2.0 HISTORICAL GROUNDWATER TCE CONCENTRATION TRENDS OVER TIME

The primary COC in groundwater at Nebo South is TCE; other VOCs are not detected or are detected below OU 2 cleanup limits. A summary of detected TCE concentrations for 2005 through 2016 are presented in Table E-2.1 below

Table E-2.1 Summary of Nebo South TCE Detections (2005 – 2106)

Year	Minimum TCE Detection (µg/L)	Maximum TCE Detection (µg/L)	Average TCE Detection (µg/L)	Total Number of Groundwater Samples	Number of Groundwater Samples with TCE detections above cleanup level*
2005	0.5 J	180	17.07	26	9
2006	0.27 J	81	6.23	22	5
2007	0.38 J	92	8.83	26	7
2008	0.39 J	25	3.89	33	8
2009	0.14 J	10 U	2.51	15	3
2010	0.17 J	25 U	3.27	28	4
2011	0.58 J	8	1.71	27	3
2012	0.38 J	11	2.48	21	3
2013	0.5 J	20	2.34	21	2
2014	0.37 J	12	2.12	21	4
2015	0.54 J	21	2.62	21	2
2016	0.54 J	16	2.37	21	3

ACRONYMS:

J = laboratory estimated concentration, U = detection limit, µg/L = micrograms per liter
*Cleanup level for TCE is 5 µg/L

Groundwater concentrations from select groundwater monitoring wells at Nebo South are presented in Graph E-2.2, following the text. The detected groundwater COC data show TCE concentrations have been reduced to below the cleanup level (5 µg/L) at all but four wells (NS6-4, NS6-5, NS6-V1, and NS6-V3) located near the Nebo Main Base east boundary. There is an increasing trend in detected TCE concentrations at wells NS6-V1, NS6-4, and NS6-5 during the past four years. However, COC concentrations in off-base monitoring wells (NEP-7, NEP-8, and NEP-9) remained below the respective cleanup levels during this review period. Well locations and November 2016 groundwater concentrations are shown on Figure E-2.2.

An analysis of TCE concentration trends is presented Graph E-2.2 (following the text); maximum and average detected TCE concentrations across the plume, the total number of samples collected, and the number of samples with COC detections exceeding the respective MCL are plotted. The number of wells with TCE concentrations with detections exceeding the MCL ranged from 2 to 4 wells during the reporting period (2012 through 2016). To account for the variable total number of TCE samples, the ratio of wells exceeding MCL to the total number of wells sampled was calculated. The ratio of wells

exceeding the MCL to the total number of wells sampled has remained stable throughout the review period.

2.1.1 AS/SVE Remedial System Performance Evaluation

The Nebo South AS/SVE system was installed to reduce the contamination in the OU 2 Nebo South groundwater plume and the vadose zone of CAOC 6, considered to be the source area of the plume, per the 2006 OU 2 ROD (DON 2006). The AS/SVE system at Nebo South operated in pilot and extended pilot testing modes beginning in October 2001. Operations were then designated an Interim Remedial Action in January 2004 (Tetra Tech FW, Inc. 2004). The OU 2 ROD was signed on 28 September 2006 and designated AS/SVE as the final remedy for the Nebo South groundwater plume and vadose zone of CAOC 6 (DON 2006).

Treatment and control of the Nebo South plume is performed through the operation of an AS/SVE system. Historical AS/SVE system performance, as indicated by the rate of total VOCs removed and cumulative totals, is presented on Graph E-2.3. The rate of COC removal (as measured in effluent concentrations) has flattened significantly since start-up. Since about 2006 the extraction rate appears relatively unchanged. A slight increase in mass removal rates in late 2011 is likely due to replacement of the air compressor, which improved system operation uptime and general functioning. The slight uptick in mass removal rate beginning in late 2015 was likely due to well repairs and increased operation time in early 2017 in an attempt to reduce the remaining TCE groundwater concentrations detected at monitoring wells NS6 V1, NS6-V3, NS6-4, and NS6-5.

3.0 CONCLUSIONS AND RECOMMENDATIONS

Detected TCE concentrations in the groundwater samples collected from the offsite wells remained below the cleanup level. The on-Base plume size increased slightly during the review period and there was a slight upward trend in maximum detected TCE concentration; however, the average TCE concentrations were relatively stable. The number of monitoring wells with TCE detections exceeding cleanup level has remained stable between 2 and 4 wells. These variable plume characteristics are not well understood, but may point to some residual contamination beyond the radius of the influence of the currently configured system. Performance of the AS/SVE system has generally declined in effectiveness overtime, but maintenance and optimization measures have maximized performance during the review period.

The remaining plume is relatively small and off-site migration is prevented by operation of the AS/SVE system. The detected TCE concentrations in the off-Base wells remained below the cleanup level during the review period; therefore the remedy remains protective for potential off-site receptors.

Recommendations include:

- Continue operation of the AS/SVE system to prevent off-Base migration of the remaining plume. Continue to evaluate system performance and monitoring data and optimize system operations to the extent feasible;
- Consider reducing the number of upgradient monitoring wells, particularly those far from the plume and with consistent detections below cleanup level concentrations. Reduce off-base monitoring frequency from semi-annual to annual based on the long-term non-detect or concentrations detections at trace-level (below cleanup levels).

4.0 REFERENCES

Oneida Total Integrated Enterprises. (OTIE). 2017. *Draft 2016 Annual Groundwater Monitoring Report Operable Units 1 and 2, Marine Corps Logistics Base, Barstow, California*. 17 May.

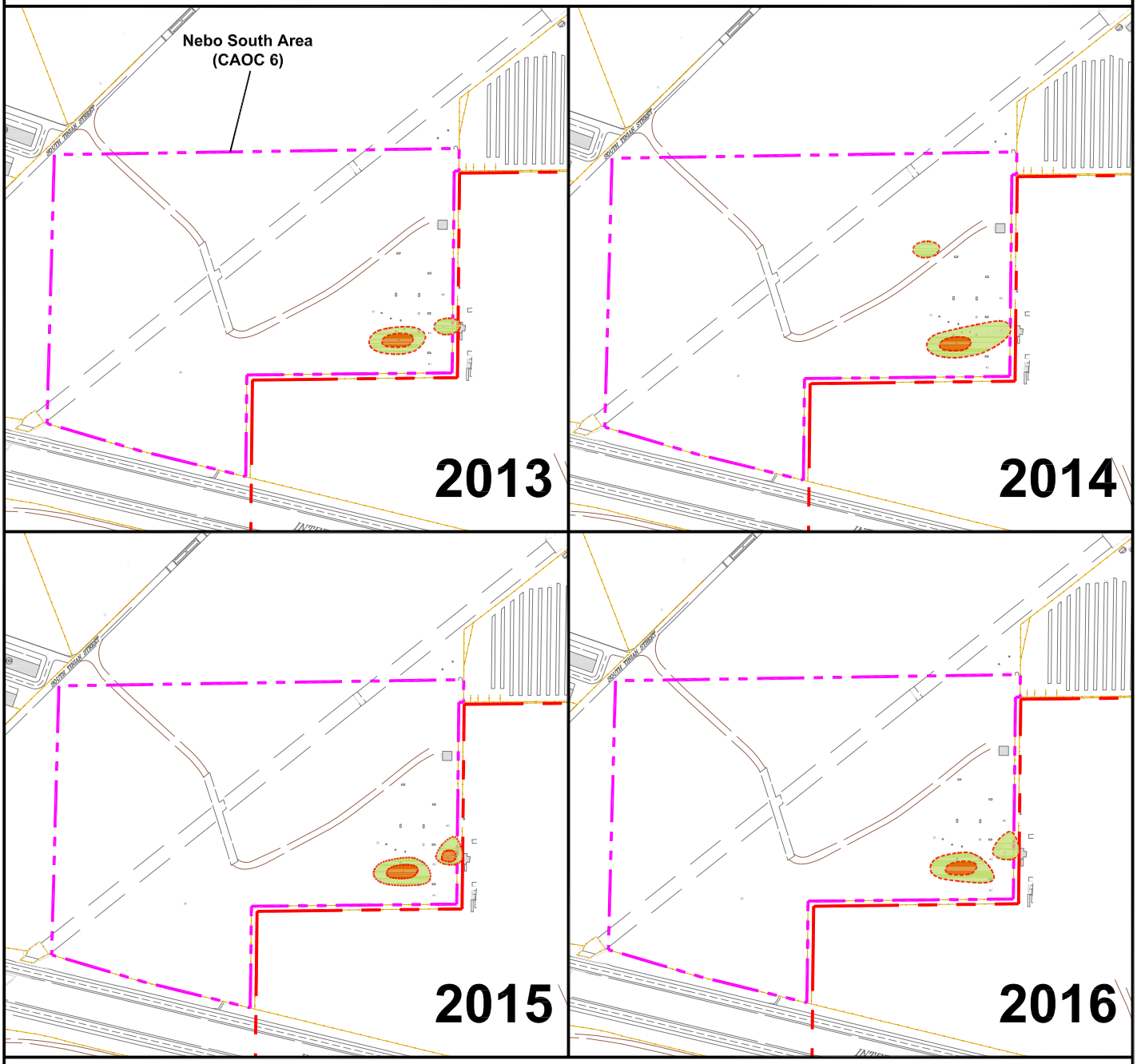
Oneida Total Integrated Enterprises. (OTIE). 2016. *2015 Annual Groundwater Monitoring Report Operable Units 1 and 2, Marine Corps Logistics Base, Barstow, California*. 29 April.

Department of the Navy (DON). 2006. *Final Record of Decision, Nebo South Groundwater – Operable Unit 2, Marine Corps Logistics Base, Barstow, California.* Prepared by Naval Facilities Engineering Command, Southwest Division. 20 September.

FIGURES

This page intentionally left blank.

Trichloroethene



Legend

- Nebo Boundary
- Nebo South Land Use Control Boundary
- 5 ug/L TCE Concentration Area
- 10 ug/L TCE Concentration Area

N
W E
S

Notes

1) ug/L = Micrograms per Liter
TCE = Trichloroethene

Approximate Scale in Feet

0 500 1,000

Figure E-2.1

Nebo South Historical Groundwater
TCE Extents, 2013 - 2016

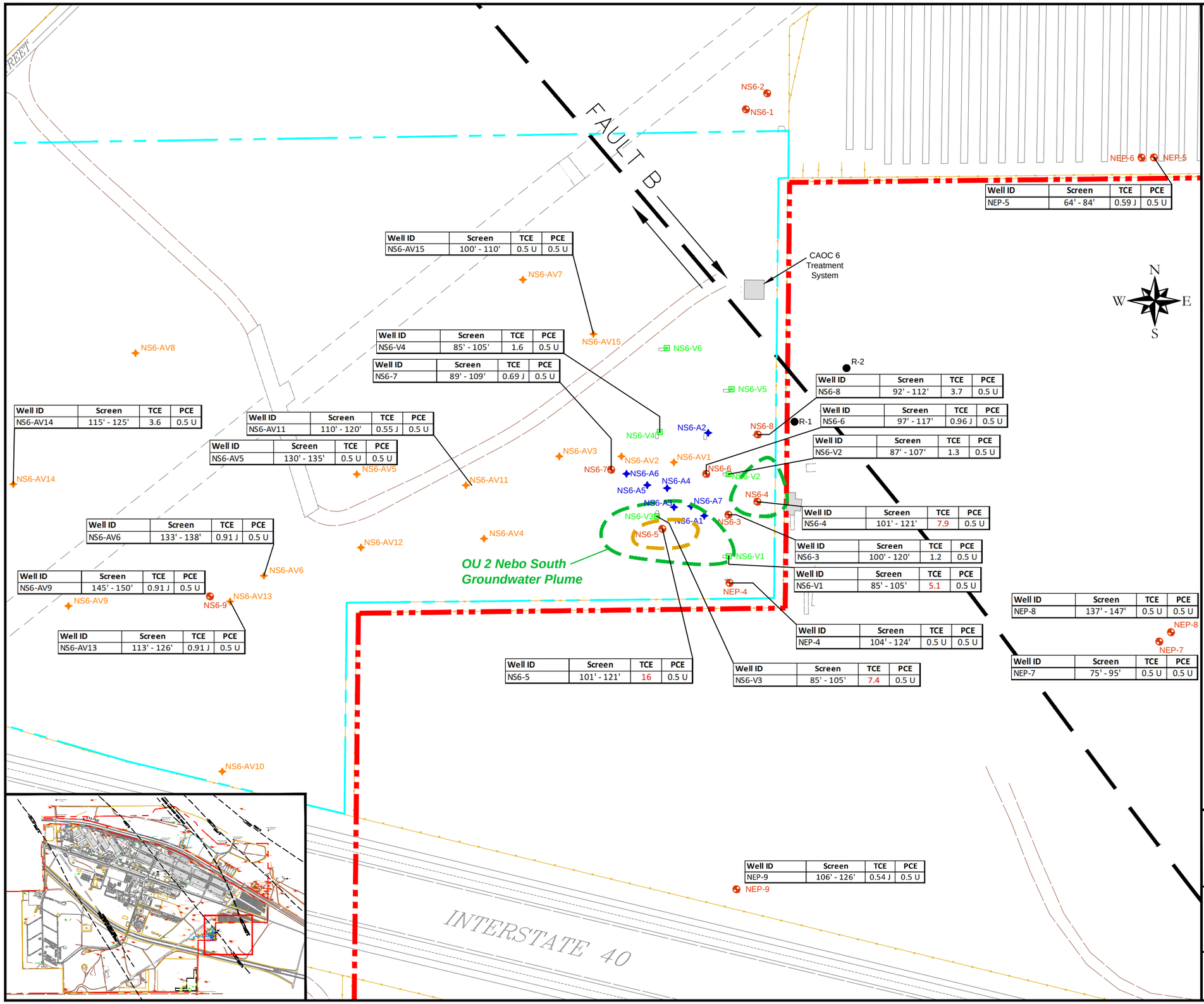
Nebo Main Base
Marine Corps Logistics Base
Barstow, California

OTIE
An Oneida Nation Company

Date: April 10, 2017

File: NeboHist_5YrRev.dwg

Plotted By: Marlo Camacho



Well ID	Screen	TCE	PCE
NS6-AV15	100' - 110'	0.5 U	0.5 U

Well ID	Screen	TCE	PCE
NS6-V4	85' - 105'	1.6	0.5 U

Well ID	Screen	TCE	PCE
NS6-7	89' - 109'	0.69 J	0.5 U

Well ID	Screen	TCE	PCE
NS6-AV14	115' - 125'	3.6	0.5 U

Well ID	Screen	TCE	PCE
NS6-AV11	110' - 120'	0.55 J	0.5 U

Well ID	Screen	TCE	PCE
NS6-AV5	130' - 135'	0.5 U	0.5 U

Well ID	Screen	TCE	PCE
NS6-AV6	133' - 138'	0.91 J	0.5 U

Well ID	Screen	TCE	PCE
NS6-AV9	145' - 150'	0.91 J	0.5 U

Well ID	Screen	TCE	PCE
NS6-AV13	113' - 126'	0.91 J	0.5 U

Well ID	Screen	TCE	PCE
NS6-5	101' - 121'	16	0.5 U

Well ID	Screen	TCE	PCE
NS6-V3	85' - 105'	7.4	0.5 U

Well ID	Screen	TCE	PCE
NEP-9	106' - 126'	0.54 J	0.5 U

Well ID	Screen	TCE	PCE
NEP-5	64' - 84'	0.59 J	0.5 U

Well ID	Screen	TCE	PCE
NS6-8	92' - 112'	3.7	0.5 U

Well ID	Screen	TCE	PCE
NS6-6	97' - 117'	0.96 J	0.5 U

Well ID	Screen	TCE	PCE
NS6-V2	87' - 107'	1.3	0.5 U

Well ID	Screen	TCE	PCE
NS6-4	101' - 121'	7.9	0.5 U

Well ID	Screen	TCE	PCE
NS6-3	100' - 120'	1.2	0.5 U

Well ID	Screen	TCE	PCE
NS6-V1	85' - 105'	5.1	0.5 U

Well ID	Screen	TCE	PCE
NEP-4	104' - 124'	0.5 U	0.5 U

Well ID	Screen	TCE	PCE
NEP-8	137' - 147'	0.5 U	0.5 U

Well ID	Screen	TCE	PCE
NEP-7	75' - 95'	0.5 U	0.5 U

Legend

- Paved Road
- Dirt Road
- Fence Line
- Base Boundary
- CAOC 6 Land Use Control Boundary
- NEP-1 — Groundwater Monitoring Well
- NS6-V4 — Vapor Extraction Well
- NS6-A7 — Air Sparge Well
- NS6-AV7 — Air Sparge/Vapor Extraction Well
- R-1 — Residential Well
- 5 — Approximate TCE Isoconcentration Contour (ug/L)
- 10 — Approximate TCE Isoconcentration Contour (ug/L)
- Fault Traces (strike-slip)

Monitoring Well Sample

Well Screen Interval (ft bgs) — Analyte

Well ID	Screen	TCE	PCE
NS6-4	101' - 121'	7.9	0.5 U

Red Result indicates a cleanup level excedence

Notes

1) Analytical results shown in ug/L (micrograms per liter) for the wells sampled during the 2016 Annual Groundwater Monitoring Event.
2) The highest detection is reported when a field duplicate is collected.
3) The groundwater cleanup level is 5 ug/L for PCE/TCE.

Acronyms

TCE = Trichloroethene
PCE = Tetrachloroethene
ft bgs = feet below ground surface
J = Estimated Value
U = Not Detected (value indicates detection limit)
CAOC = CERCLA Area of Concern
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
OU = operable unit

Approximate Scale in Feet

0 — 150 — 300

Figure E-2.2
OU 2, Nebo South (CAOC 6) Groundwater COC Concentrations (November 2016)

Nebo Main Base
Marine Corps Logistics Base
Barstow, California

OTIE — An Oneida Nation Company

Date: May 5, 2017

File: Barstow_A16.dwg

Plotted By: Geoff Brink

GRAPHS

This page intentionally left blank.

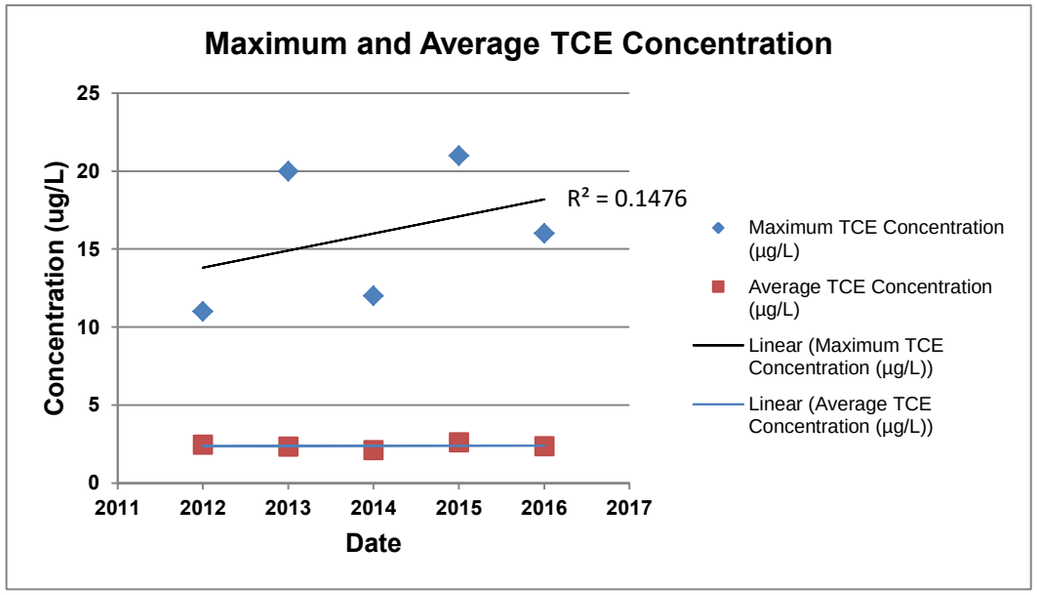
Graph E-2.2

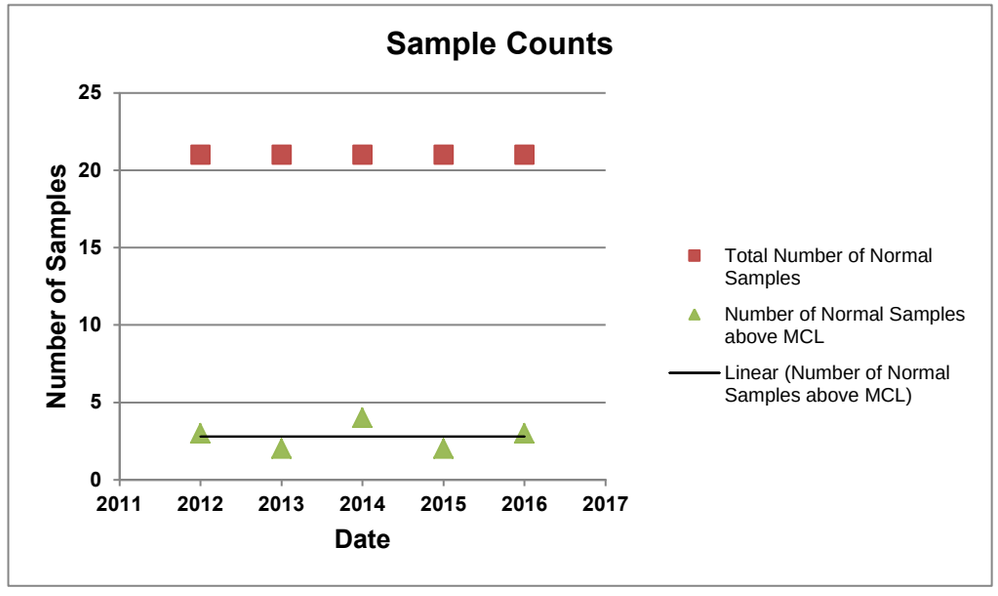
OU 2 Nebo South Plume: TCE Concentration Trends (2012 - 2016)

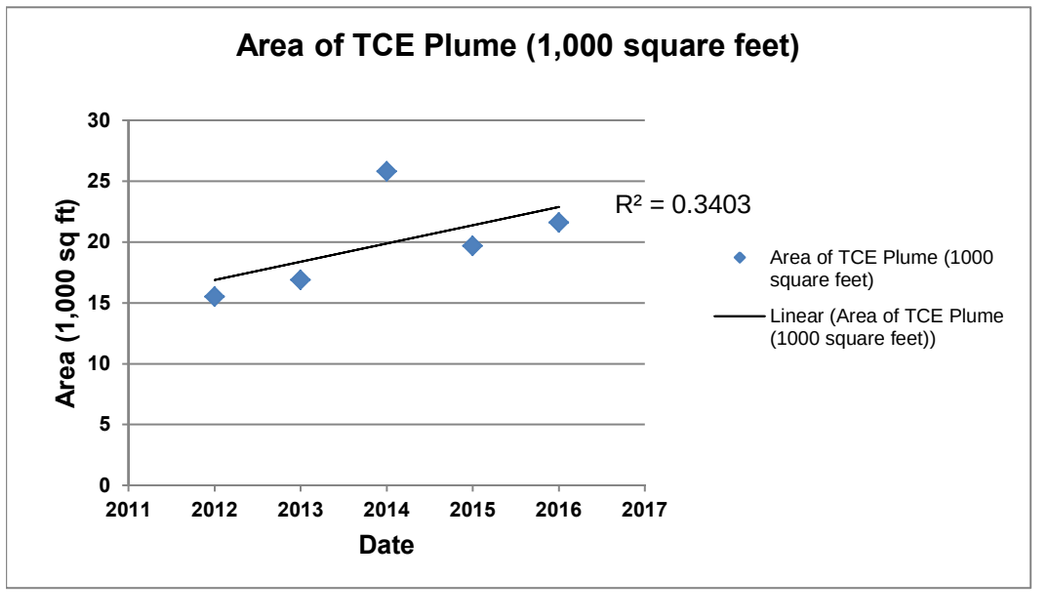
Nebo Main Base, MCLB Barstow, CA

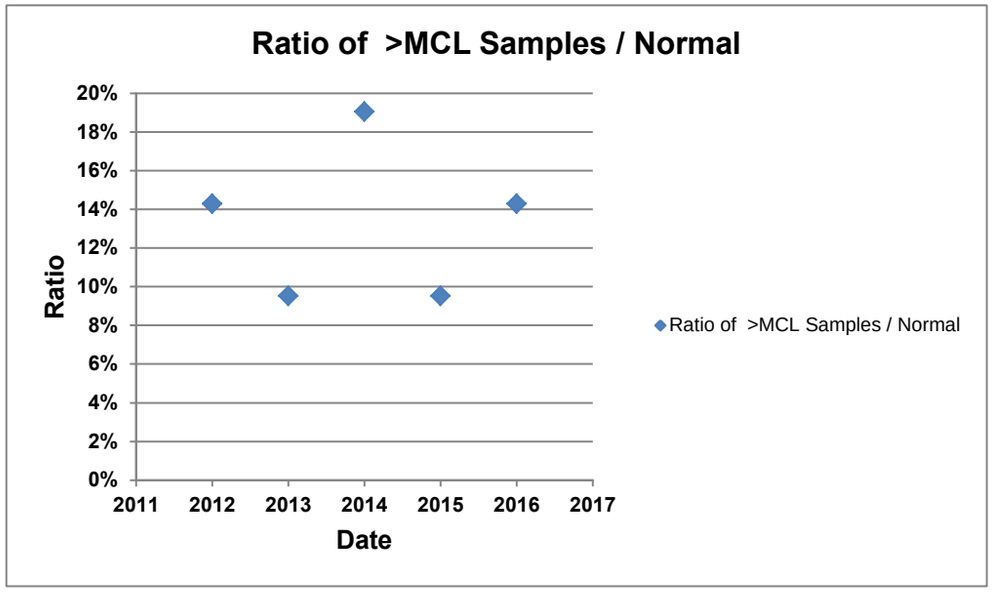
	2012	2013	2014	2015	2016
Maximum TCE Concentration (µg/L)	11	20	12	21	16
Average TCE Concentration (µg/L)	2.48	2.34	2.12	2.62	2.37
Total Number of Normal Samples	21	21	21	21	21
Number of Normal Samples above MCL	3	2	4	2	3
Area of TCE Plume (1000 square feet)	15.5	16.9	25.8	19.7	21.6

(Kaplan-Meier method)
(See Well Selection for how the wells were selected)

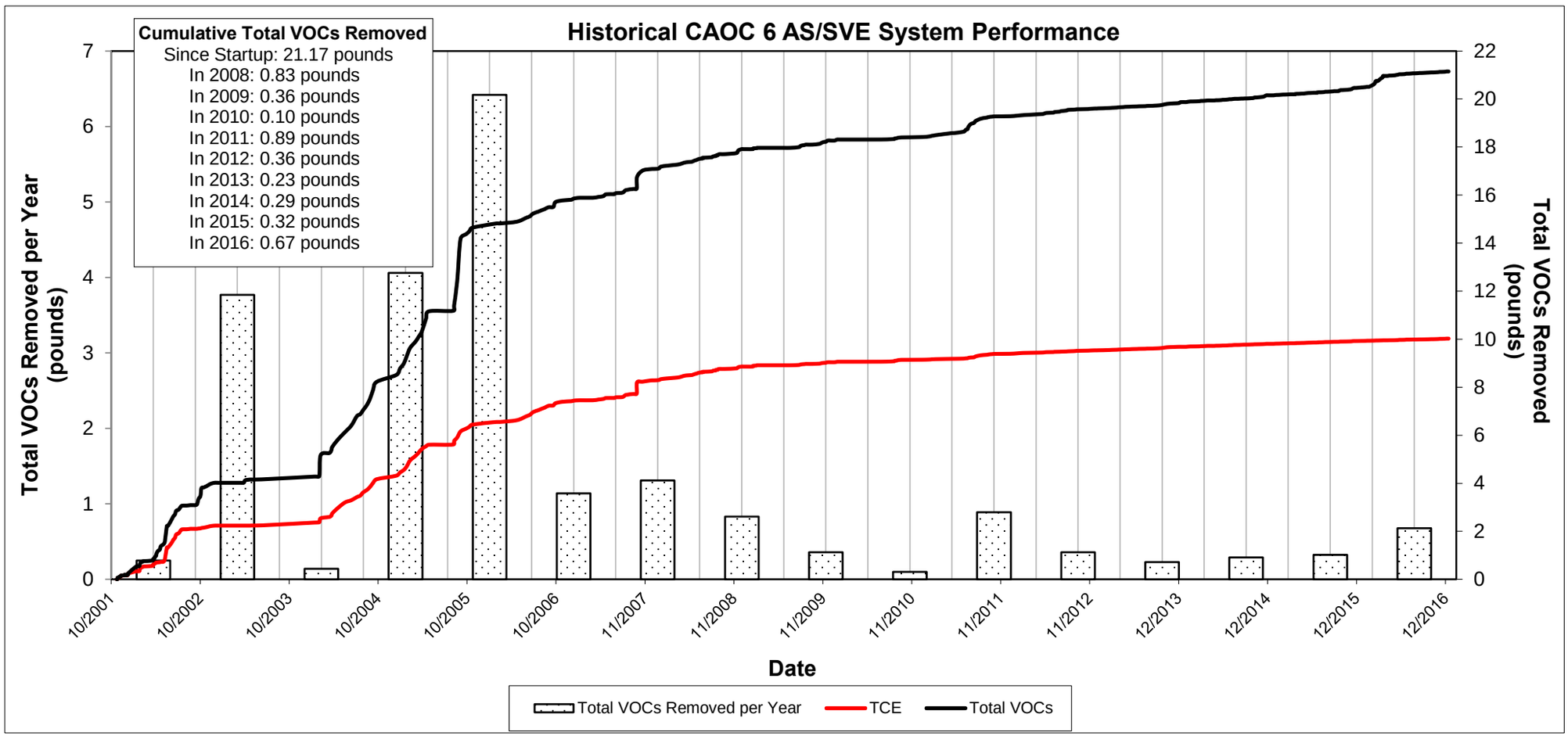








Graph E-2.3
Historical CAOC 6 AS/SVE System Performance
Nebo Main Base, MCLB Barstow, CA



Definitions:

AS/SVE = air sparging/soil vapor extraction; TCE = trichloroethene; VOCs = volatile organic compounds.

APPENDIX F

Technical Assessment Report – OU 3 CAOC 20

Fourth Five Year Review - Remedy Performance Evaluation

Marine Corps Logistic Base Barstow, California

This page intentionally left blank.

TABLE OF CONTENTS

This page intentionally left blank.

1.0 INTRODUCTION

This Technical Memorandum has been prepared to document the evaluation of the remedy implemented for Operable Unit 3 (OU 3) CAOC 20, a waste disposal site at the Yermo Annex. This evaluation was completed in support of the 2017 Fourth Five-Year Review. Specifically, the remedy protectiveness of groundwater is examined. This memorandum was prepared by Oneida Total Integrated Enterprises (OTIE) for the Department of the Navy (DON) under Contract No. N39430-16-D-1881 TO 0006.

CAOC 20, Second Hazardous and Low-Level Radiological Area, is located in the east-central portion of the Yermo Annex. This site is bounded on the east and southeast by the Industrial Waste Disposal Area (CAOC 21) and Landfill Area (CAOC 23) and by railroad tracks to the north and south (Figure 5-3 in Main Report). CAOC 20 was divided into three strata for remedial investigation purposes:

- Stratum 1 is in the northwest corner of the CAOC and includes a low-level radiological waste disposal well capped by a 60- by 60-foot concrete pad and surrounded by a chain-link fence;
- Stratum 2 comprises 31 uncapped (native soil cover only) nonradioactive waste disposal dry wells; and
- Stratum 3 lies in the northeastern portion of the CAOC between the convergence of the railroad tracks and included areas of discoloration observed in aerial photographs of the CAOC.

The Strata 1 and 2 disposal wells are approximately 30 feet deep and 4 feet in diameter. Although no engineering drawings were obtained for any of the disposal wells, they are likely unlined and were drilled by a large-diameter solid-stem soil auger. A pit containing metallic debris was located near the eastern boundary of the site (SWDIV 1993). An underground water line runs beneath the site in a northeast-southwest direction.

The selected remedy for CAOC 20 Strata 1 and 2 in the OUs 3 and 4 Record of Decision (ROD) (DON 1997) is Institutional Controls (ICs) to reduce risk to human health and the environment through controlling and monitoring exposure pathways. The remedy requires land-use controls (LUCs), groundwater monitoring, vadose zone precipitation infiltration monitoring, surface drainage control, modification of the existing concrete cap in Stratum 1, and relocation of a buried water line. The remedy construction was completed in 2000 as documented in the OUs 3 and 4 Remedial Action Report (DON 2000). The Base Master Plan was amended in 2010 to incorporate the ICs/LUCs at CAOC 20 (DON 2010). The on-going operations and maintenance (O&M) of the caps is reviewed in the Main report; this technical assessment focuses on groundwater monitoring portion of the remedy.

1.1 ROD REQUIREMENTS FOR GROUNDWATER MONITORING AND DATA ASSESSMENT

The OUs 3 and 4 ROD required installation of one upgradient and one downgradient monitoring well at CAOC 20. The CAOC 20 remedial action was to be evaluated after the fourth year of monitoring with the evaluation and recommendations presented in the Forth Five-Year Review Report. The OUs 3 and 4 ROD states that, if the monitoring proposed under the final remedy indicates a statistically significant release at CAOC 20, any appropriate action will be proposed after consultation with Federal Facilities Agreement stakeholders.

Two monitoring wells (YS20-1 and YS20-2) were installed in June 1999 to 185 feet below ground surface (bgs). The intended downgradient monitoring well YS20-2 was actually in a side-gradient position. Additional downgradient monitoring locations were added to the CAOC 20 monitoring program, but

other problems were encountered with fouling and well screen corrosion potentially affecting the data from YS20-1 and YS20 2.

Groundwater monitoring was initially performed annually for pH, anions, cations, volatile organic compounds (VOCs), metals, radium-226, radium-228, gross alpha, and gross beta. The CAOC 20 monitoring analytical program was optimized, with FFA stakeholder approval, to remove pH, anions, cations, and all metals except chromium and nickel. The radiological monitoring program was revised based on an analysis of the best practice for assessing potential discharges from the suspected radium-painted dials disposed at CAOC 20 Stratum 1 (DON, 2010). The analytical program in place during the fourth five-year review period (2012 – 2016 data set) included VOCs, chromium, nickel, radium-226, radium-228, gross beta, and tritium.

1.2 PRIOR REVIEWS OF GROUNDWATER MONITORING DATA

The CAOC 20 monitoring data have been reviewed in the second and third Five Year Reviews (DON 2007, 2012) and are summarized below:

- **2007 Second Five-Year Review Findings and Recommendations:** Gross alpha concentrations in groundwater in the upgradient and cross-gradient wells exhibit exceedances (Note: Downgradient well gross alpha concentration during 2005 was less than the respective MCL.) Additional investigations to further evaluate these exceedances. If it is determined that the source of the exceedances is CAOC 20, a reevaluation of the remedy for CAOC 20 may be required. Appropriate action will be proposed after consultation with the FFA signatories; and
- **2012 Third Five-Year Review Findings and Recommendations:** No significant or readily identifiable concentration trends for gross beta or radium isotopes 226, or 228 have been observed in CAOC 20 wells since November 2004. YS20-1 and YS20-2 were cleaned and redeveloped in October 2010 to reduce biofouling and improve data quality. The November 2011 data indicated dissolved chromium and nickel concentrations at YS20-1 exceeded the RAOs. For YS20-2, only dissolved nickel concentration exceeded the RAO. However, continued elevated turbidity measurements in these wells could indicate non-representative conditions in the wells and surrounding aquifer. Additionally YS20-1 had only 3 feet of water in the screen, which could reduce sample quality. Groundwater monitoring wells should be periodically cleaned and redeveloped to address biofouling that could impact data quality. Evaluate four consecutive years of monitoring data in accordance with OUs 3 and 4 ROD.

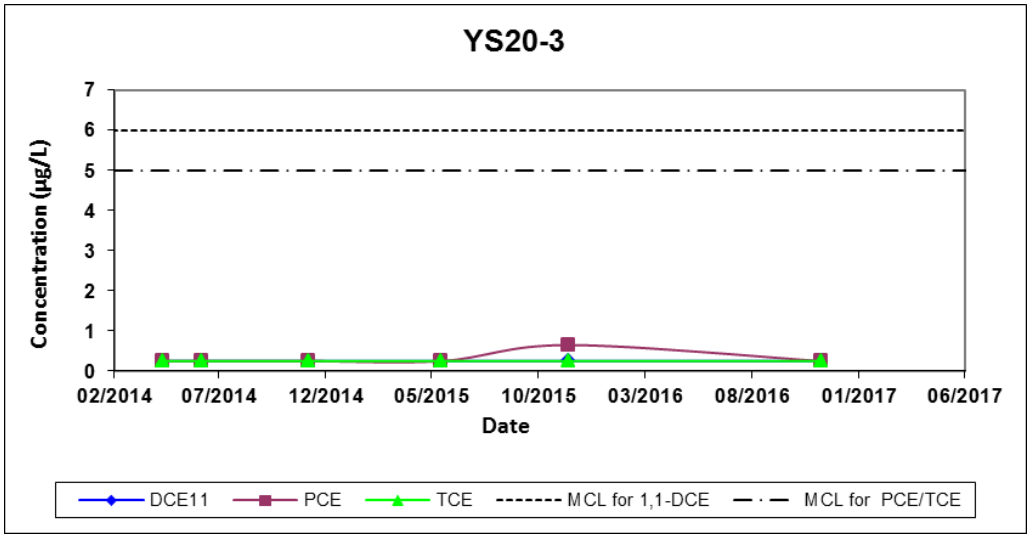
A new down-gradient PVC-screened monitoring well, YS20-3, was installed during 2014 to replace YS20-1 and YS20-2. Replacement was required because corrosion of the stainless-steel well screens at the original wells generated turbidity and dissolved chromium and nickel. Additionally, as regional groundwater levels declined, and both YS20-1 and YS20-2 went dry (2012 – 2013). Monitoring well YS20-3 is located downgradient of CAOC 20 and is monitored annually. Because the new well is believed to best represent downgradient water quality, only the data from this well are evaluated for this five year review period.

2.0 EVALUATION OF DOWNGRADIENT GROUNDWATER DATA (YS20-3)

2.1 VOLATILE ORGANIC COMPOUNDS

Six rounds of groundwater monitoring for VOCs have been performed at YS20-3 since installation. Sampling to date has not identified VOCs are present in groundwater, except perhaps at trace levels as shown on Graph F-1.1.

Graph F-1.1. CAOC 20 Downgradient Groundwater VOC Trends



It should be noted that, during installation of YS20-3, a layer of VOC-contaminated soil was encountered at 120 and 124 feet below ground surface (ft bgs) (OTIE 2014). The soil was sampled within and below the contaminated zone; the results are summarized below:

- Sample YS20-3-123 (123-foot depth): acetone (60 µg/kg), benzene (0.21 J µg/kg), 2-butanone (35 µg/kg), n-Butylbenzene (0.28 J µg/kg), carbon disulfide (0.35 J µg/kg), and p/m-xylene (0.25 J µg/kg) (J indicates an estimated quantity); and
- Sample from 148 ft bgs had no detectable VOC concentrations.

Depth to groundwater at this well ranged from 184.04 – 187.19 feet bgs (2014 – 2016), leaving approximately 60 feet of vadose zone thickness between the contaminated soil layer and groundwater. Nonetheless, based on wastes being disposed in unlined dry wells and the finding of contaminated soil at depth, there remains a potential for VOC contamination of groundwater at CAOC 20.

2.2 RADIOLOGICAL PARAMETERS

Only three rounds of monitoring for radiological parameters have been performed at CAOC 20, YS20-3. Additionally, since installation of YS20-3, the DON selected and sampled several Yermo Annex groundwater monitoring wells in order to develop a background data set for radium-226, radium-228, gross beta, and tritium. The background data were collected in lieu of replacing the upgradient monitoring well at CAOC 20; four rounds of background data have been compiled as of the date of this report. Table F-1.1 summarizes the available three rounds of radiological parameters from YS20-3; Graph F-1.2 (next page) shows the trends over time in comparison to the respective MCL and background values to date.

Table F-1.1 CAOC 20 Radiological Parameters in Groundwater at Monitoring Well YS20-3

Analyte		Gross Beta	Radium-226	Radium-228	Total Radium[3]	Tritium[4]
Units		pCi/L	pCi/L	pCi/L	pCi/L	pCi/L
MCL[1]		50			5[2]	20,000
Background Range (max, min)		5.09 - 19.1	0.242 - 1.04	1.59 - 3.27	0.242 - 4.19	(not detected)
Average Background Value[5]		10.9	0.71	2.32	1.81	NC
Sample Type	Sample Date					
N	11/11/2014	9.74	4.56	1.04 U	4.56	700 U
N	11/12/2015	11.7	0.943 UJ	2.92	2.92	102 U
N	11/7/2016	6.43	1.24	1.28 U	1.24	480 U

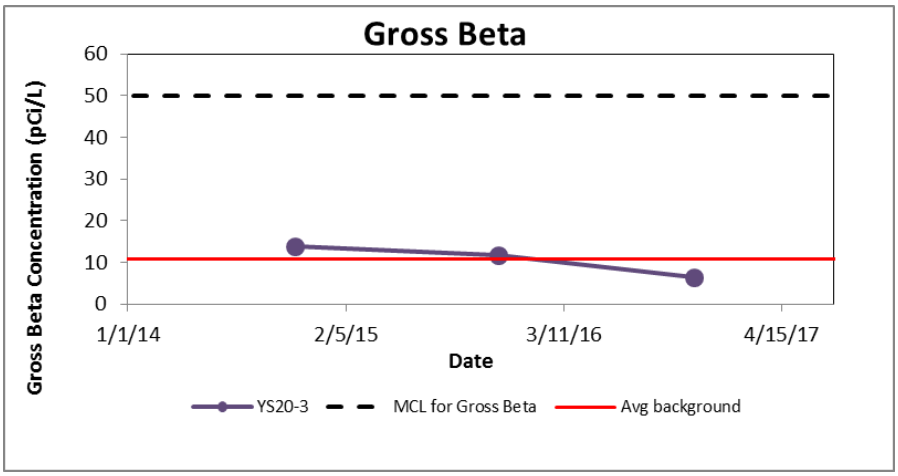
NOTES:

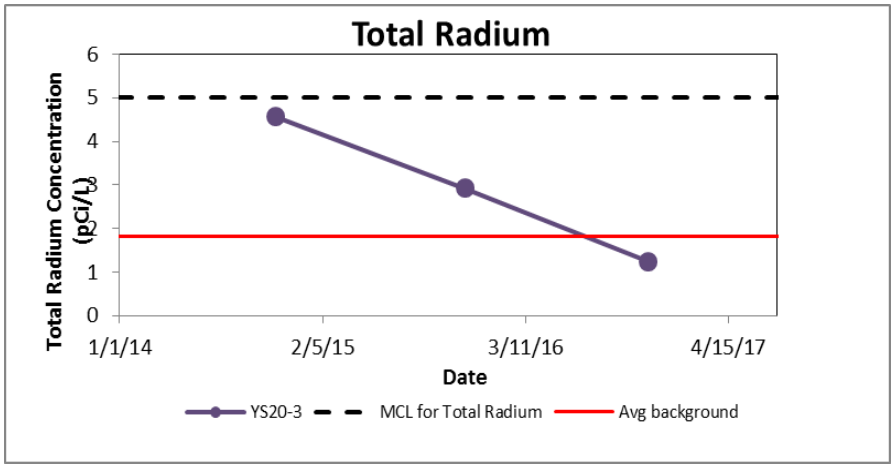
Bolded results indicate detections; shaded cell indicates result is above the average background value
Samples were analyzed by EPA Method 900 for Gross Beta, EPA Method 903.1 for Radium-226, EPA Method 904 for Radium-228, and EPA Method 906.0 for Tritium
[1]MCL per State Water Resources Control Board, 1 July 2014 (no cleanup level selected in OUs 3 and 4 ROD)
[2]California MCL for combined radium-226 and radium-228 is 5 pCi/L.
[3]Sum of radium-226 and radium-228
[4]Tritium not detected above reporting limit in background samples.
[5]Average values from background locations sampling (Draft 2016 Annual Groundwater Monitoring Report, OUs 1 – 7 , MCLB Barstow; OTIE 2017)

DEFINITIONS:

J = estimated value, detected between the detection limit and limit of quantification; MCL = maximum contaminant level; MDA = minimum detectable activity; N = normal; pCi/L = picoCuries per liter; NC = not calculable; U = not detected above the MDA; UJ = not detected and detection limit is estimated.

Graph F-1.2 CAOC 20 – Downgradient Groundwater Gross Beta and Total Radium Trends





2.3 CHROMIUM AND NICKEL

See Appendix D, Technical Assessment Report D-3, for an evaluation of the OU 1 metals monitoring program including YS20-3.

