.8579
3638	3Q-12	380	5.9402	3638	3Q-12	400	5.9915	3638	3Q-12	420	6.0403	1128	3Q-12	320	5.7683
3741	4Q-12	410	6.0162	3741	4Q-12	420	6.0403	3741	4Q-12	390	5.9661	1231	4Q-12	340	5.8289
3840	1Q-13	400	5.9915	3840	1Q-13	410	6.0162	3840	1Q-13	370	5.9135	1330	1Q-13	330	5.7991
3904	2Q-13	380	5.9402	3904	2Q-13	390	5.9661	3904	2Q-13	350	5.8579	1394	2Q-13	300	5.7038
4013	3Q-13	390	5.9661	4013	3Q-13	420	6.0403	4013	3Q-13	330	5.7991	1507	3Q-13	310	5.7366
4088	4Q-13	420	6.0403	4088	4Q-13	410	6.0162	4088	4Q-13	340	5.8289	1583	4Q-13	310	5.7366
4202	1Q-14	420	6.0403	4202	1Q-14	440	6.0868	4202	1Q-14	450	6.1092	1697	1Q-14	330	5.7991
4316	2Q-14	410	6.0162	4316	2Q-14	480	6.1738	4316	2Q-14	400	5.9915	1811	2Q-14	360	5.8861
4395	3Q-14	440	6.0868	4395	3Q-14	410	6.0162	4395	3Q-14	370	5.9135	1890	3Q-14	310	5.7366
4472	4Q-14	340	5.8289	4472	4Q-14	360	5.8861	4472	4Q-14	290	5.6699	1967	4Q-14	270	5.5984

Table 6-1 (Cont.): Calculation for Mean and Standard Deviation (Sulfate)

4579	1Q-15	390	5.9661	4579	1Q-15	360	5.8861	4579	1Q-15	290	5.6699	2074	1Q-15	270	5.5984
4765	2Q-15	370	5.9135	4765	2Q-15	360	5.8861	4765	2Q-15	280	5.6348	2260	2Q-15	270	5.5984
4848	3Q-15	430	6.0638	4848	3Q-15	410	6.0162	4848	3Q-15	330	5.7991	2343	3Q-15	320	5.7683
4938	4Q-15	410	6.0162	4938	4Q-15	410	6.0162	4938	4Q-15	330	5.7991	2433	4Q-15	320	5.7683
5055	1Q-16	370	5.9135	5055	1Q-16	380	5.9402	5055	1Q-16	340	5.8289	2550	1Q-16	310	5.7366
5122	2Q-16	390	5.9661	5122	2Q-16	420	6.0403	5122	2Q-16	330	5.7991	2617	2Q-16	310	5.7366
5213	3Q-16	420	6.0403	5213	3Q-16	390	5.9661	5213	3Q-16	300	5.7038	2708	3Q-16	310	5.7366
5305	4Q-16	400	5.9915	5305	4Q-16	420	6.0403	5305	4Q-16	330	5.7991	2800	4Q-16	360	5.8861
5397	1Q-17	450	6.1092	5397	1Q-17	400	5.9915	5397	1Q-17	310	5.7366	2892	1Q-17	340	5.8289
5487	2Q-17	440	6.0868	5487	2Q-17	400	5.9915	5487	2Q-17	330	5.7991	2982	2Q-17	340	5.8289
5563	3Q-17	430	6.0638	5563	3Q-17	400	5.9915	5563	3Q-17	310	5.7366	3058	3Q-17	330	5.7991
5672	4Q-17	400	5.9915	5672	4Q-17	380	5.9402	5672	4Q-17	290	5.6699	3167	4Q-17	310	5.7366
5782	1Q-18	390	5.9661	5782	1Q-18	400	5.9915	5782	1Q-18	390	5.9661	3277	1Q-18	340	5.8289
5850	2Q-18	390	5.9661	5850	2Q-18	380	5.9402	5850	2Q-18	360	5.8861	3345	2Q-18	310	5.7366
5960	3Q-18	430	6.0638	5960	3Q-18	390	5.9661	5960	3Q-18	380	5.9402	3455	3Q-18	300	5.7038
6007	10/30/2018	410	6.0162												
6041	4Q-18	380	5.9402	6041	4Q-18	380	5.9402	6041	4Q-18	380	5.9402	3536	4Q-18	280	5.6348
Standard Deviation =		32.9127	0.0831	Standard Deviation =		29.0742	0.0732	Standard Deviation =		106.9982	0.2341	Standard Deviation =		31.1726	0.0960
Mean =		388.4308	5.9587	Mean =		390.9385	5.9659	Mean =		412.9853	5.9947	Mean =		330.2500	5.7954
n =		65	65	n =		65	65	n =		68	68	n =		40	40
(t{n-1, 0.95}) =		1.669	1.669	(t{n-1, 0.95}) =		1.669	1.669	(t{n-1, 0.95}) =		1.668	1.668	(t{n-1, 0.95}) =		1.684	1.684
$(1 + 1/n)^{½}$ =		1.008	1.008	(1 + 1/n)½ =			1.008	(1 + 1/n)½ =			1.007	(1 + 1/n)½ =			1.012
k = $t(1 + 1/n)^{½}$ =			1.682	k = t(1 + 1/n)½ =			1.682	k = t(1 + 1/n)½ =			1.680	k = t(1 + 1/n)½ =			1.705
UTL = Mean + St.Dev.*k =			6.0985	UTL = Mean + St.Dev.*k =			6.0890	UTL = Mean + St.Dev.*k =			6.3879	UTL = Mean + St.Dev.*k =			5.9590
Concentration Significant?			No	Concentration Significant?			No	Concentration Significant?			No	Concentration Significant?			No

Table 6-1 (Cont.): Calculation for Mean and Standard Deviation (Chloride)

MW1				MW2				MW3				MW4			
Days	Date	Cl	ln(Cl)	Days	Date	Cl	ln(Cl)	Days	Date	Cl	ln(Cl)	Days	Date	Cl	ln(Cl)
0	3Q-02	294	5.6836	0	3Q-02	225	5.4161	0	3Q-02	202	5.3083				
270	2Q-03	272	5.6058	270	2Q-03	209	5.3423	270	2Q-03	117	4.7622				
450	1Q-04	200	5.2983	450	1Q-04	180	5.1930	450	1Q-04	110	4.7005				
540	2Q-04	220	5.3936	540	2Q-04	190	5.2470	540	2Q-04	120	4.7875				
630	3Q-04	200	5.2983	630	3Q-04	180	5.1930	630	3Q-04	120	4.7875				
720	4Q-04	210	5.3471	720	4Q-04	180	5.1930	720	4Q-04	210	5.3471				
810	1Q-05	230	5.4381	810	1Q-05	180	5.1930	810	1Q-05	130	4.8675				
900	2Q-05	182	5.2040	900	2Q-05	158	5.0626	900	2Q-05	109	4.6913				
990	3Q-05	255	5.5413	990	3Q-05	211	5.3519	990	3Q-05	156	5.0499				
1080	4Q-05	230	5.4381	1080	4Q-05	180	5.1930	1080	4Q-05	130	4.8675				
1170	1Q-06	219	5.3891	1170	1Q-06	189	5.2417	1170	1Q-06	149	5.0039				
1260	2Q-06	210	5.3471	1260	2Q-06	190	5.2470	1260	2Q-06	160	5.0752				
1350	3Q-06	210	5.3471	1350	3Q-06	190	5.2470	1350	3Q-06	180	5.1930				
1440	4Q-06	210	5.3471	1440	4Q-06	190	5.2470	1440	4Q-06	210	5.3471				
1530	1Q-07	230	5.4381	1530	1Q-07	190	5.2470	1530	1Q-07	200	5.2983				
1620	2Q-07	210	5.3471	1620	2Q-07	210	5.3471	1620	2Q-07	230	5.4381				
	RA-07	220	5.3936		RA-07	205	5.3230		RA-07	240	5.4806				
1710	3Q-07	250	5.5215	1710	3Q-07	190	5.2470	1710	3Q-07	190	5.2470				
1800	4Q-07	230	5.4381	1800	4Q-07	180	5.1930	1800	4Q-07	300	5.7038				
1867	12/7/2007	270	5.5984	1867	12/7/2007	190	5.2470	1867	12/7/2007	270	5.5984				
1890	1Q-08	250	5.5215	1890	1Q-08	190	5.2470	1890	1Q-08	280	5.6348				
1966	2Q-08	230	5.4381	1966	2Q-08	200	5.2983	1966	2Q-08	350	5.8579				
2068	3Q-08	250	5.5215	2068	3Q-08	200	5.2983	2068	3Q-08	400	5.9915				
2178	4Q-08	240	5.4806	2178	4Q-08	180	5.1930	2178	4Q-08	320	5.7683				
2349	1Q-09	230	5.4381	2349	1Q-09	190	5.2470	2349	1Q-09	230	5.4381				
2473	2Q-09	230	5.4381	2473	2Q-09	170	5.1358	2473	2Q-09	220	5.3936				
2571	3Q-09	230	5.4381	2571	3Q-09	220	5.3936	2571	3Q-09	370	5.9135	0	3Q-09	270	5.5984
								2618	10/30/09	220	5.3936	34	10/30/09	250	5.5215
2652	4Q-09	220	5.3936	2652	4Q-09	170	5.1358	2652	4Q-09	250	5.5215	81	4Q-09	250	5.5215
2718	1Q-10	230	5.4381	2718	1Q-10	170	5.1358	2718	1Q-10	360	5.8861	116	1Q-10	260	5.5607
								2753	4/2/2010	400	5.9915				
2800	2Q-10	260	5.5607	2800	2Q-10	180	5.1930	2800	2Q-10	580	6.3630	198	2Q-10	280	5.6348
2828	6/18/2010	250	5.5215	2828	6/18/2010	170	5.1358	2828	6/18/2010	660	6.4922	226	6/18/2010	250	5.5215
2895	3Q-10	220	5.3936	2895	3Q-10	220	5.3936	2895	3Q-10	670	6.5073	293	3Q-10	260	5.5607
								2922	9/20/2010R	460	6.1312				
3014	4Q-10	220	5.3936	3014	4Q-10	160	5.0752	3014	4Q-10	200	5.2983	412	4Q-10	260	5.5607
3086	1Q-11	210	5.3471	3086	1Q-11	160	5.0752	3086	1Q-11	240	5.4806	576	1Q-11	250	5.5215
3179	2Q-11	200	5.2983	3179	2Q-11	160	5.0752	3179	2Q-11	340	5.8289	669	2Q-11	260	5.5607
3286	3Q-11	190	5.2470	3286	3Q-11	160	5.0752	3286	3Q-11	190	5.2470	776	3Q-11	250	5.5215
3372	4Q-11	230	5.4381	3372	4Q-11	170	5.1358	3372	4Q-11	180	5.1930	862	4Q-11	270	5.5984
3472	1Q-12	210	5.3471	3472	1Q-12	160	5.0752	3472	1Q-12	220	5.3936	962	1Q-12	280	5.6348
3572	2Q-12	270	5.5984	3572	2Q-12	160	5.0752	3572	2Q-12	190	5.2470	1062	2Q-12	260	5.5607
3638	3Q-12	220	5.3936	3638	3Q-12	150	5.0106	3638	3Q-12	140	4.9416	1128	3Q-12	260	5.5607
3741	4Q-12	230	5.4381	3741	4Q-12	170	5.1358	3741	4Q-12	160	5.0752	1231	4Q-12	270	5.5984
3840	1Q-13	220	5.3936	3840	1Q-13	160	5.0752	3840	1Q-13	140	4.9416	1330	1Q-13	270	5.5984
3904	2Q-13	200	5.2983	3904	2Q-13	140	4.9416	3904	2Q-13	120	4.7875	1394	2Q-13	250	5.5215
4013	3Q-13	240	5.4806	4013	3Q-13	160	5.0752	4013	3Q-13	120	4.7875	1507	3Q-13	270	5.5984
4088	4Q-13	210	5.3471	4088	4Q-13	150	5.0106	4088	4Q-13	120	4.7875	1583	4Q-13	260	5.5607
4202	1Q-14	250	5.5215	4202	1Q-14	180	5.1930	4202	1Q-14	170	5.1358	1697	1Q-14	300	5.7038
4316	2Q-14	240	5.4806	4316	2Q-14	180	5.1930	4316	2Q-14	140	4.9416	1811	2Q-14	300	5.7038
4395	3Q-14	240	5.4806	4395	3Q-14	160	5.0752	4395	3Q-14	130	4.8675	1890	3Q-14	290	5.6699
4472	4Q-14	240	5.4806	4472	4Q-14	150	5.0106	4472	4Q-14	110	4.7005	1967	4Q-14	270	5.5984

Table 6-1 (Cont.): Calculation for Mean and Standard Deviation (Chloride)

4579	1Q-15	210	5.3471	4579	1Q-15	140	4.9416	4579	1Q-15	110	4.7005	2074	1Q-15	260	5.5607
4765	2Q-15	210	5.3471	4765	2Q-15	140	4.9416	4765	2Q-15	110	4.7005	2260	2Q-15	260	5.5607
4848	3Q-15	220	5.3936	4848	3Q-15	150	5.0106	4848	3Q-15	110	4.7005	2343	3Q-15	280	5.6348
4938	4Q-15	220	5.3936	4938	4Q-15	150	5.0106	4938	4Q-15	120	4.7875	2433	4Q-15	270	5.5984
5055	1Q-16	230	5.4381	5055	1Q-16	140	4.9416	5055	1Q-16	120	4.7875	2550	1Q-16	270	5.5984
5122	2Q-16	230	5.4381	5122	2Q-16	150	5.0106	5122	2Q-16	120	4.7875	2617	2Q-16	280	5.6348
5213	3Q-16	210	5.3471	5213	3Q-16	150	5.0106	5213	3Q-16	110	4.7005	2708	3Q-16	260	5.5607
5305	4Q-16	250	5.5215	5305	4Q-16	160	5.0752	5305	4Q-16	120	4.7875	2800	4Q-16	290	5.6699
5397	1Q-17	200	5.2983	5397	1Q-17	140	4.9416	5397	1Q-17	110	4.7005	2892	1Q-17	270	5.5984
5487	2Q-17	210	5.3471	5487	2Q-17	140	4.9416	5487	2Q-17	110	4.7005	2982	2Q-17	270	5.5984
5563	3Q-17	190	5.2470	5563	3Q-17	140	4.9416	5563	3Q-17	100	4.6052	3058	3Q-17	260	5.5607
5672	4Q-17	190	5.2470	5672	4Q-17	140	4.9416	5672	4Q-17	120	4.7875	3167	4Q-17	270	5.5984
5782	1Q-18	220	5.3936	5782	1Q-18	140	4.9416	5782	1Q-18	140	4.9416	3277	1Q-18	270	5.5984
5850	2Q-18	220	5.3936	5850	2Q-18	140	4.9416	5850	2Q-18	140	4.9416	3345	2Q-18	270	5.5984
5960	3Q-18	220	5.3936	5960	3Q-18	150	5.0106	5960	3Q-18	150	5.0106	3455	3Q-18	280	5.6348
6007	10/30/2018	200	5.2983												
6041	4Q-18	230	5.4381	6041	4Q-18	150	5.0106	6041	4Q-18	140	4.9416	3536	4Q-18	260	5.5607
Standard Deviation =		21.6582	0.0943	Standard Deviation =		23.2062	0.1340	Standard Deviation =		126.0108	0.4812	Standard Deviation =		12.9075	0.0475
Mean =		225.7231	5.4149	Mean =		171.1846	5.1338	Mean =		207.9853	5.2070	Mean =		267.7500	5.5889
n =		65	65	n =		65	65	n =		68	68	n =		40	40
(t{n-1, 0.95}) =		1.669	1.669	(t{n-1, 0.95}) =		1.669	1.669	(t{n-1, 0.95}) =		1.668	1.668	(t{n-1, 0.95}) =		1.684	1.684
$(1 + 1/n)^{½}$ =			1.008	$(1 + 1/n)^{½}$ =			1.008	$(1 + 1/n)^{½}$ =			1.007	$(1 + 1/n)^{½}$ =			1.012
k = $t(1 + 1/n)^{½}$ =			1.682	k = $t(1 + 1/n)^{½}$ =			1.682	k = $t(1 + 1/n)^{½}$ =			1.680	k = $t(1 + 1/n)^{½}$ =			1.705
UTL = Mean + St.Dev.*k =			5.5734	UTL = Mean + St.Dev.*k =			5.3591	UTL = Mean + St.Dev.*k =			6.0155	UTL = Mean + St.Dev.*k =			5.6700
Concentration Significant?			No	Concentration Significant?			No	Concentration Significant?			No	Concentration Significant?			No

Table 6-2
Comparison to Tolerance Interval[1]

WELL	PARAMETER	Q1 2018				Q2 2018			
		RESULT	ln(RESULT)	UPPER TOLERANCE LIMIT	UTL EXCEEDED (YES/NO)	RESULT	ln(RESULT)	UPPER TOLERANCE LIMIT	UTL EXCEEDED (YES/NO)
MW-1	TDS	1200	7.0901	7.1473	No	1200	7.0901	7.1472	No
	SO_4	390	5.9661	6.0986	No	390	5.9661	6.0975	No
	Cl_2	220	5.3936	5.5775	No	220	5.3936	5.5758	No
MW-2	TDS	1100	7.0031	7.0539	No	1100	7.0031	7.0536	No
	SO_4	400	5.9915	6.0927	No	380	5.9402	6.0913	No
	Cl_2	140	4.9416	5.3647	No	140	4.9416	5.3636	No
MW-3	TDS	1100	7.0031	7.5246	No	1100	7.0031	7.5201	No
	SO_4	390	5.9661	6.3998	No	360	5.8861	6.3954	No
	Cl_2	140	4.9416	6.0412	No	140	4.9416	6.0321	No
MW-4	TDS	1200	7.0901	7.1071	No	1200	7.0901	7.1097	No
	SO_4	340	5.8289	5.9647	No	310	5.7366	5.9617	No
	Cl_2	270	5.5984	5.6713	No	270	5.5984	5.6704	No

[1]Upper tolerance limit (UTL) calculated using 95% distribution and 95% probability

Table 6-2 (Cont.)
Comparison to Tolerance Interval[1]

WELL	PARAMETER	Q3 2018				Q4 2018			
		RESULT	ln(RESULT)	UPPER TOLERANCE LIMIT	UTL EXCEEDED (YES/NO)	RESULT	ln(RESULT)	UPPER TOLERANCE LIMIT	UTL EXCEEDED (YES/NO)
MW-1	TDS	1300/1200[2]	7.1701/7.0901[2]	7.1512	Yes/No[2]	1200	7.0901	7.1509	No
	SO_4	430/410[2]	6.0638/6.0162[2]	6.0998	No	380	5.9402	6.0985	No
	Cl_2	220/200[2]	5.3936/5.2983[2]	5.5743	No	230	5.4381	5.5734	No
MW-2	TDS	1100	7.0031	7.0535	No	1100	7.0031	7.0533	No
	SO_4	390	5.9661	6.0903	No	380	5.9402	6.0890	No
	Cl_2	150	5.0106	5.3613	No	150	5.0106	5.3591	No
MW-3	TDS	1100	7.0031	7.5160	No	1100	7.0031	7.5119	No
	SO_4	380	5.9402	6.3916	No	380	5.9402	6.3879	No
	Cl_2	150	5.0106	6.0238	No	140	4.9416	6.0155	No
MW-4	TDS	1100	7.0031	7.1082	No	1100	7.0031	7.1067	No
	SO_4	300	5.7038	5.9592	No	280	5.6348	5.9590	No
	Cl_2	280	5.6348	5.6714	No	260	5.5607	5.6700	No

[1]Upper tolerance limit (UTL) calculated using 95% distribution and 95% probability
[2]MW-1 was re-sampled October 30,2018.