3.0 CONCLUSIONS AND RECOMMENDATIONS

CAOC 20 is a capped waste-left-in-place remedy; the RAOs are to prevent direct contact with wastes through ICs and LUCs and protection of groundwater. The OUs 3 and 4 ROD required an assessment of the potential for CAOC 20 to contaminate groundwater. The original monitoring wells were installed in 2000, but only one was in the correct position to evaluate upgradient groundwater; the second well was side-gradient. Both wells had stainless-steel well screens that corroded and affected the groundwater quality. A new down-gradient monitoring well, installed in 2014, provides the opportunity to collect groundwater representative of CAOC 20. At the time of this evaluation, less than four rounds of radiological monitoring data were available for assessment; therefore one additional sampling round is required before the assessment required by the ROD can be completed. However, the six rounds of VOC groundwater data were reviewed. Conclusions and recommendations are summarized below.

Conclusion:

- Based on the six semiannual monitoring events for VOCs since well installation in 2014, CAOC 20 was not a source of VOCS in groundwater.

Recommendation:

- Discontinue VOC monitoring at CAOC 20 based on the ROD requirement for evaluation of four rounds of monitoring data.
- Collect one additional sample at monitoring well YS20-3 for the radiological parameters and perform the analysis per the ROD; report in the next annual groundwater monitoring report.

4.0 REFERENCES AND DATA SOURCES

Department of the Navy (DON). 1993. "Draft Phase I Remedial Investigation, Operable Units 3 and 4, Marine Corps Logistics Base, Barstow, California," Technical Memorandum 0009, Volume IV, Appendix B, Geophysical Survey Report, prepared by Jacobs Engineering Group Inc., 01 July.

_____. 1994a. "Draft Removal Site Evaluation Report – CAOC 34," Marine Corps Logistics Base, Barstow, California, prepared by Jacobs Engineering Group Inc., 10 May.

_____. 1995. Draft Final Remedial Investigation Report, Operable Units 3 and 4, Marine Corps Logistics Base, Barstow, California. 15 June 1995. Document Control No. CLEJ02-01F293-B7-0001.

_____. 1995. Draft Final Feasibility Study Report for CERCLA Areas of Concern 20 and 23, prepared by Jacobs Engineering Group Inc. 30 October 1995. Document Control No. CLE-J02-01F293-B7-0010.

_____. 1997. Final Record of Decision (ROD) Report Operable Units 3 and 4, Marine Corps Logistics Base, Barstow, California. 2 June. Document Control No. CLE-J02-01F293-B7-0018.

_____. 2000. Final Remedial Action Report, CERCLA Areas of Concern 20 and 23, Operable Units 3 and 4 prepared by Southwest Division Naval Facilities Engineering Command. 27 August 2000.

_____. 2007b. *Second Five-Year Review Report, Operable Units 1-6, Marine Corps Logistics Base (MCLB), Barstow, California*. December.

_____. 2010. *Final Technical Memorandum, Gross Alpha Exceedances In Groundwater at CAOC 20, Operable Unit 3, Yermo Annex Marine Corps Logistics Base, Barstow, California*. DCN: ECSD-3211-0006-0044.R1.

_____. 2012. *Third Five-Year Review Report, Operable Units 1-6, Marine Corps Logistics Base (MCLB), Barstow, California*. Prepared by Oneida Total Integrated Enterprises. December. Document Control No. ATJV-2610-0013-0030

Oneida Total Integrated Enterprises (OTIE). 2015. *Report of Well Destruction and Installation Activities during 2014, Marine Corps Logistics Base Barstow*. March 26.

APPENDIX G

Technical Assessment Report

Evaluation of the Monitored Natural Attenuation (MNA)

Remedies for Three Groundwater Plumes

Under Operable Unit (OU) 7,

Marine Corps Logistic Base (MCLB) Barstow, California

This page intentionally left blank

TABLE OF CONTENTS

FIGURES

ATTACHMENTS

This page intentionally left blank.

1.0 INTRODUCTION

This document presents the current status of the monitored natural attenuation (MNA) remedy of three groundwater plumes located in Operable Unit (OU) 7 at the Marine Corps Logistic Base (MCLB) Barstow, California. The selected groundwater remedies for the three plumes are documented in the OU 7 Record of Decision (ROD) (Department of the Navy [DON] 2014). Analytical data from October 2012 through December 2016 was reviewed for this report.

1.1 PURPOSE AND SCOPE

This status report evaluates the MNA remedy for groundwater contamination identified at the following Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Areas of Concern (CACOs): CAOC 10.38/10.39 Unit 7, CAOC 7 Stratum 1, and groundwater area NPZ-14. The contaminants of concern (COCs) in groundwater include trichloroethene (TCE) and tetrachloroethene (PCE).

This MNA status report is part of the five-year review to evaluate the effectiveness and protectiveness of the MNA remedy. The five-year review of the MNA remedy will be evaluated using the eight performance metrics and statistical evaluations of the long-term monitoring data as outlined in the OU 7 ROD (DON 2014) and Remedial Design – Remedial Action Work Plan (RD-RA WP) (Oneida Total Integrated Enterprises [OTIE] 2015).

Statistical evaluation of COCs was conducted in accordance with the following EPA guidance documents:

- Performance Monitoring of MNA Remedies for VOCs in Groundwater (U.S. EPA 2004), which recommends performing trend analyses on parameters of interest; and
- An Approach for Evaluating the Progress of Natural Attenuation in Groundwater (U.S. EPA 2011), for the evaluation of OU 7 MNA groundwater.

Data collected over the past five years (2011 – 2016) was evaluated using the 2011 EPA guidance to evaluate attenuation and estimate the timeframe to attain Site cleanup goals. The selected data set extends beyond the current five-year review period because this is the first review. For some wells, there is less than five years of data, depending on the date of installation.

The relative extent of each plume (shrinking, expanding, or remaining stable) was also evaluated following the methods described in *A Practical Method to Evaluate Ground Water Contaminant Plume Stability* (Ricker 2008).

Each of the eight performance metrics specified in the OU 7 ROD will be used to evaluate whether cleanup levels will likely be achieved within an acceptable timeframe (statistical analysis) and if the MNA remedy is remaining protective and effective. If these goals are not estimated to be achievable as indicated by: (1) expanding or migrating plume; (2) increasing COC concentrations; (3) insufficient decrease of COCs within a reasonable time frame; and (4) unacceptable exposure risks; collection of additional data will be required to further evaluate the remedy.

1.2 ROD SUMMARY

The OU 7 ROD presented selected remedies for soil and groundwater at 18 remaining sites at MCLB Barstow, California not covered under the previous RODs for OUs 1 through 6. Within the OU 7 ROD, sites CAOC 10.38/10.39 Unit 7, CAOC 7 Stratum 1, and groundwater area NPZ-14 selected MNA with Land Use Controls (LUCs) as the preferred remedy to protect human health or welfare or the

environment. The Remedial Action Objectives, COCs, and groundwater cleanup levels are summarized below for the three MNA sites.

Site	REMEDIAL ACTION OBJECTIVEs	COCs	Cleanup Level
CAOC 10.38/10.39 Unit 7	Protect human receptors from unacceptable risks due to ingestion of groundwater impacted with PCE and TCE, and prevent the migration of site COCs in groundwater at concentration greater than cleanup levels.	PCE and TCE	5 µg/L
CAOC 7 Stratum 1	Protect human receptors from unacceptable risks due to ingestion of groundwater impacted with TCE, to mitigate further impact to groundwater from TCE in soil vapor, and prevent the migration of site COCs in groundwater at concentration greater than cleanup levels.	TCE	5 µg/L
NPZ-14	Protect human receptors from unacceptable risks due to ingestion of groundwater impacted with TCE, and prevent the migration of site COCs in groundwater at concentration greater than cleanup levels.	TCE	5 µg/L

1.3 RICKER ANALYSIS

The Ricker Analysis is a statistical method of evaluating plume stability related to natural attenuation of dissolved contaminants in groundwater. The method calculates and assesses historical trends for various contaminated plume characteristics including area, average concentration, contaminant mass, and center of mass. Using this data a statistical trend analysis is conducted to assess plume stability: growing, shrinking, or stable (Ricker 2008). Shell Global Solutions developed an Excel module, called the GroundWater Spatio-Temporal Data Analysis Tool, or GWSDAT, to graphically represent groundwater monitoring data. The plume maps and graphs are produced using the GWSDAT software with the statistical calculations and graphical output generated using the open source statistical program R (API 2017). The spatial-temporal plume maps are calculated using the 5 µg/L isopleth (the cleanup goal for PCE and TCE) from which an estimated mass and area can be calculated. Statistical calculations cannot be generated if the plume boundary is incomplete (i.e., open); therefore the plume must be defined by up- and down-gradient monitoring wells with COC concentrations below the cleanup goals.

1.4 STATISTICAL ANALYSIS

Groundwater concentration trend statistics were calculated following the methods described in *An Approach for Evaluating the Progress of Natural Attenuation in Groundwater* (EPA 2011). Sampling dates were converted to decimal years and the natural log of contaminant concentrations were calculated. The Excel correlation formula was used to calculate the Pearson Correlation Coefficient (r). Critical values (α=0.05) for the number of data pairs were obtained from Triola (1997).The null hypothesis of no linear correlation was rejected if the absolute value of r exceeded the critical value.

Ordinary least squares regression analysis, using the Excel regression function, was conducted for wells where a significant linear correlation was observed. The attenuation factor (inverse of the regression coefficient) was calculated for the 95% lower confidence level (CL) and the 95% upper CL. If both the upper and lower 95% CL attenuation rates were positive, it was concluded that there was sufficient evidence that natural attenuation was occurring, and that concentrations were decreasing over time. If both the upper and lower 95% CL attenuation rates were negative, it was concluded that there was sufficient evidence that the concentrations were increasing over time.

If the regression analysis indicated that natural attenuation was occurring, an estimated date for reaching the MCL was calculated for the best fit linear regression attenuation rate and also for the upper 95% CL of the attenuation rate using a one-tailed test using the formula:

$$ln\left(\frac{C_g}{C_o}\right) = kt$$

Where:

C_g= concentration goal (Maximum Contaminant Level)

C_0= original concentration, average concentration over all sampling times

k= attenuation rate

t= time required to reach the concentration goal.

2.0 REVIEW OF PERFORMANCE METRICS AND STATISTICAL EVALUATIONS

2.1 CAOC 10.38/10.39 UNIT 7

CAOC 10.38/10.39 Unit 7 is in an area of former industrial operations located in the central portion of Nebo Main Base (Figure G-1). Sources of TCE/PCE groundwater contamination may include historical releases or discharges to the former Unit 7 surface drainage ditches or from the former industrial activities, equipment storage, and USTs in the area. Evaluation of MNA performance at Unit 7 follows the eight performance metrics outlined in the OU 7 ROD, as well as comparison to the baseline conditions summarized in the MNA RD-RA Work Plan (Table 3-5, Section 3.2.6). MNA performance monitoring evaluates both the effectiveness and protectiveness of the MNA remedy, which is outlined on Table 4-1 in the OU 7 ROD (DON 2014). Plume diagnostics are based on the Ricker Model whereby monitoring well data for wells within and proximal to the presumed source are plotted over time with a spatial context that outlines the plume parameters.

The Remedial Action Objectives: 1) protect human receptors from unacceptable risks due to ingestion of groundwater impacted with TCE (NPZ-14, CAOC 7) or TCE and PCE (CAOC 10.38/10.39 Unit 7), and 2) prevent the migration of COCs in groundwater at concentrations greater than cleanup levels. (Section 4.2.5 of RD-RA WP, 2015).

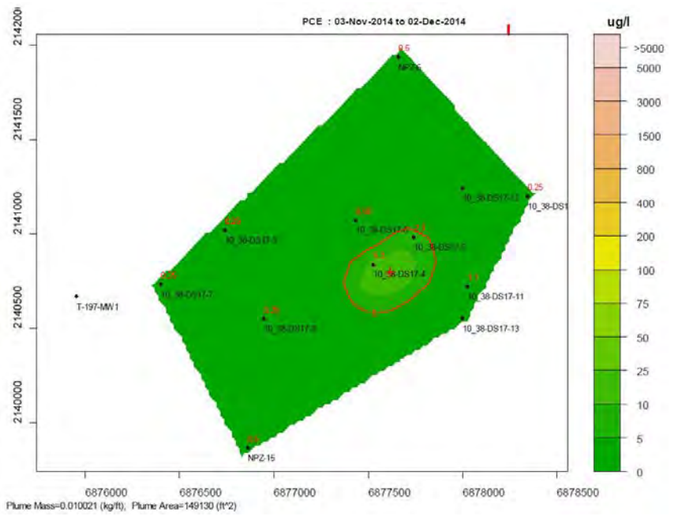
No.	Performance Metric	Evaluation of CAOC 10.38/10.39 Unit 7 PCE/TCE Plume	Conclusions and Recommendations
1	Is Natural Attenuation occurring according to expectations?	**Description:** Natural attenuation achieves reduction of VOC contamination to below cleanup levels through natural processes including microbial and geochemical degradation, sorption, dilution, volatilization, and dispersion. • PCE concentrations are increasing with a statistically significant trend in two wells and the trend is not significantly different than zero in a third well; and • TCE concentration trends are not significantly different than zero in four wells and are decreasing with a statistically significant trend in one well. **Trigger for additional action:** If natural attenuation is not occurring according to expectations, the DON will further evaluate the remedy and propose alternative response actions per Section 5.4 of RD-RA WP (OTIE 2015).	**Conclusion:** • Natural attenuation of PCE is not occurring according to expectations; and • Natural attenuation of TCE is not occurring according to expectations.
2	Are the LUCs effectively protecting potential receptors?	**Description:** The Base Environmental Division is responsible for implementation of the groundwater use LUCs. The LUCs measures implemented in OUs 1 and 2 ROD (DON 1998) will be maintained at the OU 7 groundwater sites to prevent groundwater use until cleanup levels are achieved. **Trigger for additional action:** If COC concentrations increase or the plume expands beyond the Base groundwater LUC area(s) such that a person or persons could potentially be exposed to impacted groundwater resulting in unacceptable exposure risks.	**Conclusion:** • Current plume boundaries and COC concentrations have not migrated beyond the maintained LUCs; therefore, LUCs remain protective.
3	Have Groundwater Contaminants dropped below cleanup levels?	**Description:** Fourteen monitoring wells are sampled during the semiannual and/or annual monitoring events: 10.38-DS17-4 through 10.38-DS17-13, NPZ-6, NPZ-7, NPZ-15, and T-197-MW1 to assess current concentrations of PCE and TCE relative to the cleanup goal of 5 µg/L. **Groundwater Monitoring Data (October 2012 to December 2016):** • PCE concentrations detected above the 5 µg/L cleanup goal during the reporting period are from: (1) well 10.38-D17-4, ranging from 5.1 to 23 µg/L; and (2) well 10.38-D17-5, ranging from 2.3 to 13 µg/L. • TCE concentrations detected above the 5 µg/L cleanup goal during the reporting period are from: (1) well 10.38-D17-4, ranging from 9 to 26 µg/L; (2) well 10.38-D17-5 ranging from 7.4 to 28 µg/L; well 10.38-D17-4, ranging from 9 to 26 µg/L; and (3) well 10.38-D17-6 ranging from 7.5 to 12 µg/L.	**Conclusion:** • PCE concentrations remain above the cleanup levels in two of the 14 monitoring wells; and • TCE concentrations remain above the cleanup levels in three of the 14 monitoring wells.

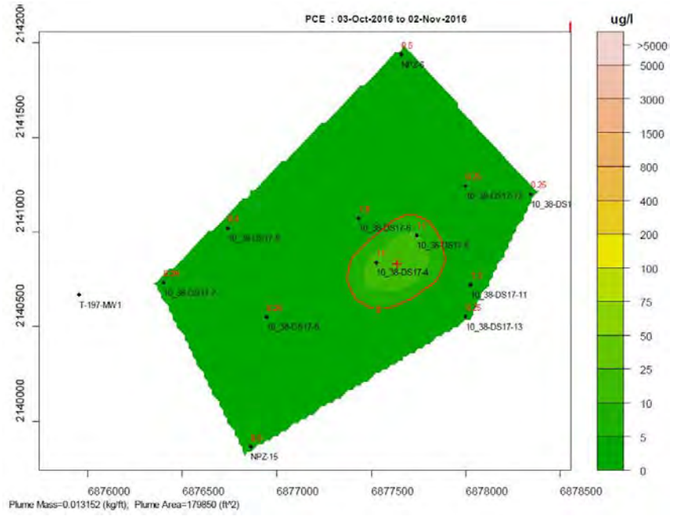
No.	Performance Metric	Evaluation of CAOC 10.38/10.39 Unit 7 PCE/TCE Plume	Conclusions and Recommendations
4	Have any of the natural environmental conditions changed that could affect natural attenuation processes?	**Description:** The semiannual and annual monitoring events include collection of field data parameters and groundwater elevation data to evaluate changes in aquifer conditions that might affect natural attenuation processes. **Field data parameters:** • Dissolved oxygen concentrations have remained relatively constant in the area with concentrations over 1.0 milligram per liter; and • Oxidation-reduction potential levels have remained relatively constant in the area with levels typically positive. Groundwater elevations within this area have been relatively stable to slightly decreasing over the past five years. A fault trace cuts the area and could affect local groundwater flow conditions. **Trigger for additional action:** If MNA fails to remain protective and effective, the DON will evaluate the remedy per Section 5.4 of the RD-RA WP (OTIE 2015).	**Conclusion:** • Field data parameters and groundwater elevations have remained relatively stable over the past five years.
5	Have any potentially toxic and/or mobile transformation products been formed?	**Description:** The semiannual and annual monitoring events included analyses that would detect potential toxic and/or mobile transformation products (i.e., daughter products) produced through site-specific natural attenuation processes. The COCs at 10.38/10.39 Unit 7, PCE and TCE, would produce dichloroethene (DCE) congeners, vinyl chloride (VC), and innocuous ethane under sequential degradation. Analytical results for historic and current groundwater samples have not detected DCE or VC above 0.5 µg/L. **Trigger for additional action:** If the presence of potentially toxic and/or mobile transformation products indicate failure of MNA to remain protective and effective, the DON will evaluate the remedy per Section 5.4 of the RD-RA WP (OTIE 2015).	**Conclusion:** • Toxic or mobile transformation products have not been detected; • The absence of degradation products suggests sequential degradation is not effectively occurring at the site; and • Other natural attenuation processes, such as abiotic transformation, can degrade PCE/TCE without the generation of toxic daughter products.
6	Have any new detected contaminants been released to the environment that could impact the effectiveness of the natural attenuation remedy?	**Description:** The Base Environmental Division will inform the DON IRP manager of any new spills or releases within the MNA area. No new spills or releases have been recorded in the MNA area. **Trigger for additional action:** If a new release of contaminants to the environment causes failure of MNA to remain protective and effective, the DON will evaluate the remedy per Section 5.4 of the RD-RA WP (OTIE 2015).	**Conclusions:** • No new releases have been reported, therefore there is no potential impact by previously undetected contaminants to the effectiveness of the natural attenuation remedy.

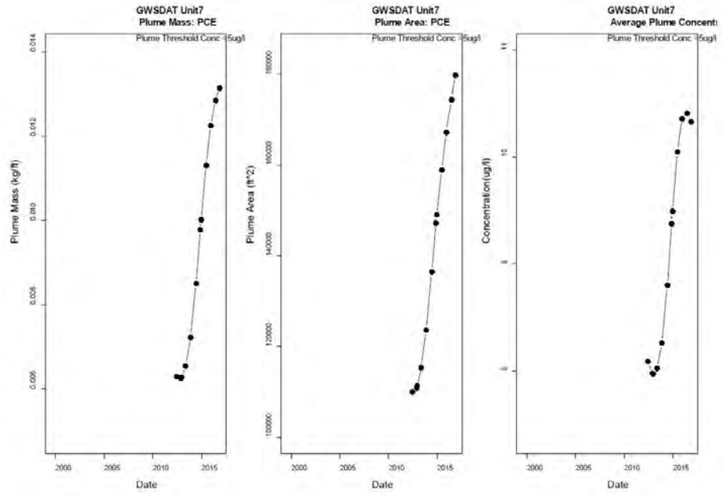
No.	Performance Metric	Evaluation of CAOC 10.38/10.39 Unit 7 PCE/TCE Plume	Conclusions and Recommendations
7	Is the plume expanding either vertically or laterally, shrinking, and are groundwater concentrations decreasing in a reasonable time frame?	**Description:** Statistical analysis of long-term monitoring data will be performed in accordance with U.S. EPA guidance to assess plume stability and concentrations trends. A Ricker analysis was conducted on historical PCE and TCE data collected at CAOC 10.38/10.39 Unit 7 to assess plume size and mass (Attachment 1). As a comparison, the RD-RA WP estimated the November 2014 PCE and TCE plumes (areas enclosed by the 5 µg/L isopleth) to be 47,000 and 280,000 square feet (sq. ft), respectively. The Ricker analysis estimates the PCE and TCE plumes to be 149,130 and 292,020 sq. ft, respectively using the same November 2014 data. Four additional PCE-TCE plume plots generated from the 2015-2016 data summarized below: • PCE plume area expands outward and slightly to the northeast (downgradient) from approximately 149,130 sq. ft (November 2014) to 179,850 sq. ft (November 2016). This represents about a 20 percent (%) increase in plume area; • PCE plume mass increased from 0.010021 kilograms per foot (kg/ft) in November 2014 to 0.013152 kg/ft in November 2016, or about a 30 % increase in plume mass; • The average PCE plume concentration increased from 9.5 to 10.5 µg/L from 2015 to 2016, but decreased in November 2016 (see plume graph); • The PCE center of mass moved slightly to the northeast toward well 10.38-DS17-5; • The TCE plume area remained relatively stable from approximately 292,020 sq. ft (May 2015) to 303,908 sq. ft (November 2016) or a 4% increase. The TCE plume shrank in 2015 by about 4% before increasing in 2016; • The TCE plume mass increased from 0.021424 kg/ft (November 2014) to 0.02548 kg/ft (November 2016), or a 19% increase; • The average TCE plume concentration increased from 10.5 to 11.7 µg/L from 2015 to 2016 (*see* plume graph); and • The TCE center of mass moved slightly to the northeast toward well 10.38-DS17-5.	**Conclusions:** • The PCE and TCE plumes have become larger in mass and areal extent, migrating slightly downgradient toward well 10.38-D17-5. PCE and TCE plume areas have increased by 20 and 4%, respectively, since 2014. However, there is no observable trend of COC concentrations increasing in monitoring wells outside the PCE-TCE plume boundaries (i.e., above 5 µg/L); and • Although both the PCE and TCE plumes have increased, they remained localized around two (PCE) or three (TCE) wells with the center of mass moving slightly downgradient toward well 10.38-D17-5. **Recommendations:** • Both plumes remain localized, continued monitoring at current intervals is recommended; and • The plume mass, area, and average concentration of each plume should be analyzed for any significant increases, in particular if COC concentration increases in groundwater outside the current plume boundaries (i.e., wells 10.38-D17-11 and -12).

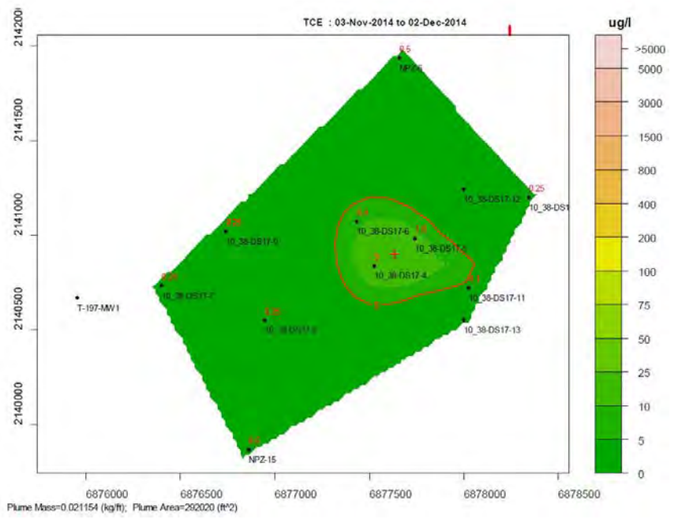
No.	Performance Metric	Evaluation of CAOC 10.38/10.39 Unit 7 PCE/TCE Plume	Conclusions and Recommendations
		In addition to the Ricker Analysis, the RD-RD WP established baseline conditions for which future MNA data evaluations would be compared. These baseline conditions are summarized below: • TCE Plume - horizontal extent o 280,000 sq. ft (November 2014); and o 303,980 sq. ft (November 2016). • Maximum COC concentrations o TCE = 9.0 µg/L; PCE = 5.1 µg/L (Nov 2014); and o TCE = 22 µg/L; PCE = 11 µg/L (Nov 2016). • Number of wells with COC concentrations above MCLs: o Nov 2014 TCE (3 wells) and PCE (1 well); and o Nov 2016 TCE (3 wells) and PCE (2 wells). **Trigger for additional action:** If a plume expands and/or migrates downgradient, additional evaluation and possible action will be initiated by the DON. A migrating plume is defined as increasing concentrations in downgradient monitoring wells.	
8	Are downgradient receptors protected from exposure risks?	**Description:** Annual groundwater monitoring and reporting will assess whether plume migration is or will potentially affect downgradient receptors. **Trigger for additional action:** If monitoring data indicate unacceptable exposure risks due to increasing COC concentrations and/or a plume migration outside the current LUCs, the DON will perform additional studies to refine the CSM and, if necessary, implement an alternative or amended remedy.	**Conclusions:** • Plume migration and COC concentrations remain localized and no exposure pathway exists downgradient, or outside the current LUCs.

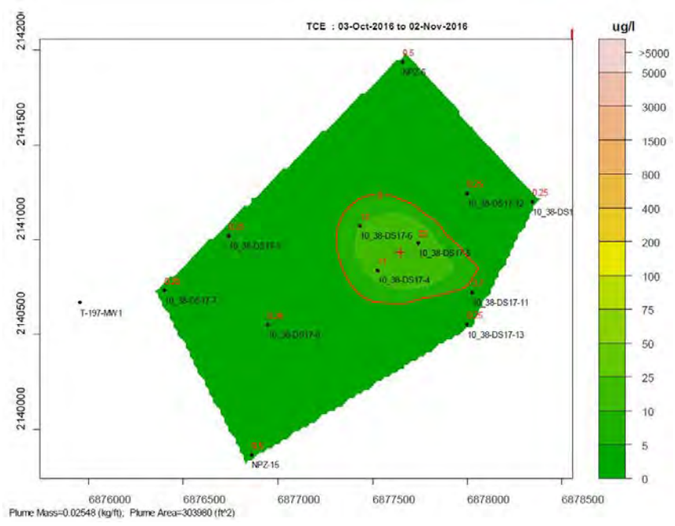
Model Outputs for CAOC 10.38/10.39 Unit 7

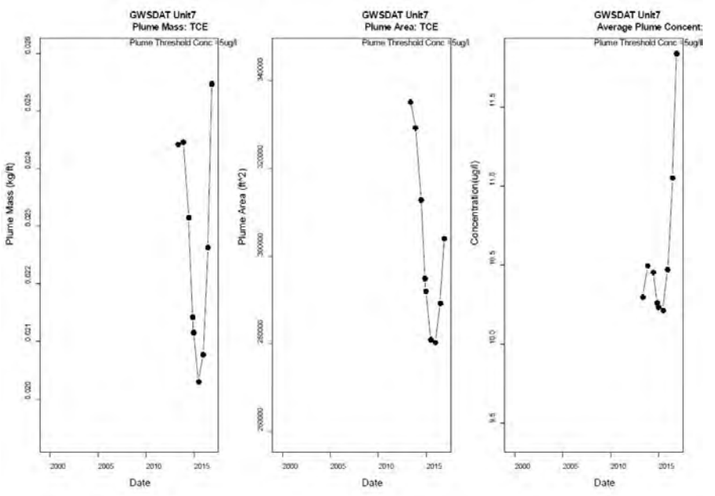












2.2 NPZ-14 GROUNDWATER AREA

The NPZ-14 groundwater area is located in a relatively isolated area in the southern part of Nebo Main Base, which was used as a storage area for military equipment from the 1950s to 1965 (Figure G-1). Evaluation of MNA performance at the NPZ-14 groundwater area follows the eight performance metrics outlined in the OU 7 ROD, as well as comparison to the baseline conditions summarized in the MNA RD-RA Work Plan (Table 3-10, Section 3.3.6). MNA performance monitoring evaluates both the effectiveness and protectiveness of the MNA remedy, which is outlined on Table 4-1 in the OU 7 ROD (DON 2014). Plume diagnostics are based on the Ricker Model whereby monitoring well data for wells within and proximal to the presumed source are plotted over time with a spatial context that outlines the plume parameters.

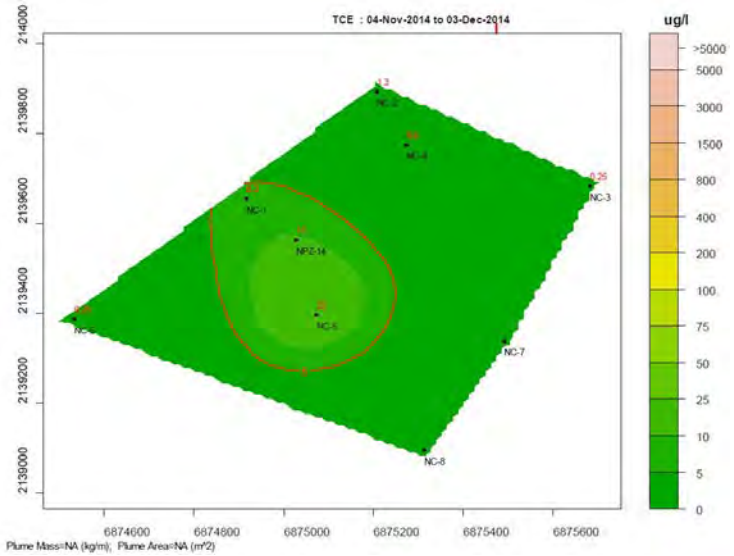
No.	Performance Metric	Evaluation of the NPZ-14 TCE Plume	Conclusions and Recommendations
1	Is Natural Attenuation occurring according to expectations?	**Description:** Natural attenuation involves reducing VOC contamination to below cleanup levels through natural processes including microbial and geochemical degradation, sorption, dilution, volatilization, and dispersion. • The TCE concentration during the reporting period decreased with a statistically significant trend in well NPZ-14, the trend was not significantly different than zero in well NC-6, and the concentration increased with a statistically significant trend in well NC-1. When calculated based on the best fit linear regression line, natural attenuation of the NPZ-14 TCE concentration would reach the MCL by 2032. Using the 95% upper confidence interval to account for uncertainty in the attenuation rate, the cleanup goal would be reached by 2087. **Trigger for additional action:** If natural attenuation is not occurring according to expectations, the DON will further evaluate the remedy and propose alternative response actions per Section 5.4 of RD-RA WP (OTIE 2015).	**Conclusion:** • The ROD did not specify a projected date for achieving the cleanup goal by natural attenuation. Although the TCE concentration in well NPZ-14 is decreasing, the conservative projection is that the cleanup goal will be reached by 2087. The TCE concentration was not changing in well NC-6 and was increasing significantly in well NC-1; and • The overall conclusion is that natural attenuation is not occurring at a rate that would attain the cleanup goal within a reasonable period of time.
2	Are the LUCs effectively protecting potential receptors?	**Description:** The Base Environmental Division is responsible for implementation of the groundwater use LUCs. The LUCs measures implemented in OUs 1 and 2 ROD (DON 1998) will be maintained at the OU 7 groundwater sites to prevent groundwater use until cleanup levels are achieved. **Trigger for additional action:** If COC concentrations increase or the plume expands beyond the Base groundwater LUC area(s) such that a person or persons could potentially be exposed to impacted groundwater resulting in unacceptable exposure risks.	**Conclusion:** • Current plume boundaries and COC concentrations have not migrated beyond the maintained LUCs, therefore, LUCs remain protective.

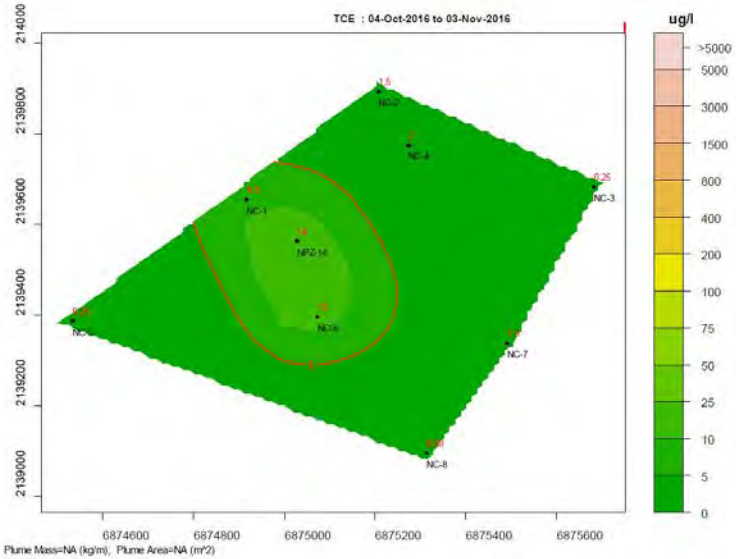
No.	Performance Metric	Evaluation of the NPZ-14 TCE Plume	Conclusions and Recommendations
3	Have Groundwater Contaminants dropped below cleanup levels?	**Description:** Nine monitoring wells are sampled during the semiannual and/or annual monitoring events: NC-1 through NC-8 and NPZ-14 to assess current concentrations of TCE, the main COC at this site, to the cleanup goal of 5 µg/L. **Groundwater Monitoring Data (October 2012 to December 2016):** • TCE concentrations detected above the 5 µg/L cleanup goal during the reporting period are from: (1) well NC-1, ranging from 3.7 to 9.4 µg/L; (2) well NC-6, ranging from 12to 26 µg/L; and (3) well NPZ-14, ranging from 9.7 to 18 µg/L. TCE concentrations in wells NC-2, NC-3, NC-4, NC-5, and NC-8 are below the cleanup goal.	**Conclusion:** • TCE concentrations remain above the cleanup levels in three of nine wells.
4	Have any of the natural environmental conditions changed that could affect natural attenuation processes?	**Description:** The semiannual and annual monitoring events will include collection of field data parameters and groundwater elevation data to evaluate the any changes in aquifer conditions that might affect natural attenuation processes. **Field data parameters:** • Dissolved oxygen concentrations have remained relatively constant in the area with concentrations typically over 1.0 milligram per liter; and • Oxidation-reduction potential levels are highly variable between wells and analysis indicates ranges over 200 millivolts (mVs) and levels being positive and/or negative. Groundwater elevations within this area have been relatively stable to slightly decreasing over the past five years. A fault trace cuts the area and could affect local groundwater flow conditions. **Trigger for additional action:** If MNA fails to remain protective and effective, the DON will evaluate the remedy per Section 5.4 of the RD-RA WP (2015).	**Conclusion:** • Field data parameters have been variable, but within the normal range for the area.
5	Have any potentially toxic and/or mobile transformation products been formed?	**Description:** The semiannual and annual monitoring events included analyses that would detect potential toxic and/or mobile transformation products (i.e., daughter products) produced through site-specific natural attenuation processes. The COC at NPZ-14, TCE, would produce toxic DCE congeners, VC, and innocuous ethane under sequential degradation. Historical and current groundwater data have not detected DCE or VC above 0.5 µg/L in groundwater samples collected from well NPZ-14. **Trigger for additional action:** If the presence of potentially toxic and/or mobile transformation products indicate failure of MNA to remain protective and effective, the DON will evaluate the remedy per Section 5.4 of the RD-RA WP (2015).	**Conclusion:** • Toxic or mobile transformation products have not been detected in well NPZ-14; and • The absence of degradation products suggests sequential degradation is not effectively occurring at the site; and •

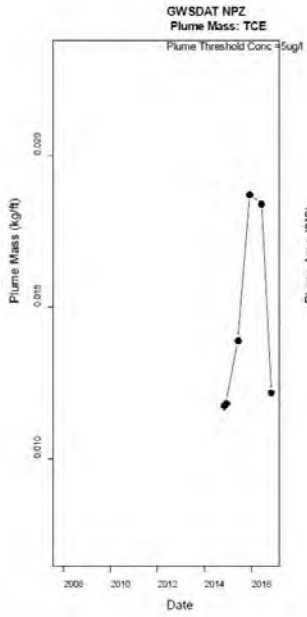
No.	Performance Metric	Evaluation of the NPZ-14 TCE Plume	Conclusions and Recommendations
6	Have any new detected contaminants been released to the environment that could impact the effectiveness of the natural attenuation remedy?	**Description:** The Base Environmental Division will inform the DON IRP manager of new spills or releases within the MNA area. New spills or releases have been not recorded in the MNA area. **Trigger for additional action:** If a new release of contaminants to the environment results in failure of MNA to remain protective and effective, then the DON will evaluate the remedy per Section 5.4 of the RD-RA WP (2015).	**Conclusions:** • New releases have not been reported, therefore there is no potential impact by new contaminants to the effectiveness of the natural attenuation remedy.
7	Is the plume expanding either vertically or laterally, shrinking, and groundwater concentrations decreasing in a reasonable time frame?	**Description:** Statistical analysis of long-term monitoring data will be performed in accordance with U.S. EPA guidance to assess plume stability and concentration trends. A Ricker analysis was conducted on historical TCE data collected at NPZ-14 to assess plume size and mass (Attachment 1). As a comparison, the RD-RA WP estimated the November 2014 TCE plume (areas enclosed by the 5 µg/L isopleth) to be 239,000 square feet (sq. ft), respectively. The Ricker analysis estimates the TCE plume to be 158,450 sq. ft using the same November 2014 data. In order to calculate plume diagnostics for the NPZ-14 plume, it was necessary to add a data point to the northwest (well NPZ-12) and an assumption was made that TCE was not detected in well NPZ-12. Four additional TCE plume plots are generated from the 2015-2016 data and summarized below: • The TCE plume area is relatively stable and increased from approximately 184,200 sq. ft (May 2015) to 194,330 sq. ft (November 2016) or a 5.5% increase. The TCE plume shrank from May 2016 to November 2016 by about 20%; • The TCE plume mass increased from 0.011832 kg/ft (November 2014) to 0.012193 kg/ft (November 2016), or a 3% increase; • The average TCE plume concentration decreased from 10.5 to 9.0 µg/L from 2015 to 2016 (see plume graph); and • The TCE center of mass moved slightly to the north toward well NPZ-14. In addition to the Ricker Analysis, the RD-RD WP established baseline conditions for which future MNA data evaluations would be compared. These baseline conditions are summarized below: • TCE Plume Horizontal extent o 158,450 sq. ft (November 2014); and o 194,330 sq. ft (November 2016). • Maximum COC concentrations o TCE = 24 µg/L (NC-6; Nov 2014); and	**Conclusions:** • The TCE plume expanded downgradient to the northeast from November 2014 through to May 2016, then retreated in November 2016. This migration was likely due to the increasing concentrations in NPZ-14 from NC-1 and slightly higher detections from downgradient wells NC-2 and NC-4. However, no additional wells had TCE detections above the cleanup goal; • The TCE plume remains localized around wells NC-1, NC-6, and NPZ-14, with the center of mass moving slightly downgradient toward well NPZ-14; and • The overall average plume TCE concentration has decreased through 2016. **Recommendations:** • The TCE plume contracted based on November 2016 data; therefore continued semi-annual monitoring at present intervals is recommended to assess plume area and migration.

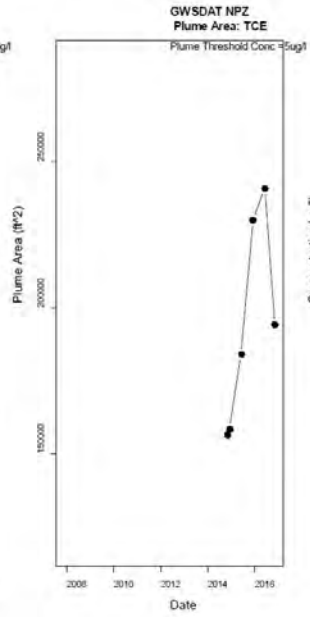
No.	Performance Metric	Evaluation of the NPZ-14 TCE Plume	Conclusions and Recommendations
		○ TCE = 14 µg/L (NPZ-14; Nov 2016). • Number of wells with COC concentrations above cleanup goal: ○ Nov 2014 TCE (3 wells); and ○ Nov 2016 TCE (3 wells). **Trigger for additional action:** If a plume expands and/or migrates downgradient, additional evaluation and possible action will be initiated by the DON. A migrating plume is defined as increasing concentrations in downgradient monitoring wells.	
8	Are downgradient receptors protected from exposure risks?	**Description:** Annual groundwater monitoring and reporting will assess whether plume migration will potentially affect downgradient receptors. **Trigger for additional action: :** If monitoring data indicate unacceptable exposure risks due to increasing COC concentrations and/or a plume migration outside the current LUCs, the DON will perform additional studies to refine the CSM and, if necessary, implement an alternative or amended remedy.	**Conclusions:** • Plume migration and COC concentrations remain localized and no exposure pathway exists.

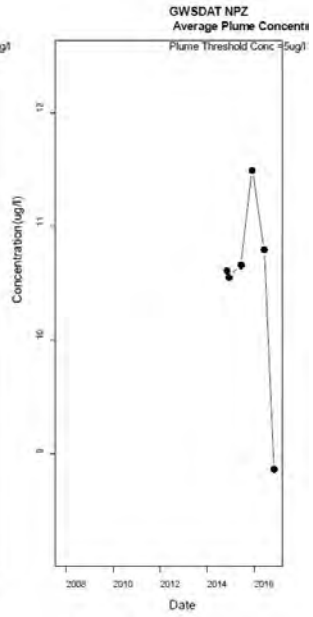
Model Output for the NPZ-14 TCE Plume











2.3 CAOC 7 STRATUM 1

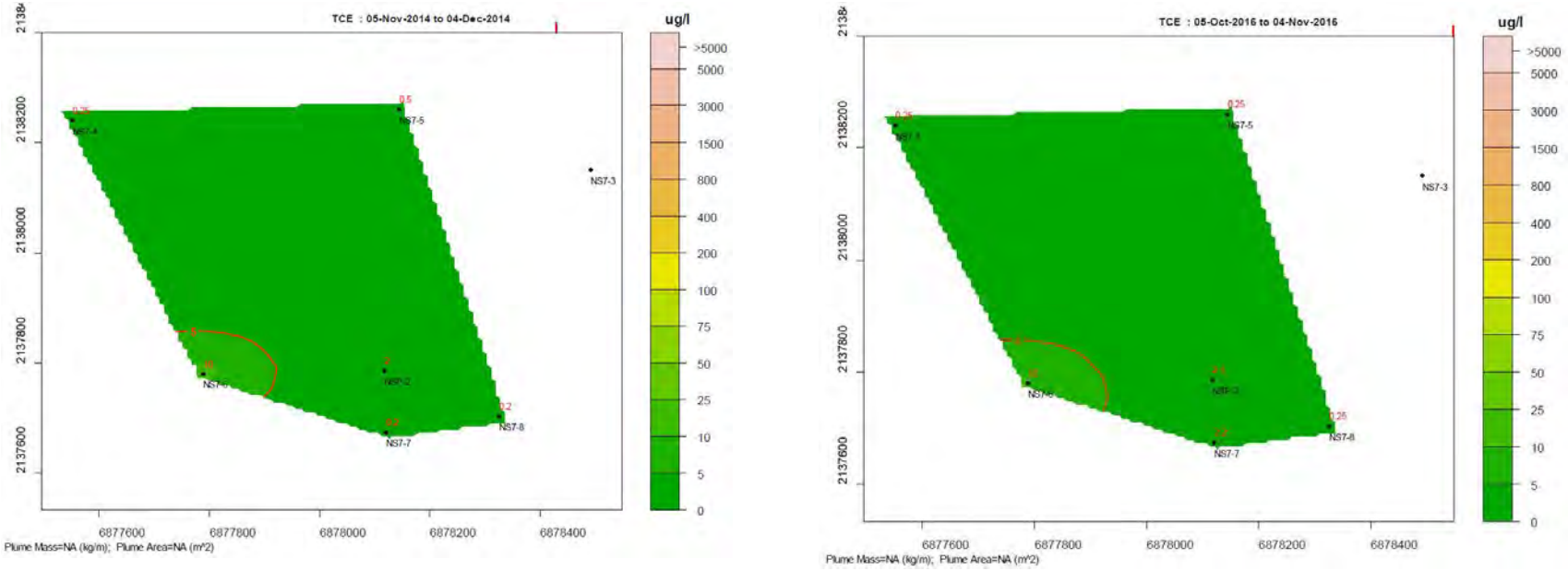
CAOC 7 Stratum 1 is a former burn dump and waste disposal area with a soil cap in the southeastern corner of Nebo Main Base (Figure G-2). Evaluation of MNA performance at CAOC 7 Stratum 1 follows the eight performance metrics outlined in the OU 7 ROD, as well as comparison to the baseline conditions summarized in the MNA RD-RA Work Plan (Table 3-10, Section 3.3.6). MNA performance monitoring evaluates both the effectiveness and protectiveness of the MNA remedy, which is outlined on Table 4-1 in the OU 7 ROD (DON 2014). Plume diagnostics are based on the Ricker Model whereby monitoring well data for wells within and proximal to the presumed source are plotted over time with a spatial context that outlines the plume parameters.