SECOND SEMI-ANNUAL 2018 MONITORING REPORT

SECTION 7
LYSIMETER TEST RECORDS

LYSIMETER TEST RECORD

Project Name/Client: Blythe Energy Inc.	Site Name: Blythe Energy Project
Project No. NB11160982	Date: March 24, 2018
Weather Conditions: Sunny 75˚	Sampler: Ralph De La Parra

EAST POND Lysimeter No.: 1 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 2 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 3 TEST RESULTS: Dry	Notes: *
WEST POND Lysimeter No.: 4 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 5 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 6 TEST RESULTS: Dry	Notes: *

LYSIMETER TEST RECORD

Project Name/Client: Blythe Energy Inc.	Site Name: Blythe Energy Project
Project No. NB11160982	Date: May 31, 2018
Weather Conditions: Sunny	Sampler: Ralph De La Parra

EAST POND Lysimeter No.: 1 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 2 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 3 TEST RESULTS: Dry	Notes: *
WEST POND Lysimeter No.: 4 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 5 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 6 TEST RESULTS: Dry	Notes: *

LYSIMETER TEST RECORD

Project Name/Client: Blythe Energy Inc.	Site Name: Blythe Energy Project
Project No. NB11160982	Date: September 13, 2018
Weather Conditions: Warm, Sunny	Sampler : Ralph De La Parra

EAST POND Lysimeter No.: 1 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 2 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 3 TEST RESULTS: Dry	Notes: *
WEST POND Lysimeter No.: 4 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 5 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 6 TEST RESULTS: Dry	Notes: *

LYSIMETER TEST RECORD

Project Name/Client: Blythe Energy Inc.	Site Name: Blythe Energy Project
Project No. NB11160982	Date: December 3, 2018
Weather Conditions: Sunny, Cool	Sampler : Ralph De La Parra

EAST POND Lysimeter No.: 1 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 2 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 3 TEST RESULTS: Dry	Notes: *
WEST POND Lysimeter No.: 4 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 5 TEST RESULTS: Dry	Notes: *
Lysimeter No.: 6 TEST RESULTS: Dry	Notes: *

wood.

SECOND SEMI-ANNUAL 2018 MONITORING REPORT

SECTION 8
EVAPORATION POND SAMPLING RECORDS

EVAPORATION POND SAMPLING RECORD

Project Name/Client: Blythe Energy Inc.	Site Name: Blythe Energy Project
Project No.: NB11160982	Date: March 24, 2018
Weather Conditions: Warm, Sunny	Sampler: Ralph De La Parra
Pond No./Designation: #1 East Time: 1100 Color/Clarity: slightly green Temp.: 25.3°C pH: 8.57 Ec: >20.00 ms/cm	Comments:
Pond No./Designation: #2 West Time: 1105 Color/Clarity: slightly green Temp.: 21.4°C pH: 8.49 Ec: >20.00 ms/cm	Comments:

Notes:
- Temperature reported in degrees Celsius
- pH reported in pH units
- Ec reported in millisiemens per centimeter (ms/cm)

EVAPORATION POND SAMPLING RECORD

Project Name/Client: Blythe Energy Inc.	Site Name: Blythe Energy Project
Project No.: NB11160982	Date: May 31, 2018
Weather Conditions: Warm, Sunny	Sampler: Ralph De La Parra
Pond No./Designation: #1 East Time: 1110 Color/Clarity: slightly green Temp.: 33.4°C pH: 8.61 Ec: >20.00 ms/cm	Comments:
Pond No./Designation: #2 West Time: 1120 Color/Clarity: slightly green Temp.: 33.9 °C pH: 8.79 Ec: >20.00 ms/cm	Comments:

Notes:

- Temperature reported in degrees Celsius
- pH reported in pH units
- Ec reported in millisiemens per centimeter (ms/cm)

EVAPORATION POND SAMPLING RECORD

Project Name/Client: Blythe Energy Inc.	Site Name: Blythe Energy Project
Project No.: NB11160982	Date: September 13, 2018
Weather Conditions: Warm, Sunny	Sampler : Ralph De La Parra
Pond No./Designation: #1 East Time: 0930 Color/Clarity: light green Temp.: 28.4°C pH: 8.42 Ec: >20.00 ms/cm	Comments: Contains Brine Shrimp
Pond No./Designation: #2 West Time: 0940 Color/Clarity: light green Temp.: 29.5°C pH: 8.39 Ec: >20.00 ms/cm	Comments: Contains Brine Shrimp

Notes:

- Temperature reported in degrees Celsius
- pH reported in pH units
- Ec reported in millisiemens per centimeter (ms/cm)

EVAPORATION POND SAMPLING RECORD

Project Name/Client: Blythe Energy Inc.	Site Name: Blythe Energy Project
Project No.: NB11160982	Date: December 3, 2018
Weather Conditions: Sunny, Cool	Sampler : Ralph De La Parra
Pond No./Designation: #1 East Time: 1040 Color/Clarity: slightly green Temp.: 14.9°C pH: 8.03 Ec: >20.00 ms/cm	Comments:
Pond No./Designation: #2 West Time: 1045 Color/Clarity: slightly green Temp.: 15.1°C pH: 8.41 Ec: >20.00 ms/cm	Comments:

Notes:

- Temperature reported in degrees Celsius
- pH reported in pH units
- Ec reported in millisiemens per centimeter (ms/cm)

wood.

SECOND SEMI-ANNUAL 2018 MONITORING REPORT

SECTION 9
WELL SAMPLING RECORDS

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-1**	Date: **March 24, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**337.27**	ft. (a)
Elevation of Ground Surface	**337.76**	ft. (b)
Well Depth (below MP)	**120.00**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**88.65**	ft. (e)
Water Level Elevation (a-e)	**248.62**	ft. (f)
Height of Water in Well	**31.35**	ft.
Volume of Water in Casing	**31.35 x 0.66 = 20.69**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos electric submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water rinse**

FIELD OBSERVATIONS

Weather Conditions **Clear, cool**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-1** Date **March 24, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
09:06	2	2	30.2	7.19	1.86	Clear, odorless
09:10	2	10	30.3	7.18	1.86	Clear, odorless
09:15	2	20	30.4	7.17	1.86	Clear, odorless
09:20	2	30	30.7	7.15	1.85	Clear, odorless
09:25	2	40	30.8	7.15	1.85	Clear, odorless
09:30	2	50	30.9	7.15	1.85	Clear, odorless
09:40	2	70	31.0	7.15	1.85	Clear, odorless

Total Vol. Purged **70** (gal) Casing Vol. Purged **3.38**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-1-3-24-18	09:40	2	Quarterly	N	NA	Duplicate Collected (Dup-3-24-18)

F = Filtered (Y,N), P = Preservative (Type)

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-2**	Date: **March 24, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**337.77**	ft. (a)
Elevation of Ground Surface	**337.17**	ft. (b)
Well Depth (below MP)	**120.00**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**89.28**	ft. (e)
Water Level Elevation (a-e)	**248.49**	ft. (f)
Height of Water in Well	**30.72**	ft.
Volume of Water in Casing	**30.72 x 0.66 = 20.28**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos electric submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water rinse**

FIELD OBSERVATIONS

Weather Conditions **Clear, cool**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-2** Date **March 24, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
08:16	2	2	28.3	7.34	1.68	Clear, odorless
08:20	2	10	28.6	7.31	1.68	Clear, odorless
08:25	2	20	29.2	7.25	1.67	Clear, odorless
08:35	2	40	30.1	7.13	1.66	Clear, odorless
08:40	2	50	30.1	7.13	1.66	Clear, odorless
08:45	2	60	30.2	7.13	1.66	Clear, odorless
08:50	2	70	30.2	7.13	1.66	Clear, odorless

Total Vol. Purged **70** (gal) Casing Vol. Purged **3.45**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-2-3-24-18	08:50	1	Quarterly	N	NA	1 Liter poly

F = Filtered (Y,N), P = Preservative (Type)

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-3**	Date: **March 24, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**338.22**	ft. (a)
Elevation of Ground Surface	**336.28**	ft. (b)
Well Depth (below MP)	**115.00**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**89.65**	ft. (e)
Water Level Elevation (a-e)	**248.57**	ft. (f)
Height of Water in Well	**25.35**	ft.
Volume of Water in Casing	**25.35 x 0.66 = 16.73**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos electric submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water**

Rinse

FIELD OBSERVATIONS

Weather Conditions **Clear, cool**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-3** Date **March 24, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
07:31	2	2	23.8	6.62	1.61	Clear, odorless
07:35	2	10	24.1	6.62	1.60	Clear, odorless
07:40	2	20	24.1	6.62	1.59	Clear, odorless
07:45	2	30	24.2	6.63	1.58	Clear, odorless
07:50	2	40	24.2	6.64	1.58	Clear, odorless
07:55	2	50	24.2	6.67	1.58	Clear, odorless
08:00	2	60	24.2	6.68	1.58	Clear, odorless

Total Vol. Purged **60** (gal) Casing Vol. Purged **3.59**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-3-3-24-18	08:00	1	Quarterly	N	NA	1 Liter poly

F = Filtered (Y,N), P = Preservative (Type)

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-4**	Date: **March 24, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**342.50**	ft. (a)
Elevation of Ground Surface	**339.95**	ft. (b)
Well Depth (below MP)	**118.95**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**93.42**	ft. (e)
Water Level Elevation (a-e)	**249.08**	ft. (f)
Height of Water in Well	**25.53**	ft.
Volume of Water in Casing	**25.53 x 0.66 = 16.85**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water**

Rinse

FIELD OBSERVATIONS

Weather Conditions **Clear, warm**

Well Head Conditions **Dry, good**

Comments

Second Semi-Annual 2018 Monitoring Report
Blythe Energy Inc.
Blythe, California
January 25, 2019