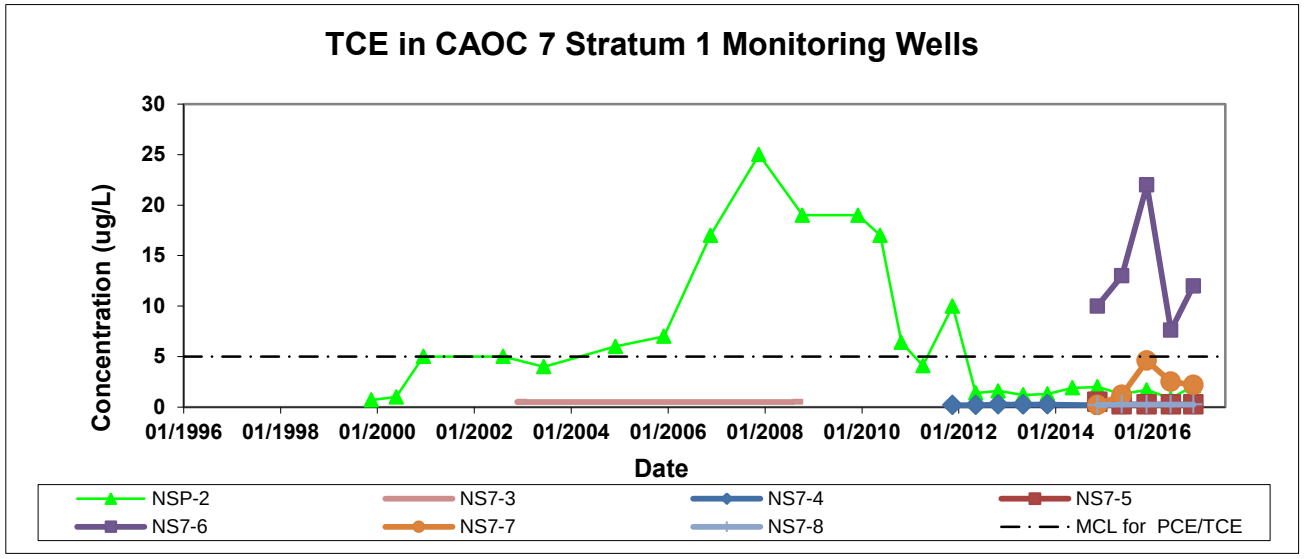
No.	Performance Metric	Evaluation of CAOC 7 Stratum 1 TCE Plume	Conclusions and Recommendations
1	Is Natural Attenuation occurring according to Expectations?	**Description:** Natural attenuation involves reducing VOC contamination to below cleanup levels through natural processes including microbial and geochemical degradation, sorption, dilution, volatilization, and dispersion. • The TCE concentration decreased with a statistically significant trend in well NSP-2 over the time period from November 16, 2007 when the maximum TCE concentration of 25 µg/L was observed through the latest sampling date of November 3, 2016; and • The TCE concentration trend was not significantly different than zero in well NS7-6 over the five sampling dates monitored. **Trigger for additional action:** If natural attenuation is not occurring according to expectations, the DON will further evaluate the remedy and propose alternative response actions per Section 5.4 of RD-RA WP (2015).	**Conclusion:** • The TCE concentration trend in well NSP-2 from the time of the maximum observed concentration to the latest sampling date is consistent with natural attenuation occurring to achieve the MCL in a reasonable period of time. The TCE concentration trend in well NS7-6 was not significantly different than zero; however, the monitoring period was too short to draw conclusions.
2	Are the LUCs effectively protecting potential receptors?	**Description:** The Base Environmental Division is responsible for implementation of the groundwater use LUCs. The LUCs measures implemented in OUs 1 and 2 ROD (Don 1998) will be maintained at the OU 7 groundwater sites to prevent groundwater use until cleanup levels are achieved. **Trigger for additional action:** If COC concentrations increase or the plume expands beyond the Base groundwater LUC area(s) such that a person or persons could potentially be exposed to impacted groundwater resulting in unacceptable exposure risks.	**Conclusion:** • Current plume boundaries and COC concentrations have not migrated beyond the maintained LUCs, therefore, LUCs remain protective.
3	Have Groundwater Contaminants Dropped below cleanup levels?	**Description:** Six monitoring wells are sampled during the semiannual and/or annual monitoring events: NS7-4 through NS7-8 and NSP-2 to assess current concentrations of TCE, the main COC at this site, to the cleanup goal of 5 µg/L. **Groundwater Monitoring Data (October 2012 to December 2016):** • TCE concentrations detected above the 5 µg/L cleanup goal during the reporting period are only from well NS7-6, ranging from 7.6 to 22 µg/L. • Remaining wells do not have TCE concentrations above the cleanup goal.	**Conclusion:** • TCE concentrations remain above the cleanup goal from well NS7-6; however, this well has only been sampled five times, so there is no clear trend has been established.

No.	Performance Metric	Evaluation of CAOC 7 Stratum 1 TCE Plume	Conclusions and Recommendations
4	Have any of the natural environmental conditions changed that could affect natural attenuation processes?	**Description:** The semiannual and annual monitoring events will include collection of field data parameters and groundwater elevation data to evaluate the any changes in aquifer conditions that might affect natural attenuation processes. **Field data parameters:** • Dissolved oxygen concentrations have remained relatively constant in the area with concentrations typically over 1.0 milligram per liter; and • Oxidation-reduction potential levels are highly variable between wells and sampling events with wells having ranges over 200 mVs and levels being positive and/or negative. Groundwater elevations within this area have been relatively stable to slightly decreasing over the past five years. A fault trace cuts the area to the northeast that could have some influence on hydrological conditions. **Trigger for additional action:** If reduced efficacy of MNA results in failure of the remedy to remain protective and effective, then the DON will evaluate the remedy per Section 5.4 of the RD-RA WP (2015).	**Conclusion:** • Natural environmental conditions have been variable, but within the normal range for the area.
5	Have any potentially toxic and/or mobile transformation products been formed?	**Description:** The semiannual and annual monitoring events will include analytical methods that would detect any potential toxic and/or mobile transformation products (i.e., daughter products) that would be produced through site-specific natural attenuation processes. • The CAOC-7 Stratum 1 COC is TCE, which under sequential degradation would produce toxic dichloroethene congeners, vinyl chloride, and innocuous ethene. Historical and current groundwater data have not detected DCE or VC above 0.5 µg/L. **Trigger for additional action: :** If the presence of potentially toxic and/or mobile transformation products indicate failure of MNA to remain protective and effective, the DON will evaluate the remedy per Section 5.4 of the RD-RA WP (OTIE 2015).	**Conclusion:** • No toxic or mobile transformation products have been detected; • The absence of degradation products suggests sequential degradation is not effectively occurring at the site; and • Other natural attenuation processes, such as abiotic transformation, can degrade TCE without the generation of toxic daughter products.
6	Have any new detected contaminants been released to the environment that could impact the effectiveness of the natural attenuation remedy?	**Description:** The Base Environmental Division will inform the DON IRP manager of any new spills or releases within the MNA area. • New spills or releases have not been recorded in the MNA area. **Trigger for additional action:** If a new release of contaminants to the environment results in failure of MNA to remain protective and effective, the DON will evaluate the remedy per Section 5.4 of the RD-RA WP (2015).	**Conclusions:** • No new releases have been reported, therefore there is no potential impact by previously undetected contaminants to the effectiveness of the natural attenuation remedy

No.	Performance Metric	Evaluation of CAOC 7 Stratum 1 TCE Plume	Conclusions and Recommendations
7	Is the plume expanding downgradient either vertically or laterally, shrinking, and groundwater concentrations decreasing in a reasonable time frame?	**Description:** Statistical analysis of long term monitoring data will be performed in accordance with U.S. EPA guidance to assess plume stability and concentration trends. A Ricker analysis was conducted on historical TCE data collected at CAOC 7 Stratum 1 to assess plume size and mass (Attachment 1). The RD-RA WP estimated the November 2014 TCE plume (areas enclosed by the 5 µg/L isopleth) to be 46,000 sq. ft. The limited data set for CAOC 7 Stratum 1 precludes a plume diagnostic analysis using the Ricker method as there is no useful TCE data located to the west of NS7-6. Nevertheless, four additional TCE plume plots were generated from the 2015-2016 data and summarized below: • The TCE plume is undefined to the west and area and volume calculations are not possible; and • The eastern edge of the TCE plume appears to expand from 2014 through 2015 based on the increases in groundwater TCE concentrations from well NS7-6 and downgradient wells NS7-7 and NSP-2 before retreating in 2016. In addition to the Ricker Analysis, the RD-RD WP established baseline conditions for which future MNA data evaluations would be compared. These baseline conditions are summarized below: • TCE Plume Horizontal extent o 46,000 sq. ft (November 2014). • Maximum COC concentrations o TCE = 10 µg/L (NS7-6; Nov 2014); and o TCE = 12 µg/L (NS7-6; Nov 2016). • Number of wells with COC concentrations above MCL: o Nov 2014 TCE (1 well); and o Nov 2016 TCE (1 well). **Trigger for additional action:** If a plume is expanding and/or migrating downgradient, additional evaluation and possible action will be initiated by the DON. A migrating plume is defined as increasing concentrations in downgradient monitoring wells.	**Conclusions:** • The TCE plume expanded slightly downgradient toward the east from November 2014 to November 2015, then retreated through November 2016. This migration was likely due to increased TCE concentrations in NSP-2 from NS7-7 during 2015. However, no additional wells had TCE detections above the cleanup goal; and • The TCE plume remains localized around well NS7-6. **Recommendations:** The TCE plume has contracted toward the end of 2016; therefore continued monitoring at present intervals is recommended to assess whether it continues to decrease in size.
8	Are downgradient receptors protected from exposure risks?	**Description:** Annual groundwater monitoring and reporting will assess whether plume migration is or will potentially affect downgradient receptors. **Trigger for additional action: :** If monitoring data indicate unacceptable exposure risks due to increasing COC concentrations and/or a plume migration outside the current LUCs, the DON will perform additional studies to refine the CSM and, if necessary, implement an alternative or amended remedy.	**Conclusions:** • Plume migration and COC concentrations remain localized and no exposure pathway exists.

Model Output for the CAOC 7 Stratum 1 TCE Plume





3.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this evaluation, natural attenuation cannot be proven at CAOC 10.38/10.39 Unit 7 and CAOC 7 Stratum 1; it appears to be occurring at a slow rate at NPZ-14 groundwater area. However, the MNA remedy remains protective at all three sites because LUCs are maintained preventing exposure to contaminated groundwater and the PCE and/or TCE plumes are not expanding or migrating downgradient from the originally defined plume boundaries. A remedial timeframe calculation was only possible for groundwater area NPZ-14, which estimated achieving the cleanup goal by 2087.

The recommendations for the three OU 7 MNA remedies at Nebo Main Base include:

- Continued semi-annual monitoring at all three Sites;
- At CAOC 7 Stratum 1, implement the soil vapor extraction remedy, followed by reevaluation of the MNA groundwater remedy;
- At CAOC 7 Stratum 1, install one or more monitoring wells to address the data gap to the west of the defined plume;
- Investigate the source area(s) at NPZ-14 and CAOC 10.38/10.39 Unit 7 to facilitate future evaluations and ensure the overall protectiveness of the LUCs; and

4.0 REFERENCES

API. 2017. Groundwater Spatio-Temporal Data Analysis Tool (GWSDAT) downloadable from: http://www.api.org/oil-and-natural-gas/environment/clean-water/ground-water/gwsdat

Department of the Navy (DON). 1998. *Operable Units 1and 2 Final Record of Decision Report*, *Marine Corps Logistic Base Barstow, California*. April.

_____. 2014. *Final Record of Decision for Operable Unit 7, Marine Corps Logistic Base Barstow, California*. January 14.

Oneida Total Integrated Enterprises LLC (OTIE). 2015. *Remedial Design – Remedial Action Work Plan for Monitored Natural Attenuation of Three Groundwater Sites, Operable Unit 7, Marine Corps Logistic Base Barstow, California*. August 7.

_____.2017. Draft *2016 Annual Groundwater Monitoring Report, Operable Units 1 through 7, Marine Corps Logistic Base Barstow, California*. May.

Ricker, J.A. 2008. A Practical Method to Evaluate Ground Water Contaminant Plume Stability. Ground Water Monitoring & Remediation 28, no. 4, Fall 2008, pages 85-94.

Triola, MF. 1997. Elementary Statistics, Seventh Edition. Addison Wesley Longman, Inc. ISBN 0-201-85920-3.

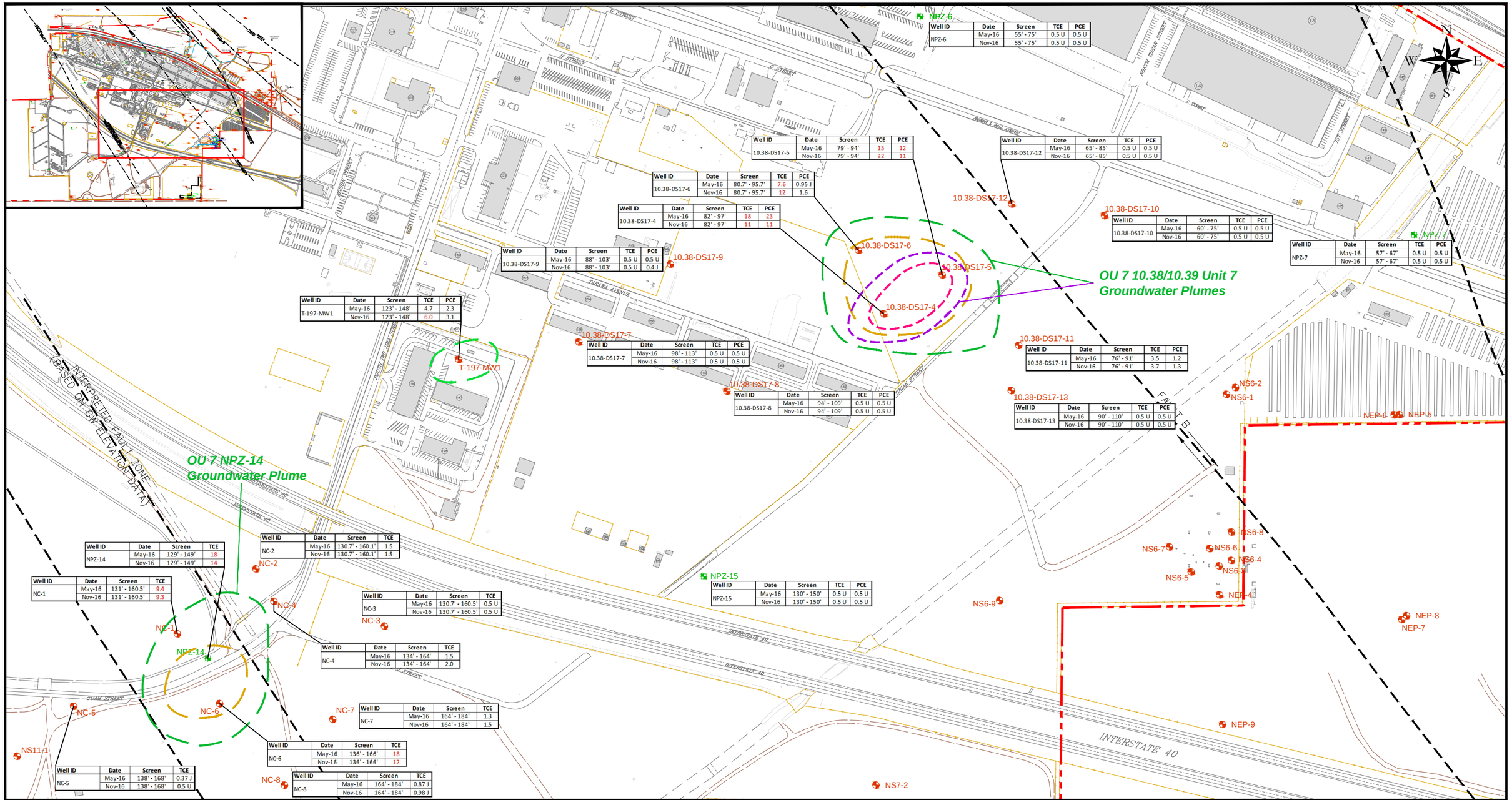
United States Environmental Protection Agency (U.S. EPA). 2004. *Performance Monitoring for MNA Remedies of VOCs in Groundwater Water*. EPA 600/R-04/027, April 2004. National Risk Management Research Laboratory, Office of Research and Development, United States Environmental Protection Agency (USEPA).

_____. 2011. An Approach for Evaluating the Progress of Natural Attenuation in Groundwater. National Risk Management Research Laboratory, Office of Research and Development. EPA 600/R-11/204.

This page intentionally left blank.

FIGURES

This page intentionally left blank.



Well ID	Date	Screen	TCE	PCE
NPZ-6	May-16	55' - 75'	0.5 U	0.5 U
	Nov-16	55' - 75'	0.5 U	0.5 U

Well ID	Date	Screen	TCE	PCE
10.38-DS17-5	May-16	79' - 94'	15	12
	Nov-16	79' - 94'	22	11

Well ID	Date	Screen	TCE	PCE
10.38-DS17-12	May-16	65' - 85'	0.5 U	0.5 U
	Nov-16	65' - 85'	0.5 U	0.5 U

Well ID	Date	Screen	TCE	PCE
10.38-DS17-6	May-16	80.7' - 95.7'	7.6	0.95 J
	Nov-16	80.7' - 95.7'	12	1.6

Well ID	Date	Screen	TCE	PCE
10.38-DS17-10	May-16	60' - 75'	0.5 U	0.5 U
	Nov-16	60' - 75'	0.5 U	0.5 U

Well ID	Date	Screen	TCE	PCE
10.38-DS17-4	May-16	82' - 97'	18	23
	Nov-16	82' - 97'	11	11

Well ID	Date	Screen	TCE	PCE
NPZ-7	May-16	57' - 67'	0.5 U	0.5 U
	Nov-16	57' - 67'	0.5 U	0.5 U

Well ID	Date	Screen	TCE	PCE
10.38-DS17-9	May-16	88' - 103'	0.5 U	0.5 U
	Nov-16	88' - 103'	0.5 U	0.4 J

Well ID	Date	Screen	TCE	PCE
T-197-MW1	May-16	123' - 148'	4.7	2.3
	Nov-16	123' - 148'	6.0	3.1

Well ID	Date	Screen	TCE	PCE
10.38-DS17-7	May-16	98' - 113'	0.5 U	0.5 U
	Nov-16	98' - 113'	0.5 U	0.5 U

Well ID	Date	Screen	TCE	PCE
10.38-DS17-11	May-16	76' - 91'	3.5	1.2
	Nov-16	76' - 91'	3.7	1.3

Well ID	Date	Screen	TCE	PCE
10.38-DS17-8	May-16	94' - 109'	0.5 U	0.5 U
	Nov-16	94' - 109'	0.5 U	0.5 U

Well ID	Date	Screen	TCE	PCE
10.38-DS17-13	May-16	90' - 110'	0.5 U	0.5 U
	Nov-16	90' - 110'	0.5 U	0.5 U

Well ID	Date	Screen	TCE
NPZ-14	May-16	129' - 149'	18
	Nov-16	129' - 149'	14

Well ID	Date	Screen	TCE
NC-2	May-16	130.7' - 160.1'	1.5
	Nov-16	130.7' - 160.1'	1.5

Well ID	Date	Screen	TCE
NC-1	May-16	131' - 160.5'	9.4
	Nov-16	131' - 160.5'	9.3

Well ID	Date	Screen	TCE
NC-3	May-16	130.7' - 160.5'	0.5 U
	Nov-16	130.7' - 160.5'	0.5 U

Well ID	Date	Screen	TCE
NC-4	May-16	134' - 164'	1.5
	Nov-16	134' - 164'	2.0

Well ID	Date	Screen	TCE
NC-7	May-16	164' - 184'	1.3
	Nov-16	164' - 184'	1.5

Well ID	Date	Screen	TCE
NC-6	May-16	136' - 166'	18
	Nov-16	136' - 166'	12

Well ID	Date	Screen	TCE
NC-5	May-16	138' - 168'	0.37 J
	Nov-16	138' - 168'	0.5 U

Well ID	Date	Screen	TCE
NC-8	May-16	164' - 184'	0.87 J
	Nov-16	164' - 184'	0.98 J

Well ID	Date	Screen	TCE	PCE
NPZ-15	May-16	130' - 150'	0.5 U	0.5 U
	Nov-16	130' - 150'	0.5 U	0.5 U

Legend

- Paved Road
- Dirt Road
- Railroad Tracks
- Fence Line
- Base Boundary
- Fault Traces (strike-slip)

- MW-B — Groundwater Monitoring Well
- NPZ-8 — Piezometer
- 5 — Approximate TCE Isoconcentration Contour (ug/L)
- 10 — Approximate TCE Isoconcentration Contour (ug/L)
- 5 — Approximate PCE Isoconcentration Contour (ug/L)
- 10 — Approximate PCE Isoconcentration Contour (ug/L)

Monitoring Well Sample

Well Screen Interval (ft bgs) — Analyte

Well ID	Date	Screen	TCE	PCE
10.38-DS17-6	May-16	80.7' - 95.7'	7.6	0.95 J
	Nov-16	80.7' - 95.7'	12	1.6

Concentration (ug/L)

Red Result indicates a cleanup level excedence

Approximate Scale in Feet

0 — 350 — 700

Notes

1) Analytical results shown in ug/L (micrograms per liter) for the wells sampled during the 2016 Annual Groundwater Monitoring Event.
2) The highest detection is reported when a field duplicate is collected.
3) The groundwater cleanup level is 5 ug/L for PCE/TCE.

Acronyms

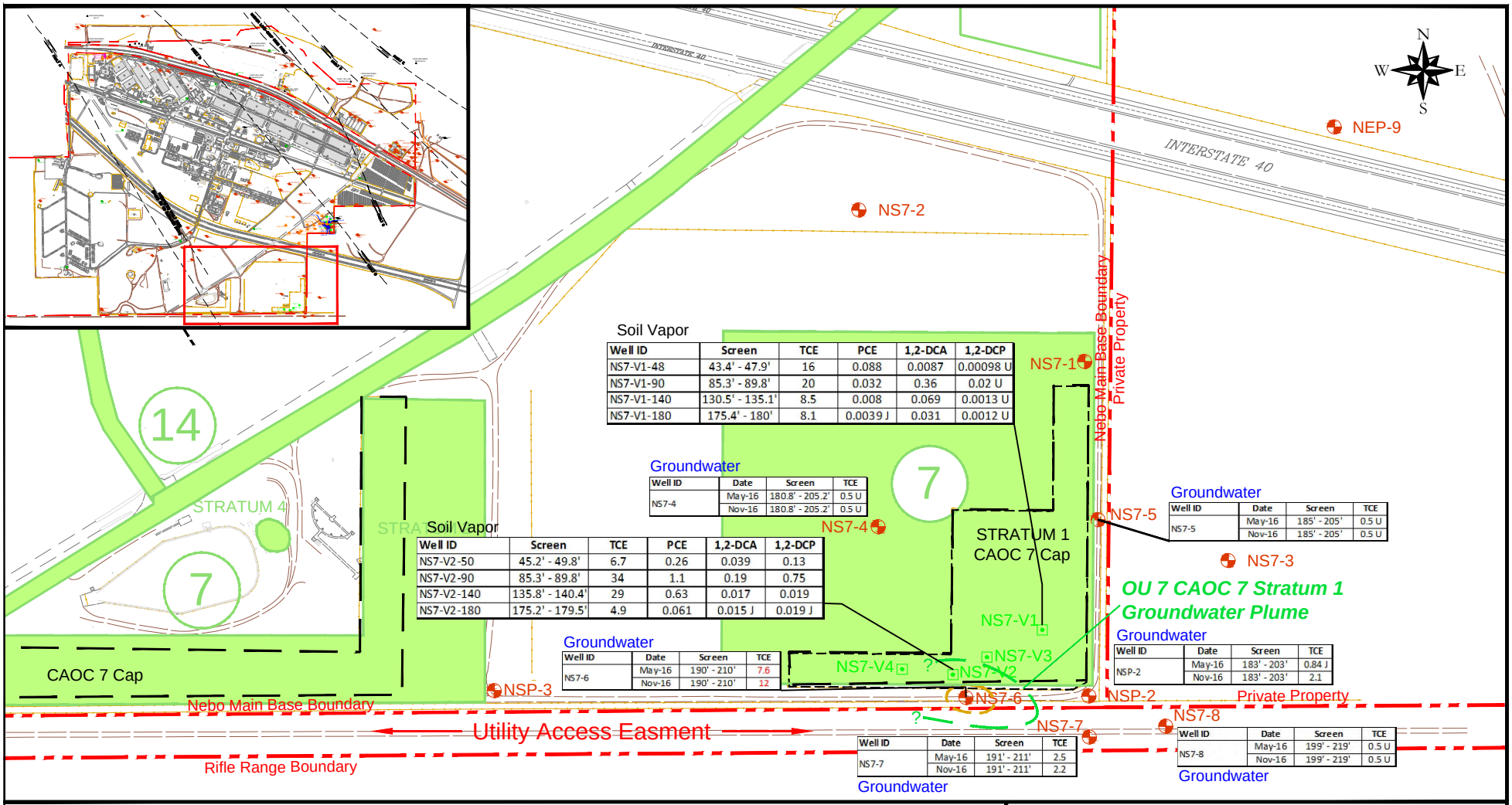
COC = contaminant of concern
TCE = Trichloroethene
PCE = Tetrachloroethene
J = Estimated Value
ft bgs = feet below ground surface
U = Not Detected (value indicates detection limit)
OU = operable unit
CAOC - CERCLA Area of Concern
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act

Figure G-1
OU 7, NPZ-14 Area and CAOC 10.38/10.39 Unit 7 Groundwater COC Concentrations

Nebo Main Base
Marine Corps Logistics Base
Barstow, California

OTIE — An Oneida Nation Company

Date: May 5, 2017
File: Barstow_A16.dwg
Plotted By: Geoff Brink



Soil Vapor

Well ID	Screen	TCE	PCE	1,2-DCA	1,2-DCP
NS7-V1-48	43.4' - 47.9'	16	0.088	0.0087	0.00098 U
NS7-V1-90	85.3' - 89.8'	20	0.032	0.36	0.02 U
NS7-V1-140	130.5' - 135.1'	8.5	0.008	0.069	0.0013 U
NS7-V1-180	175.4' - 180'	8.1	0.0039 J	0.031	0.0012 U

Groundwater

Well ID	Date	Screen	TCE
NS7-4	May-16	180.8' - 205.2'	0.5 U
	Nov-16	180.8' - 205.2'	0.5 U

Soil Vapor

Well ID	Screen	TCE	PCE	1,2-DCA	1,2-DCP
NS7-V2-50	45.2' - 49.8'	6.7	0.26	0.039	0.13
NS7-V2-90	85.3' - 89.8'	34	1.1	0.19	0.75
NS7-V2-140	135.8' - 140.4'	29	0.63	0.017	0.019
NS7-V2-180	175.2' - 179.5'	4.9	0.061	0.015 J	0.019 J

Groundwater

Well ID	Date	Screen	TCE
NS7-6	May-16	190' - 210'	7.6
	Nov-16	190' - 210'	12

Groundwater

Well ID	Date	Screen	TCE
NS7-5	May-16	185' - 205'	0.5 U
	Nov-16	185' - 205'	0.5 U

Groundwater

Well ID	Date	Screen	TCE
NSP-2	May-16	183' - 203'	0.84 J
	Nov-16	183' - 203'	2.1

Groundwater

Well ID	Date	Screen	TCE
NS7-7	May-16	191' - 211'	2.5
	Nov-16	191' - 211'	2.2

Groundwater

Well ID	Date	Screen	TCE
NS7-8	May-16	199' - 219'	0.5 U
	Nov-16	199' - 219'	0.5 U

Groundwater

Legend

- Paved Road
- Dirt Road
- Fence Line
- Base Boundary
- Operable Unit 6 (CAOC 7)
- NSP-3 — Groundwater Monitoring Well
- NS7-V1 — Vapor Extraction Well
- 5 — Approximate TCE Isoconcentration Contour (ug/L)
- 10 — Approximate TCE Isoconcentration Contour (ug/L)
- Stratum 1 Armored Cap Boundary

Monitoring Well Sample

Well Screen Interval (ft bgs)

Well ID	Date	Screen	TCE
NS7-6	May-16	190' - 210'	7.6
	Nov-16	190' - 210'	12

Analyte

Red Result indicates a cleanup level excedence

Notes

1) Analytical results shown in ug/L (micrograms per liter) for the wells sampled during the 2016 Annual Groundwater Monitoring Event.
2) The highest detection is reported when a field duplicate is collected.
3) The groundwater cleanup level is 5 ug/L for TCE.
4) TCE = Trichloroethene
   ft bgs = feet below ground surface
   U = Not Detected (value indicates detection limit)
   CAOC - CERCLA Area of Concern
   CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act

Approximate Scale in Feet

0 400

Figure G-2
CAOC 7 Stratum 1 COC Concentrations in Groundwater and Soil Gas (2016)

Nebo Main Base
Marine Corps Logistics Base
Barstow, California

OTIE
An Oneida Nation Company

Date: June 19, 2017

File: Barstow_5yrRev - 2017.dwg

Plotted By: Adam Goldenberg

ATTACHMENTS

This page intentionally left blank.

Attachment 1

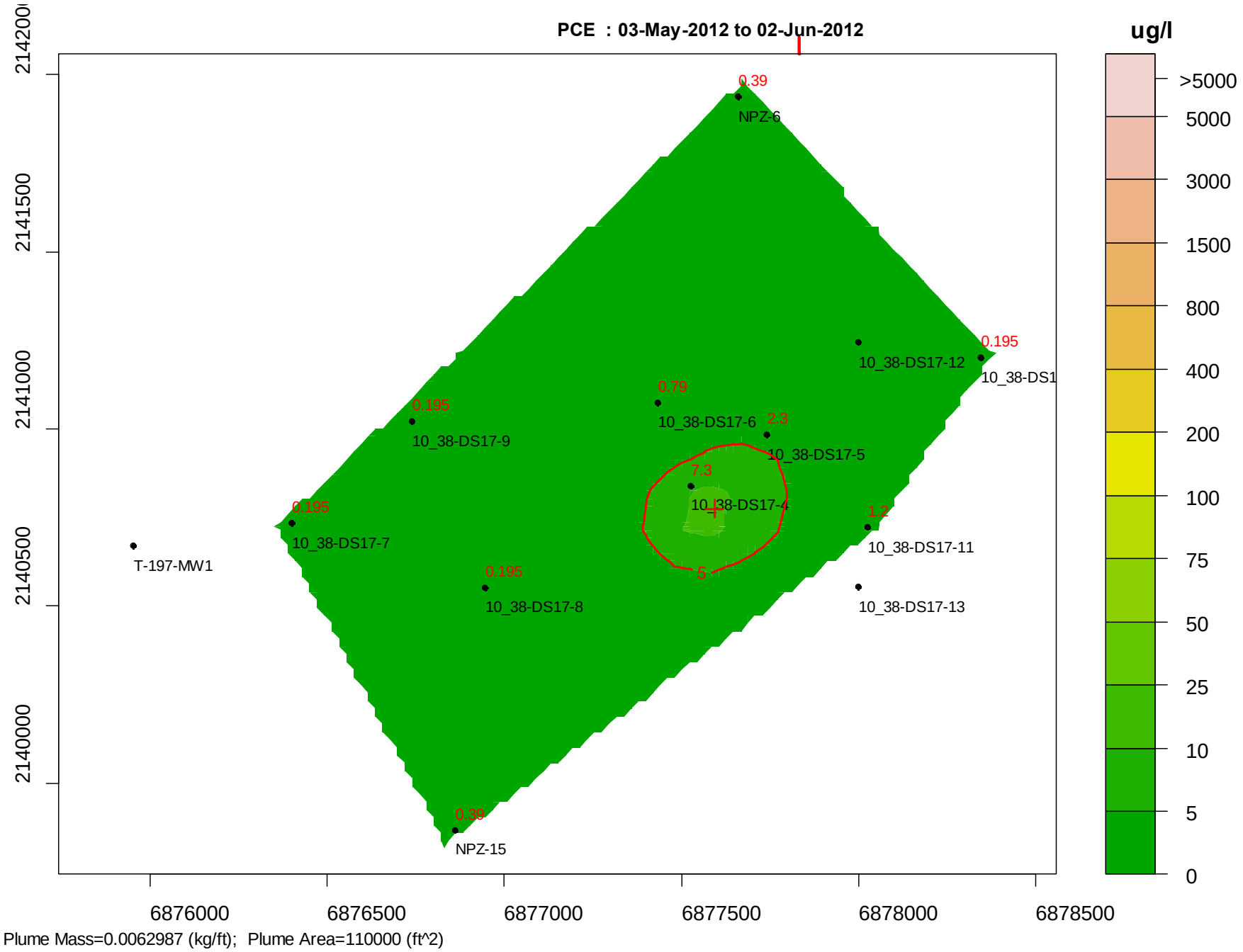
Ricker Analysis Model Output

This page intentionally left blank

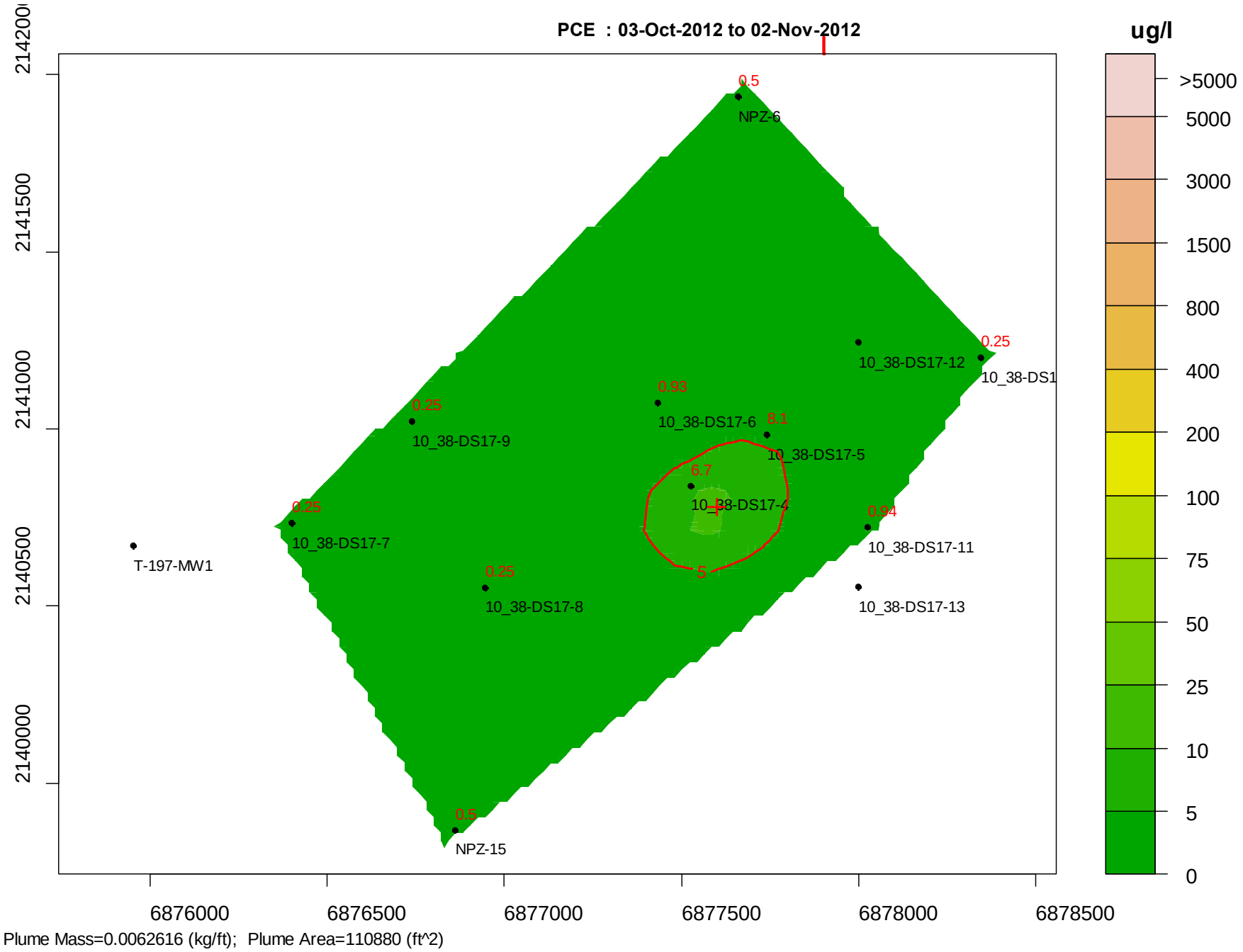
MNA SITE 10.38/10.39 UNIT 7

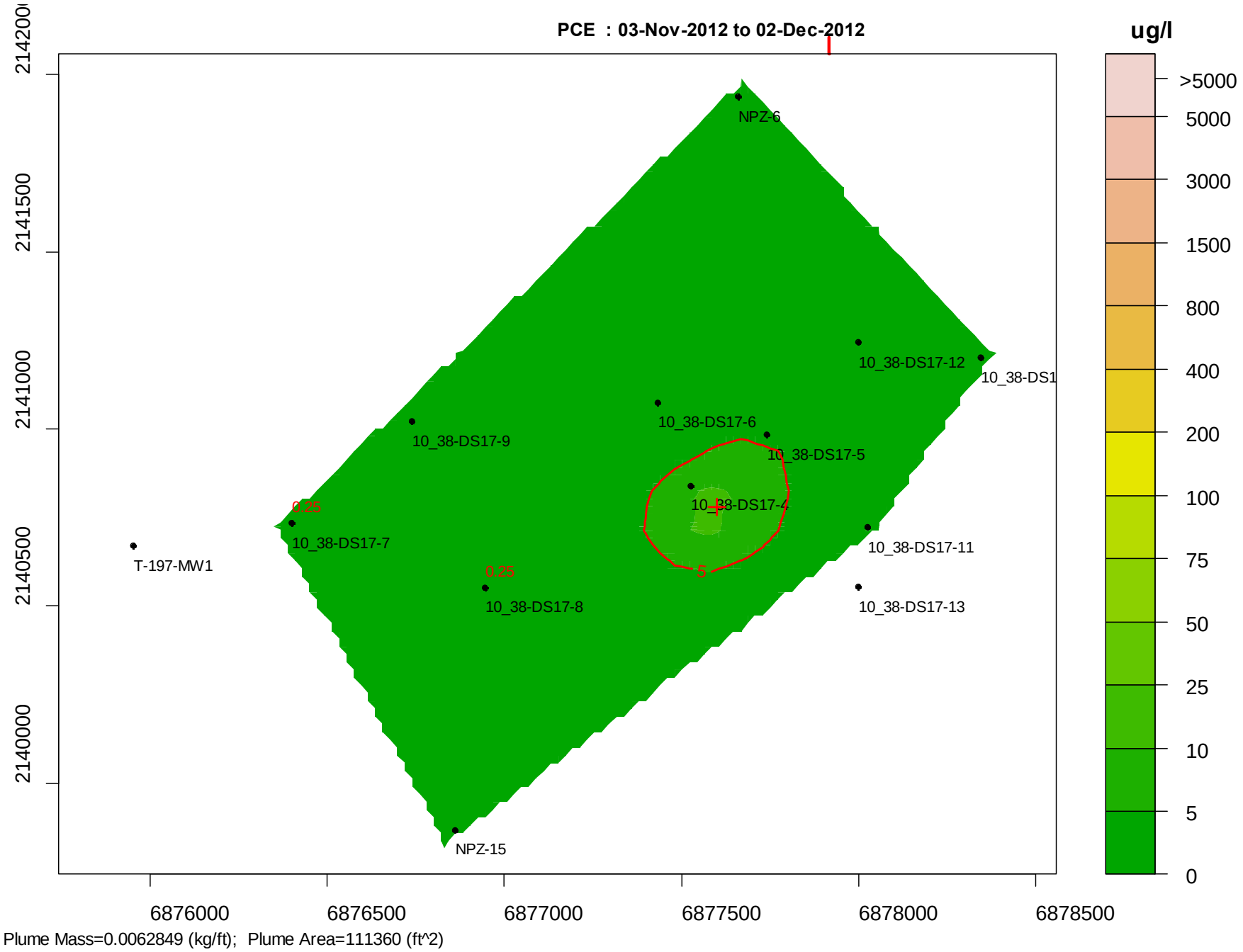
PCE

This page intentionally left blank

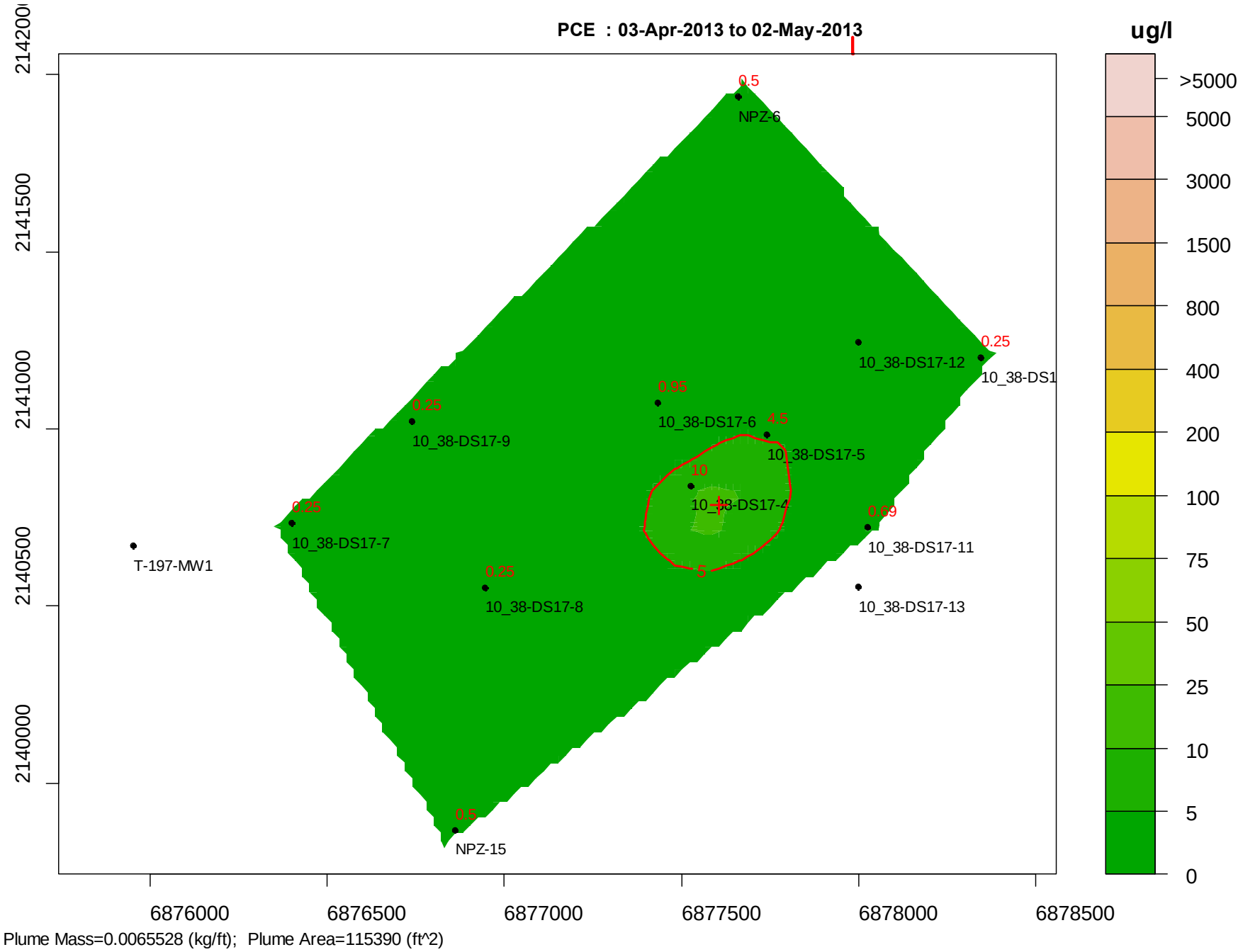


Plume Mass=0.0062987 (kg/ft); Plume Area=110000 (ft^2)