Project Name/Client **Blythe Energy Inc.** Well Number **MW-4** Date **March 24, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
10:01	2	2	32.3	7.24	1.87	Clear, odorless
10:05	2	10	32.4	7.24	1.87	Clear, odorless
10:10	2	20	32.5	7.21	1.87	Clear, odorless
10:15	2	30	32.5	7.20	1.87	Clear, odorless
10:20	2	40	32.5	7.20	1.87	Clear, odorless
10:25	2	50	32.5	7.20	1.87	Clear, odorless
10:30	2	60	32.5	7.20	1.87	Clear, odorless

Total Vol. Purged **60** (gal) Casing Vol. Purged **3.56**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-4-3-24-18	10:30	1	Quarterly	N	NA	1 Liter poly

F = Filtered (Y,N), P = Preservative (Type)

Depth to Water Readings:
OW-1 = 90.68 feet
OW-2 = 87.48 feet

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-1**	Date: **May 31, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**337.27**	ft. (a)
Elevation of Ground Surface	**337.76**	ft. (b)
Well Depth (below MP)	**109.75**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**88.90**	ft. (e)
Water Level Elevation (a-e)	**248.37**	ft. (f)
Height of Water in Well	**20.85**	ft.
Volume of Water in Casing	**20.85 x 0.66 = 13.76**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos electric submersible pump**

Sampling Apparatus: Type **1.56" diameter disposable bailer**

Cleaning Methods **Alconox and potable water wash, double distilled water rinse**

FIELD OBSERVATIONS

Weather Conditions **Clear, warm**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-1** Date **May 31, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
08:55	1	5	30.4	7.15	1.89	Clear, odorless
09:00	1	10	30.0	7.18	1.89	Clear, odorless
09:10	1	20	30.1	7.19	1.89	Clear, odorless
09:20	1	30	30.3	7.20	1.89	Clear, odorless
09:30	1	40	30.6	7.21	1.89	Clear, odorless
09:40	1	50	30.7	7.21	1.89	Clear, odorless

Total Vol. Purged **50** (gal) Casing Vol. Purged **3.63**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-1-5-31-18	09:40	2	Quarterly	N	NA	Duplicate Collected (DUP-5-31-18)

F = Filtered (Y,N), P = Preservative (Type)

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-2**	Date: **May 31, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**337.77**	ft. (a)
Elevation of Ground Surface	**337.17**	ft. (b)
Well Depth (below MP)	**109.80**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**89.35**	ft. (e)
Water Level Elevation (a-e)	**248.42**	ft. (f)
Height of Water in Well	**20.45**	ft.
Volume of Water in Casing	**20.45 x 0.66 = 13.50**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos electric submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water rinse**

FIELD OBSERVATIONS

Weather Conditions **Clear, warm**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-2** Date **May 31, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
07:45	1	5	28.5	7.57	1.72	Clear, odorless
07:50	1	10	28.7	7.53	1.70	Clear, odorless
08:00	1	20	28.9	7.52	1.69	Clear, odorless
08:10	1	30	29.0	7.51	1.69	Clear, odorless
08:20	1	40	29.1	7.51	1.69	Clear, odorless
08:30	1	50	29.2	7.51	1.69	Clear, odorless

Total Vol. Purged **50** (gal) Casing Vol. Purged **3.70**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-2-5-31-18	08:30	1	Quarterly	N	NA	1 Liter poly

F = Filtered (Y,N), P = Preservative (Type)

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-3**	Date: **May 31, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**338.22**	ft. (a)
Elevation of Ground Surface	**336.28**	ft. (b)
Well Depth (below MP)	**108.90**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**89.60**	ft. (e)
Water Level Elevation (a-e)	**248.62**	ft. (f)
Height of Water in Well	**19.30**	ft.
Volume of Water in Casing	**19.30 x 0.66 = 12.73**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water rinse**

FIELD OBSERVATIONS

Weather Conditions **Clear, warm**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-3** Date **May 31, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
06:45	1	10	23.5	7.28	1.71	Clear, odorless
06:55	1	20	24.2	6.90	1.65	Clear, odorless
07:05	1	30	24.8	6.87	1.62	Clear, odorless
07:15	1	40	24.8	6.86	1.63	Clear, odorless
07:25	1	50	24.9	6.86	1.63	Clear, odorless

Total Vol. Purged **50** (gal) Casing Vol. Purged **3.92**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-3-5-31-18	07:25	1	Quarterly	N	NA	1 Liter poly

F = Filtered (Y,N), P = Preservative (Type)

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-4**	Date: **May 31, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**342.50**	ft. (a)
Elevation of Ground Surface	**337.76**	ft. (b)
Well Depth (below MP)	**119.55**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**94.10**	ft. (e)
Water Level Elevation (a-e)	**248.40**	ft. (f)
Height of Water in Well	**25.45**	ft.
Volume of Water in Casing	**25.45 x 0.66 = 16.80**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water**

Rinse

FIELD OBSERVATIONS

Weather Conditions **Clear, warm**

Well Head Conditions **Dry, good**

Comments

Second Semi-Annual 2018 Monitoring Report
Blythe Energy Inc.
Blythe, California
January 25, 2019

Project Name/Client **Blythe Energy Inc.** Well Number **MW-4** Date **May 31, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
10:05	1	5	32.5	7.34	1.81	Clear, odorless
10:10	1	10	32.7	7.28	1.80	Clear, odorless
10:20	1	20	32.8	7.27	1.80	Clear, odorless
10:30	1	30	32.9	7.27	1.80	Clear, odorless
10:40	1	40	33.0	7.27	1.80	Clear, odorless
11:00	1	60	33.1	7.27	1.80	Clear, odorless

Total Vol. Purged **60** (gal) Casing Vol. Purged **3.57**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-4-5-31-18	11:00	1	Quarterly	N	NA	1 Liter poly

F = Filtered (Y,N), P = Preservative (Type)

Depth to Water Readings:
OW-1 = 92.40 feet
OW-2 = 89.10 feet

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-1**	Date: **September 13, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**337.27**	ft. (a)
Elevation of Ground Surface	**337.76**	ft. (b)
Well Depth (below MP)	**120.00**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**89.45**	ft. (e)
Water Level Elevation (a-e)	**247.82**	ft. (f)
Height of Water in Well	**30.55**	ft.
Volume of Water in Casing	**30.55x0.66=20.16**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos electric submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water rinse**

FIELD OBSERVATIONS

Weather Conditions **Clear, warm**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-1** Date **September 13, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
0845	2	5	30.5	7.24	1.920	Clear, odorless
0850	2	10	31.0	7.25	1.900	Clear, odorless
0900	2	20	31.3	7.26	1.920	Clear, odorless
0910	2	30	31.5	7.26	1.930	Clear, odorless
0930	2	50	31.6	7.27	1.930	Clear, odorless
0950	2	70	31.7	7.27	1.930	Clear, odorless

Total Vol. Purged **70** (gal) Casing Vol. Purged **3.47**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-1-9-13-18	0950	1	Quarterly	N	NA	1 Liter Poly

F = Filtered (Y,N), P = Preservative (Type)

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-2**	Date: **September 13, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**337.77**	ft. (a)
Elevation of Ground Surface	**337.17**	ft. (b)
Well Depth (below MP)	**120.00**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**89.45**	ft. (e)
Water Level Elevation (a-e)	**248.32**	ft. (f)
Height of Water in Well	**30.55**	ft.
Volume of Water in Casing	**30.55x0.66=20.16**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos electric submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water rinse**

FIELD OBSERVATIONS

Weather Conditions **Clear, warm**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-2** Date **September 13, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
0715	1	5	27.7	7.34	1.660	Clear, odorless
0720	1	10	29.2	7.35	1.660	Clear, odorless
0730	1	20	29.4	7.33	1.660	Clear, odorless
0740	1	30	29.6	7.30	1.660	Clear, odorless
0750	1	40	29.7	7.30	1.660	Clear, odorless
0820	1	70	29.7	7.29	1.660	Clear, odorless

Total Vol. Purged **70** (gal) Casing Vol. Purged **3.47**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-2-9-13-18	0820	2	Quarterly	N	NA	DUP-9-13-18 collected

F = Filtered (Y,N), P = Preservative (Type)

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-3**	Date: **September 13, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**338.22**	ft. (a)
Elevation of Ground Surface	**336.28**	ft. (b)
Well Depth (below MP)	**115.00**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**89.46**	ft. (e)
Water Level Elevation (a-e)	**248.76**	ft. (f)
Height of Water in Well	**25.54**	ft.
Volume of Water in Casing	**25.54x0.66=16.86**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos electric submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water**

Rinse

FIELD OBSERVATIONS

Weather Conditions **Clear, cool**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-3** Date **September 13, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
0605	1	5	22.8	7.19	1.790	Clear, odorless
0610	1	10	23.4	6.91	1.620	Clear, odorless
0620	1	20	23.6	6.90	1.610	Clear, odorless
0630	1	30	23.6	6.90	1.610	Clear, odorless
0640	1	40	23.7	6.88	1.620	Clear, odorless
0700	1	60	23.7	6.89	1.620	Clear, odorless

Total Vol. Purged **60** (gal) Casing Vol. Purged **3.56**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-3-9-13-18	0700	1	Quarterly	N	NA	

F = Filtered (Y,N), P = Preservative (Type)

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-4**	Date: **September 13, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**342.50**	ft. (a)
Elevation of Ground Surface	**339.95**	ft. (b)
Well Depth (below MP)	**118.95**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**95.28**	ft. (e)
Water Level Elevation (a-e)	**247.22**	ft. (f)
Height of Water in Well	**23.67**	ft.
Volume of Water in Casing	**23.67x0.66=15.62**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos submersible pump**