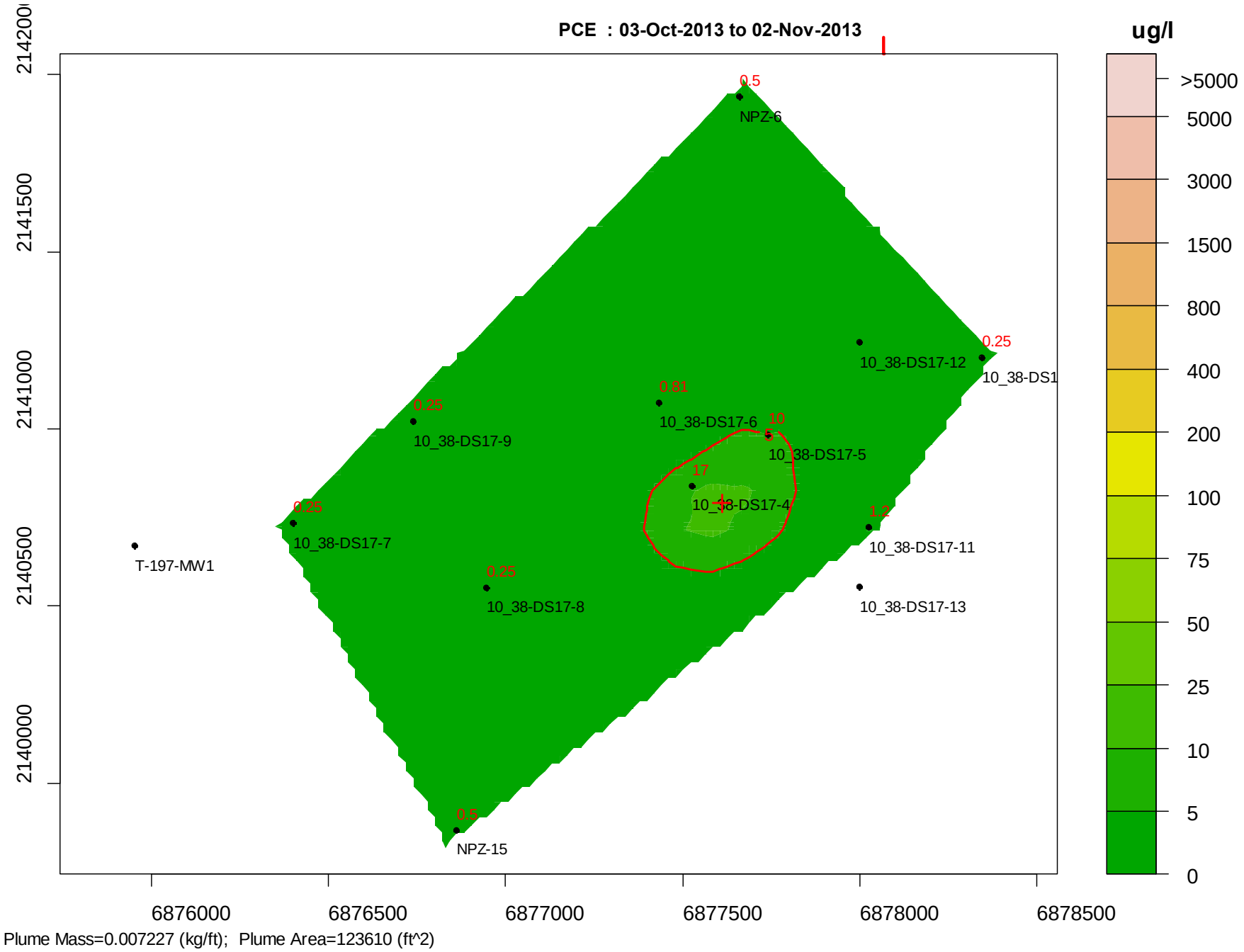

PCE : 03-Oct-2012 to 02-Nov-2012
ug/l
>5000
5000
3000
1500
800
400
200
100
75
50
25
10
5
0
0.5
NPZ-6
0.25
10_38-DS17-12
10_38-DS1
0.93
10_38-DS17-6
8.1
0.25
10_38-DS17-9
10_38-DS17-5
6.7
10_38-DS17-4
0.25
10_38-DS17-7
0.94
10_38-DS17-11
T-197-MW1
5
0.25
10_38-DS17-8
10_38-DS17-13
0.5
NPZ-15
2142000
2141500
2141000
2140500
2140000
6876000
6876500
6877000
6877500
6878000
6878500
Plume Mass=0.0062616 (kg/ft); Plume Area=110880 (ft^2)



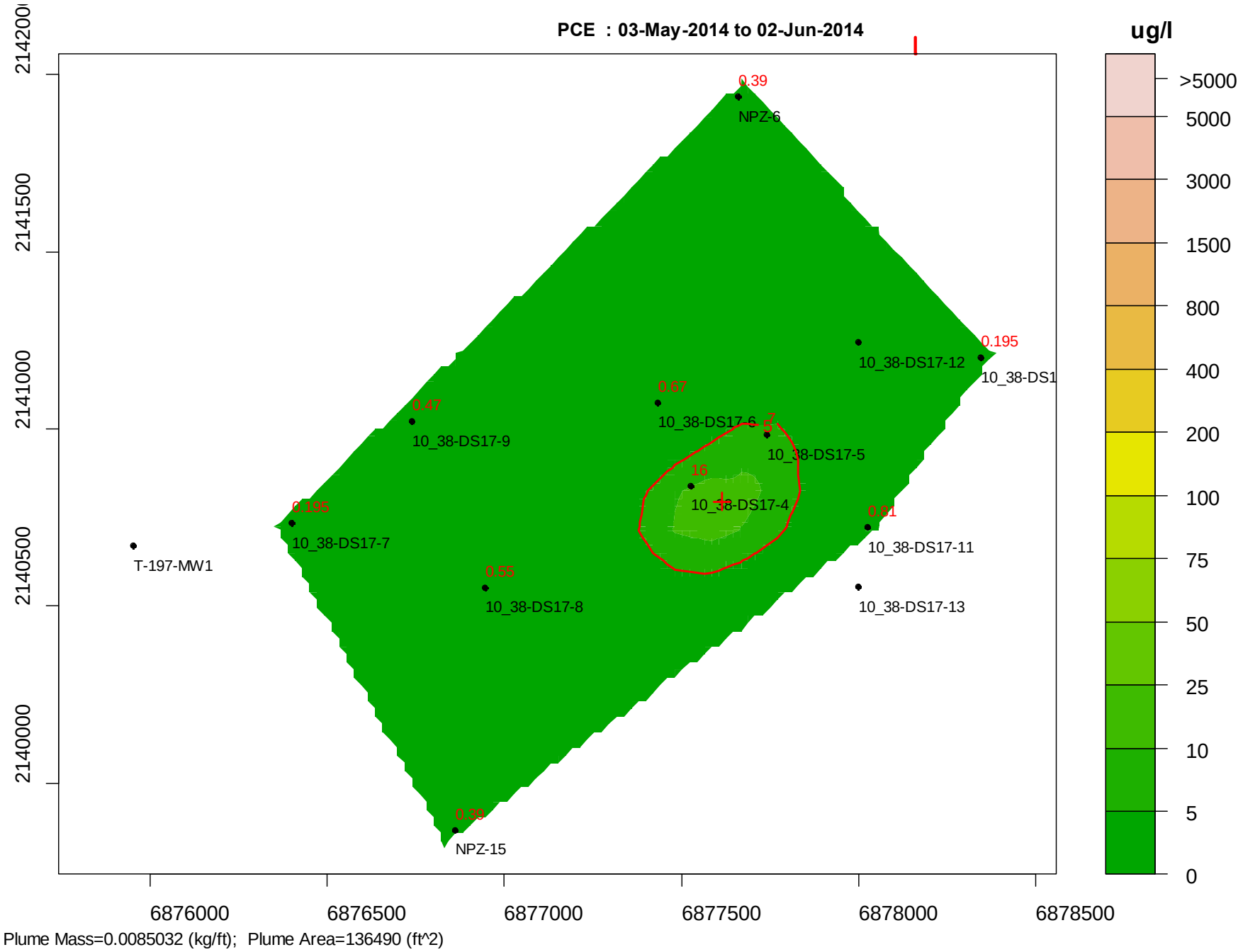
Plume Mass=0.0062849 (kg/ft); Plume Area=111360 (ft^2)

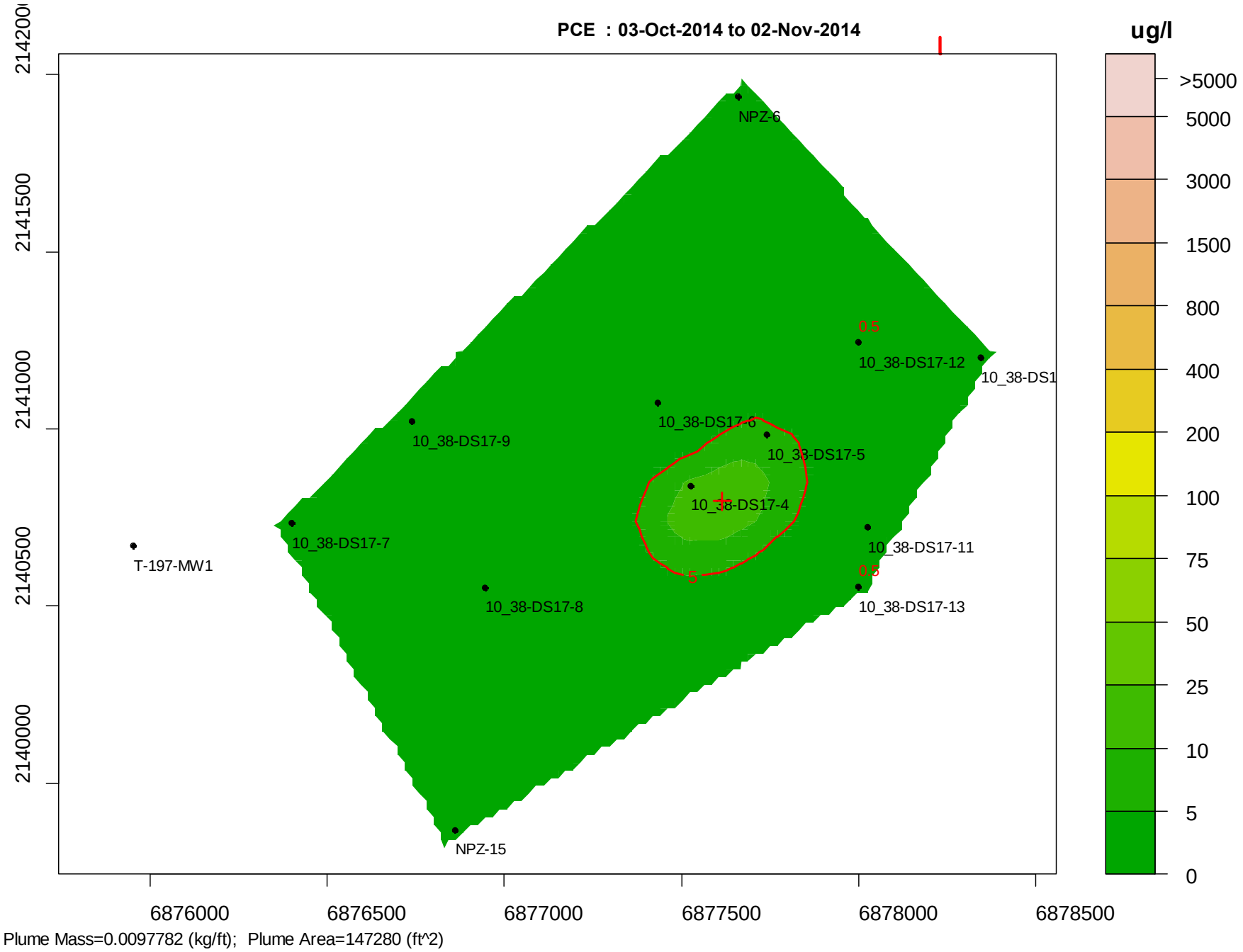


Plume Mass=0.0065528 (kg/ft); Plume Area=115390 (ft^2)

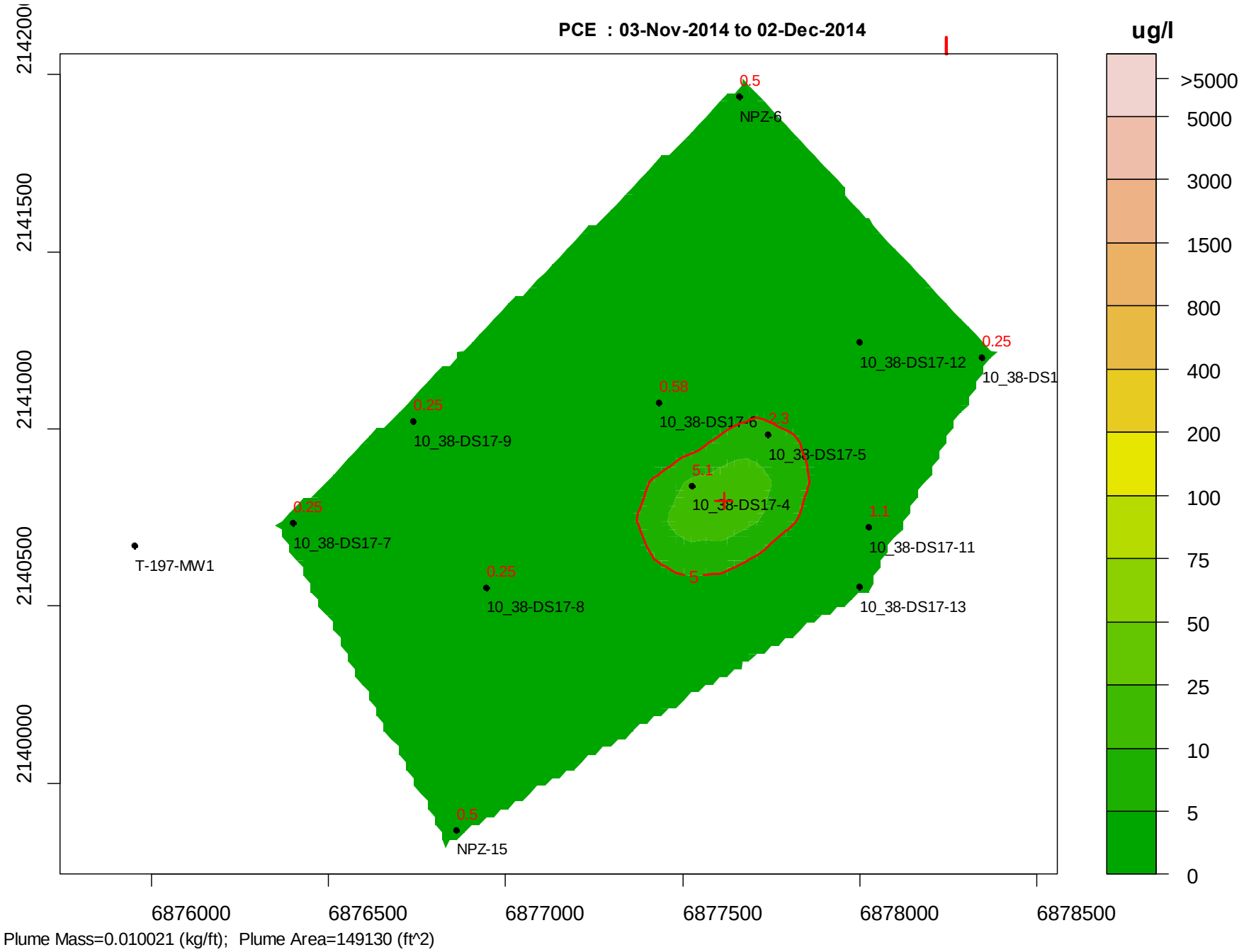


Plume Mass=0.007227 (kg/ft); Plume Area=123610 (ft^2)

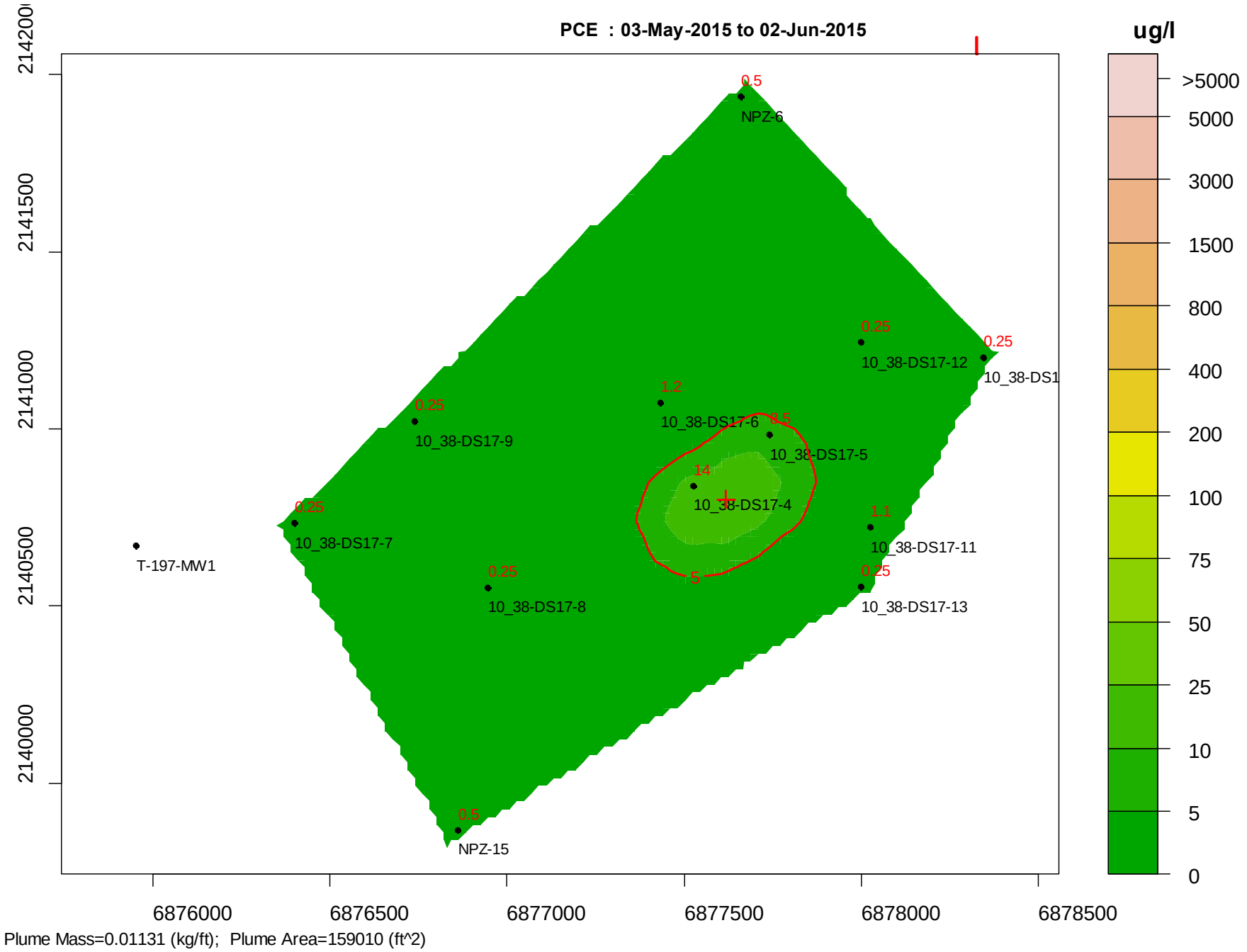

PCE : 03-May-2014 to 02-Jun-2014
ug/l
>5000
5000
3000
1500
800
400
200
100
75
50
25
10
5
0
0.39
NPZ-6
0.195
10_38-DS17-12
10_38-DS1
0.67
10_38-DS17-6
0.47
10_38-DS17-9
10_38-DS17-5
16
10_38-DS17-4
0.195
10_38-DS17-7
0.81
10_38-DS17-11
T-197-MW1
0.55
10_38-DS17-8
10_38-DS17-13
0.39
NPZ-15
2142000
2141500
2141000
2140500
2140000
6876000
6876500
6877000
6877500
6878000
6878500
Plume Mass=0.0085032 (kg/ft); Plume Area=136490 (ft^2)

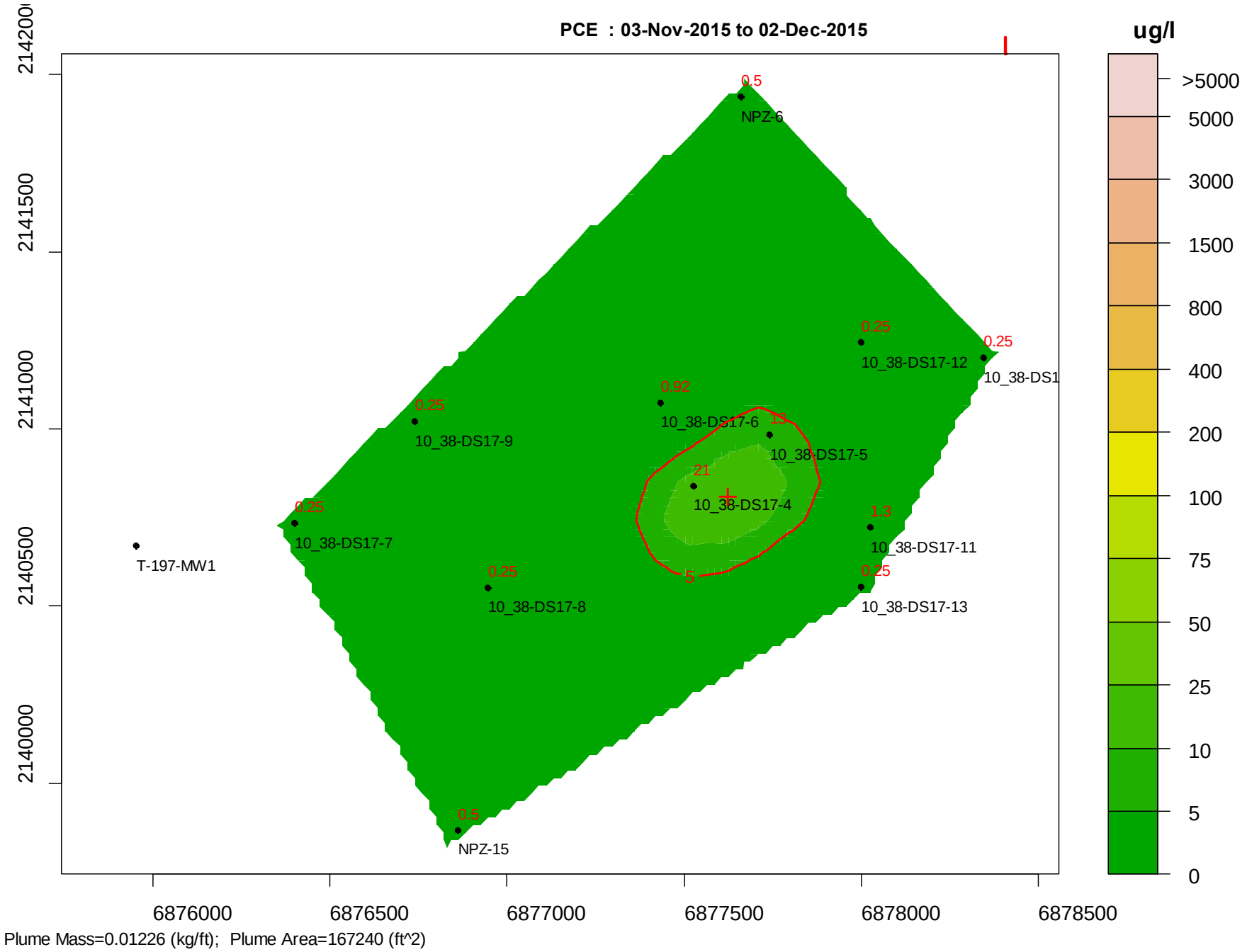


Plume Mass=0.0097782 (kg/ft); Plume Area=147280 (ft^2)

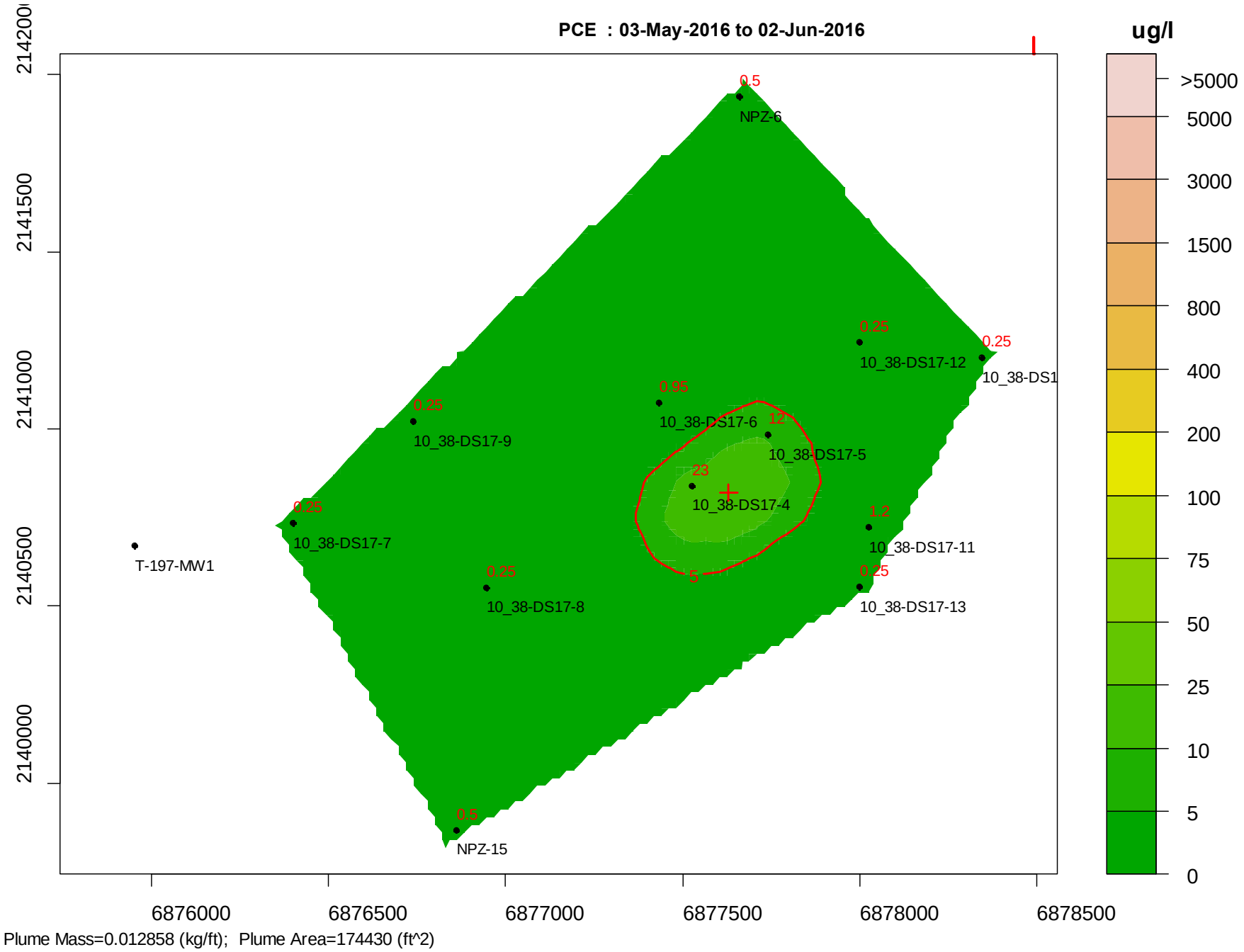


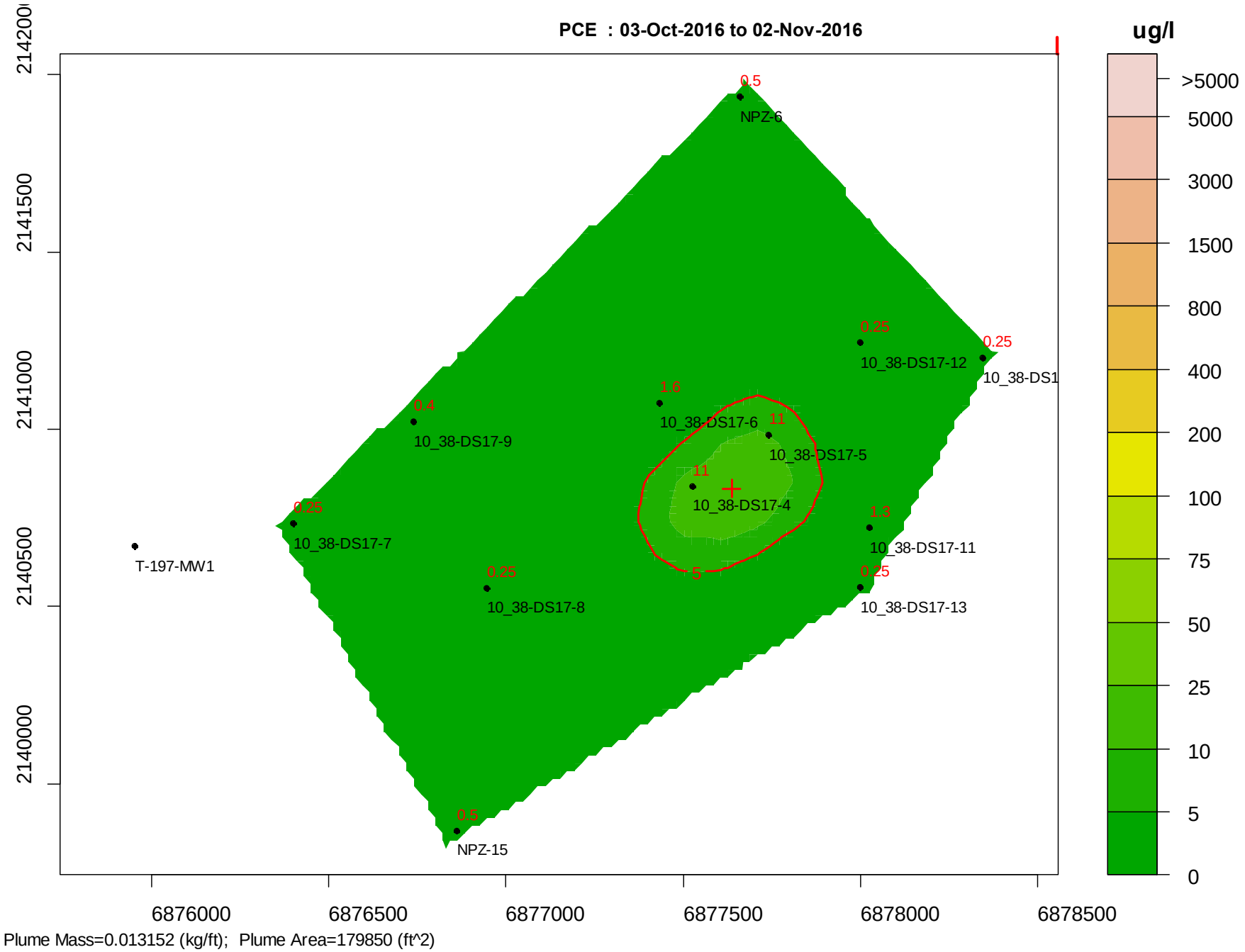
Plume Mass=0.010021 (kg/ft); Plume Area=149130 (ft^2)


PCE : 03-May-2015 to 02-Jun-2015
ug/l
>5000
5000
3000
1500
800
400
200
100
75
50
25
10
5
0
0.5
NPZ-6
0.25
10_38-DS17-12
0.25
10_38-DS1
1.2
10_38-DS17-6
0.25
10_38-DS17-9
1.5
10_38-DS17-5
14
10_38-DS17-4
0.25
10_38-DS17-7
1.1
10_38-DS17-11
T-197-MW1
0.25
10_38-DS17-8
5
0.25
10_38-DS17-13
0.5
NPZ-15
2142000
2141500
2141000
2140500
2140000
6876000
6876500
6877000
6877500
6878000
6878500
Plume Mass=0.01131 (kg/ft); Plume Area=159010 (ft^2)

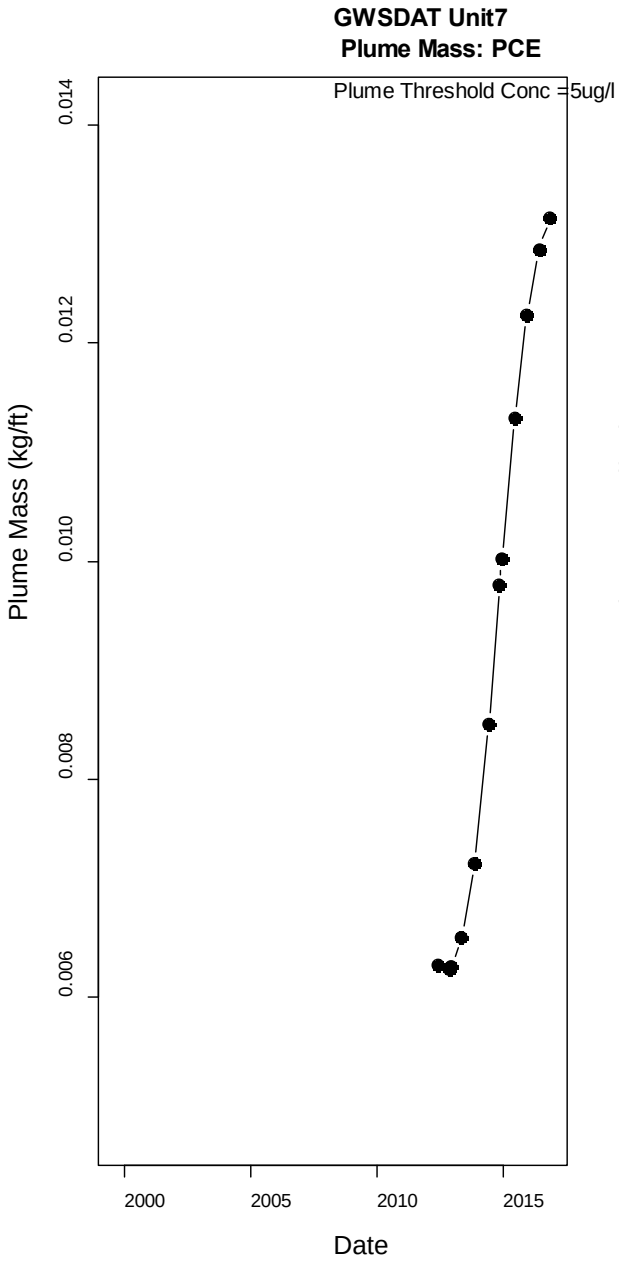


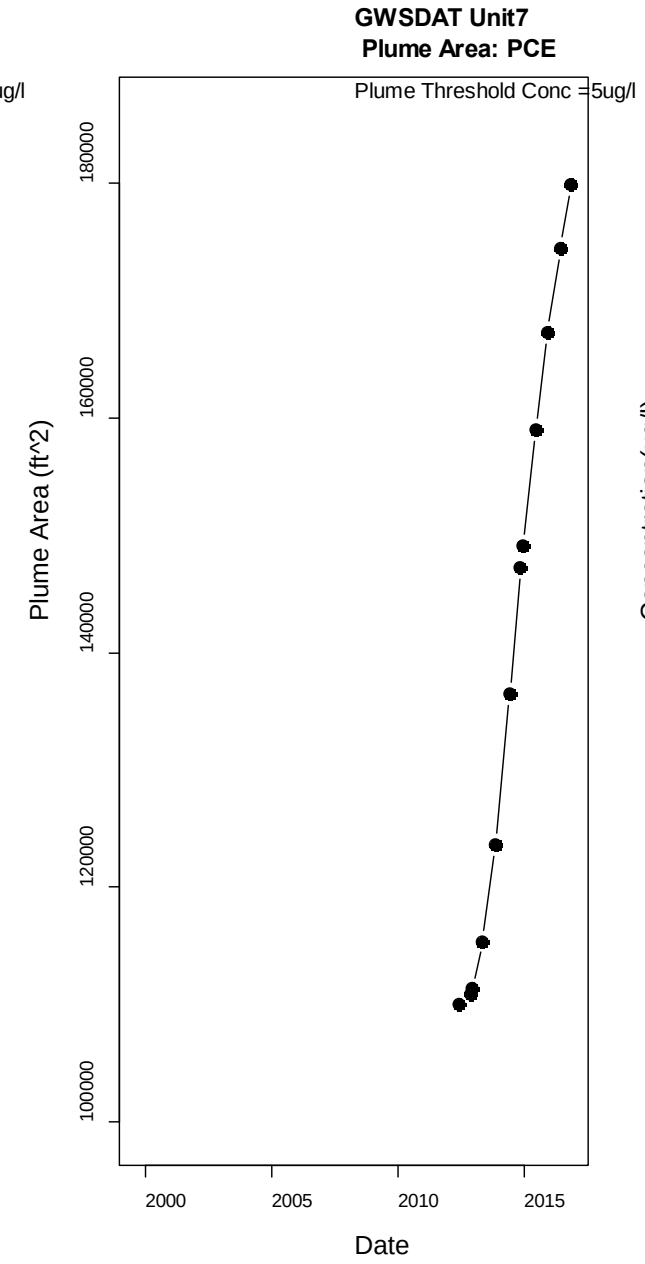
Plume Mass=0.01226 (kg/ft); Plume Area=167240 (ft^2)

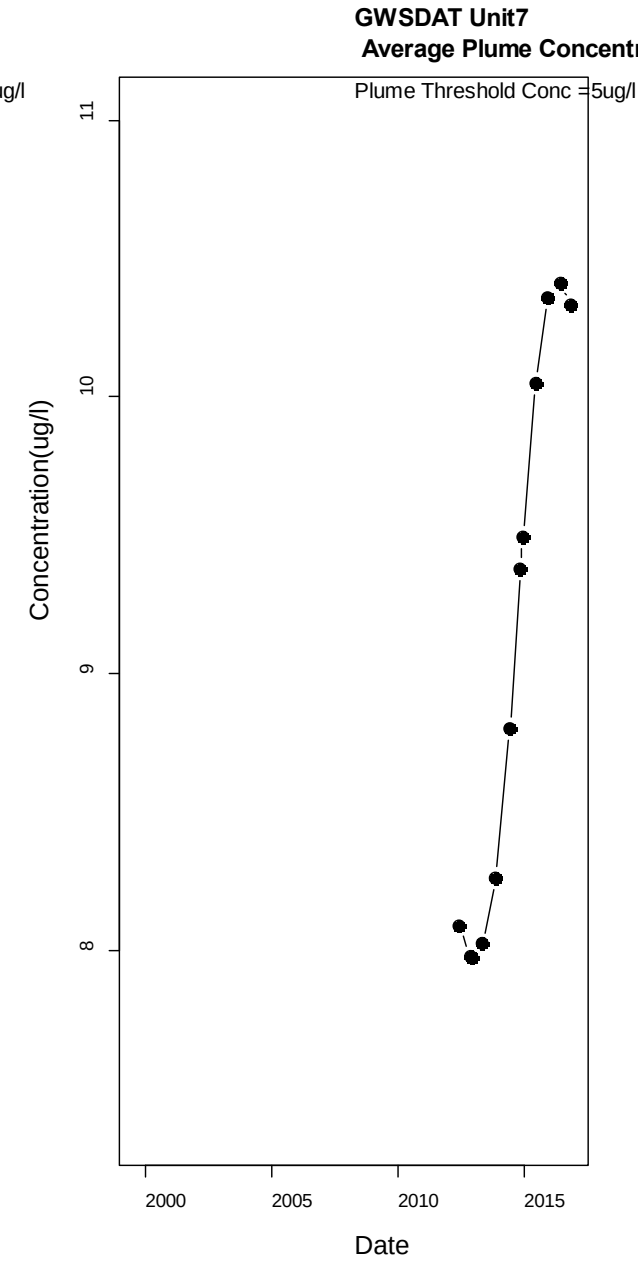

PCE : 03-May-2016 to 02-Jun-2016
ug/l
>5000
5000
3000
1500
800
400
200
100
75
50
25
10
5
0
0.5
NPZ-6
0.25
10_38-DS17-12
0.25
10_38-DS1
0.95
10_38-DS17-6
12
10_38-DS17-5
0.25
10_38-DS17-9
23
10_38-DS17-4
0.25
10_38-DS17-7
1.2
10_38-DS17-11
T-197-MW1
0.25
10_38-DS17-8
5
0.25
10_38-DS17-13
0.5
NPZ-15
2142000
2141500
2141000
2140500
2140000
6876000
6876500
6877000
6877500
6878000
6878500
Plume Mass=0.012858 (kg/ft); Plume Area=174430 (ft^2)



Plume Mass=0.013152 (kg/ft); Plume Area=179850 (ft^2)


GWSDAT Unit7
Plume Mass: PCE
Plume Threshold Conc =5ug/l
Plume Mass (kg/ft)
0.006
0.008
0.010
0.012
0.014
2000
2005
2010
2015
Date


GWSDAT Unit7
Plume Area: PCE
Plume Threshold Conc =5ug/l
Plume Area (ft^2)
100000
120000
140000
160000
180000
2000
2005
2010
2015
Date

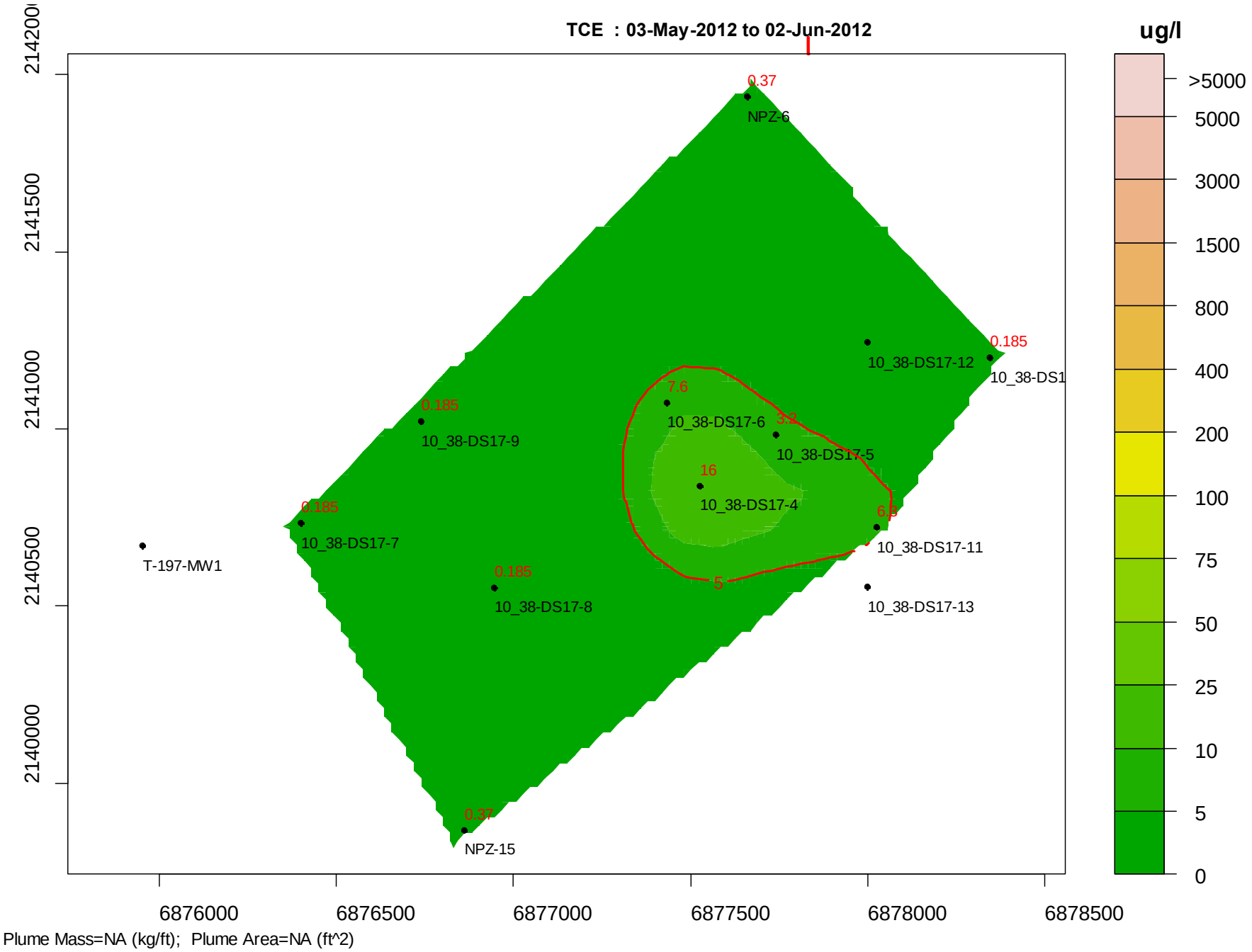

GWSDAT Unit7
Average Plume Concentr
Plume Threshold Conc =5ug/l
Concentration(ug/l)
8
9
10
11
2000
2005
2010
2015
Date

This page intentionally left blank.