Sampling Apparatus: Type **1.56" Disposable bailer**

Cleaning Methods **Alconox and potable water wash, double distilled water**

Rinse

FIELD OBSERVATIONS

Weather Conditions **Clear, warm**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-4** Date **September 13, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
1005	1	5	32.5	7.39	1.770	Clear, odorless
1010	1	10	32.6	7.42	1.770	Clear, odorless
1020	1	20	33.3	7.39	1.770	Clear, odorless
1030	1	30	34.2	7.37	1.770	Clear, odorless
1040	1	40	34.5	7.37	1.770	Clear, odorless
1050	1	50	34.6	7.27	1.770	Clear, odorless

Total Vol. Purged **50** (gal) Casing Vol. Purged **3.20**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-4-9-13-18	1050	1	Quarterly	N	NA	I Liter Poly

F = Filtered (Y,N), P = Preservative (Type)

Depth to Water Readings:
OW-1 = 94.10 feet
OW-2 = 90.72 feet

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-1**	Date: **December 3, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**337.27**	ft. (a)
Elevation of Ground Surface	**337.76**	ft. (b)
Well Depth (below MP)	**120.00**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**88.38**	ft. (e)
Water Level Elevation (a-e)	**248.89**	ft. (f)
Height of Water in Well	**31.62**	ft.
Volume of Water in Casing	**31.62x0.66=20.87**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos electric submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water rinse**

FIELD OBSERVATIONS

Weather Conditions **Clear, cool**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-1** Date **December 3, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
0830	2	10	29.7	7.19	1.780	Clear, odorless
0835	2	20	29.7	7.20	1.780	Clear, odorless
0840	2	30	29.7	7.21	1.780	Clear, odorless
0850	2	50	29.8	7.21	1.780	Clear, odorless
0900	2	70	29.8	7.21	1.780	Clear, odorless

Total Vol. Purged **70** (gal) Casing Vol. Purged **3.35**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-1-12-3-18	0900	4	Quarterly	N	NA	Duplicate Collected (DUP-12-3-18)

F = Filtered (Y,N), P = Preservative (Type)

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-2**	Date: **December 3, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**337.77**	ft. (a)
Elevation of Ground Surface	**337.17**	ft. (b)
Well Depth (below MP)	**120.00**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**88.60**	ft. (e)
Water Level Elevation (a-e)	**249.17**	ft. (f)
Height of Water in Well	**31.40**	ft.
Volume of Water in Casing	**31.40x0.66=20.72**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos electric submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water rinse**

FIELD OBSERVATIONS

Weather Conditions **Clear, cool**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-2** Date **December 3, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
0735	2	10	29.2	7.25	1.580	Clear, odorless
0740	2	20	29.2	7.23	1.580	Clear, odorless
0745	2	30	29.2	7.19	1.570	Clear, odorless
0755	2	50	29.2	7.18	1.570	Clear, odorless
0805	2	70	29.2	7.18	1.570	Clear, odorless

Total Vol. Purged **70** (gal) Casing Vol. Purged **3.38**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-2-12-3-18	0805	2	Quarterly	N	NA	1 Liter Poly

F = Filtered (Y,N), P = Preservative (Type)

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-3**	Date: **December 3, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**338.22**	ft. (a)
Elevation of Ground Surface	**336.28**	ft. (b)
Well Depth (below MP)	**115.00**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**88.65**	ft. (e)
Water Level Elevation (a-e)	**249.57**	ft. (f)
Height of Water in Well	**26.35**	ft.
Volume of Water in Casing	**26.35x0.66=17.39**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos electric submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water**

Rinse

FIELD OBSERVATIONS

Weather Conditions **Clear, cool**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-3** Date **December 3, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
0641	2	2	22.7	7.06	1.600	Clear, odorless
0650	2	20	22.9	7.05	1.600	Clear, odorless
0655	2	30	23.1	7.01	1.590	Clear, odorless
0700	2	40	23.2	7.00	1.580	Clear, odorless
0710	2	60	23.3	7.01	1.580	Clear, odorless

Total Vol. Purged **60** (gal) Casing Vol. Purged **3.45**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-3-12-3-18	0710	2	Quarterly	N	NA	

F = Filtered (Y,N), P = Preservative (Type)

WELL SAMPLING/DEVELOPMENT RECORD

Project:	**Blythe Energy Inc.**	Project No:	**NB11160982**
Location:	**Blythe, California**	Logged by:	**Ralph De La Parra**
Well No.: **MW-4**	Date: **December 3, 2018**	Sampler:	**Ralph De La Parra**

Elevation of Measuring Point (MP)	**342.50**	ft. (a)
Elevation of Ground Surface	**339.95**	ft. (b)
Well Depth (below MP)	**118.95**	ft. (c)
Casing Inside Diameter	**4.0**	in. (d)

CALCULATION OF CASING VOLUME

Depth of Water Below MP	**93.85**	ft. (e)
Water Level Elevation (a-e)	**248.65**	ft. (f)
Height of Water in Well	**25.10**	ft.
Volume of Water in Casing	**25.10x0.66=16.57**	gal.

Sampling/Development System (High-light) Dedicated Non-dedicated √

Purging Apparatus: Type **Grundfos submersible pump**

Sampling Apparatus: Type **Sampled through pump**

Cleaning Methods **Alconox and potable water wash, double distilled water**

Rinse

FIELD OBSERVATIONS

Weather Conditions **Clear, cool**

Well Head Conditions **Dry, good**

Comments

Project Name/Client **Blythe Energy Inc.** Well Number **MW-4** Date **December 3, 2018**

FIELD MEASUREMENTS						
Time	Pump Rate (GPM)	Cumulative Vol. Removed (gal)	Temp (°C)	pH	Spec. Cond. (ms/cm at 25 °C)	Particulates/Odor/Clarity/Color
0925	2	10	32.2	7.27	1.640	Clear, odorless
0930	2	20	32.3	7.30	1.630	Clear, odorless
0935	2	30	32.4	7.31	1.630	Clear, odorless
0940	2	40	32.5	7.31	1.630	Clear, odorless
0950	2	60	32.6	7.31	1.630	Clear, odorless

Total Vol. Purged **60** (gal) Casing Vol. Purged **3.62**

Final Water Level After Purging _____ ft. Below MP; Time _____

Fate of Purged Water **Discharged to ground**

SAMPLE INVENTORY

Label	Time	Number of Bottles	Analysis	F	P	Remarks
MW-4-12-3-18	0950	2	Quarterly	N	NA	I Liter Poly

F = Filtered (Y,N), P = Preservative (Type)

Depth to Water Readings:
OW-1 = 92.50 feet
OW-2 = 89.18 feet

SECOND SEMI-ANNUAL 2018 MONITORING REPORT

SECTION 10
LEACHATE COLLECTION AND RECOVERY SYSTEM (LCRS) & WEEKLY LYSIMETER RECORDS

LEACHATE COLLECTION AND RECOVERY SYSTEM (LCRS) & WEEKLY LYSIMETER RECORDS

Table 10-1 shows records of weekly inspections performed on the Leachate Collection and Recovery System (LCR) and the Lysimeters.

Table 10-1 Leachate Collection and Recovery System (LCRS) & Weekly Lysimeter Results

Date	LRS Measurement	East Pond Level	Pumped Y/N	Lysimeter checked	Water Present? Y/N	LRS Measurement	West Pond Level	Pumped Y/N	Lysimeter checked	Water Present? Y/N	Comments
1/1/2018	NA	50%	Y	Y	N	NA	30%	Y	Y	N	Weekly Inspection
1/8/201	NA	50%	Y	Y	N	NA	40%	Y	Y	N	Weekly Inspection
1/14/2018	3'10"	50%	N	Y	N	1'8"	40%	N	Y	N	Weekly Inspection
1/21/2018	4'11"	30%	N	Y	N	5'3"	25%	Y	Y	N	Weekly Inspection
1/28/2018	4'6"	30%	N	Y	N	4'7"	20%	N	Y	N	Weekly Inspection
2/4/2018	4'11"	25%	Y	Y	N	5'2"	30%	Y	Y	N	Weekly Inspection
2/11/2018	4'10"	30%	N	Y	N	4'9"	20%	N	Y	N	Weekly Inspection
2/18/2018	4'10"	40%	N	Y	N	4'10"	30%	N	Y	N	Weekly Inspection
2/25/2018	5'2"	30%	Y	Y	N	5'5"	50%	Y	Y	N	Weekly Inspection
3/6/2018	1'8"	35%	N	Y	N	5'	30%	Y	Y	N	Weekly Inspection
3/11/2018	2'7"	60%	N	Y	N	3'10"	35%	N	Y	N	Weekly Inspection
3/18/2018	3'1"	35%	N	Y	N	5'3"	35%	Y	Y	N	Weekly Inspection
3/25/2018	3'4"	80%	N	Y	N	4'7"	50%	N	Y	N	Weekly Inspection
4/1/2018	3'9"	50%	N	Y	N	4'11"	30%	N	Y	N	Weekly Inspection
4/7/2018	4'6"	60%	Y	Y	N	5'8"	40%	Y	Y	N	Weekly Inspection
4/15/2018	1'	75%	N	Y	N	3'5"	45%	N	Y	N	Weekly Inspection
4/22/2018	10"	40%	N	Y	N	4'1"	40%	N	Y	N	Weekly Inspection
4/30/2018	1'6"	30%	N	Y	N	5'3"	25%	Y	Y	N	Weekly Inspection
5/6/2018	5'8"	70%	Y	Y	N	5'2"	50%	Y	Y	N	Weekly Inspection
5/13/2018	10"	70%	N	Y	N	4'3"	50%	N	Y	N	Weekly Inspection
5/20/2018	10"	75%	N	Y	N	4'9"	50%	N	Y	N	Weekly Inspection
5/27/2018	1'1"	70%	N	Y	N	5'2"	40%	N	Y	N	Weekly Inspection
6/3/2018	6"	50%	N	Y	N	4'3"	40%	N	Y	N	Weekly Inspection
6/10/2018	10"	30%	N	Y	N	10"	50%	N	Y	N	Weekly Inspection
6/17/2018	8'4"	40%	N	Y	N	6'6"	50%	N	Y	N	Weekly Inspection
6/24/2018	2’	90%	N	Y	N	4'2"	50%	N	Y	N	Weekly Inspection

Table 10-1 Leachate Collection and Recovery System (LCRS) & Weekly Lysimeter Results

Date	LRS Measurement in Inches	East Pond Level - Inches of Free Board	Pumped Y/N	Lysimeter Checked	Water Present? Y/N	LRS Measurement in Inches	West Pond Level - Inches of Free Board	Pumped Y/N	Lysimeter Checked	Water Present? Y/N	Comments
7/1/2018	48	70	Y	Y	N	0	47	N	Y	N	Weekly Inspection
7/8/2018	10	68	N	Y	N	24	49	N	Y	N	Weekly Inspection
7/15/2018	11	68	Y	N	N	67	41	Y	N	N	no vacuum pump for lysimeter checks
7/22/2018	12	66	N	Y	N	12	54	N	Y	N	Weekly Inspection
7/29/2018	2	64	N	Y	N	66	55	N	Y	N	Weekly Inspection
8/5/2018	42	67	N	Y	N	27	38	N	Y	N	Weekly Inspection
8/12/2018	54	67	N	Y	N	12	53	N	Y	N	Weekly Inspection
8/19/2018	36	68	N	Y	N	13	59	N	Y	N	Weekly Inspection
8/26/2018	60	67	N	Y	N	2	66	N	Y	N	Weekly Inspection
9/2/2018	54	65	N	Y	N	6	85	N	Y	N	Weekly Inspection
9/9/2018	60	64	Y	Y	N	27	76	N	Y	N	Weekly Inspection
9/16/2018	12	63	N	Y	N	12	73	N	Y	N	Weekly Inspection
9/23/2018	12	64	N	Y	N	72	75	Y	Y	N	Weekly Inspection
9/30/2018	51	64	N	Y	N	56	74	N	Y	N	Weekly Inspection
10/7/2018	6	63	N	Y	N	24	74	N	Y	N	Weekly Inspection
10/14/2018	12	63	N	Y	N	24	79	N	Y	N	Weekly Inspection
10/21/2018	12	63	N	Y	N	20	78	N	Y	N	Weekly Inspection
10/28/2018	12	63	N	Y	N	18	77	N	Y	N	Weekly Inspection
11/4/2018	48	64	N	Y	N	54	78	N	Y	N	Weekly Inspection
11/11/2018	0	65	N	Y	N	56	78	N	Y	N	Weekly Inspection
11/18/2018	6	65	N	Y	N	12	79	N	Y	N	Weekly Inspection
11/25/2018	12	63	N	Y	N	66	82	Y	Y	N	Weekly Inspection
12/2/2018	12	63	N	Y	N	60	82	N	Y	N	Weekly Inspection
12/9/2018	12	62	N	Y	N	60	81	N	Y	N	Weekly Inspection
12/16/2018	6	56	N	Y	N	48	81	N	Y	N	Weekly Inspection
12/30/2018	2	62	N	Y	N	66	82	N	Y	N	Weekly Inspection

SECOND SEMI-ANNUAL 2018 MONITORING REPORT

APPENDIX A

LABORATORY ANALYTICAL DATA SHEETS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

TestAmerica Job ID: 440-220305-1
Client Project/Site: AltaGas-Blythe

For:
Northstar Environmental Remediation
26225 Enterprise Court
Lake Forest, California 92630

Attn: Ralph DeLaParra

Authorized for release by:
9/30/2018 1:56:03 AM

Dennis Tran, Project Manager I
(949)261-1022
dennis.tran@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-220305-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-220305-1	MW-3-9-13-18	Water	09/13/18 07:00	09/18/18 10:34
440-220305-2	MW-2-9-13-18	Water	09/13/18 08:20	09/18/18 10:34
440-220305-3	MW-1-9-13-18	Water	09/13/18 09:50	09/18/18 10:34
440-220305-4	MW-4-9-13-18	Water	09/13/18 10:50	09/18/18 10:34
440-220305-5	Dup-9-13-18	Water	09/13/18 00:01	09/18/18 10:34

Case Narrative

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-220305-1

Job ID: 440-220305-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-220305-1

Comments
No additional comments.

Receipt
The samples were received on 9/18/2018 10:34 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0º C.

HPLC/IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-220305-1

Client Sample ID: MW-3-9-13-18

Lab Sample ID: 440-220305-1
Date Collected: 09/13/18 07:00
Matrix: Water
Date Received: 09/18/18 10:34

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	150		10	mg/L			09/19/18 00:49	20
Sulfate	380		25	mg/L			09/19/18 13:51	50

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.010	mg/L		09/26/18 10:26	09/27/18 18:01	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1600		1.0	umhos/cm			09/24/18 08:43	1
Total Dissolved Solids	1100		10	mg/L			09/20/18 09:31	1

Client Sample ID: MW-2-9-13-18

Lab Sample ID: 440-220305-2
Date Collected: 09/13/18 08:20
Matrix: Water
Date Received: 09/18/18 10:34

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	150		10	mg/L			09/19/18 01:06	20
Sulfate	390		25	mg/L			09/19/18 14:09	50

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.010	mg/L		09/26/18 10:26	09/27/18 18:04	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1700		1.0	umhos/cm			09/24/18 08:43	1
Total Dissolved Solids	1100		10	mg/L			09/20/18 09:31	1

Client Sample ID: MW-1-9-13-18

Lab Sample ID: 440-220305-3
Date Collected: 09/13/18 09:50
Matrix: Water
Date Received: 09/18/18 10:34

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	220		10	mg/L			09/19/18 01:23	20
Sulfate	430		25	mg/L			09/19/18 14:27	50

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.010	mg/L		09/26/18 10:26	09/27/18 18:06	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1900		1.0	umhos/cm			09/24/18 08:43	1
Total Dissolved Solids	1300		10	mg/L			09/20/18 09:31	1

Client Sample Results

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-220305-1

Client Sample ID: MW-4-9-13-18

Lab Sample ID: 440-220305-4
Date Collected: 09/13/18 10:50
Matrix: Water
Date Received: 09/18/18 10:34

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	280		10	mg/L			09/19/18 01:40	20
Sulfate	300		25	mg/L			09/19/18 14:45	50

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.010	mg/L		09/26/18 10:26	09/27/18 18:09	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1800		1.0	umhos/cm			09/24/18 08:43	1
Total Dissolved Solids	1100		10	mg/L			09/20/18 09:31	1

Client Sample ID: Dup-9-13-18

Lab Sample ID: 440-220305-5
Date Collected: 09/13/18 00:01
Matrix: Water
Date Received: 09/18/18 10:34

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	150		10	mg/L			09/19/18 01:57	20
Sulfate	400		25	mg/L			09/19/18 15:03	50

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.010	mg/L		09/26/18 10:26	09/27/18 18:11	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1700		1.0	umhos/cm			09/24/18 09:28	1
Total Dissolved Solids	1100		10	mg/L			09/20/18 09:31	1

Method Summary

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-220305-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
200.7 Rev 4.4	Metals (ICP)	EPA	TAL IRV
SM 2510B	Conductivity, Specific Conductance	SM	TAL IRV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL IRV
200.2	Preparation, Total Recoverable Metals	EPA	TAL IRV

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-220305-1

Client Sample ID: MW-3-9-13-18 — Lab Sample ID: 440-220305-1

Date Collected: 09/13/18 07:00 — **Matrix: Water**
Date Received: 09/18/18 10:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20			499601	09/19/18 00:49	NTN	TAL IRV
Total/NA	Analysis	300.0		50			499866	09/19/18 13:51	NTN	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	501203	09/26/18 10:26	KE	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1			501704	09/27/18 18:01	TQN	TAL IRV
Total/NA	Analysis	SM 2510B		1			500690	09/24/18 08:43	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	500113	09/20/18 09:31	XL	TAL IRV

Client Sample ID: MW-2-9-13-18 — Lab Sample ID: 440-220305-2

Date Collected: 09/13/18 08:20 — **Matrix: Water**
Date Received: 09/18/18 10:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20			499601	09/19/18 01:06	NTN	TAL IRV
Total/NA	Analysis	300.0		50			499866	09/19/18 14:09	NTN	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	501203	09/26/18 10:26	KE	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1			501704	09/27/18 18:04	TQN	TAL IRV
Total/NA	Analysis	SM 2510B		1			500690	09/24/18 08:43	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	500113	09/20/18 09:31	XL	TAL IRV

Client Sample ID: MW-1-9-13-18 — Lab Sample ID: 440-220305-3

Date Collected: 09/13/18 09:50 — **Matrix: Water**
Date Received: 09/18/18 10:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20			499601	09/19/18 01:23	NTN	TAL IRV
Total/NA	Analysis	300.0		50			499866	09/19/18 14:27	NTN	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	501203	09/26/18 10:26	KE	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1			501704	09/27/18 18:06	TQN	TAL IRV
Total/NA	Analysis	SM 2510B		1			500690	09/24/18 08:43	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	500113	09/20/18 09:31	XL	TAL IRV

Client Sample ID: MW-4-9-13-18 — Lab Sample ID: 440-220305-4

Date Collected: 09/13/18 10:50 — **Matrix: Water**
Date Received: 09/18/18 10:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20			499601	09/19/18 01:40	NTN	TAL IRV
Total/NA	Analysis	300.0		50			499866	09/19/18 14:45	NTN	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	501203	09/26/18 10:26	KE	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1			501704	09/27/18 18:09	TQN	TAL IRV
Total/NA	Analysis	SM 2510B		1			500690	09/24/18 08:43	XL	TAL IRV

Lab Chronicle

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-220305-1

Client Sample ID: MW-4-9-13-18

Lab Sample ID: 440-220305-4

Date Collected: 09/13/18 10:50
Matrix: Water
Date Received: 09/18/18 10:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	500113	09/20/18 09:31	XL	TAL IRV