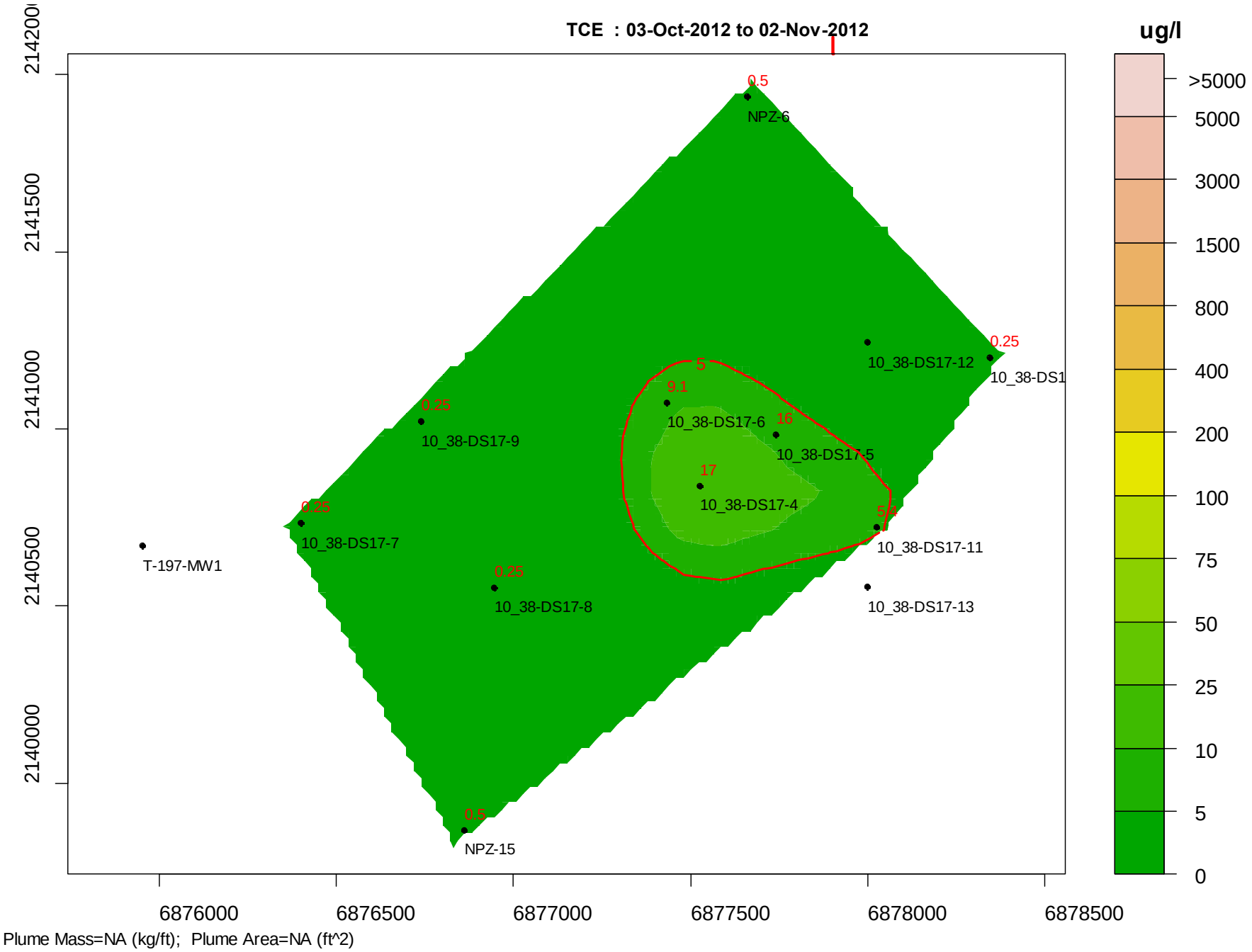
MNA SITE 10.38/10.39 UNIT 7

TCE

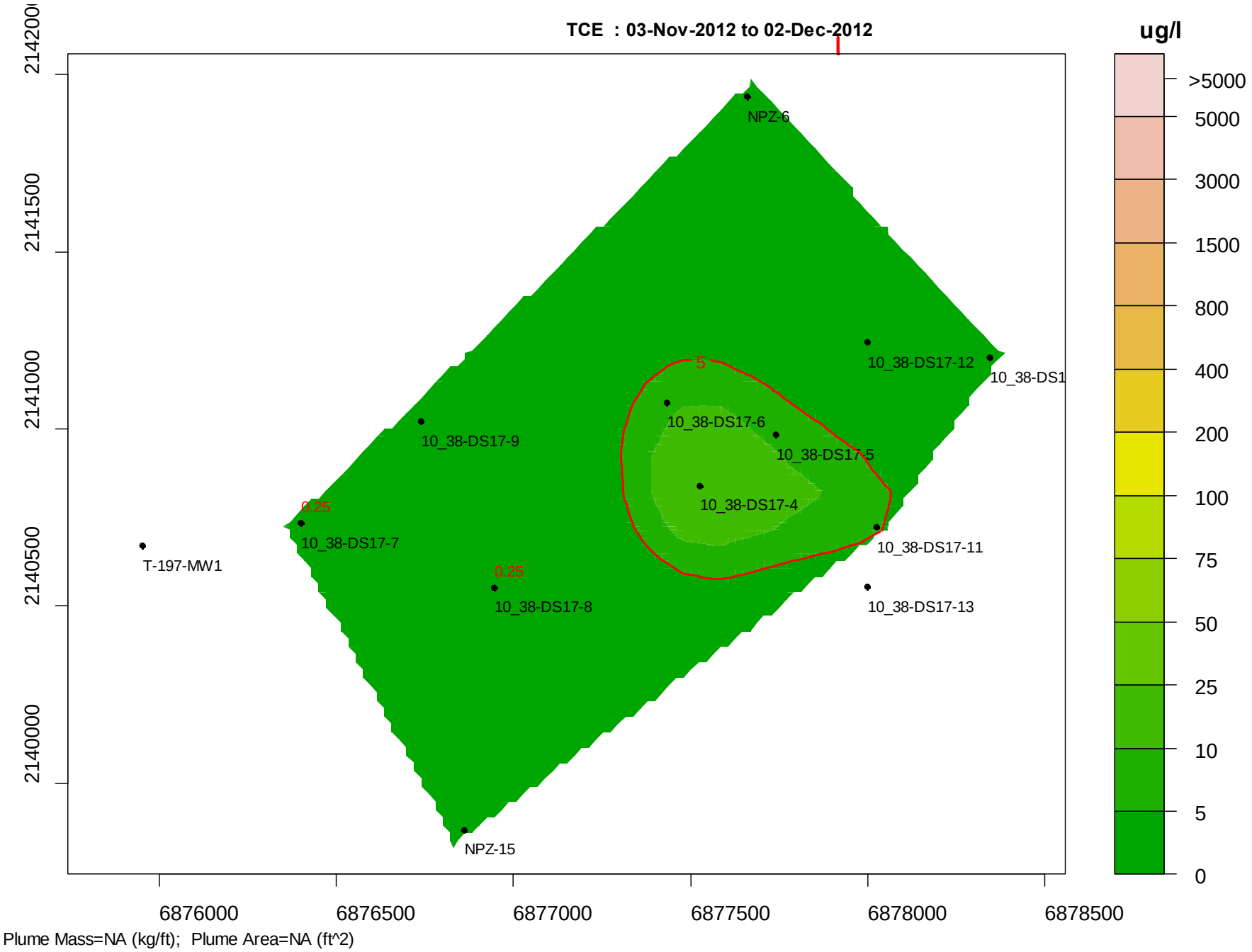
This page intentionally left blank



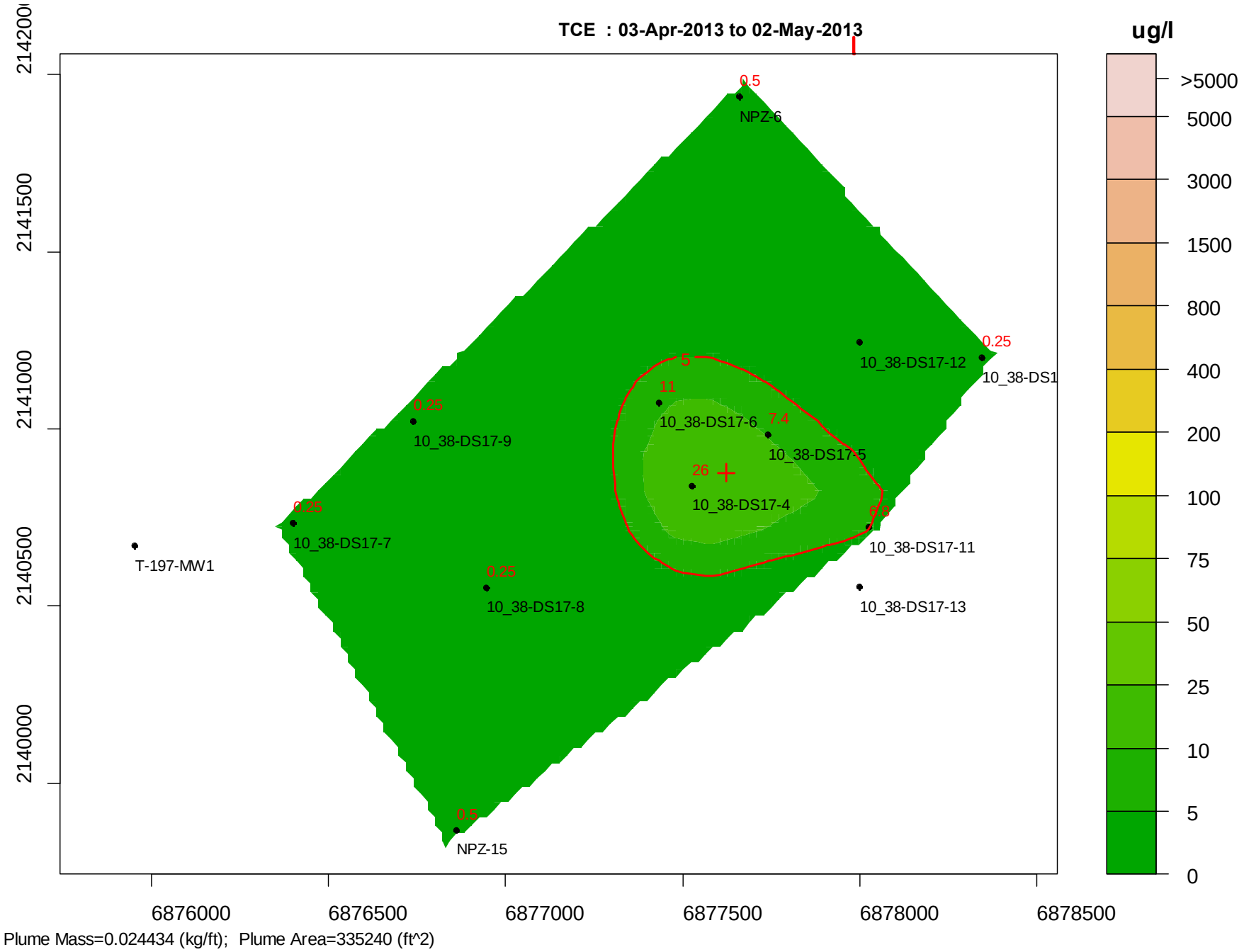
Plume Mass=NA (kg/ft); Plume Area=NA (ft^2)



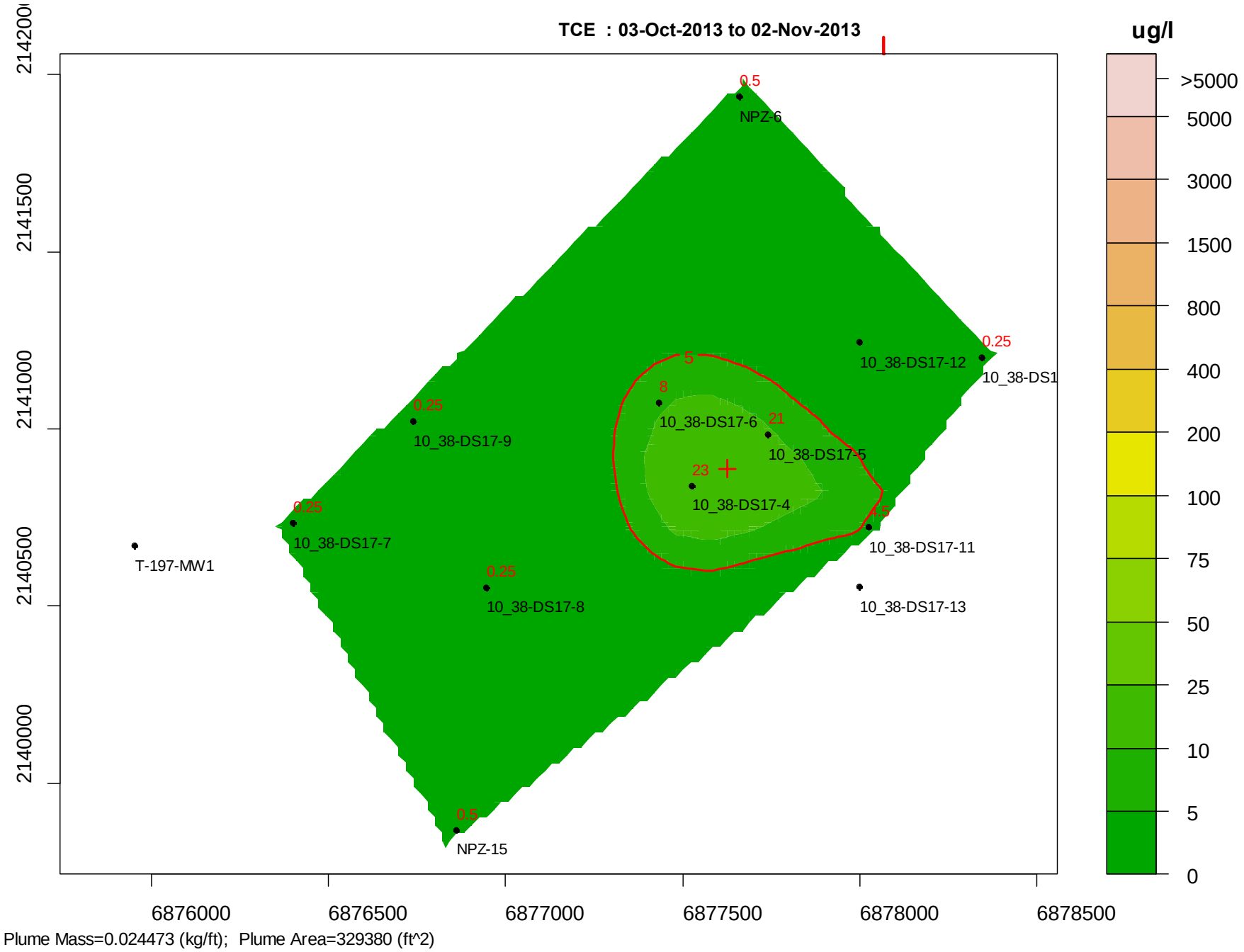
Plume Mass=NA (kg/ft); Plume Area=NA (ft^2)



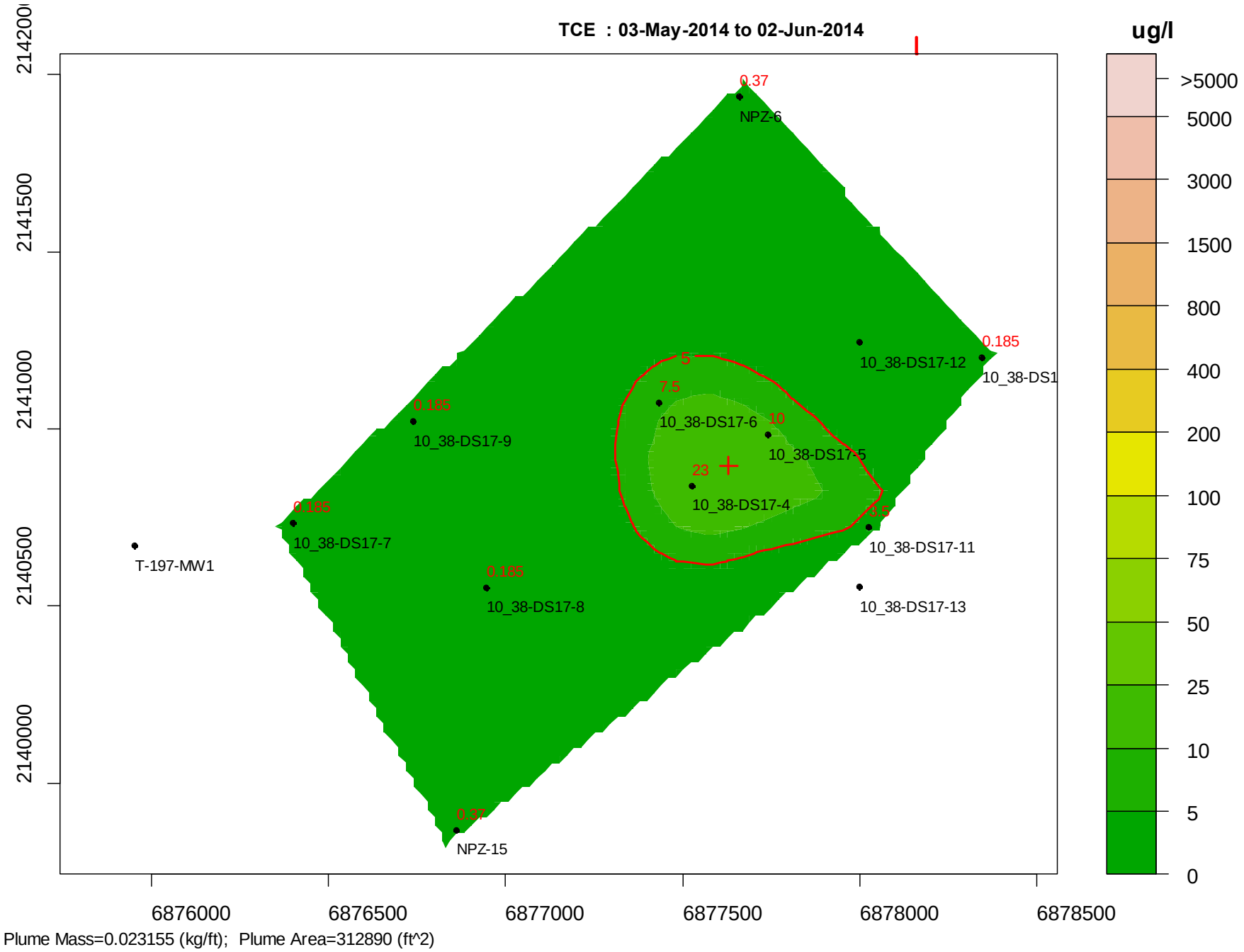
Plume Mass=NA (kg/ft); Plume Area=NA (ft^2)

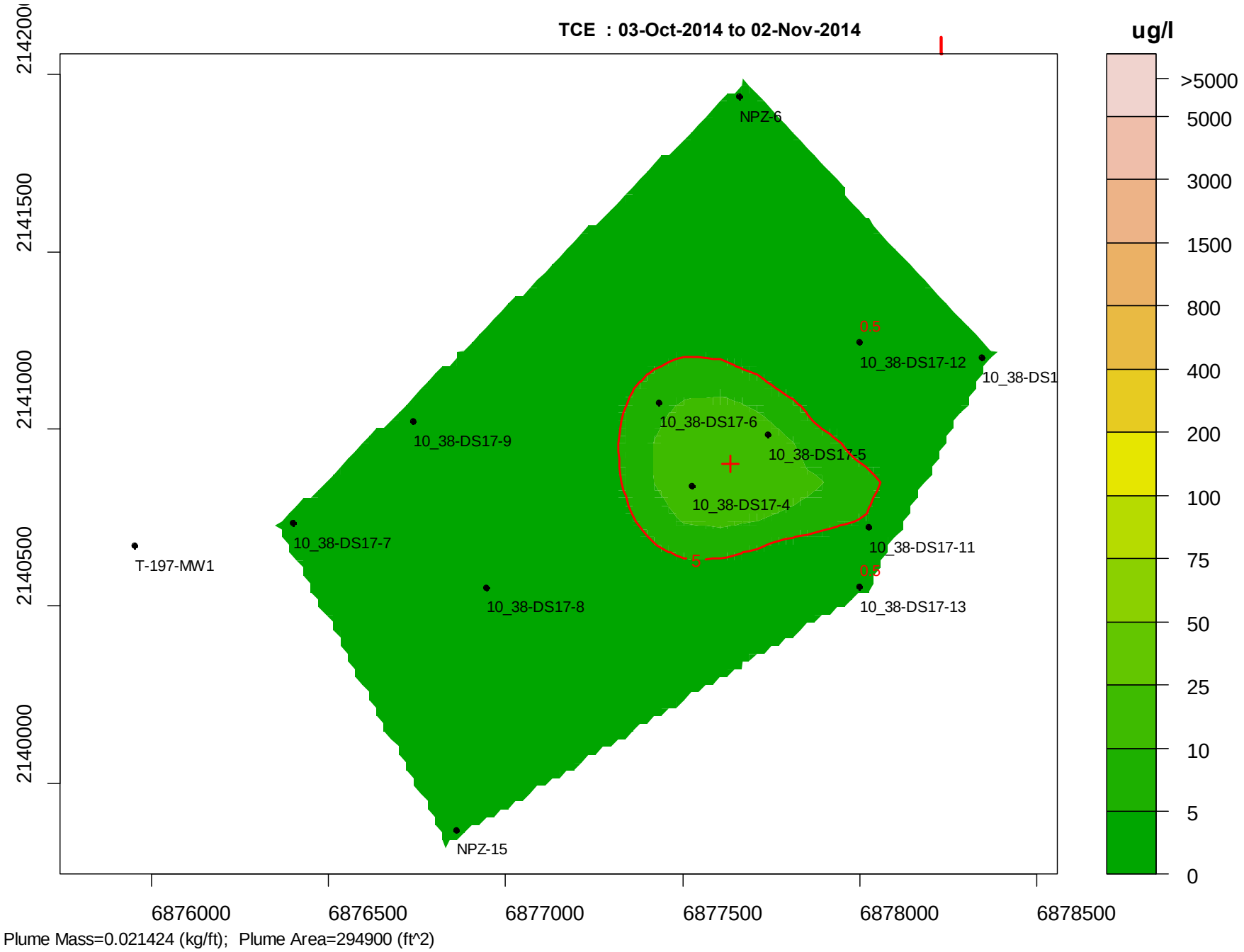


Plume Mass=0.024434 (kg/ft); Plume Area=335240 (ft^2)

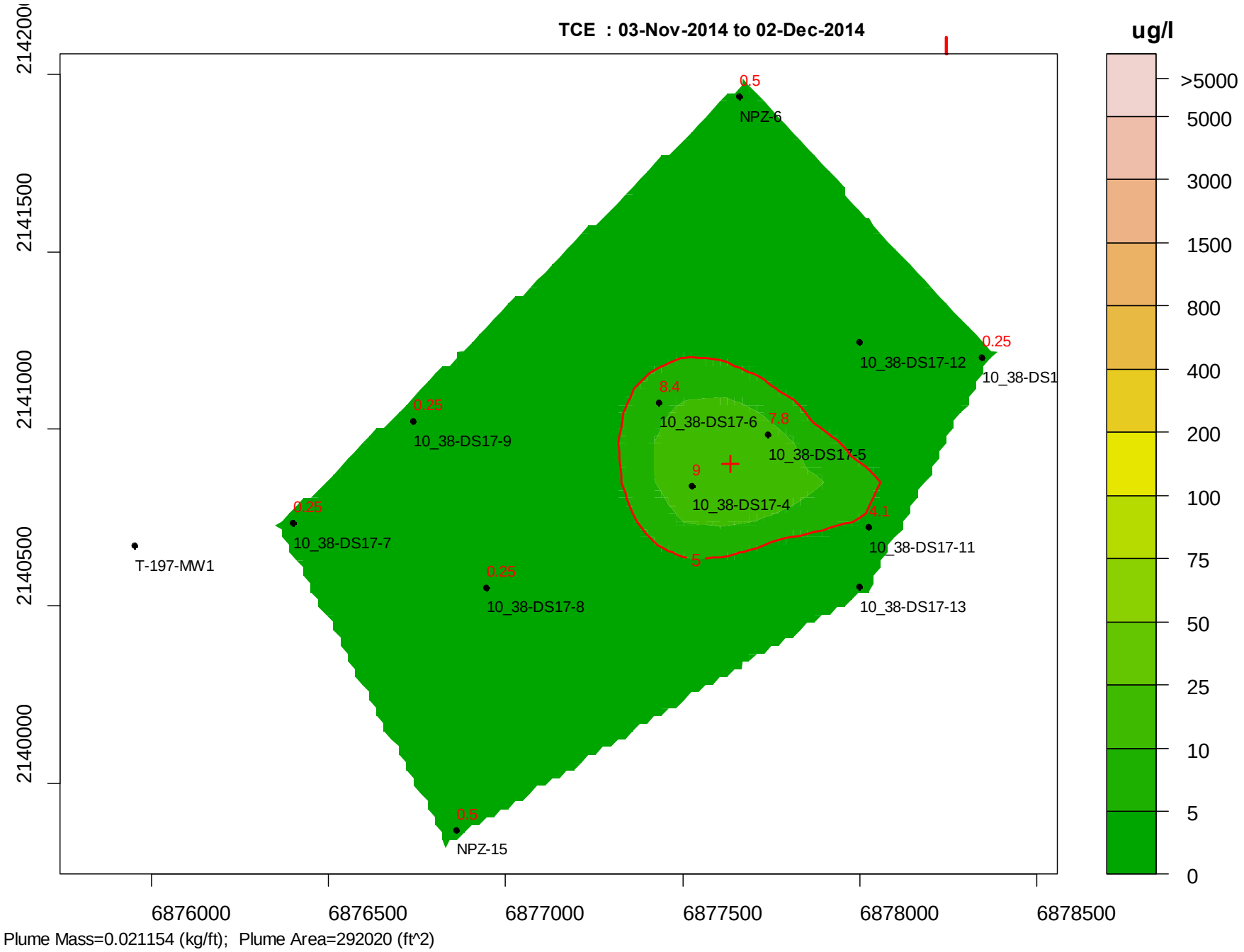


Plume Mass=0.024473 (kg/ft); Plume Area=329380 (ft^2)

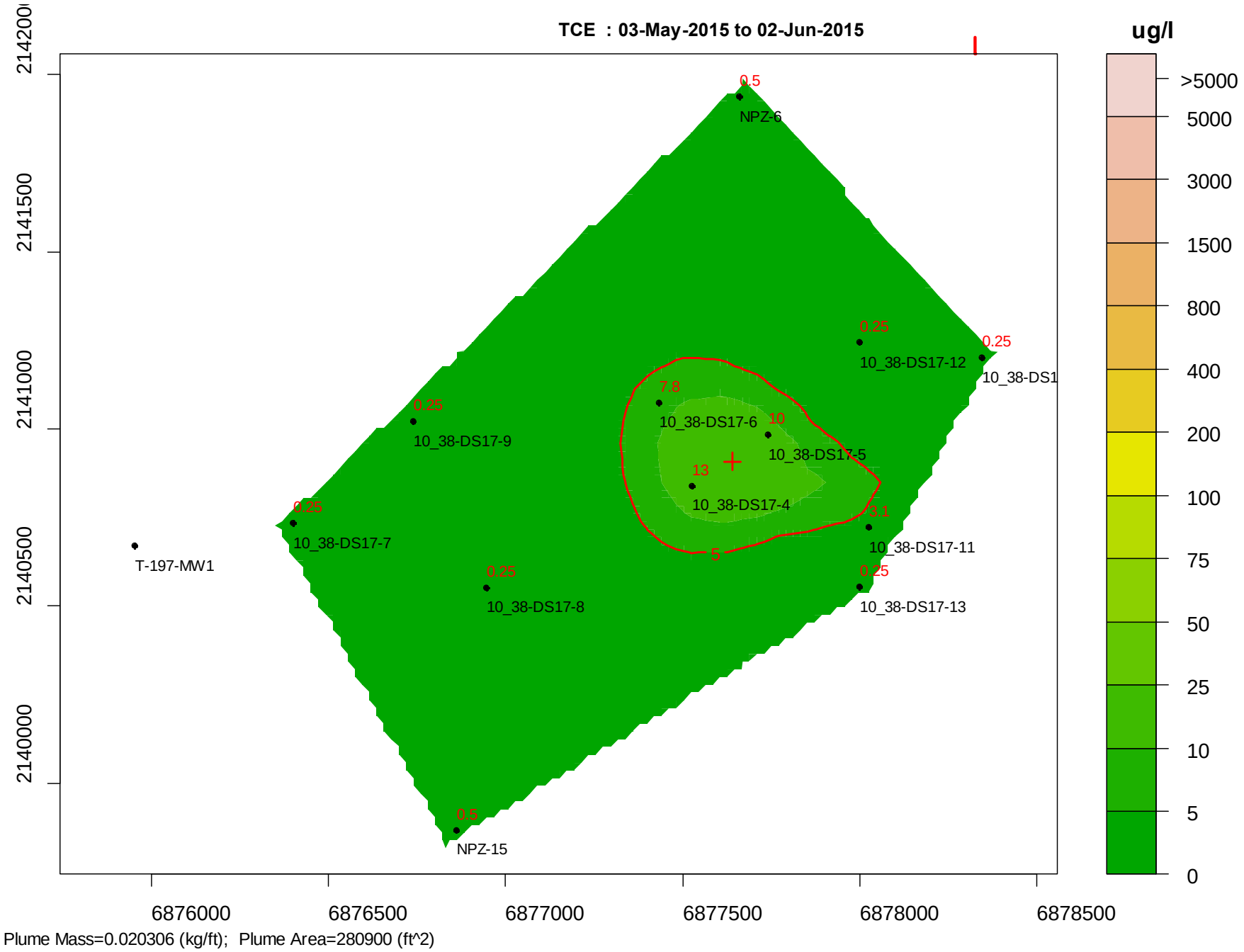

TCE : 03-May-2014 to 02-Jun-2014
ug/l
>5000
5000
3000
1500
800
400
200
100
75
50
25
10
5
0
0.37
NPZ-6
0.185
10_38-DS17-12
10_38-DS1
5
7.5
10_38-DS17-6
10
10_38-DS17-5
23
10_38-DS17-4
0.185
10_38-DS17-9
0.185
10_38-DS17-7
3.5
10_38-DS17-11
T-197-MW1
0.185
10_38-DS17-8
10_38-DS17-13
0.37
NPZ-15
2142000
2141500
2141000
2140500
2140000
6876000
6876500
6877000
6877500
6878000
6878500
Plume Mass=0.023155 (kg/ft); Plume Area=312890 (ft^2)



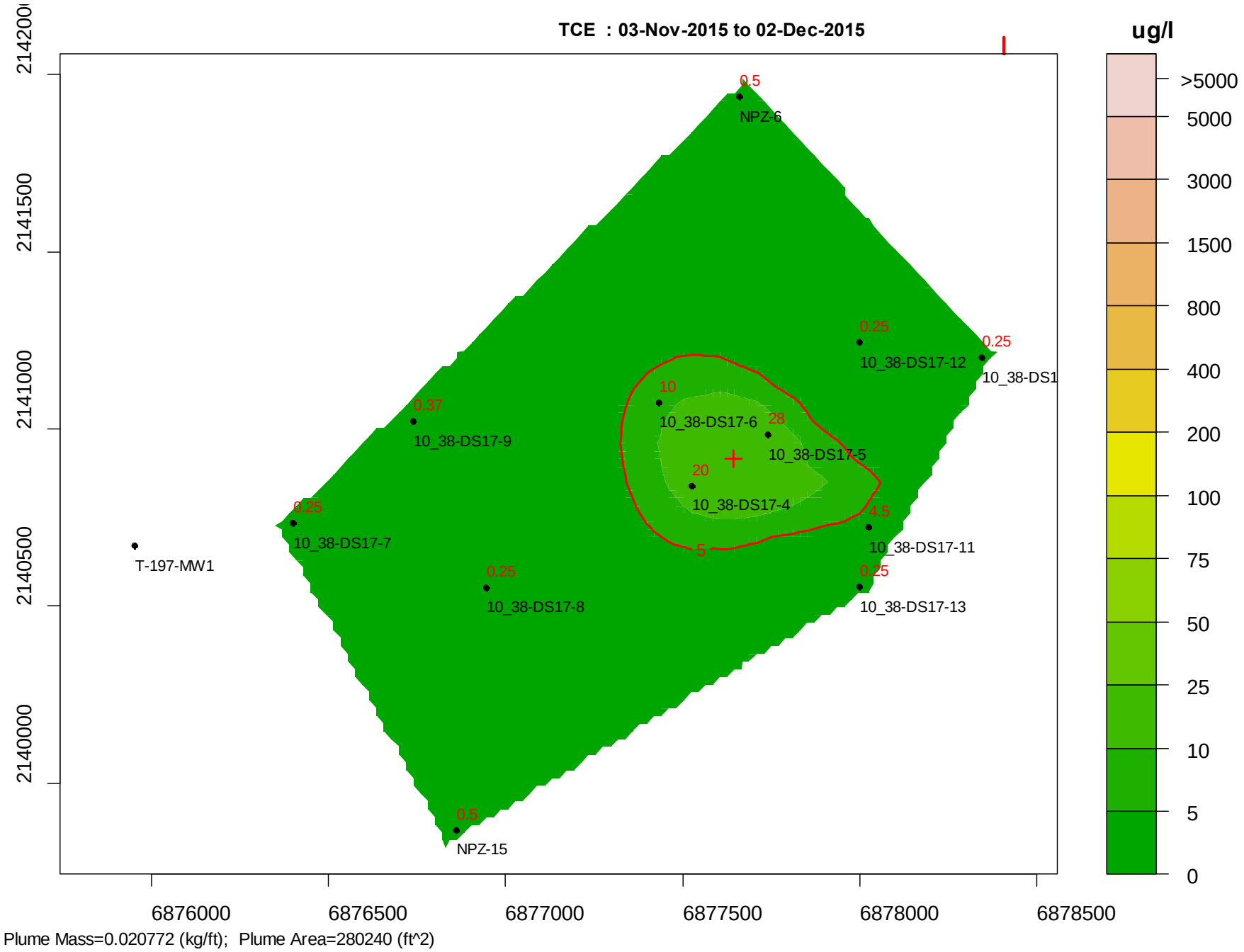
Plume Mass=0.021424 (kg/ft); Plume Area=294900 (ft^2)



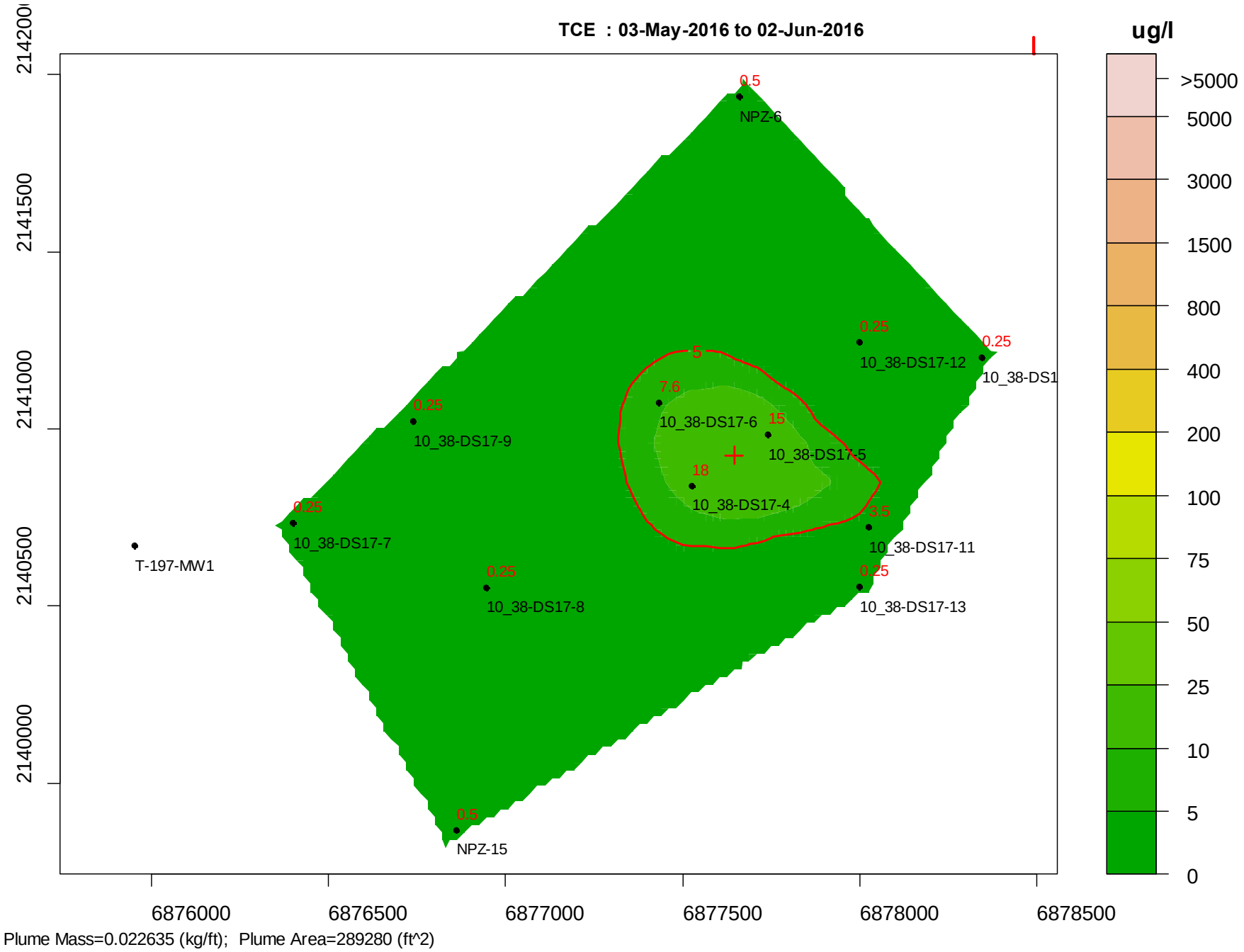
Plume Mass=0.021154 (kg/ft); Plume Area=292020 (ft^2)



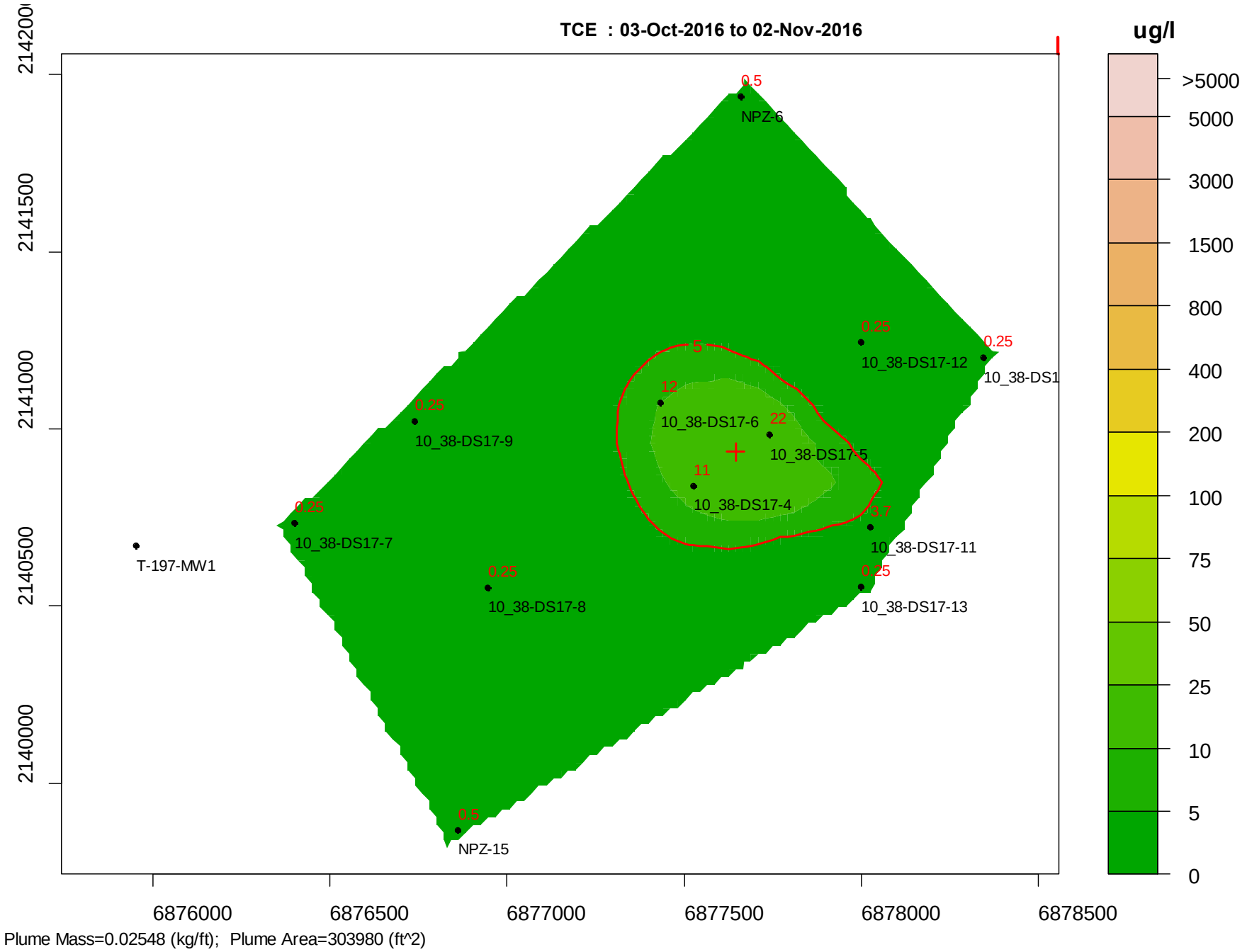
Plume Mass=0.020306 (kg/ft); Plume Area=280900 (ft^2)



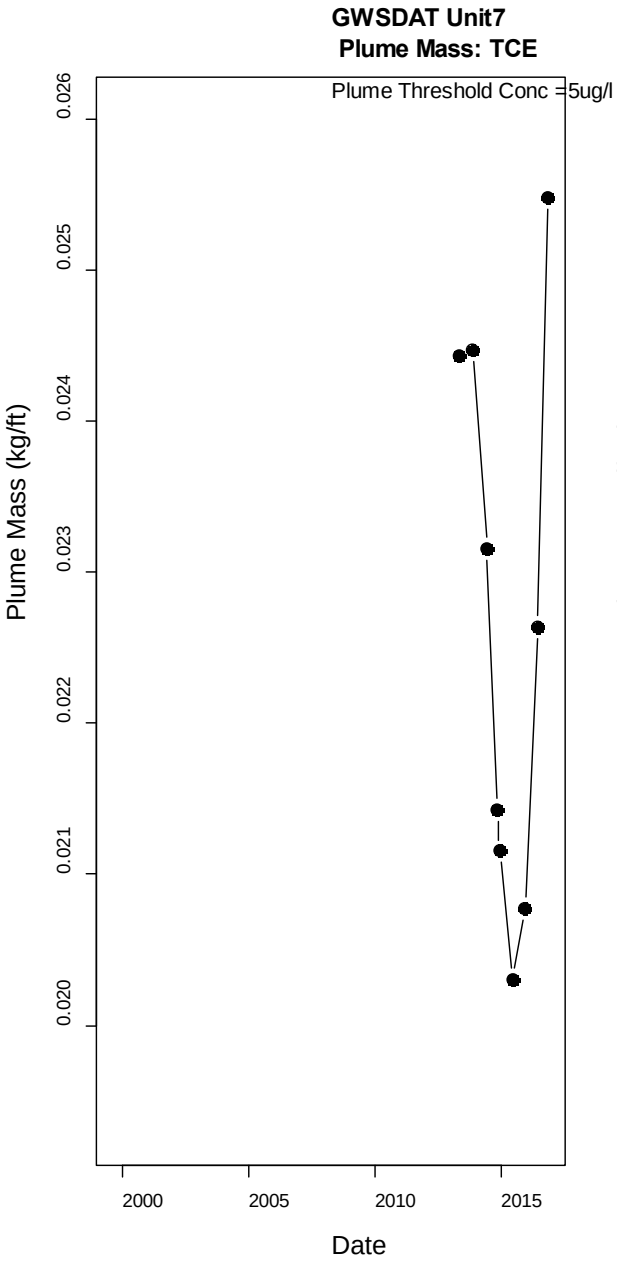
Plume Mass=0.020772 (kg/ft); Plume Area=280240 (ft^2)