Client Sample ID: Dup-9-13-18

Lab Sample ID: 440-220305-5

Date Collected: 09/13/18 00:01
Matrix: Water
Date Received: 09/18/18 10:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20			499601	09/19/18 01:57	NTN	TAL IRV
Total/NA	Analysis	300.0		50			499866	09/19/18 15:03	NTN	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	501203	09/26/18 10:26	KE	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1			501704	09/27/18 18:11	TQN	TAL IRV
Total/NA	Analysis	SM 2510B		1			500690	09/24/18 09:28	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	500113	09/20/18 09:31	XL	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-499601/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 499601

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50		mg/L			09/18/18 12:36	1

Lab Sample ID: LCS 440-499601/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 499601

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			5.00	4.81		mg/L		96	90 - 110		

Lab Sample ID: 440-220363-B-4 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 499601

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	230	E	5.00	250	E 4	mg/L		305	80 - 120		

Lab Sample ID: 440-220363-B-4 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 499601

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	230	E	5.00	233	E 4	mg/L		-36	80 - 120	7	20

Lab Sample ID: MB 440-499866/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 499866

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		0.50		mg/L			09/19/18 12:42	1

Lab Sample ID: LCS 440-499866/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 499866

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			5.00	5.45		mg/L		109	90 - 110		

Lab Sample ID: 440-220305-5 MS — **Client Sample ID: Dup-9-13-18**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 499866

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate	400		250	646		mg/L		100	80 - 120		

Lab Sample ID: 440-220305-5 MSD — **Client Sample ID: Dup-9-13-18**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 499866

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	400		250	646		mg/L		101	80 - 120	0	20

QC Sample Results

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-220305-1

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 440-501203/1-A
Matrix: Water
Analysis Batch: 501704

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 501203

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.010		mg/L		09/26/18 10:26	09/27/18 16:21	1

Lab Sample ID: LCS 440-501203/2-A
Matrix: Water
Analysis Batch: 501704

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 501203

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Selenium			0.500	0.485		mg/L		97	85 - 115		

Lab Sample ID: 440-220347-F-3-B MS
Matrix: Water
Analysis Batch: 501704

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 501203

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Selenium	ND		0.500	0.489		mg/L		98	70 - 130		

Lab Sample ID: 440-220347-F-3-C MSD
Matrix: Water
Analysis Batch: 501704

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 501203

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Selenium	ND		0.500	0.486		mg/L		97	70 - 130	1	20

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 440-500690/3
Matrix: Water
Analysis Batch: 500690

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		1.0		umhos/cm			09/24/18 08:43	1

Lab Sample ID: LCS 440-500690/4
Matrix: Water
Analysis Batch: 500690

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Specific Conductance			953	987		umhos/cm		104	90 - 110		

Lab Sample ID: 440-220242-A-1 DU
Matrix: Water
Analysis Batch: 500690

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Specific Conductance	29			30.1		umhos/cm				3	5

QC Sample Results

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-220305-1

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 440-500113/1
Matrix: Water
Analysis Batch: 500113

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10		mg/L			09/20/18 09:31	1

Lab Sample ID: LCS 440-500113/2
Matrix: Water
Analysis Batch: 500113

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids			1000	990		mg/L		99	90 - 110		

Lab Sample ID: 440-220277-G-12 DU
Matrix: Water
Analysis Batch: 500113

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	950			936		mg/L				1	5

QC Association Summary

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-220305-1

HPLC/IC

Analysis Batch: 499601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220305-1	MW-3-9-13-18	Total/NA	Water	300.0	
440-220305-2	MW-2-9-13-18	Total/NA	Water	300.0	
440-220305-3	MW-1-9-13-18	Total/NA	Water	300.0	
440-220305-4	MW-4-9-13-18	Total/NA	Water	300.0	
440-220305-5	Dup-9-13-18	Total/NA	Water	300.0	
MB 440-499601/6	Method Blank	Total/NA	Water	300.0	
LCS 440-499601/5	Lab Control Sample	Total/NA	Water	300.0	
440-220363-B-4 MS	Matrix Spike	Total/NA	Water	300.0	
440-220363-B-4 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 499866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220305-1	MW-3-9-13-18	Total/NA	Water	300.0	
440-220305-2	MW-2-9-13-18	Total/NA	Water	300.0	
440-220305-3	MW-1-9-13-18	Total/NA	Water	300.0	
440-220305-4	MW-4-9-13-18	Total/NA	Water	300.0	
440-220305-5	Dup-9-13-18	Total/NA	Water	300.0	
MB 440-499866/6	Method Blank	Total/NA	Water	300.0	
LCS 440-499866/5	Lab Control Sample	Total/NA	Water	300.0	
440-220305-5 MS	Dup-9-13-18	Total/NA	Water	300.0	
440-220305-5 MSD	Dup-9-13-18	Total/NA	Water	300.0	

Metals

Prep Batch: 501203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220305-1	MW-3-9-13-18	Total Recoverable	Water	200.2	
440-220305-2	MW-2-9-13-18	Total Recoverable	Water	200.2	
440-220305-3	MW-1-9-13-18	Total Recoverable	Water	200.2	
440-220305-4	MW-4-9-13-18	Total Recoverable	Water	200.2	
440-220305-5	Dup-9-13-18	Total Recoverable	Water	200.2	
MB 440-501203/1-A	Method Blank	Total Recoverable	Water	200.2	
LCS 440-501203/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
440-220347-F-3-B MS	Matrix Spike	Total Recoverable	Water	200.2	
440-220347-F-3-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.2	

Analysis Batch: 501704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220305-1	MW-3-9-13-18	Total Recoverable	Water	200.7 Rev 4.4	501203
440-220305-2	MW-2-9-13-18	Total Recoverable	Water	200.7 Rev 4.4	501203
440-220305-3	MW-1-9-13-18	Total Recoverable	Water	200.7 Rev 4.4	501203
440-220305-4	MW-4-9-13-18	Total Recoverable	Water	200.7 Rev 4.4	501203
440-220305-5	Dup-9-13-18	Total Recoverable	Water	200.7 Rev 4.4	501203
MB 440-501203/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	501203
LCS 440-501203/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	501203
440-220347-F-3-B MS	Matrix Spike	Total Recoverable	Water	200.7 Rev 4.4	501203
440-220347-F-3-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.7 Rev 4.4	501203

QC Association Summary

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-220305-1

General Chemistry

Analysis Batch: 500113

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220305-1	MW-3-9-13-18	Total/NA	Water	SM 2540C	
440-220305-2	MW-2-9-13-18	Total/NA	Water	SM 2540C	
440-220305-3	MW-1-9-13-18	Total/NA	Water	SM 2540C	
440-220305-4	MW-4-9-13-18	Total/NA	Water	SM 2540C	
440-220305-5	Dup-9-13-18	Total/NA	Water	SM 2540C	
MB 440-500113/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-500113/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-220277-G-12 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 500690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-220305-1	MW-3-9-13-18	Total/NA	Water	SM 2510B	
440-220305-2	MW-2-9-13-18	Total/NA	Water	SM 2510B	
440-220305-3	MW-1-9-13-18	Total/NA	Water	SM 2510B	
440-220305-4	MW-4-9-13-18	Total/NA	Water	SM 2510B	
440-220305-5	Dup-9-13-18	Total/NA	Water	SM 2510B	
MB 440-500690/3	Method Blank	Total/NA	Water	SM 2510B	
LCS 440-500690/4	Lab Control Sample	Total/NA	Water	SM 2510B	
440-220242-A-1 DU	Duplicate	Total/NA	Water	SM 2510B	

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-220305-1

Laboratory: TestAmerica Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-19
Arizona	State Program	9	AZ0671	10-14-18 *
California	LA Cty Sanitation Districts	9	10256	06-30-19
California	State Program	9	CA ELAP 2706	06-30-19
Guam	State Program	9	Cert. No. 17-003R	01-23-19
Hawaii	State Program	9	N/A	01-29-19
Kansas	NELAP	7	E-10420	07-31-19
Nevada	State Program	9	CA015312018-1	07-31-19
New Mexico	State Program	6	N/A	01-29-19
Oregon	NELAP	10	4028	01-29-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-15-00184	07-09-21
Washington	State Program	10	C900	09-03-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
Phone: 949.261.1022 Fax:

Chain of Custody Record

209907

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager:	Site Contact:	Date: 9-17-18	COC No:
Company Name: NorthStar Environmental	Tel/Fax:	Lab Contact:	Carrier:	1 of 1 COCs
Address: 26225 Enterprise Ct	Analysis Turnaround Time			Sampler:
City/State/Zip: Lake Forest, CA 92630	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: (949) 580-2800	TAT if different from Below _____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Altabas-Blythe	☐ 1 week			
Site:	☐ 2 days			Job / SDG No :
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Chloride	TDS	Specific Conductance	Sulfate	Selenium	Sample Specific Notes:
MW-3-9-13-18	9-13-18	0200	G	H2O	1	N	N	X	X	X	X	X	
MW-2 "		0820			1			X	X	X	X	X	
MW-1 "		0950			1			X	X	X	X	X	
MW-4 "		1050			1			X	X	X	X	X	
Dup - "		—			1			X	X	X	X	X	

440-220305 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd _____ | Therm ID No.: _____

Relinquished by:	Company: NorthStar	Date/Time: 9/18/18 8:52	Received by:	Company: TA	Date/Time: 9/18/18 8:52
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company: TA	Date/Time: 9/18/18 10:34	Received in Laboratory by:	Company: TA-IRV	Date/Time: 9/18/18 10:34

IR-SC6 2.3/2.0

Login Sample Receipt Checklist

Client: Northstar Environmental Remediation

Job Number: 440-220305-1

Login Number: 220305
List Number: 1
Creator: Skinner, Alma D

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	False	Improper containers received.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

TestAmerica Job ID: 440-223433-1
Client Project/Site: AltaGas-Blythe

For:
Northstar Environmental Remediation
26225 Enterprise Court
Lake Forest, California 92630

Attn: Ralph DeLaParra

Authorized for release by:
11/12/2018 10:37:06 AM

Dennis Tran, Project Manager I
(949)261-1022
dennis.tran@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-223433-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-223433-1	MW-1-10-30-18	Water	10/30/18 14:30	10/31/18 12:15
440-223433-2	DUP-1	Water	10/30/18 14:30	10/31/18 12:15

Job ID: 440-223433-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-223433-1

Comments
No additional comments.