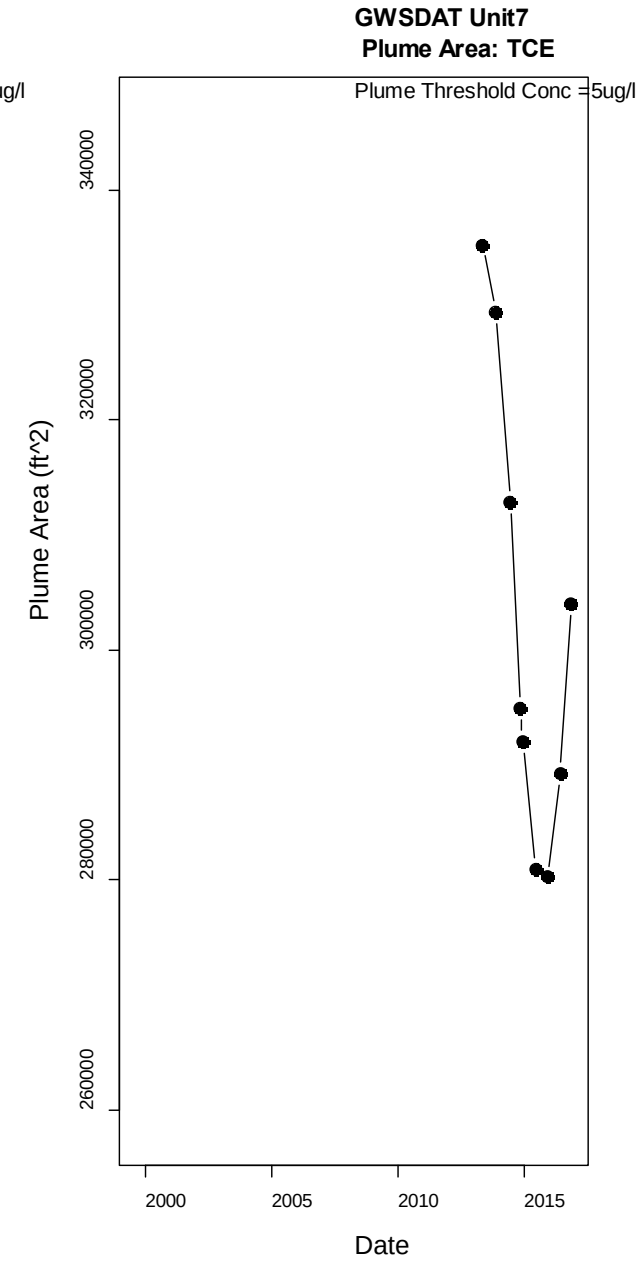


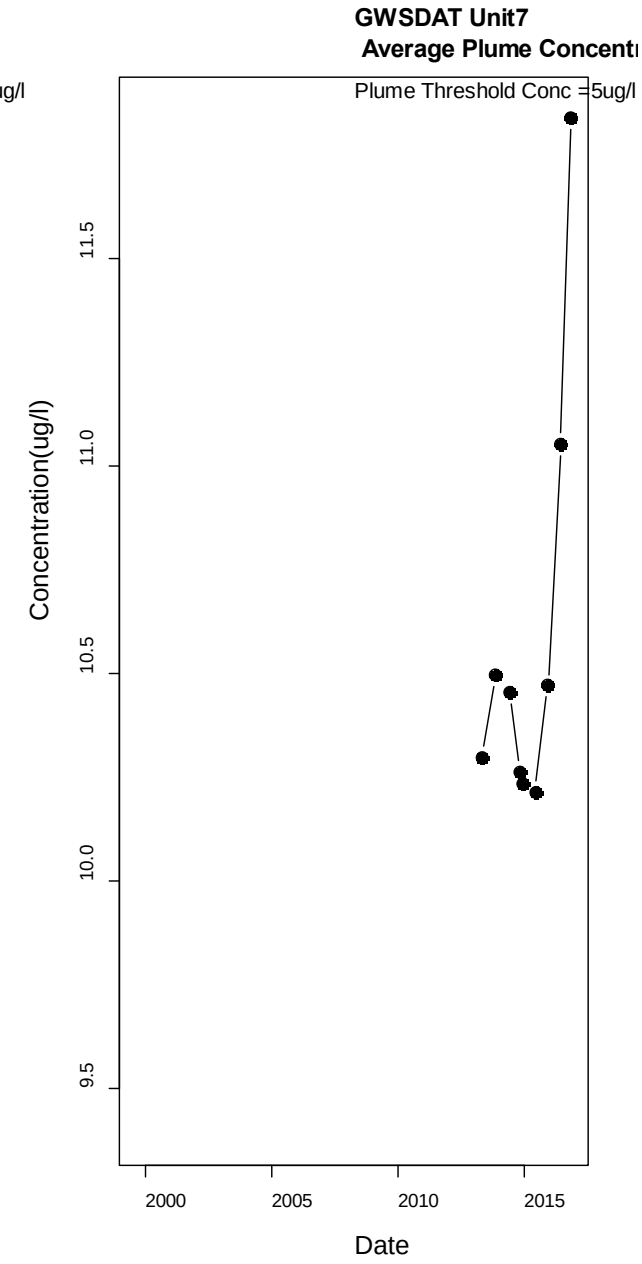
Plume Mass=0.022635 (kg/ft); Plume Area=289280 (ft^2)



Plume Mass=0.02548 (kg/ft); Plume Area=303980 (ft^2)


GWSDAT Unit7
Plume Mass: TCE
Plume Threshold Conc =5ug/l
Plume Mass (kg/ft)
0.020
0.021
0.022
0.023
0.024
0.025
0.026
2000
2005
2010
2015
Date


GWSDAT Unit7
Plume Area: TCE
Plume Threshold Conc =5ug/l
Plume Area (ft^2)
260000
280000
300000
320000
340000
2000
2005
2010
2015
Date

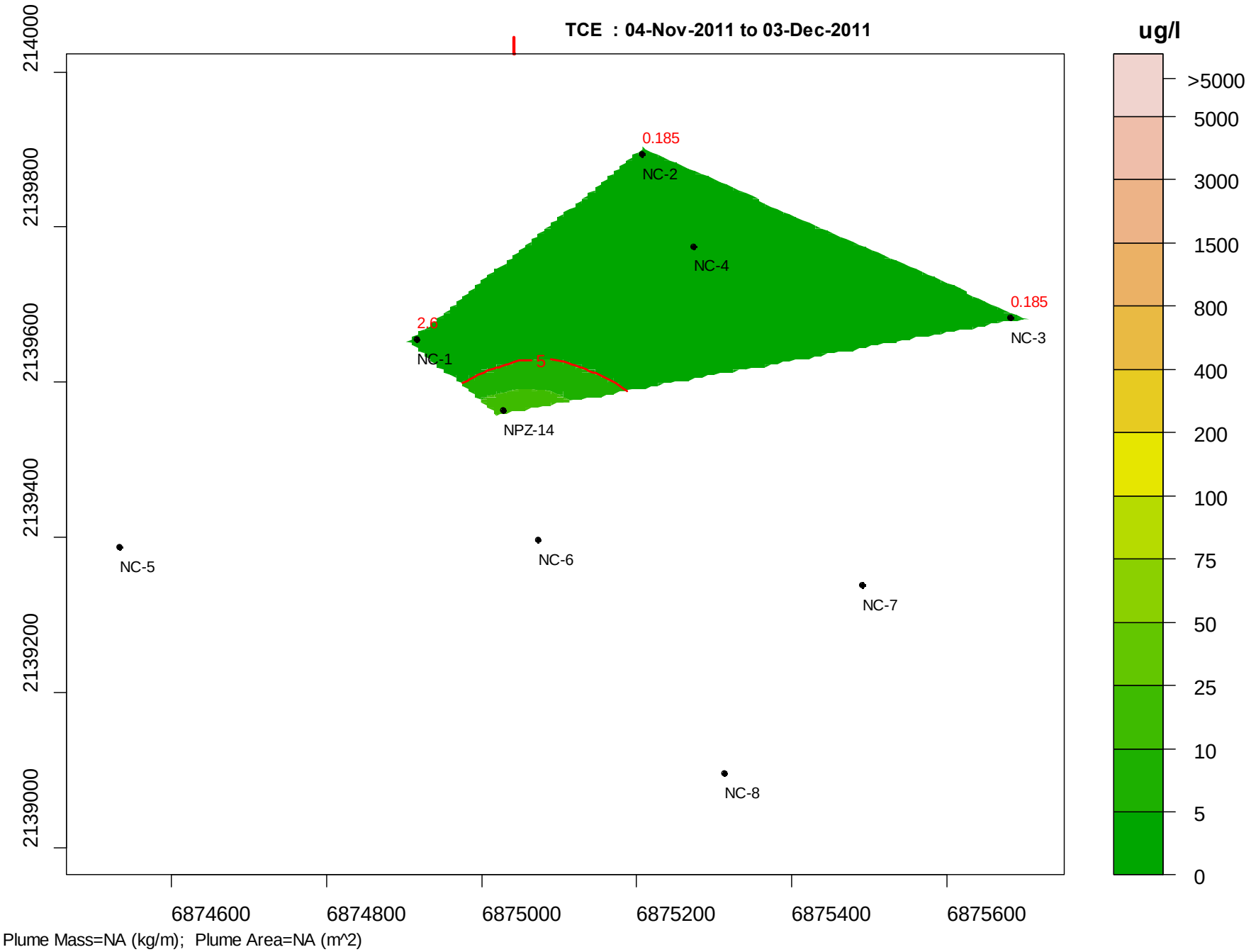

GWSDAT Unit7
Average Plume Concentr
Plume Threshold Conc =5ug/l
Concentration(ug/l)
9.5
10.0
10.5
11.0
11.5
2000
2005
2010
2015
Date

This page intentionally left blank.

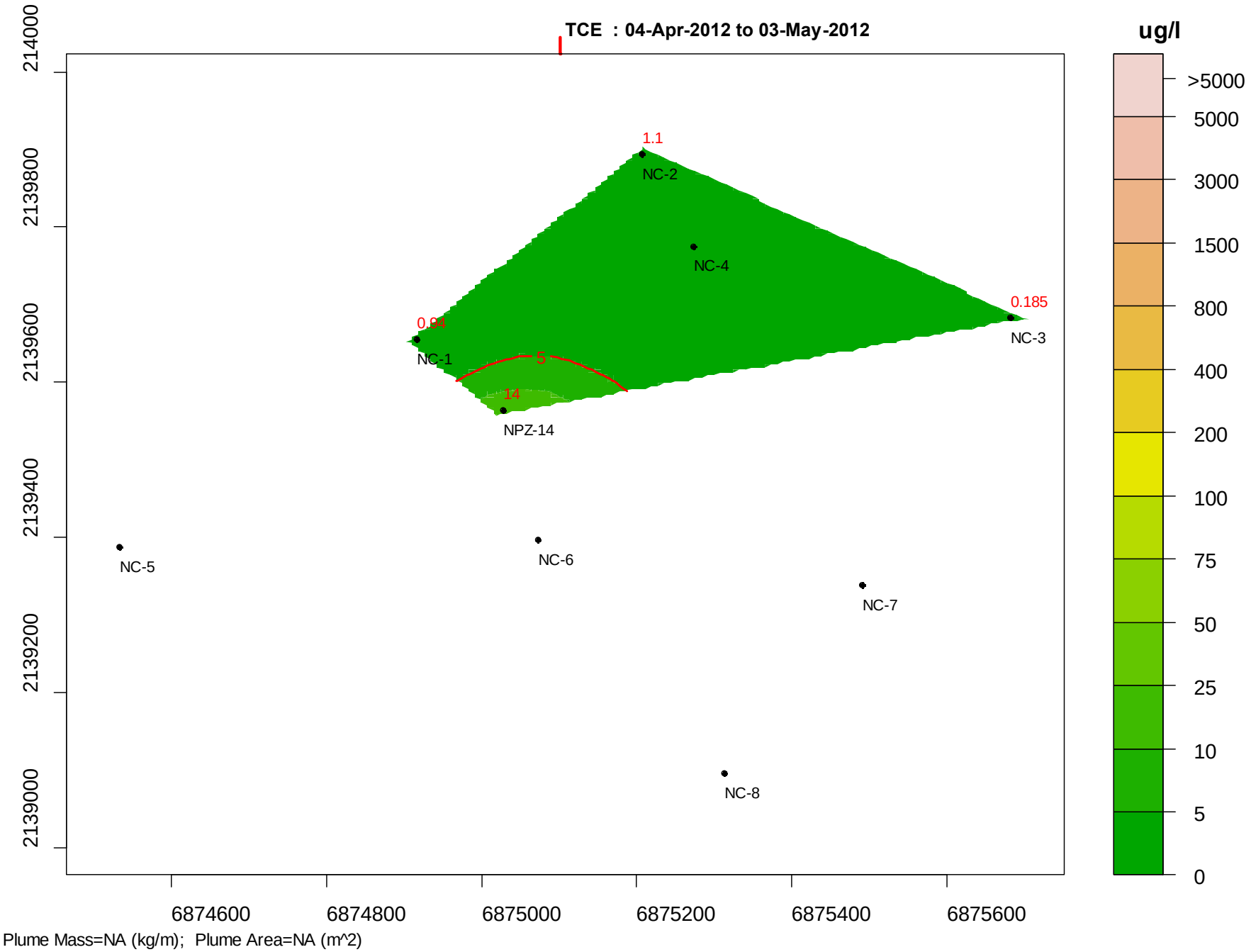
MNA SITE NPZ-14

TCE

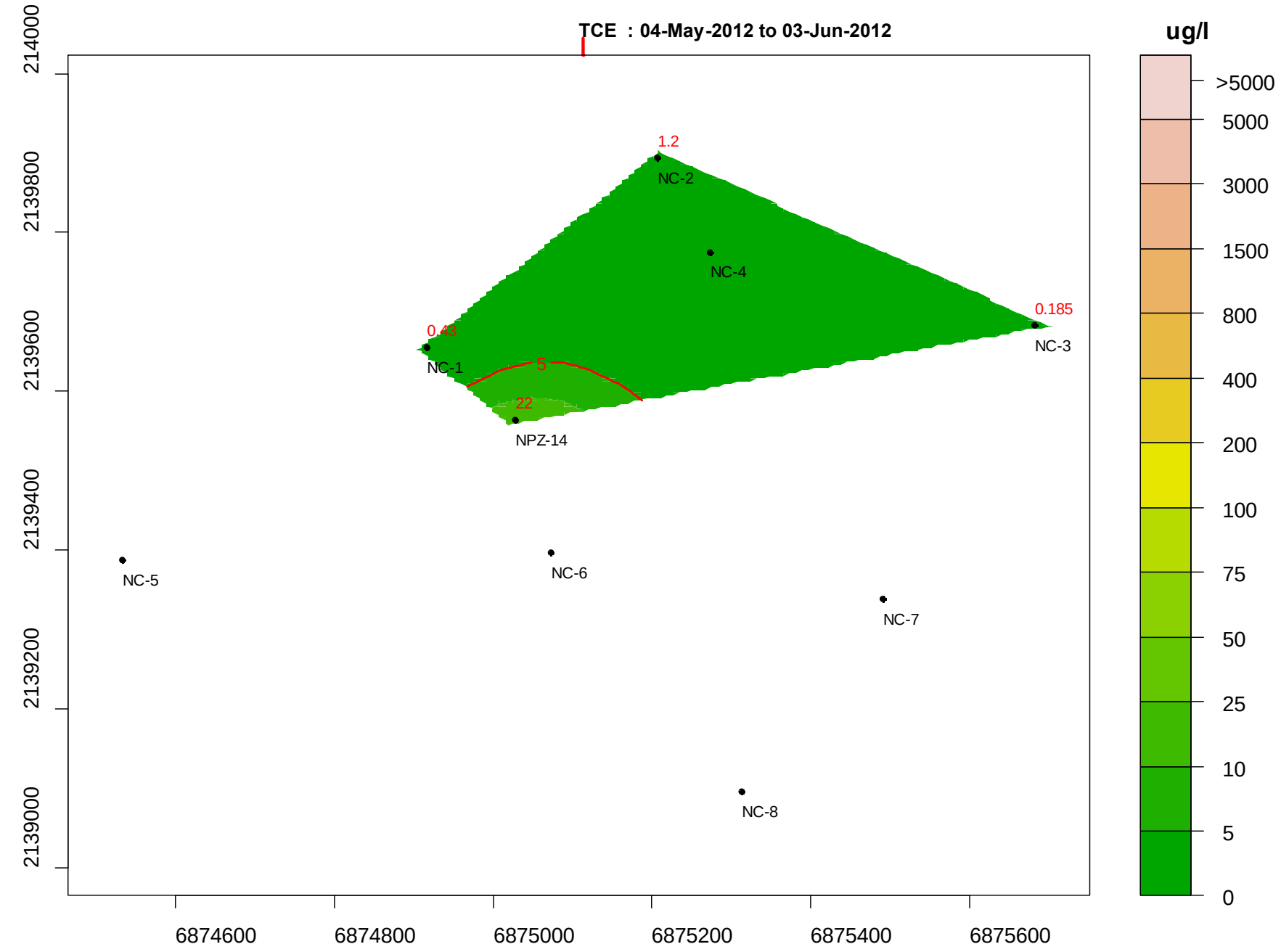
This page intentionally left blank



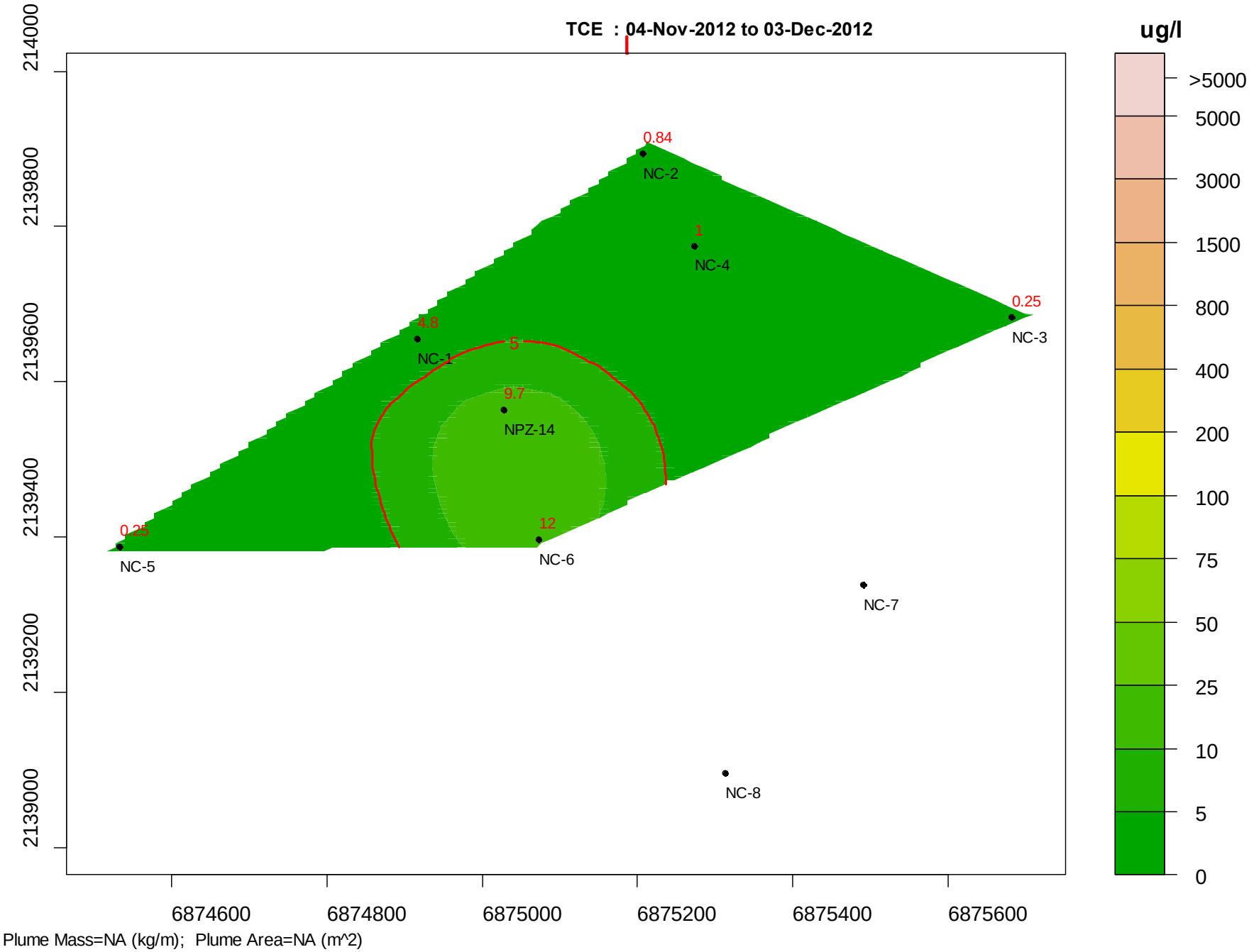
Plume Mass=NA (kg/m); Plume Area=NA (m^2)



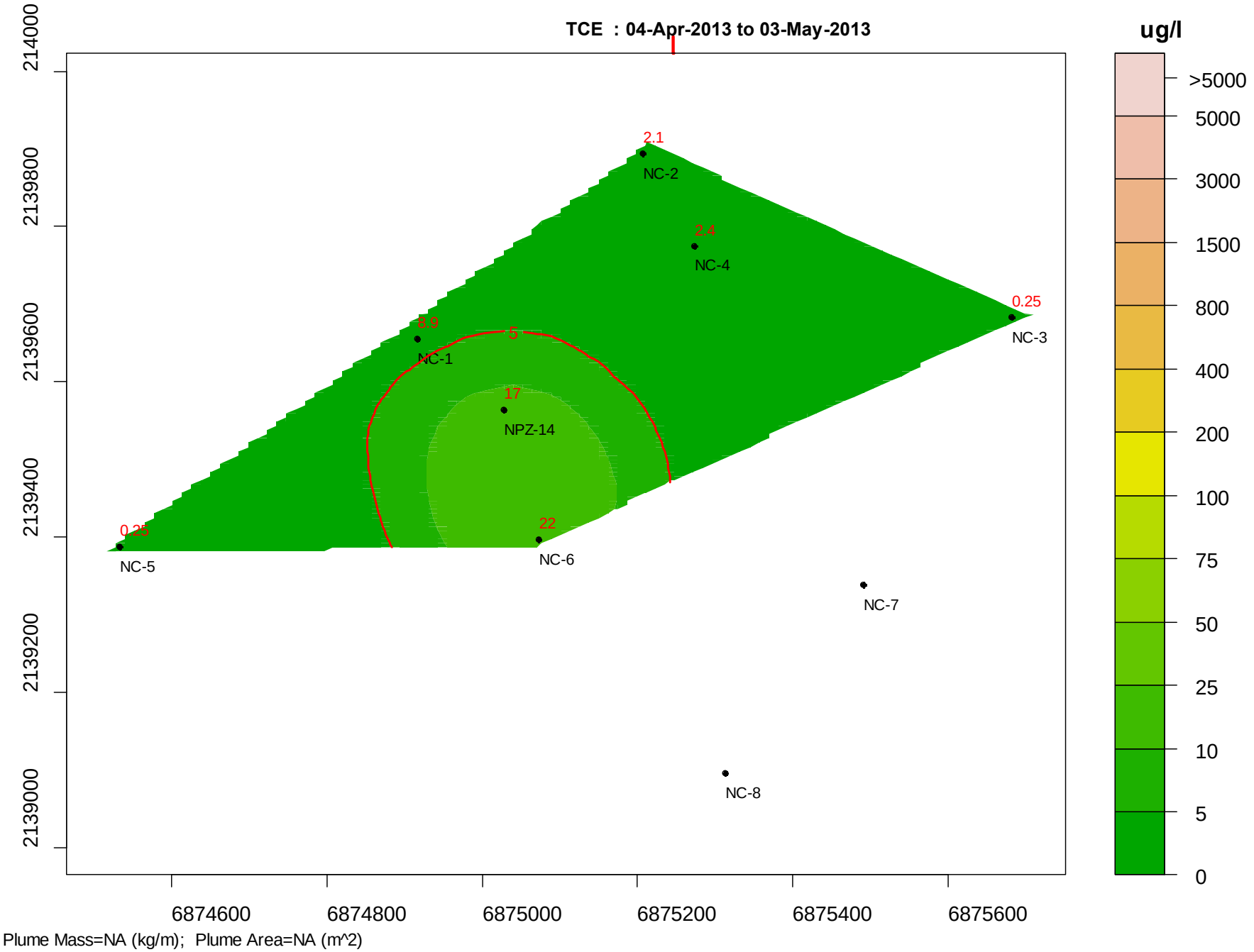
Plume Mass=NA (kg/m); Plume Area=NA (m^2)



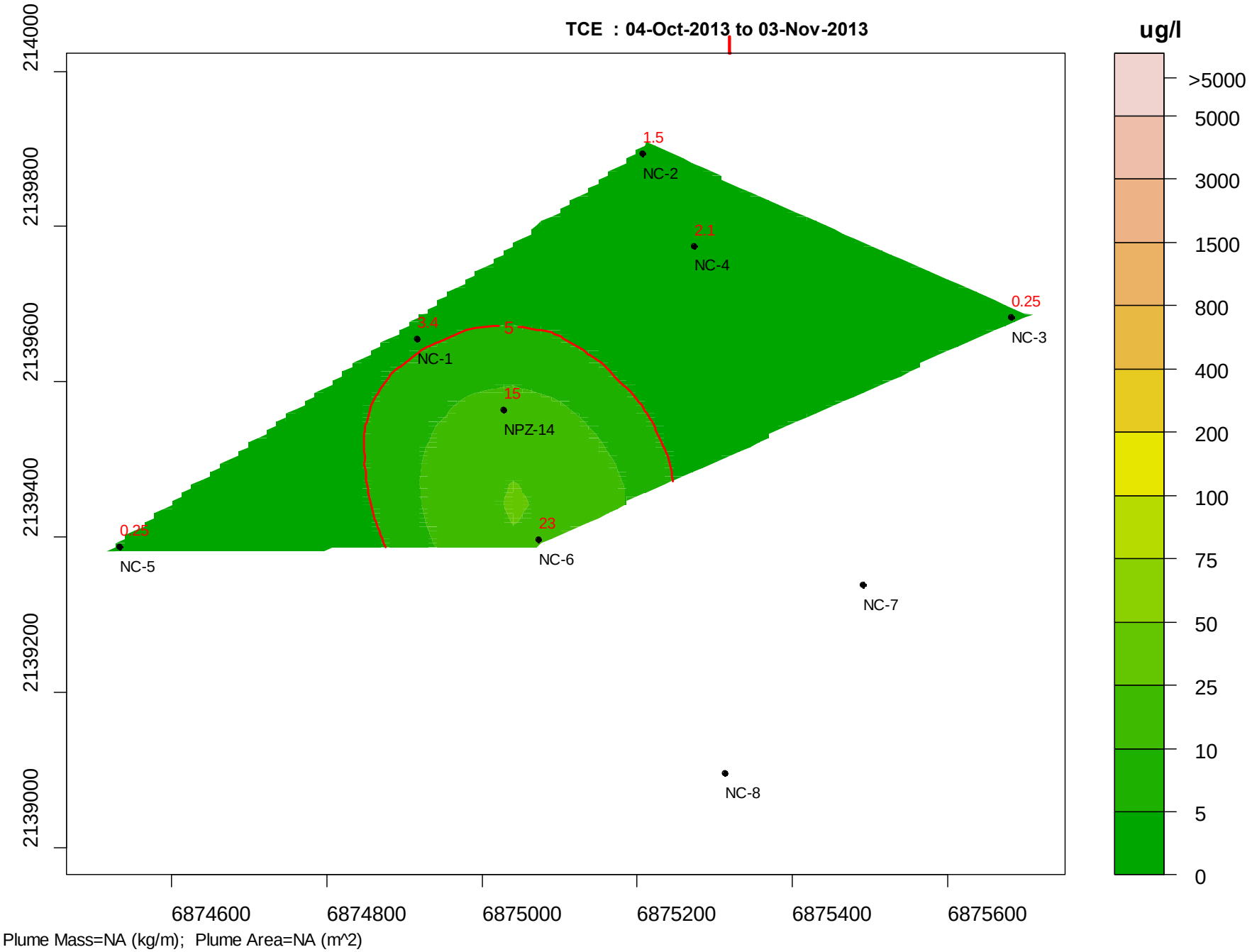
Plume Mass=NA (kg/m); Plume Area=NA (m^2)



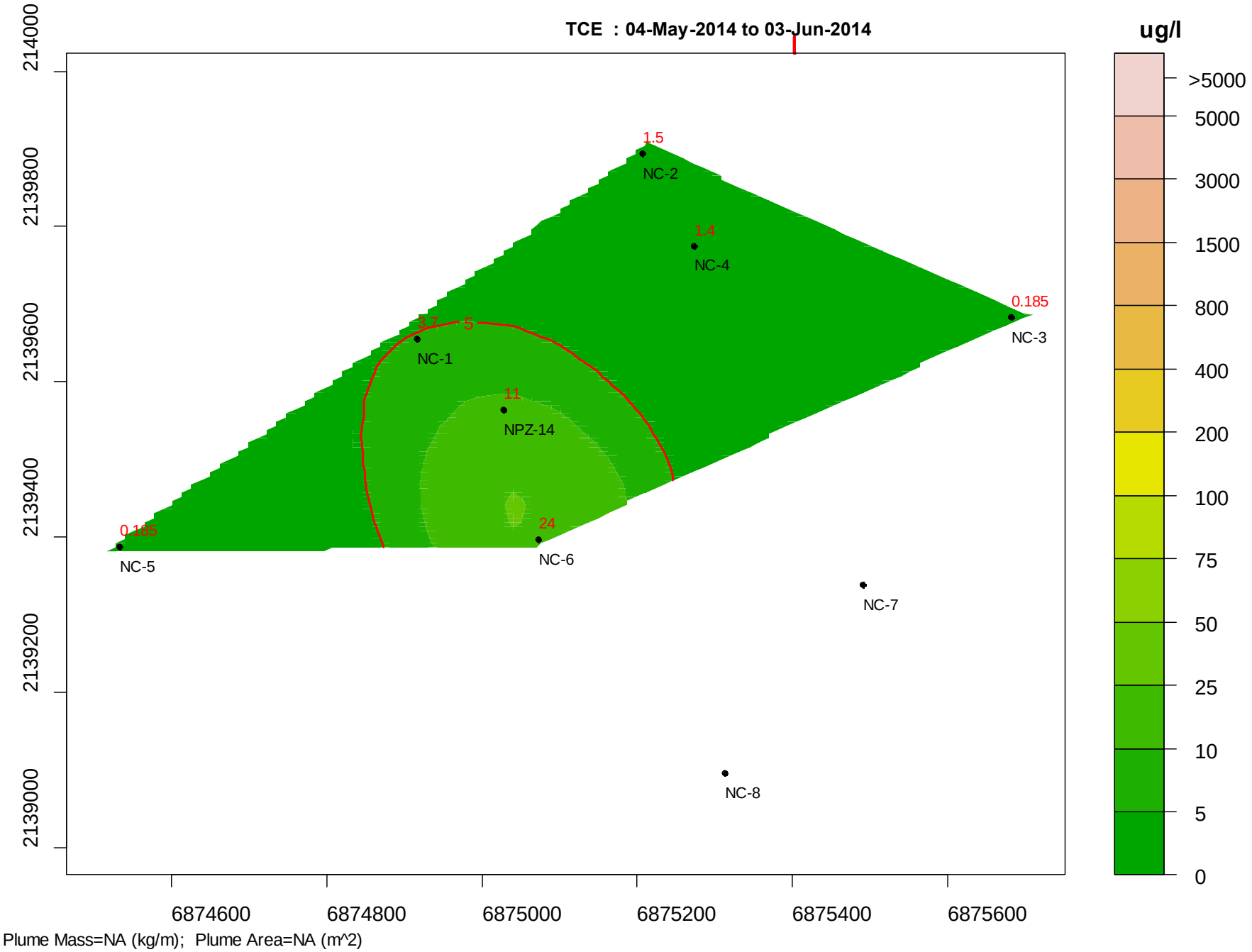
Plume Mass=NA (kg/m); Plume Area=NA (m^2)



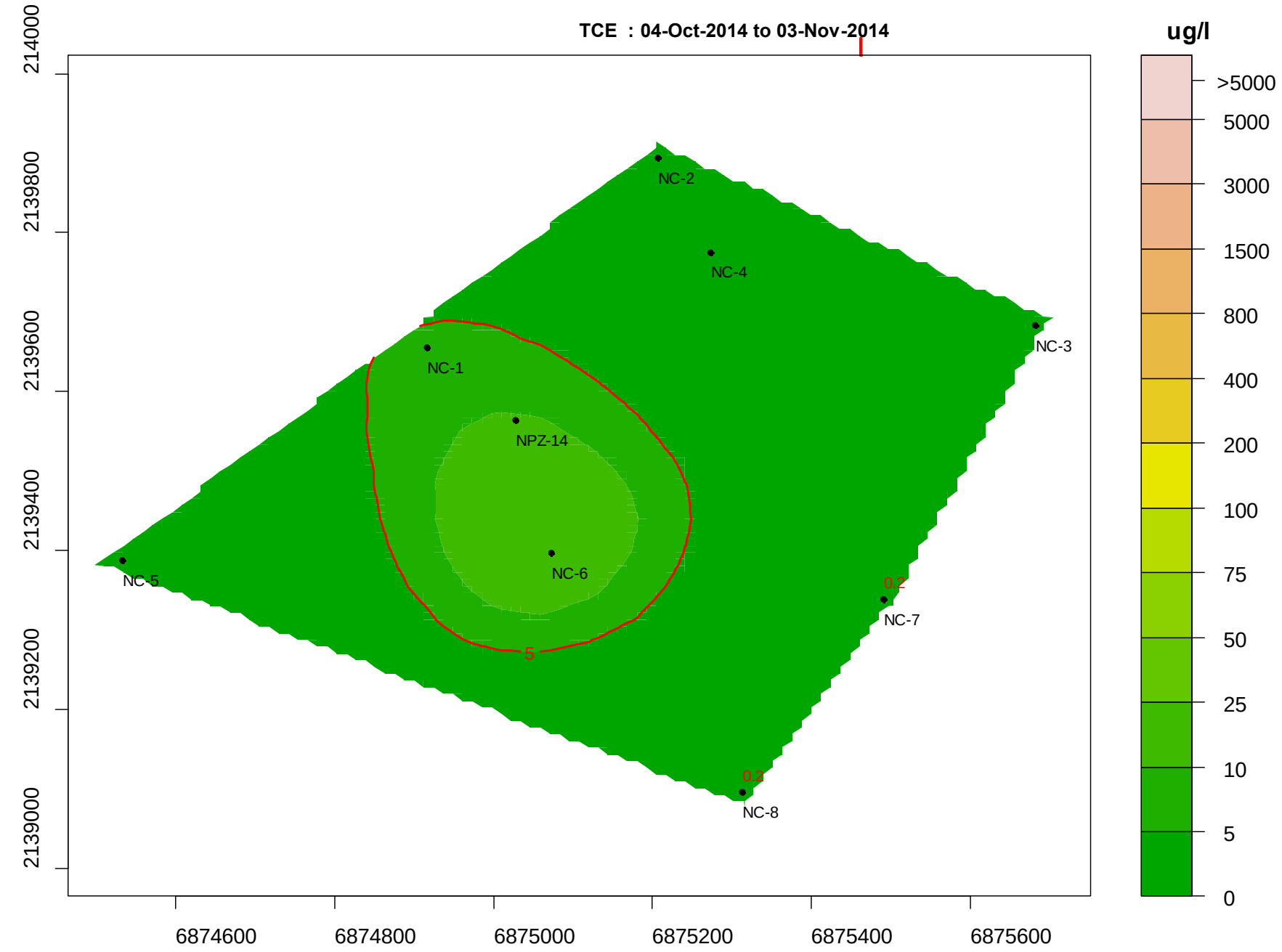
Plume Mass=NA (kg/m); Plume Area=NA (m^2)



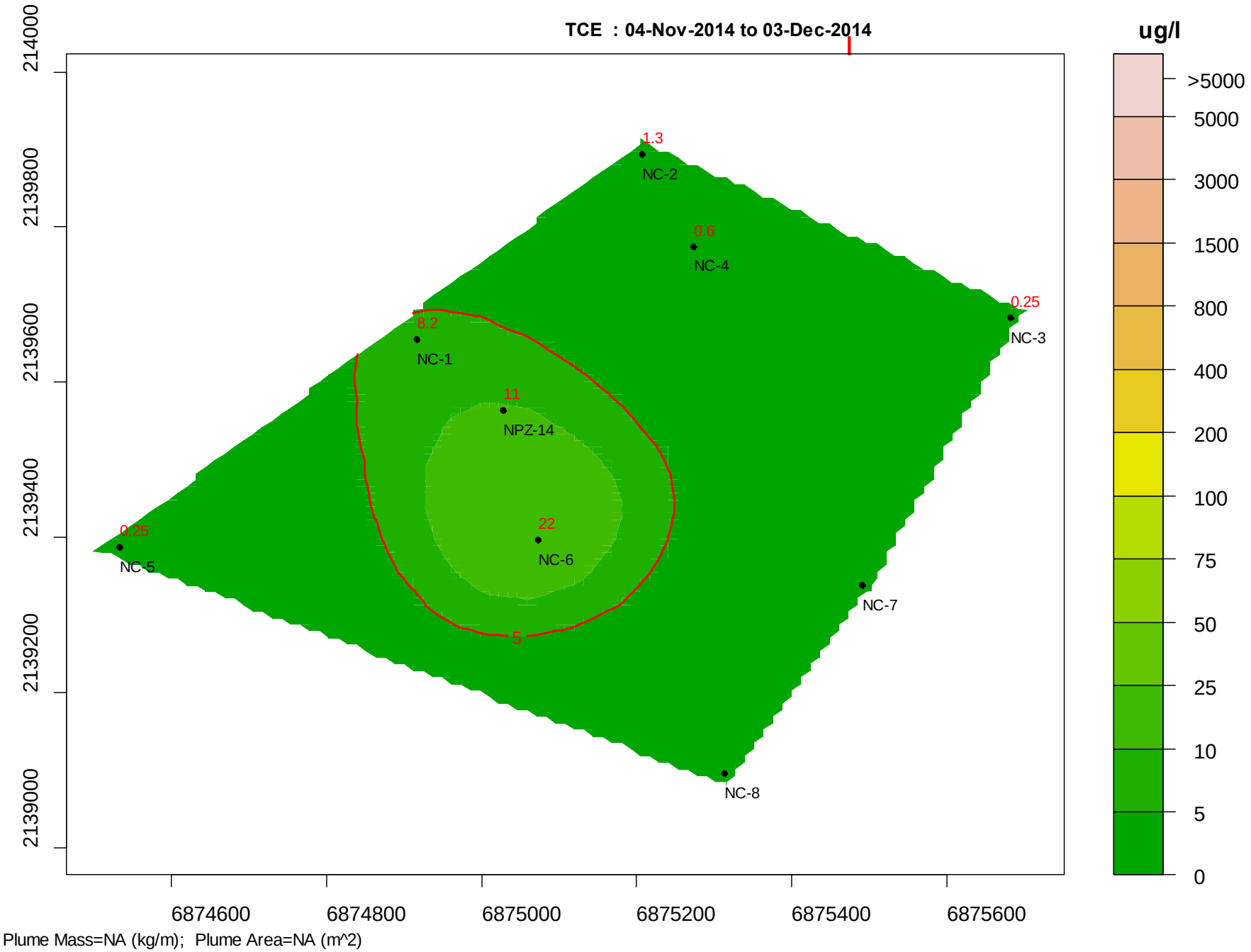
Plume Mass=NA (kg/m); Plume Area=NA (m^2)



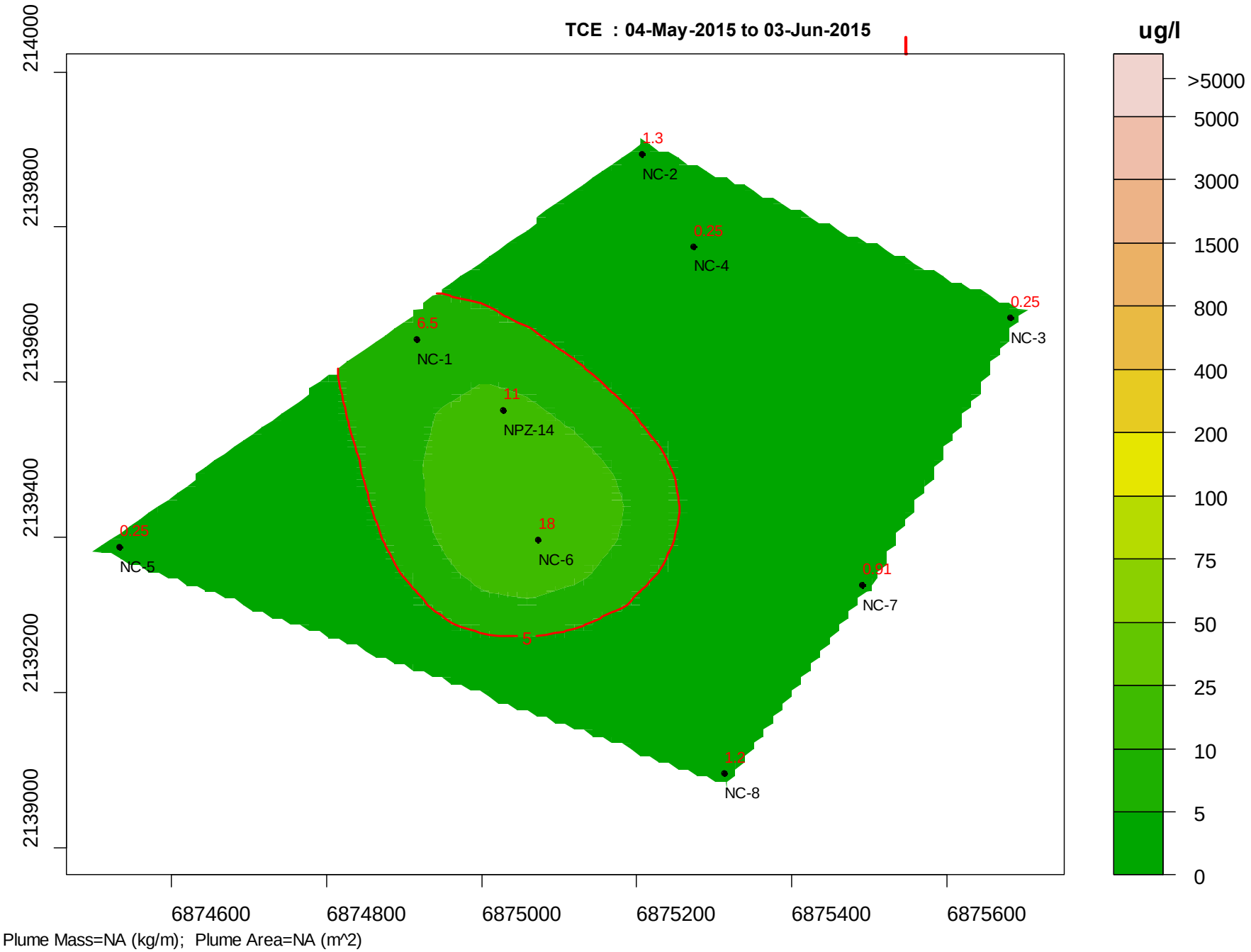
Plume Mass=NA (kg/m); Plume Area=NA (m^2)



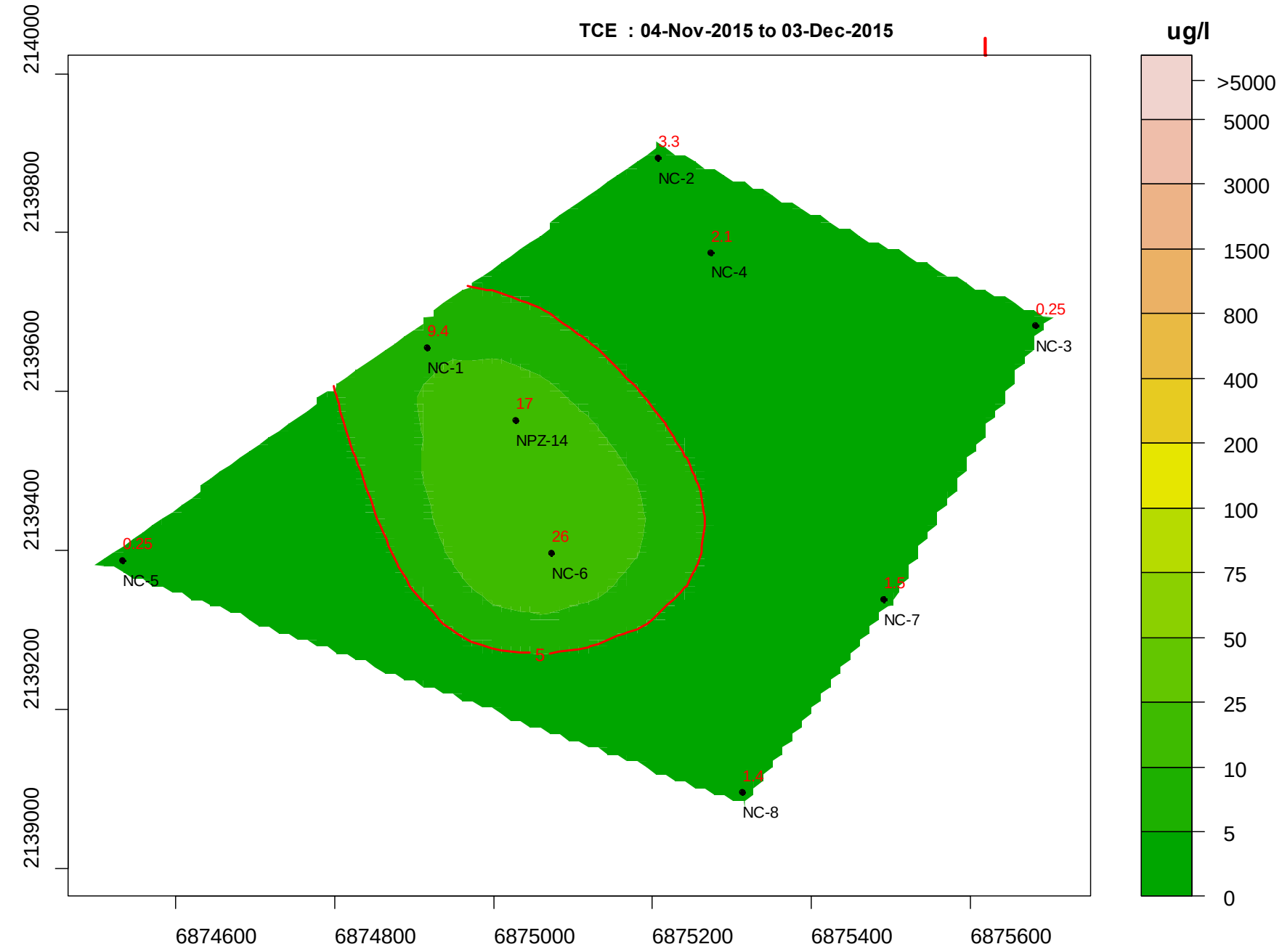
Plume Mass=NA (kg/m); Plume Area=NA (m^2)