Receipt
The samples were received on 10/31/2018 12:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.2º C.

Receipt Exceptions
The Field Sampler was not listed on the Chain of Custody.

The COC lists two containers to be received for Dup-1, but only one container was received.

HPLC/IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
The following samples for metals were received unpreserved and were preserved upon receipt to the laboratory. Regulatory documents require a 24-hour waiting period from the time of the addition of the acid preservative to the time of digestion.

11/01/18 at 9:10
HNO3 Lot: 0000200458
Amount added: 1.0mL

Method(s) 200.2: The following samples for metals were received unpreserved and were preserved upon receipt to the laboratory: MW-1-10-30-18 (440-223433-1). Regulatory documents require a 24-hour waiting period from the time of the addition of the acid preservative to the time of digestion.

Method(s) 200.2: The following samples for metals were received unpreserved and were preserved upon receipt to the laboratory: MW-1-10-30-18 (440-223433-1), 440-223433-1. Regulatory documents require a 24-hour waiting period from the time of the addition of the acid preservative to the time of digestion.

0.5mL HNO3 added to both 440-223421-1,2
1.0mL HNO3 added to 440-223433-1
all on 11/1/18 @ 9:10

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-223433-1

Client Sample ID: MW-1-10-30-18

Lab Sample ID: 440-223433-1

Date Collected: 10/30/18 14:30
Matrix: Water
Date Received: 10/31/18 12:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	200		50		mg/L			10/31/18 23:44	100
Sulfate	410		50		mg/L			10/31/18 23:44	100

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Selenium	0.014		0.010		mg/L		11/02/18 09:03	11/02/18 19:43	1

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1700		1.0		umhos/cm			11/02/18 09:18	1
Total Dissolved Solids	1200		10		mg/L			11/01/18 09:10	1

Client Sample ID: DUP-1

Lab Sample ID: 440-223433-2

Date Collected: 10/30/18 14:30
Matrix: Water
Date Received: 10/31/18 12:15

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1200		10		mg/L			11/01/18 09:10	1

Method Summary

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-223433-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
200.7 Rev 4.4	Metals (ICP)	EPA	TAL IRV
SM 2510B	Conductivity, Specific Conductance	SM	TAL IRV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL IRV
200.2	Preparation, Total Recoverable Metals	EPA	TAL IRV

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-223433-1

Client Sample ID: MW-1-10-30-18

Lab Sample ID: 440-223433-1
Date Collected: 10/30/18 14:30
Matrix: Water
Date Received: 10/31/18 12:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100	5 mL	1.0 mL	508489	10/31/18 23:44	NTN	TAL IRV
Total Recoverable	Prep	200.2			25 mL	25 mL	508937	11/02/18 09:03	KE	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1			509145	11/02/18 19:43	TQN	TAL IRV
Total/NA	Analysis	SM 2510B		1			508940	11/02/18 09:18	XL	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	508695	11/01/18 09:10	XL	TAL IRV

Client Sample ID: DUP-1

Lab Sample ID: 440-223433-2
Date Collected: 10/30/18 14:30
Matrix: Water
Date Received: 10/31/18 12:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	508695	11/01/18 09:10	XL	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

QC Sample Results

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-223433-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-508489/6
Matrix: Water
Analysis Batch: 508489

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50		mg/L			10/31/18 12:38	1
Sulfate	ND		0.50		mg/L			10/31/18 12:38	1

Lab Sample ID: LCS 440-508489/5
Matrix: Water
Analysis Batch: 508489

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			5.00	4.75		mg/L		95	90 - 110		
Sulfate			5.00	4.92		mg/L		98	90 - 110		

Lab Sample ID: 440-223277-A-1 MS
Matrix: Water
Analysis Batch: 508489

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	75	F1	25.0	105	E	mg/L		119	80 - 120		
Sulfate	970	E	25.0	1020	E 4	mg/L		218	80 - 120		

Lab Sample ID: 440-223277-A-1 MSD
Matrix: Water
Analysis Batch: 508489

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	75	F1	25.0	106	E F1	mg/L		121	80 - 120	0	20
Sulfate	970	E	25.0	1020	E 4	mg/L		214	80 - 120	0	20

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 440-508937/1-A
Matrix: Water
Analysis Batch: 509145

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 508937

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.010		mg/L		11/02/18 09:03	11/02/18 18:43	1

Lab Sample ID: LCS 440-508937/2-A
Matrix: Water
Analysis Batch: 509145

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 508937

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Selenium			0.500	0.500		mg/L		100	85 - 115		

Lab Sample ID: 440-223387-I-1-F MS
Matrix: Water
Analysis Batch: 509145

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 508937

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Selenium	ND		0.500	0.405		mg/L		81	70 - 130		

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: 440-223387-I-1-G MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 509145 — **Prep Batch: 508937**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Selenium	ND		0.500	0.424		mg/L		85	70 - 130	5	20

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 440-508940/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 508940

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		1.0		umhos/cm			11/02/18 09:18	1

Lab Sample ID: LCS 440-508940/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 508940

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Specific Conductance			953	962		umhos/cm		101	90 - 110		

Lab Sample ID: 440-223218-T-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 508940

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Specific Conductance	880			883		umhos/cm				0.8	5

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 440-508695/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 508695

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10		mg/L			11/01/18 09:10	1

Lab Sample ID: LCS 440-508695/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 508695

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids			1000	1020		mg/L		102	90 - 110		

Lab Sample ID: 720-89419-Y-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 508695

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	1700			1700		mg/L				0.1	5

QC Association Summary

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-223433-1

HPLC/IC

Analysis Batch: 508489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-223433-1	MW-1-10-30-18	Total/NA	Water	300.0	
MB 440-508489/6	Method Blank	Total/NA	Water	300.0	
LCS 440-508489/5	Lab Control Sample	Total/NA	Water	300.0	
440-223277-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
440-223277-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 508937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-223433-1	MW-1-10-30-18	Total Recoverable	Water	200.2	
MB 440-508937/1-A	Method Blank	Total Recoverable	Water	200.2	
LCS 440-508937/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
440-223387-I-1-F MS	Matrix Spike	Total Recoverable	Water	200.2	
440-223387-I-1-G MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.2	

Analysis Batch: 509145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-223433-1	MW-1-10-30-18	Total Recoverable	Water	200.7 Rev 4.4	508937
MB 440-508937/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	508937
LCS 440-508937/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	508937
440-223387-I-1-F MS	Matrix Spike	Total Recoverable	Water	200.7 Rev 4.4	508937
440-223387-I-1-G MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.7 Rev 4.4	508937

General Chemistry

Analysis Batch: 508695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-223433-1	MW-1-10-30-18	Total/NA	Water	SM 2540C	
440-223433-2	DUP-1	Total/NA	Water	SM 2540C	
MB 440-508695/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-508695/2	Lab Control Sample	Total/NA	Water	SM 2540C	
720-89419-Y-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 508940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-223433-1	MW-1-10-30-18	Total/NA	Water	SM 2510B	
MB 440-508940/3	Method Blank	Total/NA	Water	SM 2510B	
LCS 440-508940/4	Lab Control Sample	Total/NA	Water	SM 2510B	
440-223218-T-1 DU	Duplicate	Total/NA	Water	SM 2510B	

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
E	Result exceeded calibration range.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Northstar Environmental Remediation
Project/Site: AltaGas-Blythe

TestAmerica Job ID: 440-223433-1

Laboratory: TestAmerica Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-19
Arizona	State Program	9	AZ0671	10-14-18 *
California	LA Cty Sanitation Districts	9	10256	06-30-19
California	State Program	9	CA ELAP 2706	06-30-19
Guam	State Program	9	Cert. No. 17-003R	01-23-19
Hawaii	State Program	9	N/A	01-29-19
Kansas	NELAP	7	E-10420	07-31-19
Nevada	State Program	9	CA015312018-1	07-31-19
New Mexico	State Program	6	N/A	01-29-19
Oregon	NELAP	10	4028	01-29-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-18-00214	07-09-21
Washington	State Program	10	C900	09-03-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
Phone: 949.261.1022 Fax:

Chain of Custody Record

207064

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact			
Company Name: NorthStar Environmental	Project Manager: Ralph DeLaPerra	Site Contact:	Date: 10-30-18
Address: 26225 Enterprise Ct	Tel/Fax:	Lab Contact:	Carrier:
City/State/Zip: Lake Forest, CA, 92630	Analysis Turnaround Time		
Phone: (949) 580-2800	☐ CALENDAR DAYS ☐ WORKING DAYS		
Fax	TAT if different from Below		
Project Name: Alta Gas - Blythe	☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day	5 Day normal Turn	
Site:			
P O #			

COC No ____ of ____ COCs
Sampler:
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Chloride	TDS	Specific Conductance	Nitrate	Selenium	Sample Specific Notes
mw-1-10-30-18	10-30-18	1430	G	H2O	2	N	N	X	X	X	X	X	
Dup-1 "	"	—	G	"	2	N	N		X				

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact ☐ Yes ☐ No | Custody Seal No | Cooler Temp (°C): Obs'd 3.0 Corr'd. 3.2 | Therm ID No: 12-88

Relinquished by:	Company: NorthStar	Date/Time 10-31-18@1205	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company	Date/Time:
Relinquished by	Company	Date/Time	Received in Laboratory by:	Company TA IRV	Date/Time: 10/31/18 12:15

440-223433 Chain of Custody

10/31/18

11/12/2018

Login Sample Receipt Checklist

Client: Northstar Environmental Remediation

Job Number: 440-223433-1

Login Number: 223433
List Number: 1
Creator: Bonta, Lucia F

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	