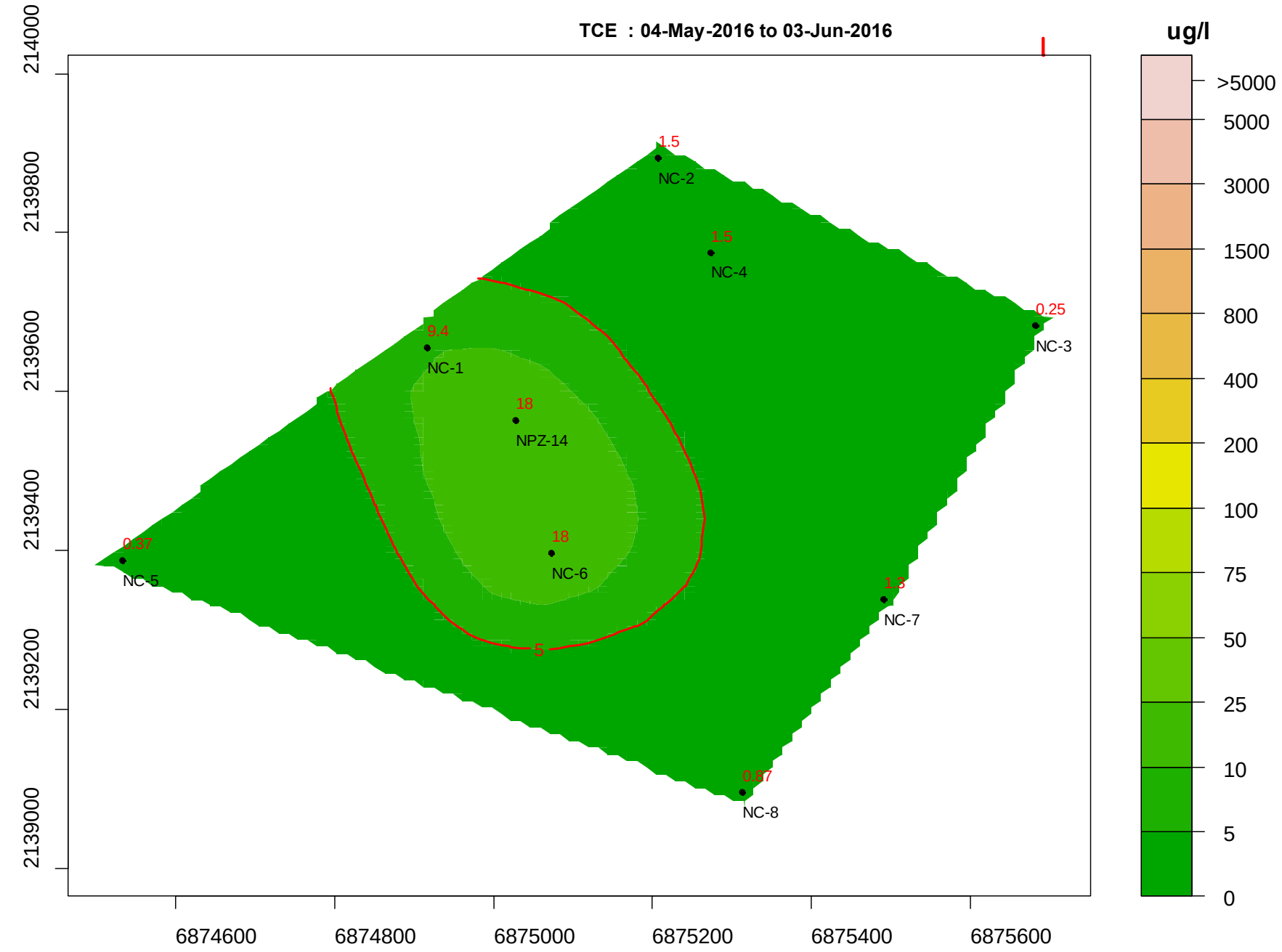
Plume Mass=NA (kg/m); Plume Area=NA (m^2)



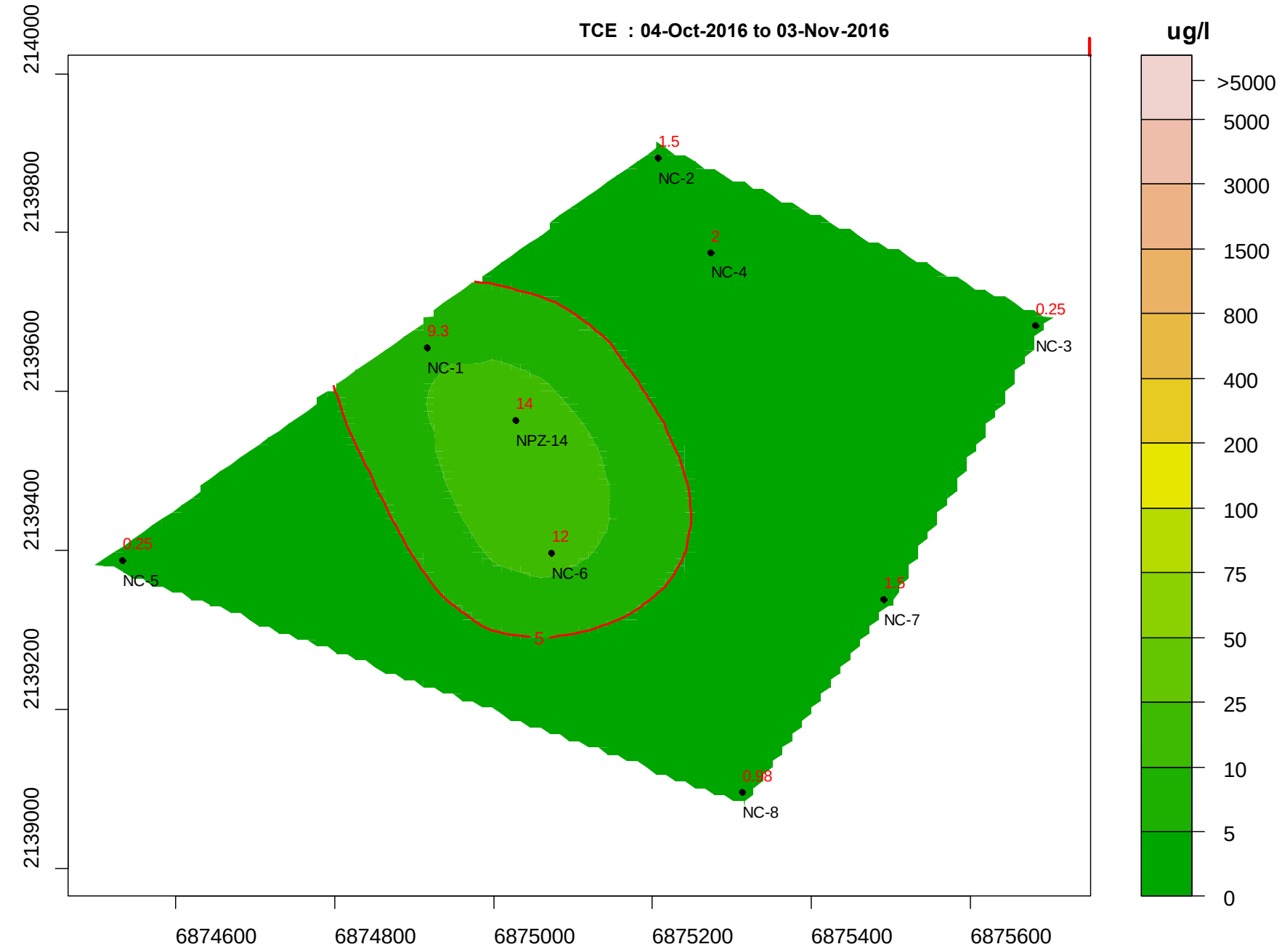
Plume Mass=NA (kg/m); Plume Area=NA (m^2)



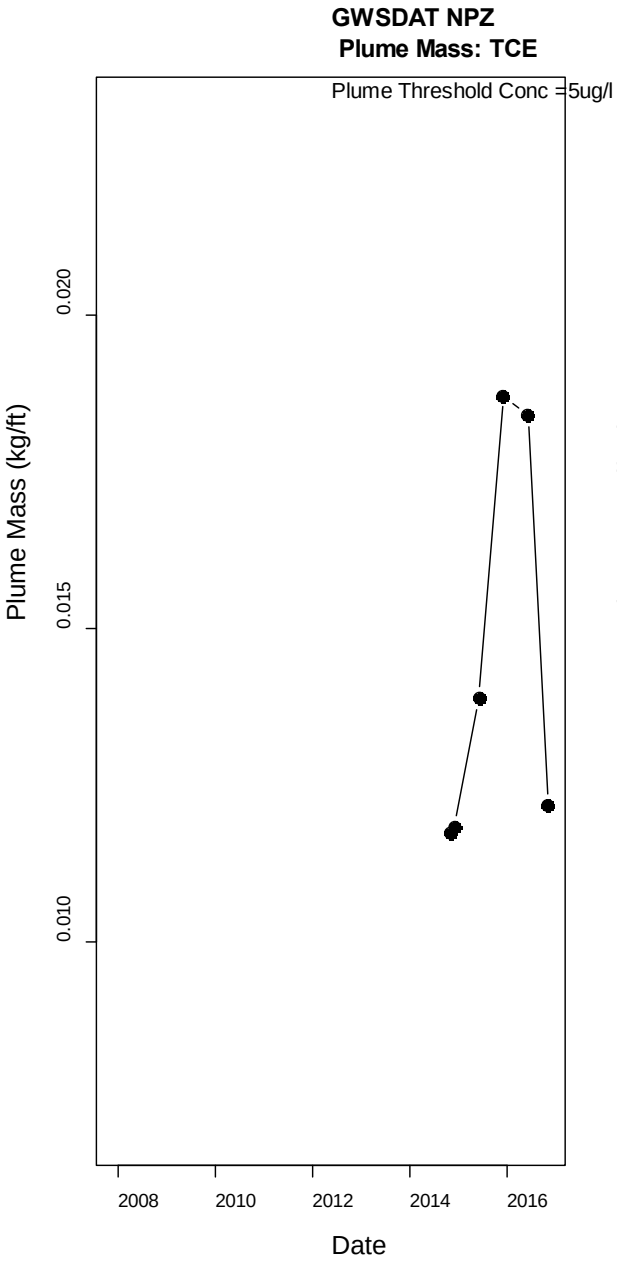
Plume Mass=NA (kg/m); Plume Area=NA (m^2)

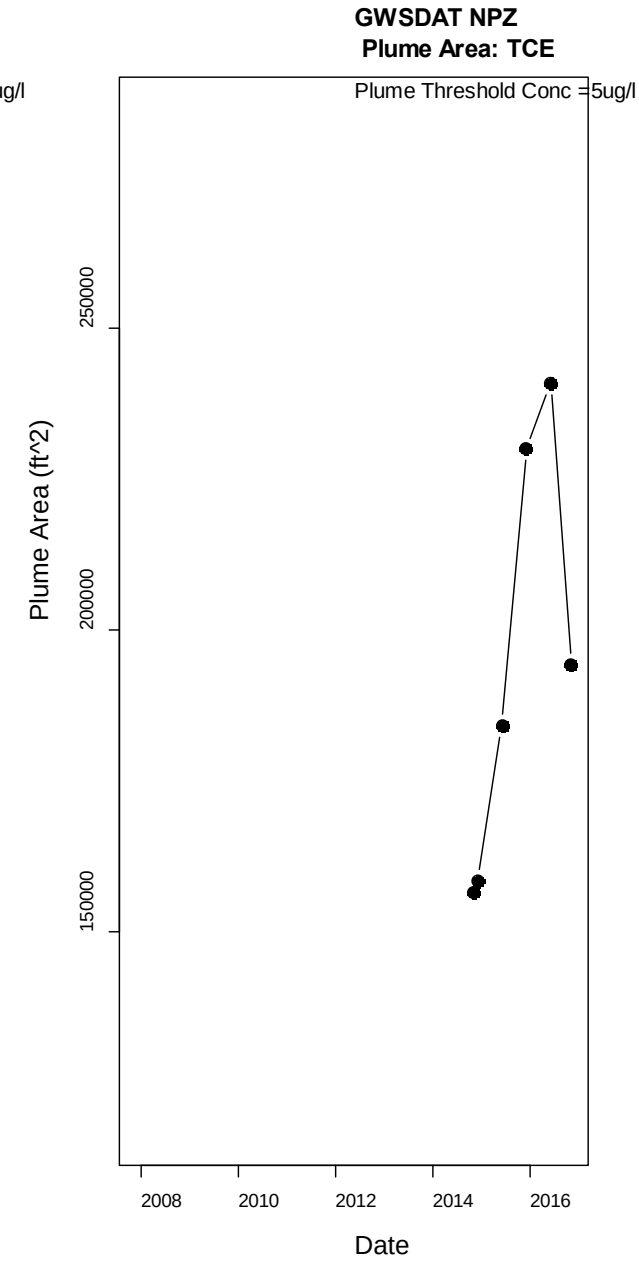


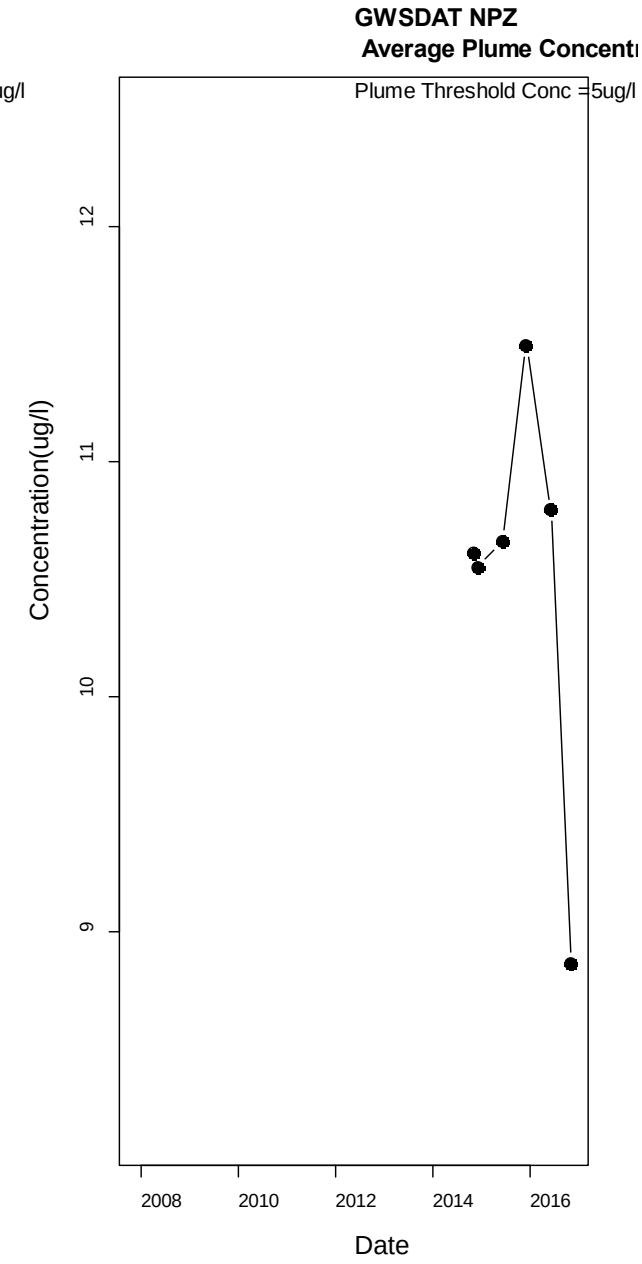
Plume Mass=NA (kg/m); Plume Area=NA (m^2)



Plume Mass=NA (kg/m); Plume Area=NA (m^2)


GWSDAT NPZ
Plume Mass: TCE
Plume Threshold Conc =5ug/l
Plume Mass (kg/ft)
0.010
0.015
0.020
2008
2010
2012
2014
2016
Date

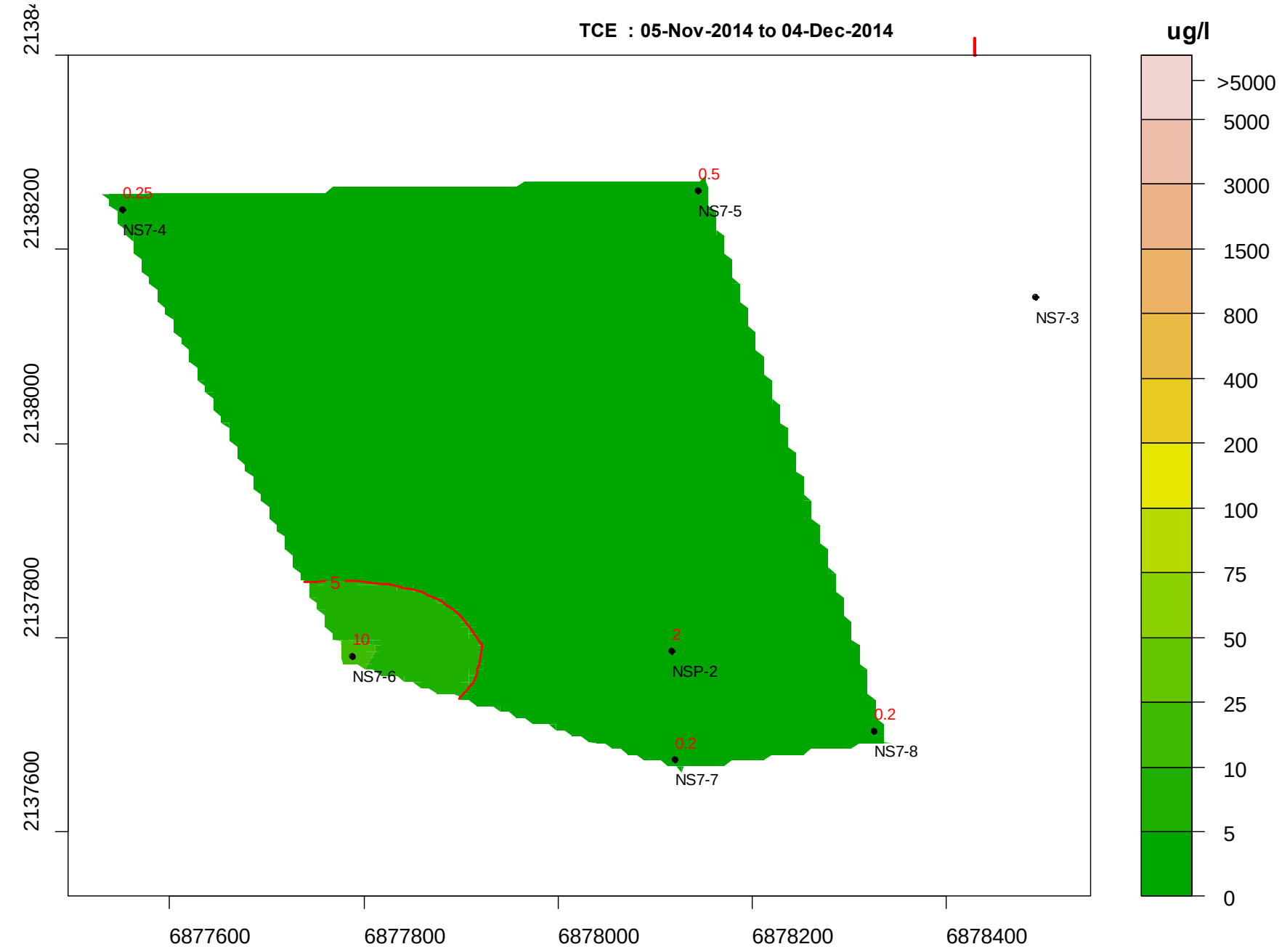

GWSDAT NPZ
Plume Area: TCE
Plume Threshold Conc =5ug/l
Plume Area (ft^2)
150000
200000
250000
2008
2010
2012
2014
2016
Date


GWSDAT NPZ
Average Plume Concentr
Plume Threshold Conc =5ug/l
Concentration(ug/l)
9
10
11
12
2008
2010
2012
2014
2016
Date

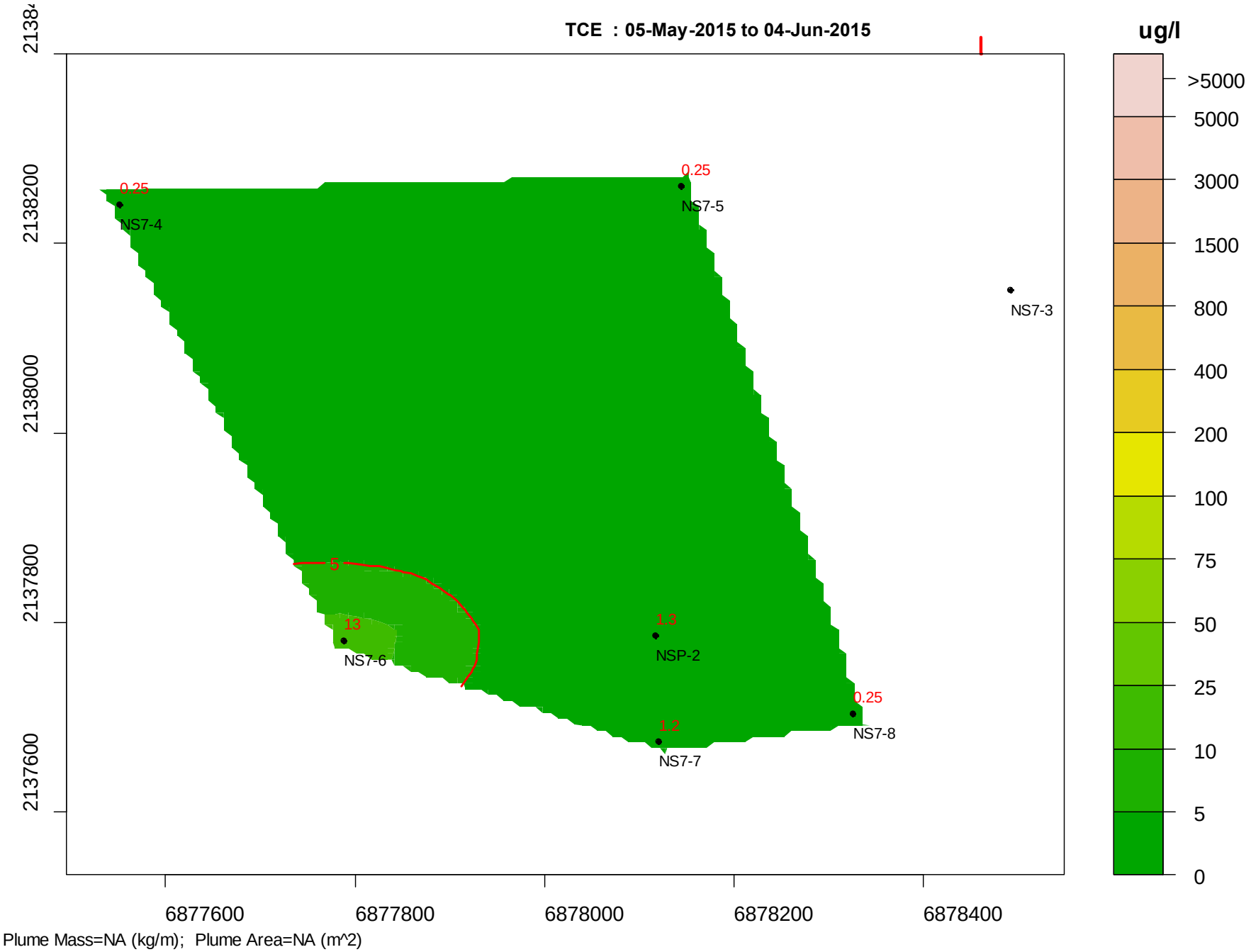
MNA SITE CAOC 7 STRATUM 1

TCE

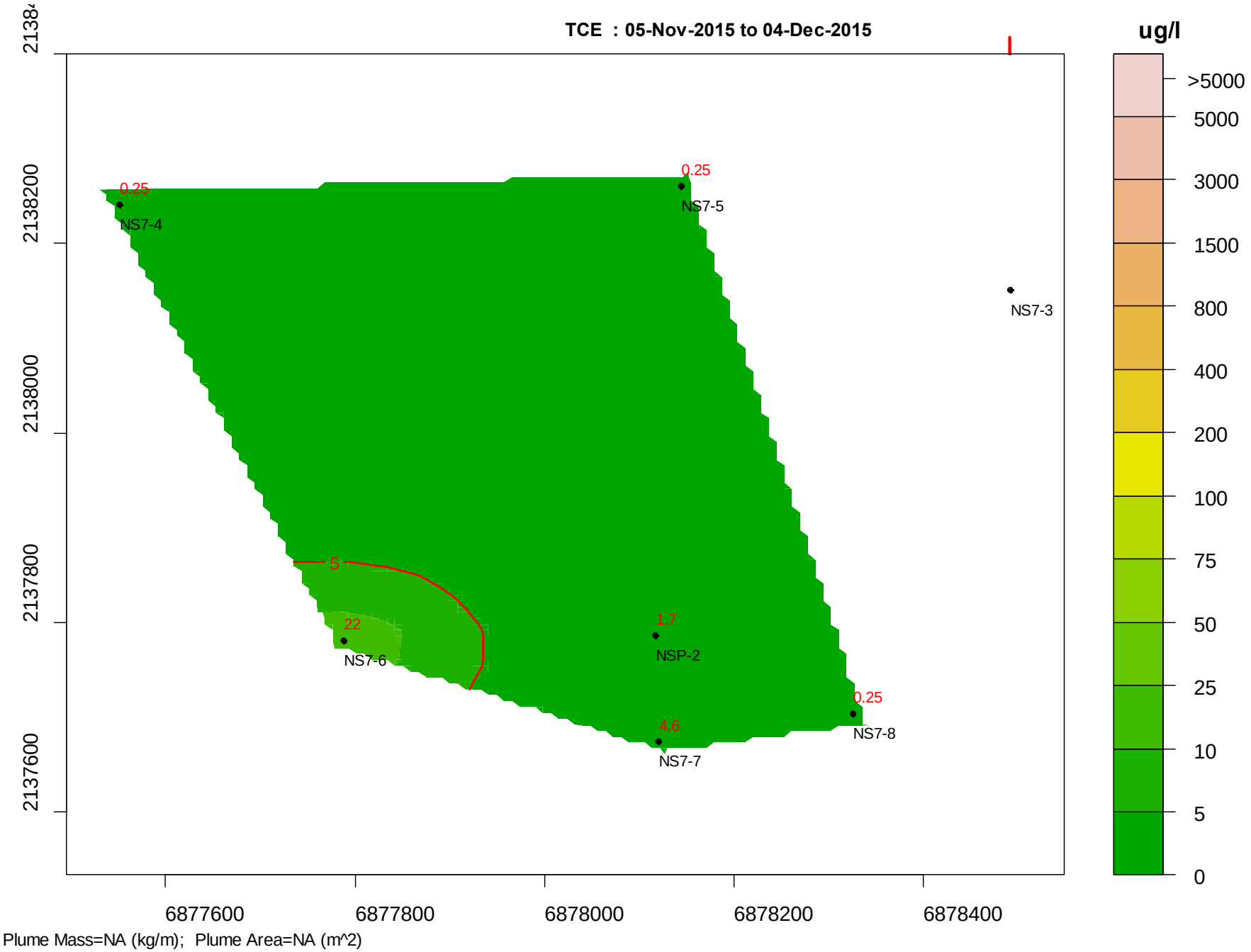
This page intentionally left blank



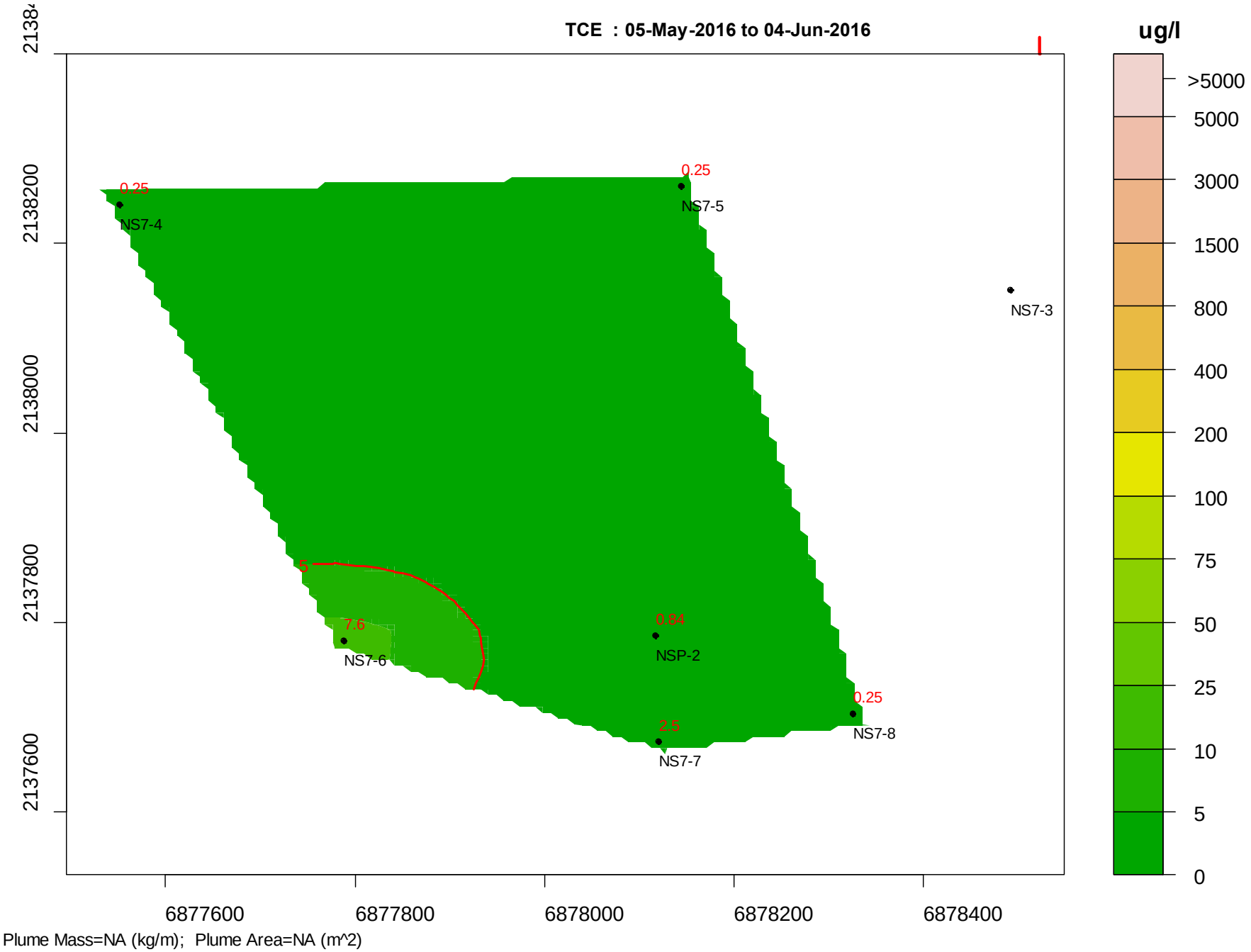
Plume Mass=NA (kg/m); Plume Area=NA (m^2)



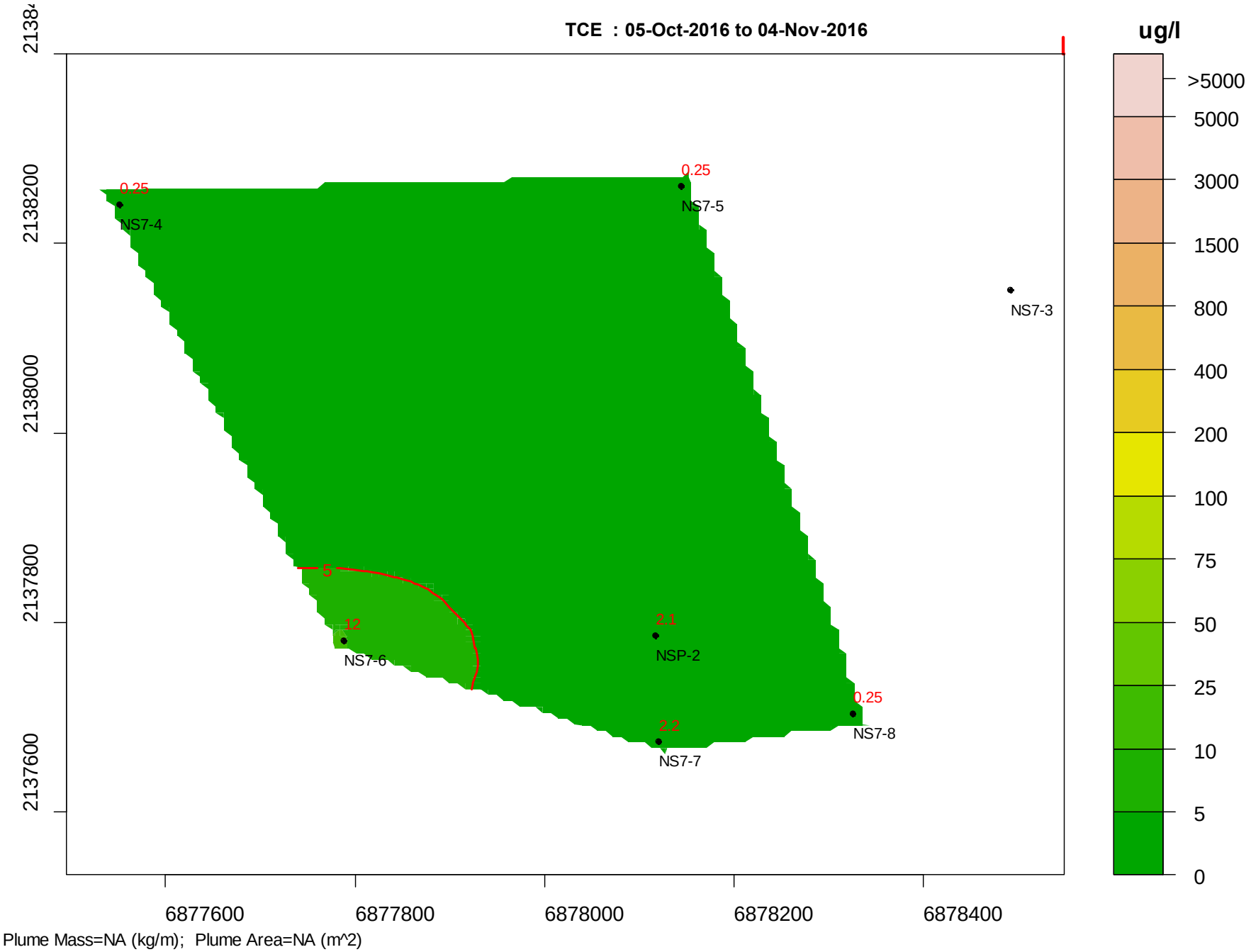
Plume Mass=NA (kg/m); Plume Area=NA (m^2)



Plume Mass=NA (kg/m); Plume Area=NA (m^2)



Plume Mass=NA (kg/m); Plume Area=NA (m^2)



Plume Mass=NA (kg/m); Plume Area=NA (m^2)

This page intentionally left blank.

Attachment 2

Statistical Summary

This page intentionally left blank

Appendix G. Attachment 2
Statistical Evaluation of CAOC 10.38/10.39 Unit 7 Wells

Table 1. Linear Correlation and Regression Analysis of Sampling Date Perchloroethyene (PCE) and Trichloroethylene (TCE) Concentrations in COAC 10.38/10.39 Unit 7 Wells.

Well	Compound	Maximum Concentration[1]	n[2]	Critical Value	Linear Correlation Coefficient r	Significant α=0.05	Attenuation Rate Constant[3]		Direction of Change
							Lower 95% CL	Upper 95% CL	
		µg/L					per year	per year	
10_38-DS17-4	PCE	23	16	0.497	0.556	Yes	-0.029	-0.382	Increasing
10_38-DS17-5	PCE	13	16	0.497	0.501	Yes	-0.001	-0.254	Increasing
T-197-MW1	PCE	5.4	19	0.456	-0.049	No	–	–	–
10_38-DS17-4	TCE	23	16	0.497	0.190	No	–	–	–
10_38-DS17-5	TCE	26	16	0.497	0.015	No	–	–	–
T-197-MW1	TCE	9	19	0.456	-0.134	No	–	–	–
10_38-DS17-6	TCE	12	16	0.497	0.424	No	–	–	–
10_38-DS17-11	TCE	6.8	10	0.632	-0.757	Yes	0.223	0.039	Decreasing

[1]Linear correlation coefficients for sample date with the natural log of concentrations were calculated for wells in which the maximum observed concentration exceeded the Maximum Contaminant Level (MCL) for the respsective compound.
[2]n=number of sampling dates.

[3]The 95% Lower Confidence Limit (CL) and 95% Upper Confidence Limits for the attenuation rate were calculated using ordinary least squares regression analysis of the data from wells where a statistically significant (α=0.05) linear correlation was observed.

Appendix G. Attachment 2
Statistical Evaluations of CAOC 7 Stratum 1 Wells

Table 1. Linear Correlation and Regression Analysis of Sampling Date Trichloroethylene (TCE) Concentrations in COAC 7 Stratum 1 Wells.

Well	Compound	Maximum Concentration[1]	n[2]	Critical Value	Linear Correlation Coefficient r	Significant α=0.05	Attenuation Rate Constant[3]		Direction of Change
							Lower 95% CL	Upper 95% CL	
		µg/L					per year	per year	
NSP-2[4]	TCE	25	17	0.482	-0.858	Yes	0.213	0.130	Decreasing
NS7-6	TCE	22	5	0.878	-0.060	No	–	–	–

[1]Linear correlation coefficients for sample date with the natural log of concentrations were calculated for wells in which the maximum observed concentration exceeded the Maximum Contaminant Level (MCL) for the respsective compound.

[2]n=number of sampling dates.

[3]The 95% Lower Confidence Limit (CL) and 95% Upper Confidence Limits for the attenuation rate were calculated using ordinary least squares regression analysis of the data from wells where a statistically significant (α=0.05) linear correlation was observed.

[4]Statistics were calculated for well NSP-6 beginning from the sampling date of November 16, 2007 when the maximum TCE concentration of 25 µg/L was observered through the November 3, 2016 sampling date.

Appendix G. Attachment 2
Statistical Evaluation of NPZ-14 Plume Area Wells

Table 1. Linear Correlation and Regression Analysis of Sampling Date Trichloroethylene (TCE) Concentrations in NPZ-14 Wells.

Well	Compound	Maximum Concentration[1]	n[2]	Critical Value	Linear Correlation Coefficient r	Significant α=0.05	Attenuation Rate Constant[3]		Direction of Change
							Lower 95% CL	Upper 95% CL	
		µg/L					per year	per year	
NPZ-14	TCE	29	16	0.497	-0.534	Yes	0.121	0.006	Decreasing
NC-6	TCE	26	9	0.666	-0.101	No	–	–	–
NC-1	TCE	9.4	12	0.576	0.733	Yes	-0.149	-0.712	Increasing

[1]Linear correlation coefficients were calculated for wells in which the maximum observed concentration exceeded the Maximum Contaminant Level (MCL) for the respsective compound.
[2]n=number of sampling dates.

[3]The 95% Lower Confidence Limit (CL) and 95% Upper Confidence Limits for the attenuation rate were calculated using ordinary least squares regression analysis of the data from wells where a statistically significant (α=0.05) linear correlation was observed.

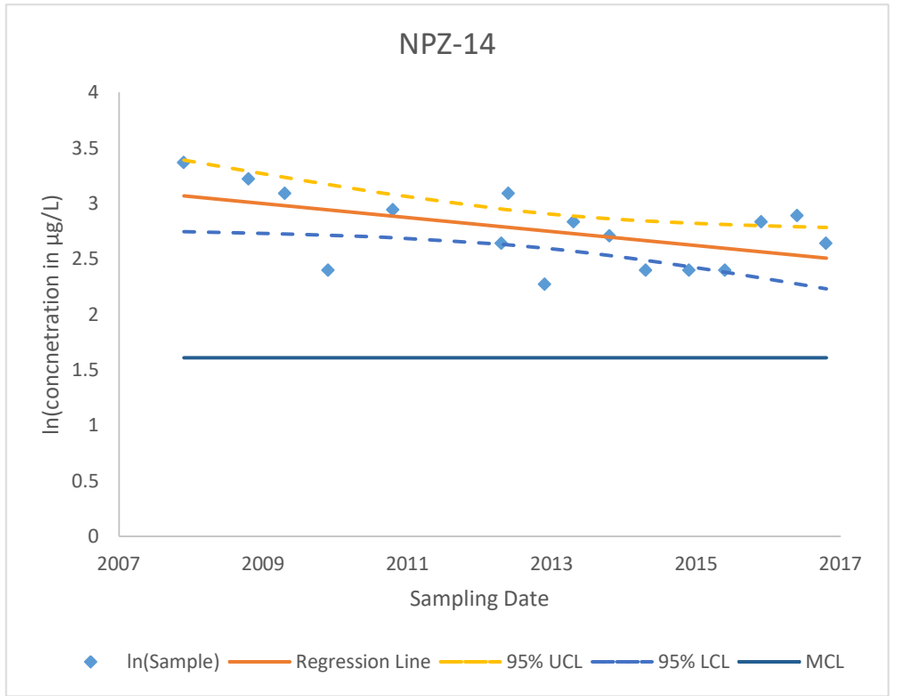
Appendix G - Attachment 2
Statistical Evaluation of
Monitoring Well NPZ-14 Long-Term Data (2007 - 2016)

	Year	ln(ug/L)
1	2007.9	3.367
2	2008.8	3.219
3	2009.3	3.091
4	2009.9	2.398
5	2010.8	2.944
6	2012.3	2.639
7	2012.4	3.091
8	2012.9	2.272
9	2013.3	2.833
10	2013.8	2.708
11	2014.3	2.398
12	2014.9	2.398
13	2015.4	2.398
14	2015.9	2.833
15	2016.4	2.89
16	2016.8	2.639

Slope, m	m	-0.063	'SLOPE(y,x)
Intercept, b	b	129.600	INTERCEPT(y,x)
Observations, n	n	16	COUNT(x)
Std error in estimate, S_{yx}	SYX	0.291	STEYX(y,x)
Average x	XAVG	2012.8	AVERAGE(x)
SSX	SSX	118.324	DEVSQ(x)
t(α,df)	t	2.145	TINV(0.05,n-2)

Regression line confidence interval

Year	Data	ln(Sample)	Regression Line	CI	95% UCL	95% LCL	MCL
2007.9	29	3.367	3.067	0.322	3.390	2.745	1.609
2008.8	25	3.219	3.011	0.278	3.289	2.732	1.609
2009.3	22	3.091	2.979	0.255	3.234	2.724	1.609
2009.9	11	2.398	2.941	0.229	3.170	2.713	1.609
2010.8	19	2.944	2.885	0.194	3.079	2.690	1.609
2012.3	14	2.639	2.790	0.159	2.949	2.631	1.609
2012.4	22	3.091	2.784	0.158	2.942	2.626	1.609
2012.9	9.7	2.272	2.752	0.156	2.908	2.596	1.609
2013.3	17	2.833	2.727	0.158	2.885	2.569	1.609
2013.8	15	2.708	2.696	0.166	2.861	2.530	1.609
2014.3	11	2.398	2.664	0.178	2.842	2.486	1.609
2014.9	11	2.398	2.626	0.196	2.823	2.430	1.609
2015.4	11	2.398	2.595	0.215	2.810	2.380	1.609
2015.9	17	2.833	2.563	0.236	2.799	2.328	1.609
2016.4	18	2.89	2.532	0.258	2.790	2.274	1.609
2016.8	14	2.639	2.506	0.276	2.783	2.230	1.609



APPENDIX H

Comments and

DON Responses to Comments

This page intentionally left blank.

Environmental Resources Management

2875 Michelle Drive
Suite 200
Irvine, CA 92606
(949) 623-4700
(949) 623-4711 (fax)

28 September 2016

Via Electronic Mail

Jeff Fitzsimmons, P.G.
California Regional Water Quality Control Board
Lahontan Region 6
14440 Civic Drive, Suite 200
Victorville, CA 92392

Subject: Evaporation Pond Assessment Summary Report
NRG Coolwater Generating Station
3700 Santa Fe Street, Daggett, CA 92327

Dear Mr. Fitzsimmons:

On behalf of NRG California South LP (NRG), ERM-West, Inc. (ERM) has prepared this report summarizing the results of soil sampling and analysis conducted in accordance with California Regional Water Quality Control Board, Lahontan Region (RWQCB) approved Evaporation Impoundment Characterization Workplan (Workplan), dated 31 March 2016, for the NRG Coolwater Generating Station (CGS) located at 3700 Santa Fe Street in Daggett, CA (site; Figure 1). The CGS formerly operated a coal gasification facility (CGF), which utilized evaporation impoundments for boiler blowdown and other low-volume wastes under a National Pollution Discharge Elimination System (NPDES) permit with the RWQCB. This report summarizes field and laboratory methods used to sample and analyze accumulated settled solids within the evaporation impoundments (ponds) and surficial soil surrounding the ponds within the CGS property, and provides recommendations for remedial actions, and additional assessment.

SITE DESCRIPTION

CGS consists of four inactive power generating units (Units 1-4); five evaporation impoundment ponds (Ponds 1, 2, 3, 4, and 5); a former CGF; and supporting administrative and operational/warehouse facilities and out-of-service equipment. CGS covers approximately 293 acres of land situated on one irregular shaped parcel. The evaporation impoundment is located to the east of CGS and consists of five manmade, lined ponds (Ponds 1 through 5), as shown on Figure 1. The ponds were constructed in 1973 and have been

used to dispose of cooling water blowdown and other low-volume wastes from CGS, the former CGF, and the former Solar One and Solar Two facilities (Figure 1). The ponds were operated under NPDES Waste Discharge Requirements (WDR) and NPDES Permit Board Order No. 6-98-54 (WDID No. 6B362036002).

OBJECTIVE

The objective of the soil sampling investigation was to characterize the current chemical composition of accumulated settled solids within each of the ponds and assess surficial soil outside of the ponds within the property boundary of the CGS.

PRE-FIELD ACTIVITIES

Prior to mobilization, ERM implemented its subsurface clearance protocol, which included a discussion with a knowledgeable site person regarding subsurface utilities and infrastructure; notification to Underground Services Alert/DigAlert; and preparation of a site-specific Health and Safety Plan.

SOIL INVESTIGATION ACTIVITIES

This section presents the methodology for sampling the settled solids within each of the five ponds and soil from background locations and shallow borings located on the exterior perimeter of the ponds. Sampling activities were conducted on 27 June 2016. Sampling activities were conducted in accordance with the Workplan; Mr. Jeff Fitzsimmons of the RWQCB was on site to witness sampling activities. Background and perimeter sample locations of the ponds, as shown on Figure 2, were located in consultation with the RWQCB.

Evaporation Pond Sampling

Each composite sample consisted of five discrete samples of settled solids collected from each of the five ponds (Figure 2). Discrete samples were collected at a depth of approximately 0.2 to 0.5 feet below ground surface (bgs), above the clay liner and compacted sand. The sampled material was collected from the ground surface of the ponds using both a hand auger and

trowel. Sampling equipment was decontaminated between samples. Discrete samples were collected in separate containers and submitted to a laboratory for compositing and analysis. To prepare the composite sample from each individual pond, the laboratory took equal portions (approximately 30 grams) from each sample container and mixed the samples together. Then aliquots from the composite samples were taken for individual analyses.

Perimeter Fence-Line Sampling

Soil samples were collected between the berm and fence line on the north, south, and eastern (prevailing downwind) side of the ponds. The sample locations were collected in areas where sediment accumulated downwind of Ponds 1, 2, 3, 4, and 5. Soil samples were collected using a hand auger and/or trowel. At each location, soil borings were advanced utilizing a hand auger to a depth of 3 feet bgs. Samples were collected from the surface, 6 inches bgs, 1 foot bgs, and 3 feet bgs. The surface samples, downwind of Ponds 3, 4, and 5, were collected from a "crust" that formed on top of the accumulated sediment.

Background Sampling

Three background samples were collected from 6 inches to 1 foot bgs from upwind locations. Soil samples were collected using a hand auger and/or trowel.

LABORATORY ANALYSIS

Soil samples were submitted to a Eurofins Calscience of Garden Grove, California for analysis. Soil samples were analyzed for the following constituents of concern (COCs):

- California Code of Regulations, Title 22 metals using U.S. Environmental Protection Agency (USEPA) Methods 6010B and 7471A;
- Other metals boron, calcium, lithium, magnesium, potassium, and sodium using USEPA Method 6010B;
- Ions chloride, fluoride, nitrate, and sulfate by USEPA 300.0;
- pH by USEPA by Method 9045D;
- Total dissolved solids (TDS) by USEPA Method SM 2540 C (M);

- Total petroleum hydrocarbons (TPH) as diesel and as motor oil by USEPA Method 8015B (M); and
- Radium 226 and 228 by USEPA 903.1 and USEPA 904.0, respectively. Radiological analysis was subcontracted to GEL Laboratories LLC of Charleston, South Carolina.
- Two select samples (samples P5, P5-FL-7-0 and a duplicate of P5-FL-7-0) were also analyzed for Soluble Threshold Limit Concentration (STLC) selenium using the standard 6010B Method, and sample P5-FL-7-0 and its duplicate were analyzed for Total Threshold Limit Concentration (TCLP) analysis using USEPA Method 6010B for selenium.
- In addition, the Lahontan RWQCB requested that select samples with elevated arsenic and selenium concentrations (as shown on Table 1) be analyzed for STLC by modified USEPA Method 6010B using deionized (DI) water.

A summary of the analytical results is provided on Tables 1 through 4 and a copy of the laboratory analytical reports are provided in Attachment A.

Analytical data received were assessed by ERM following the USEPA's Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, August 2014, and USEPA National Functional Guidelines for Inorganic Superfund Data Review, August 2014. All data were considered usable for its intended use with the exception of one sample (P5), which was rejected for antimony and lithium due to a low matrix spike recovery. The data validation memorandum is included as Attachment A.

MANAGEMENT OF INVESTIGATION DERIVED WASTE

Investigation-derived waste including soil cuttings and equipment decontamination water was collected into three labeled 5-gallon buckets. The three buckets were relinquished to site personnel pending characterization results.

SUMMARY OF RESULTS

This section provides a brief summary of the results obtained from the soil sampling investigation activities.

Metals

A summary of the metals analyses is provided in Table 1. Analytical results were compared to site background and to the May 2016 USEPA's Regional Screening Levels (RSL) for industrial soil. For comparative purposes, residential RSLs are also included in Table 1, as well as federal and state standards for waste characterization purposes.

Table 1 illustrates that only arsenic was reported at concentrations above the 2016 RSL for industrial soil (3 milligrams per kilogram (mg/kg)). The maximum arsenic concentration reported was 22.2 mg/kg in boring sample P3-FL-5-0. The majority of elevated arsenic levels were detected in surface to 6-inch samples in and downwind of Ponds 3, 4, and 5. The highest concentrations are generally detected in the surficial "crust" from samples collected directly downwind of Ponds 3, 4, and 5. Concentrations decreased rapidly with depth to within background levels at all locations.

Table 1 also illustrates that metals exceed background, as shown in samples B-1, B-2, and B-3. As with arsenic, the majority of elevated concentrations are from shallow soil samples and the surficial "crust" samples collected in downwind Ponds 3, 4, and 5.

All other metals were reported with concentrations below RSLs and the federal hazardous waste total threshold limit concentration (TTLC).

Samples analyzed for STLC and TCLP had the following results:

- All arsenic STLC DI water results were either nondetect or less than 0.2 milligrams per liter (mg/L), indicating an extremely low leaching potential for the arsenic.
- The selenium TCLP result was less than 1 mg/L.
- The selenium STLC result for sample P5 was less than 1 mg/L.
- The selenium STLC results for sample P5-FL-7-0 and the duplicate sample for P5-FL-7-0 were slightly greater than 1 mg/L (1.18 and 1.06

mg/L, respectively); however, the STLC DI water results for the same two samples were less than 1 mg/L (0.549 and 0,489 mg/L, respectively).

Ions, pH, and TDS

Table 2 provides a summary of ions, pH, and TDS results. Of the constituents with available RSLs, no concentrations exceeded the industrial or residential RSLs. However, several constituents exceeded site background. As with the metals results, the highest concentrations are generally detected in shallow samples downwind of Ponds 3, 4, and 5 and decrease rapidly with depth.

TPH

A summary of TPH results is provided in Table 3. This table illustrates that each of the ponds were reported with detectable TPH concentrations, but at very low concentrations. Additionally, TPH concentrations were reported in some of the fence-line samples. It is important to note that the laboratory indicated that the chromatographic pattern of petroleum hydrocarbons in the samples was inconsistent with the profile of the reference fuel standard for diesel and motor oil. The highest concentrations were detected within and adjacent to Ponds 3, 4, and 5. However, unlike the metals samples, the highest concentration was detected in sample P5-FL-8-0 located south of and cross-wind gradient of Pond 5. The sample was collected from soil that did not have visual signs of sediment accumulation emanating from Pond 5.

Radium

Table 4 provides a summary of radium analyses. The majority of samples were less than background with only six samples slightly exceeding site background.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are based on the soil investigation activities described above:

- Arsenic concentrations detected in the ponds and fence-line samples exceed RSLs and background concentrations. However, most of the elevated concentrations are located in the surficial "crust" and decrease

rapidly with depth; and the STLC DI water results indicate a very low potential for leaching.

- The selenium concentrations detected in one surface sample collected downwind of Pond 5, slightly exceed the STLC limit; however the STLC DI water analysis from the same sample is well below the STLC.
- Most pond and fence-line samples are reported with several other metals, ions, pH, and TDS that exceed site background concentrations. The highest concentrations are generally detected in the surficial samples located downwind of Ponds 3, 4, and 5 and decrease rapidly with depth.
- The TPH results detected are generally low and based on laboratory data not related to the referenced fuel oil standard and may be the result of an organic material interference.

In summary, the results of the soil characterization show the sediment that has accumulated downwind of the ponds has concentrations of several COCs that exceed background levels; the industrial RSL for arsenic; and in one sample slightly exceeds the STLC concentration for selenium. The impacts are focused in the surface and shallow soil and decrease rapidly with depth with the majority of impacts located downwind of Ponds 3, 4, and 5.

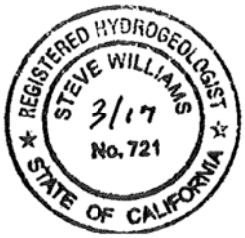
Based on the results above, the following actions are recommended:

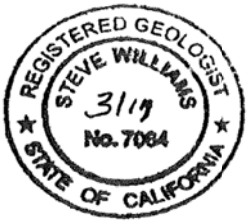
- In the area where the selenium concentration slightly exceeds the STLC, the surficial sediment in that area should be removed and sent off site for proper disposal as a non-Resource Conservation and Recovery Act (RCRA) California hazardous waste.
- In the remainder of the area downwind of the ponds and within the NRG property boundary, the visibly identifiable surface sediment that has accumulated downwind of all ponds should be removed and consolidated back into the adjacent ponds.
- Once NRG has arranged an access agreement outside the property boundary, shallow soil sampling in a grid pattern should be implemented. The sampling should only focus on COCs that significantly exceed background concentrations.
- The data collected should be utilized to prepare a risk assessment addressing potential risks to human health and the environment and an evaluation of the potential storm water impacts from COCs.

CLOSING

If there are any questions regarding the sampling methodology and results presented herein, which require further clarification the, please do not hesitate to contact me at 949-623-4674 or via email at steve.williams @erm.com

Sincerely,





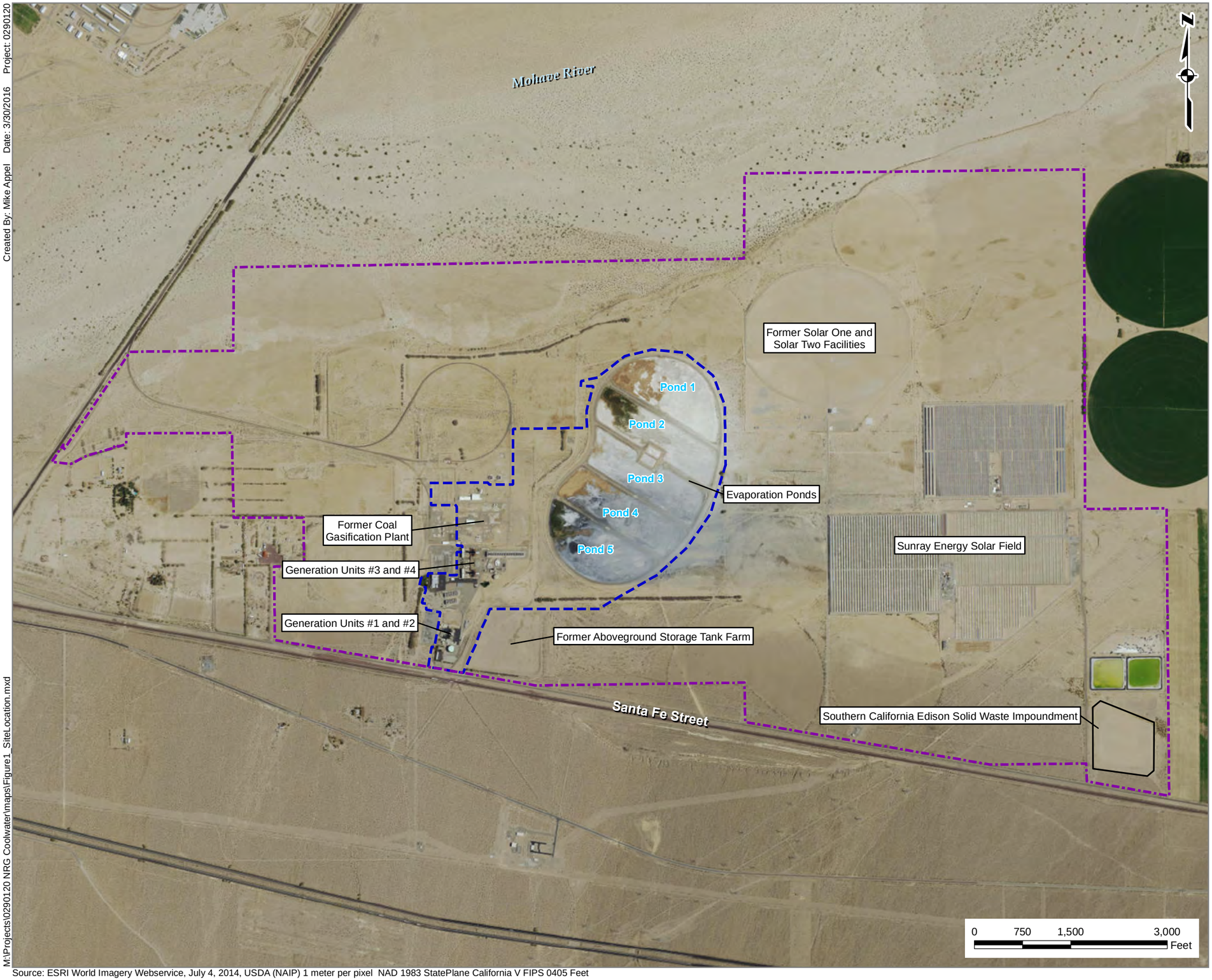
Steve Williams, P.G., CHG
Partner

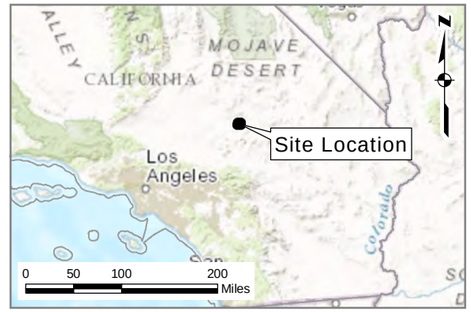
SW/taa-0355141

Attachments as noted.

Figures

Created By: Mike Appel Date: 3/30/2016 Project: 0290120





Legend

- NRG Coolwater Property Boundary
- Southern California Edison Solid Waste Impoundment
- Southern California Edison Property Boundary

Notes:
Parcel Boundary from San Bernadino County GIS.

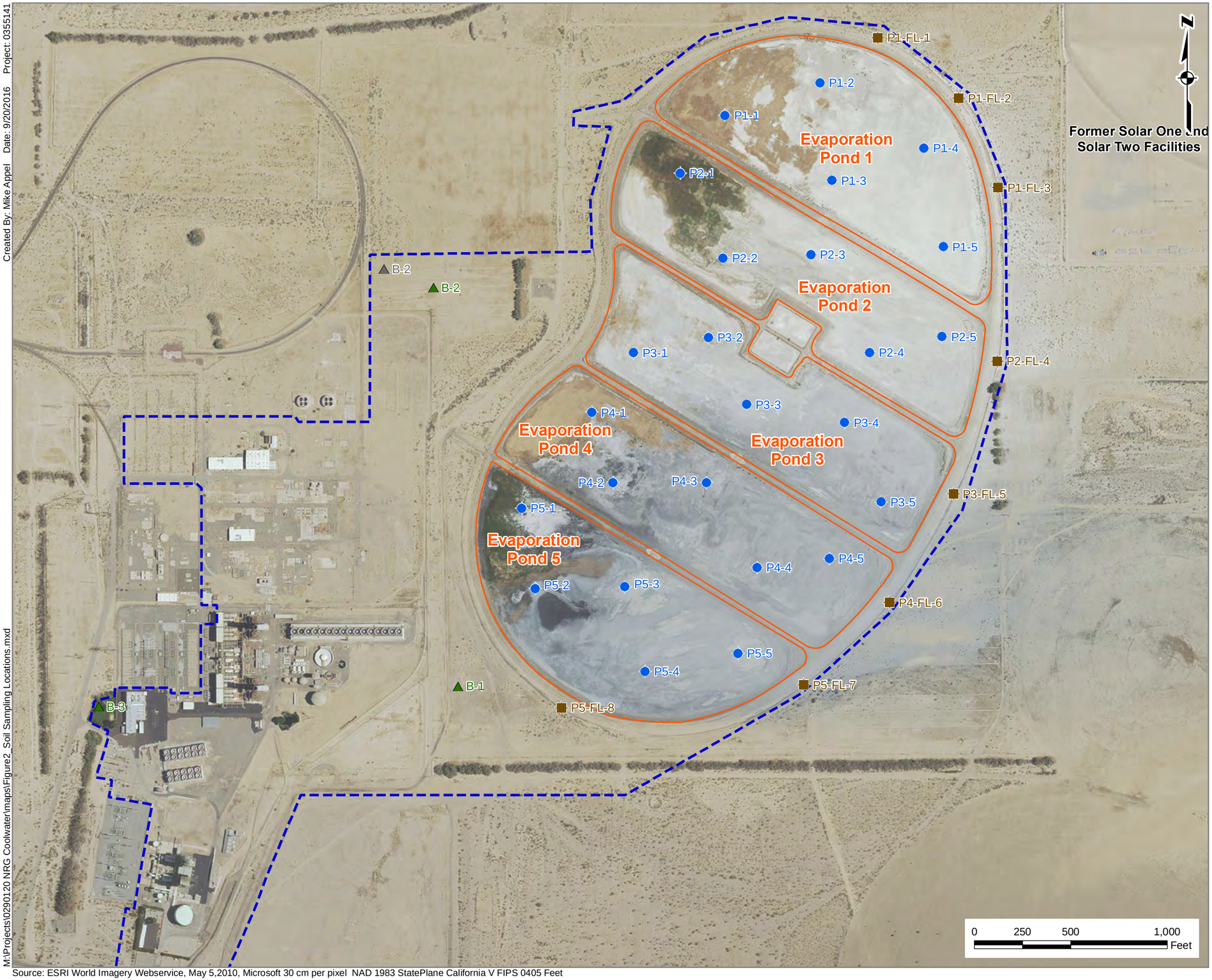
M:\Projects\0290120 NRG Coolwater\maps\Figure1_SiteLocation.mxd

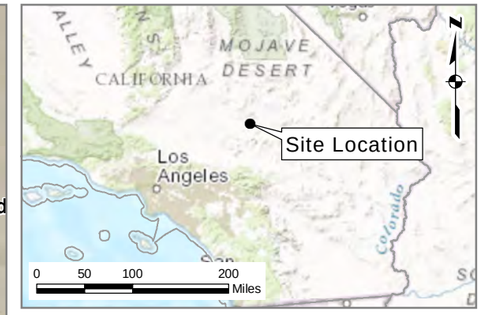
Source: ESRI World Imagery Webservice, July 4, 2014, USDA (NAIP) 1 meter per pixel NAD 1983 StatePlane California V FIPS 0405 Feet

Figure 1
Site Location
NRG Coolwater Facility
Daggett, California

Environmental Resources Management
www.erm.com

Project: 0355141
Date: 9/20/2016
Created By: Mike Appel





Legend

- Pond Surface Sample Location
- Fence Line Sample Location
- Background Sample Location
- Proposed Sample Location, Recurrence from RWQCB
- Evaporation Ponds
- Property Boundary

Notes:
Property Boundary from San Bernadino GIS.

M:\Projects\0290120 NRG Coolwater\maps\Figure2_Soil Sampling Locations.mxd

Source: ESRI World Imagery Webservice, May 5,2010, Microsoft 30 cm per pixel NAD 1983 StatePlane California V FIPS 0405 Feet

Figure 2
Soil Sampling Locations
NRG Coolwater Facility
Daggett, California

Environmental Resources Management
www.erm.com

Tables

Table 1 - Summary of Metals
NRG Coolwater Facility
Daggett, California

Sample ID	Sample Date	Location	USEPA 6010B (mg/kg) except as noted																								USEPA 7471A (mg/kg)
			Antimony	Arsenic	Arsenic STLC DI (mg/L)	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Lead	Lithium	Magnesium	Molybdenum	Nickel	Potassium	Selenium	Selenium STLC (mg/L)	Selenium STLC DI (mg/L)	Selenium TCLP (mg/L)	Silver	Sodium	Thallium	Vanadium	Zinc	Mercury
Risk Screening - RSL - Residential			31	0.68		15,000	160	16,000	71	--	120,000	23	3,100	400	160	--	390	1,500	--	390	--		--	390	2,300	0.78	390	23,000	11
Risk Screening - RSL - Industrial			470	3		220,000	2,300	230,000	980	--	1,800,000	350	47,000	800	2,300	--	5,800	22,000	--	5,800	--		--	5,800	35,000	12	2,000	350,000	46
Waste Screening - TTLC (mg/Kg) (b)			500	500		10,000	75	--	100	--	2,500	8,000	2,500	1,000	--	--	3,500	2,000	--	100	--		--	500	--	700	2,400	5,000	20
Waste Screening - 20* TCLP (mg/Kg)			--	100		2,000	--	--	20	--	100	--	--	100	--	--	--	--	--	20	--		--	100	--	--	--	--	4
Waste Screening - 10*STLC (mg/Kg)			150	50		1,000	8	--	10	--	50	800	250	50	--	--	3,500	200	--	10	--		--	50	--	70	240	2,500	2
TCLP (mg/L)			--	--	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		1	--	--	--	--	--	--
STLC (mg/L)			--	--	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1	--	--	--	--	--	--	--
Background B-1	06/27/16	Southwest of Ponds	<0.765	**3.04**	--	**79.8**	**0.363**	**3.36**	<0.51	**9,580**	**7.35**	**5.44**	**7.77**	**3.78**	**4.07**	**3,970**	<0.255	**5.45**	**2,070**	<0.765	--	--	--	<0.255	**144**	<0.765	**23.8**	**32**	<0.0794
Background B-2	06/27/16	West of Ponds	<0.754	**2.75**	--	**102**	**0.3**	**5.7**	<0.503	**7,660**	**6.17**	**3.84**	**7.08**	**3.95**	<2.51	**3,040**	<0.251	**5.16**	**1,980**	<0.754	--	--	--	<0.251	**138**	<0.754	**16.2**	**21.4**	<0.0877
Background B-3	06/27/16	West of Ponds	<0.758	**4.04**	--	**125**	**0.366**	**19.5**	**0.559**	**14,500**	**11.7**	**4.84**	**14.2**	**6.99**	<2.53	**4,130**	**0.465**	**8.61**	**2,090**	<0.758	--	--	--	**0.388**	**426**	<0.758	**19**	**53.1**	<0.0877
P1	06/27/16	Pond 1 Composite	<0.718	**11.5**	NA	**88**	<0.239	**69.9**	<0.478	**65,600**	**9.63**	**2.11**	**73.1**	**0.747**	<2.39	**7,080**	**0.398**	**13.2**	**999**	<0.718	NA	NA	NA	**0.406**	**2,250**	<0.718	**18.7**	**27**	<0.0806
P1-FL-1-0	06/27/16	North of Pond 1	<0.761	**2.22**	NA	**127**	<0.254	**4.19**	<0.508	**5,690**	**5.09**	**3.47**	**5.73**	**3.67**	<2.54	**2,710**	<0.254	**3.89**	**1,530**	<0.761	NA	NA	NA	<0.254	**93**	<0.761	**17.1**	**26.4**	<0.0794
P1-FL-1-0.5	06/27/16	North of Pond 1	<0.728	**3.27**	NA	**94.5**	<0.243	**2.64**	<0.485	**5,110**	**4.93**	**3.2**	**5.19**	**3.24**	<2.43	**2,380**	<0.243	**3.47**	**1,440**	<0.728	NA	NA	NA	<0.243	**91**	<0.728	**18.5**	**22.5**	**0.0846**
P1-FL-1-1	06/27/16	North of Pond 1	<0.735	**1.55**	NA	**36.9**	<0.245	**1.81**	<0.49	**3,260**	**2.79**	**1.98**	**2.68**	**1.46**	<2.84	**1,250**	<0.245	**1.77**	**816**	<0.735	NA	NA	NA	<0.245	**85**	<0.735	**13**	**11.9**	**0.0794**
P1-FL-1-3	06/27/16	North of Pond 1	<0.785	**1.08**	NA	**31.4**	<0.262	**1.54**	<0.524	**2,250**	**2.94**	**2.15**	**2.65**	**1.47**	<3.84	**1,460**	<0.262	**1.88**	**920**	<0.785	NA	NA	NA	<0.262	**78**	<0.785	**13.3**	**15**	**0.0794**
P1-FL-2-0	06/27/16	North of Pond 1	<0.725	**7.25**	NA	**95**	<0.242	**47.9**	<0.483	**37,700**	**6.25**	**3.25**	**10.7**	**2.32**	<2.42	**4,870**	<0.242	**5.53**	**1,690**	<0.725	NA	NA	NA	<0.242	**684**	<0.725	**21.7**	**26**	<0.0794
P1-FL-2-0.5	06/27/16	North of Pond 1	<0.75	**5.24**	NA	**89.7**	**0.281**	**26.5**	<0.5	**21,100**	**5.99**	**3.33**	**8.5**	**2.64**	<2.5	**3,730**	<0.25	**5.1**	**1,830**	<0.75	NA	NA	NA	<0.25	**1,060**	<0.75	**17.8**	**23.8**	<0.0794
P1-FL-2-1	06/27/16	North of Pond 1	<0.714	**4.26**	NA	**75.1**	**0.369**	**5.04**	<0.476	**7,650**	**8.73**	**4.73**	**7.47**	**3.43**	<8.07	**3,790**	<0.238	**5.77**	**2,590**	<0.714	NA	NA	NA	<0.238	**1,370**	<0.714	**23.3**	**26.7**	NA
P1-FL-2-3	06/27/16	North of Pond 1	<0.75	**2.19**	NA	**42.8**	**0.25**	**2.84**	<0.5	**5,040**	**4.68**	**2.99**	**4.23**	**1.99**	<4.79	**2,200**	<0.25	**3.27**	**1,350**	<0.75	NA	NA	NA	<0.25	**405**	<0.75	**15.7**	**17.3**	NA
P1-FL-3-0	06/27/16	East of Pond 1	<0.761	**12.5**	NA	**103**	<0.254	**148**	<0.508	**93,600**	**9.6**	**2.71**	**38.1**	**1.28**	<2.54	**8,560**	**0.304**	**10.1**	**1,610**	<0.761	NA	NA	NA	**0.534**	**1,140**	<0.761	**19.4**	**58.9**	<0.0877
P1-FL-3-0.5	06/27/16	East of Pond 1	<0.781	**4.36**	NA	**69.4**	<0.26	**31.5**	<0.521	**21,500**	**6.06**	**3.46**	**11.3**	**2.55**	<2.6	**3,480**	**0.277**	**4.79**	**1,750**	<0.781	NA	NA	NA	<0.26	**1,360**	<0.781	**20.5**	**20.6**	<0.0794
P1-FL-3-1	06/27/16	East of Pond 1	<0.769	**5.81**	NA	**68.2**	<0.287	**35**	<0.513	**26,600**	**6.9**	**3.42**	**16**	**2.52**	<2.97	**4,070**	**0.256**	**5.69**	**1,780**	<0.769	NA	NA	NA	<0.256	**1,500**	<0.769	**21.1**	**22.2**	NA
P1-FL-3-3	06/27/16	East of Pond 1	<0.781	**3.42**	NA	**53.8**	<0.322	**18.5**	<0.521	**12,500**	**7.1**	**3.71**	**8.22**	**3.01**	<4.41	**3,230**	**0.26**	**4.39**	**1,960**	<0.781	NA	NA	NA	<0.26	**1,530**	<0.781	**24.5**	**20.5**	NA
P2	06/27/16	Pond 2 Composite	<0.761	**7.07**	NA	**77.5**	<0.254	**82.7**	<0.508	**47,600**	**5.79**	**2.37**	**29.6**	**1.05**	<2.54	**4,820**	**0.711**	**6.8**	**1,340**	<0.761	NA	NA	NA	<0.254	**4,930**	<0.761	**18.5**	**21.4**	<0.0833
P2-FL-4.0	06/27/16	East of Pond 2	<0.781	**5.71**	NA	**69.3**	**0.274**	**81**	<0.521	**33,800**	**6.51**	**3.39**	**13.2**	**2.33**	<2.6	**5,020**	**0.293**	**5.37**	**1,700**	<0.781	NA	NA	NA	<0.26	**3,420**	<0.781	**18.9**	**23.2**	<0.082
P2-FL-4-0.5	06/27/16	East of Pond 2	<0.761	**3.64**	NA	**67.2**	**0.301**	**23.8**	<0.508	**16,200**	**6.33**	**3.78**	**8.43**	**2.63**	<2.54	**3,740**	<0.254	**4.63**	**1,790**	<0.761	NA	NA	NA	<0.254	**2,890**	<0.761	**20.3**	**22.4**	<0.0806
P2-FL-4-1	06/27/16	East of Pond 2	<0.761	**3.45**	NA	**83.3**	**0.337**	**8.47**	<0.508	**8,510**	**7.26**	**4.6**	**7**	**4.24**	<6.61	**3,570**	<0.254	**4.94**	**1,830**	<0.761	NA	NA	NA	<0.254	**1,720**	<0.761	**24.3**	**27.2**	NA
P2-FL-4-3	06/27/16	East of Pond 2	<0.725	**1.41**	NA	**20.3**	**0.242**	**4.53**	<0.483	**4,360**	**3.36**	**1.65**	**2.89**	**1.27**	<2.42	**1,110**	<0.242	**1.77**	**592**	<0.725	NA	NA	NA	<0.242	**348**	<0.725	**14.2**	**8.55**	NA
P3	06/27/16	Pond 3 Composite	<0.758	**14.5**	NA	**90**	<0.253	**150**	<0.505	**57,800**	**8.41**	**16**	**39.6**	**1.42**	<2.53	**7,150**	**2.06**	**10.8**	**1,570**	<0.758	NA	NA	NA	**0.276**	**7,760**	<0.758	**26.6**	**24.4**	<0.0862
P3-FL-5-0	06/27/16	East of Pond 3	<0.789	**22.2**	**0.199**	**127**	<0.263	**433**	**0.609**	**183,000**	**12.6**	**2.41**	**47.5**	**6.08**	<2.63	**10,500**	**1.94**	**11.5**	**1,410**	**5.97**	NA	NA	NA	**1.05**	**16,900**	<0.789	**17.3**	**35.4**	<0.0877
P3-FL-5-0.5	06/27/16	East of Pond 3	<0.739	**12.8**	**0.176**	**86.2**	<0.246	**207**	<0.493	**108,000**	**6.82**	**1.42**	**26.5**	**3.26**	<2.46	**5,840**	**0.895**	**6.4**	**683**	**3.34**	NA	NA	NA	**0.583**	**3,580**	<0.739	**9.59**	**21.2**	<0.0794
P3-FL-5-1	06/27/16	East of Pond 3	<0.765	**6.87**	NA	**80.6**	<0.28	**74.8**	<0.51	**26,900**	**6.52**	**3.49**	**11.3**	**3.9**	<3.72	**4,080**	**0.592**	**5.54**	**1,640**	**0.815**	NA	NA	NA	**0.255**	**4,720**	<0.765	**16.5**	**24.2**	NA
P3-FL-5-3	06/27/16	East of Pond 3	<0.714	**3.27**	NA	**57.5**	<0.283	**16.1**	<0.476	**10,800**	**6.04**	**3.95**	**6.46**	**2.94**	<6.3	**3,160**	**0.238**	**4.27**	**1,640**	**0.714**	NA	NA	NA	**0.238**	**1,220**	<0.714	**19.9**	**22.3**	NA
P4	06/27/16	Pond 4 Composite	<0.761	**11.9**	NA	**167**	**0.401**	**194**	**0.738**	**69,700**	**16.5**	**3.53**	**42.8**	**13.5**	<2.54	**6,440**	**1.18**	**11.6**	**1,330**	**4.92**	NA	NA	NA	**0.493**	**5,220**	<0.761	**24.3**	**49.2**	<0.0862
P4-FL-6-0	06/27/16	East of Pond 4	<0.714	**21.2**	**ND**	**123**	**0.247**	**407**	**0.613**	**203,000**	**13.2**	**2.45**	**41.2**	**4.69**	<2.38	**11,300**	**1.04**	**10.3**	**1,100**	**8.19**	NA	NA	NA	**0.924**	**6,360**	<0.714	**18.9**	**34**	<0.0794
P4-FL-6-0.5	06/27/16	East of Pond 4	<0.765	**11.6**	**ND**	**118**	**0.425**	**183**	**0.52**	**77,900**	**11.9**	**4.78**	**23**	**5.77**	<2.55	**7,670**	**0.479**	**8.61**	**2,120**	**3.67**	NA	NA	NA	**0.408**	**5,080**	<0.765	**26.5**	**38.3**	<0.082
P4-FL-6-1	06/27/16	East of Pond 4	<0.761	**5.15**	NA	**92**	**0.633**	**18.9**	**0.508**	**11,600**	**11.9**	**7.6**	**14.3**	**5.6**	<12.7	**6,140**	**0.254**	**8.77**	**2,800**	**0.761**	NA	NA	NA	**0.254**	**2,920**	<0.761	**29.7**	**41.4**	NA
P4-FL-6-3	06/27/16	East of Pond 4	<0.75	**4.53**	NA	**109**	**0.45**	**9.11**	**0.5**	**12,400**	**9.5**	**6.03**	**9.07**	**3.83**	<10.1	**4,480**	**0.25**	**6.28**	**1,360**	**0.75**	`	NA	NA	**0.25**	**754**	<0.75	**35.3**	**32.5**	NA
P5	06/27/16	Pond 5 Composite	<0.718	**12.1**	NA	**287**	**0.789**	**260**	**1.4**	**61,700**	**24.8**	**6.28**	**48.9**	**25.1**	<2.39	**7,660**	**2.43**	**14.4**	**2,090**	**12.3**	**0.558**	NA	NA	**0.48**	**12,200**	<0.718	**37.8**	**48.3**	**0.113**
P5-FL-7-0	06/27/16	East of Pond 5	<0.75	**21.6**	**ND**	**120**	**0.295**	**606**	**0.674**	**176,000**	**16**	**2.82**	**47.2**	**6.36**	<2.5	**16,300**	**3.27**	**11.2**	**1,030**	**21.4**	**1.18**	**0.549**	**0.466**	**1.06**	**24,200**	<0.75	**22.4**	**27.9**	<0.0806
DUP (P5-FL-7-0)	06/27/16	East of Pond 5	<0.785	**21**	**ND**	**115**	**0.267**	**747**	**0.661**	**163,000**	**15.7**	**2.71**	**52**	**6.61**	<2.62	**17,800**	**4.39**	**11.3**	**1,130**	**29.9**	**1.06**	**0.489**	**0.383**	**0.987**	**27,900**	<0.785	**22.4**	**26.3**	<0.0847
P5-FL-7-0.5	06/27/16	East of Pond 5	<0.765	**9.5**	**ND**	**80.7**	<0.255	**219**	<0.51	**64,400**	**7.47**	**2.48**	**20.5**	**3.86**	<2.55	**7,000**	**1.2**	**5.67**	**1,230**	**6.73**	NA	NA	NA	**0.41**	**9,430**	<0.765	**15.1**	**22.5**	<0.0847
P5-FL-7-1	06/27/16	East of Pond 5	<0.765	**6.19**	NA	**81.3**	<0.351	**46.4**	<0.51	**22,900**	**7.56**	**4.48**	**12.3**	**4.58**	<4.91	**4,240**	**0.628**	**6.31**	**1,780**	**1.22**	NA	NA	NA	**0.255**	**4,620**	<0.765	**19.2**	**30.3**	NA
P5-FL-7-3	06/27/16	East of Pond 5	<0.75	**2.89**	NA	**49.8**	<0.266	**9.25**	<0.5	**8,680**	**6.07**	**3.41**	**5.73**	**2.5**	<4.83	**2,480**	**0.25**	**3.59**	**1,160**	**0.75**	NA	NA	NA	**0.25**	**612**	<0.75	**24**	**19**	NA

Table 1 - Summary of Metals
NRG Coolwater Facility
Daggett, California

			USEPA 6010B (mg/kg) except as noted																								USEPA 7471A (mg/kg)
Sample ID	**Sample Date**	**Location**	**Antimony**	**Arsenic**	**Arsenic STLC DI (mg/L)**	**Barium**	**Beryllium**	**Boron**	**Cadmium**	**Calcium**	**Chromium**	**Cobalt**	**Copper**	**Lead**	**Lithium**	**Magnesium**	**Molybdenum**	**Nickel**	**Potassium**	**Selenium**	**Selenium STLC (mg/L)**	**Selenium STLC DI (mg/L)**	**Selenium TCLP (mg/L)**	**Silver**	**Sodium**	**Thallium**	**Vanadium**	**Zinc**	**Mercury**
P5-FL-8-0	06/27/16	South of Pond 5	<0.769	**5.03**	NA	**131**	**0.544**	**9.29**	<0.513	**11,500**	**10.2**	**6.72**	**11.7**	**6.24**	**2.87**	**5,580**	<0.256	**8.55**	**2,530**	<0.769	NA	NA	NA	<0.256	**191**	<0.769	**36.2**	**55.4**	<0.0877
P5-FL-8-0.5	06/27/16	South of Pond 5	<0.769	**5.81**	NA	**151**	**0.624**	**8.75**	<0.513	**14,000**	**11.8**	**8.01**	**13.3**	**6.85**	**2.64**	**6,370**	<0.256	**8.91**	**2,540**	<0.769	NA	NA	NA	<0.256	**250**	<0.769	**43.3**	**65.6**	<0.082
P5-FL-8-1	06/27/16	South of Pond 5	<0.746	**2.74**	NA	**119**	**0.74**	**10.9**	<0.498	**8,330**	**15**	**8.74**	**15.1**	**6.78**	**15.2**	**6,930**	<0.392	**9.17**	**2,570**	<0.746	NA	NA	NA	<0.249	**362**	<0.746	**51.2**	**52.3**	NA
P5-FL-8-3	06/27/16	South of Pond 5	<0.765	**1.97**	NA	**109**	**0.628**	**7.74**	<0.51	**5,620**	**13.1**	**8.74**	**11.7**	**5.81**	**12**	**5,400**	<0.569	**8.72**	**2,590**	<0.765	NA	NA	NA	<0.255	**586**	<0.765	**42.1**	**45.5**	NA
		Maximum Result:	--	22.2		287	0.789	747	1.4	203,000	24.8	16	73.1	25.1	15.2	17,800	4.39	14.4	2,800	29.9	1.18		0.466	1.06	27,900	--	51.2	65.6	0.113

Notes:
< = Not detected above laboratory detection limits.
-- = Not available
Bold = Detection
exceeds highest background level
exceeds RSL-Residential
exceeds RSL- Industrial
exceeds 20x TCLP
exceeds 10x STLC
exceeds STLC (mg/L)

Abbreviations:
Dup = Duplicate sample
mg/kg = Milligrams per kilogram
RSL = USEPA Regional Screening Level, May 2016
USEPA = U.S. Environmental Protection Agency

TTLC = Total Threshold Limit Concentration standard; CCR Title 22 (66261.24)
STLC = Soluble Threshold Limit Concentration standard; CCR Title 22 (66261.24).

Table 2 - Summary of Ions
NRG Coolwater Facility
Daggett, California

			USEPA 300.0 (mg/kg)				USEPA 9045D	SM 2540 C, Modified (mg/kg)
Sample ID	**Sample Date**	**Location**	**Chloride**	**Fluoride**	**Nitrate (as N)**	**Sulfate**	**pH**	**Solids, Total Dissolved**
		RSL - Residential	--	3,100	130,000	--	--	--
		RSL - Industrial	--	47,000	1,900,000	--	--	--
B-1	06/27/16	Southwest of Ponds	<10	<1	**2**	<10	**7.42**	**15,000**
B-2	06/27/16	West of Ponds	**23**	<1	**40**	**45**	**6.87**	**2,810**
B-3	06/27/16	West of Ponds	**69**	<1	**38**	**42**	**7.62**	**7,690**
P1	06/27/16	Pond 1 Composite	**760**	**2.2**	**11**	**8,000**	**7.88**	**27,000**
P1-FL-1-0	06/27/16	North of Pond 1	<10	<1	**2.7**	**230**	**6.34**	**4,070**
P1-FL-1-0.5	06/27/16	North of Pond 1	<10	<1	**1.2**	**77**	**6.53**	**5,350**
P1-FL-2-0	06/27/16	North of Pond 1	**86**	**1.8**	**5.1**	**4,700**	**6.36**	**22,000**
P1-FL-2-0.5	06/27/16	North of Pond 1	**450**	<1	**68**	**4,100**	**6.59**	**18,100**
P1-FL-2-1	06/27/16	North of Pond 1	**280**	<5	**50**	**410**	NA	**6,910**
P1-FL-2-3	06/27/16	North of Pond 1	**140**	<1	**27**	**510**	NA	**4,460**
P1-FL-3-0	06/27/16	East of Pond 1	**98**	**2.4**	**11**	**7,600**	**7.24**	**23,400**
P1-FL-3-0.5	06/27/16	East of Pond 1	**280**	<1	**13**	**2,200**	**7.42**	**23,600**
P1-FL-3-1	06/27/16	East of Pond 1	**170**	<5	**7**	**2,700**	NA	**24,200**
P1-FL-3-3	06/27/16	East of Pond 1	**220**	<5	**7.6**	**2,000**	NA	**16,100**
P2	06/27/16	Pond 2 Composite	**1,600**	**2.5**	**16**	**9,500**	**8.31**	**27,200**
P2-FL-4.0	06/27/16	East of Pond 2	**950**	**1.1**	**160**	**8,700**	**7.7**	**30,100**
P2-FL-4-0.5	06/27/16	East of Pond 2	**1,500**	<1	**250**	**4,100**	**7.8**	**26,100**
P2-FL-4-1	06/27/16	East of Pond 2	**630**	<5	**81**	**1,200**	NA	**10,800**
P2-FL-4-3	06/27/16	East of Pond 2	**150**	<5	**27**	**1,400**	NA	**8,010**
P3	06/27/16	Pond 3 Composite	**5,000**	**5.7**	**35**	**14,000**	**8.51**	**47,000**
P3-FL-5-0	06/27/16	East of Pond 3	**4,900**	**4.6**	**36**	**19,000**	**8.28**	**78,400**
P3-FL-5-0.5	06/27/16	East of Pond 3	**910**	**4.4**	<1	**14,000**	**7.86**	**50,900**
P3-FL-5-1	06/27/16	East of Pond 3	**1,200**	**10**	<10	**5,900**	NA	**32,400**
P3-FL-5-3	06/27/16	East of Pond 3	**360**	**5**	<5	**1,500**	NA	**12,600**
P4	06/27/16	Pond 4 Composite	<10	<1	<1	<10	**7.93**	**23,700**
P4-FL-6-0	06/27/16	East of Pond 4	**750**	**4.2**	**9.1**	**8,300**	**8.32**	**39,400**
P4-FL-6-0.5	06/27/16	East of Pond 4	**870**	**2.9**	**17**	**7,600**	**8.22**	**27,200**
P4-FL-6-1	06/27/16	East of Pond 4	**430**	**5**	**5**	**1,800**	NA	**17,700**
P4-FL-6-3	06/27/16	East of Pond 4	**350**	**5**	**10**	**790**	NA	**7,310**
P5	06/27/16	Pond 5 Composite	**31**	**1.7**	**3.1**	**32**	**7.96**	**31,400**
P5-FL-7-0	06/27/16	East of Pond 5	**14,000**	**9**	**27**	**20,000**	**8.49**	**93,000**
DUP (P5-FL-7-0)	06/27/16	East of Pond 5	**10,000**	**6.8**	**26**	**26,000**	**8.41**	**101,000**
P5-FL-7-0.5	06/27/16	East of Pond 5	**3,700**	**4.8**	**28**	**13,000**	**8.46**	**59,200**
P5-FL-7-1	06/27/16	East of Pond 5	**1,700**	**10**	**13**	**7,600**	NA	**30,800**
P5-FL-7-3	06/27/16	East of Pond 5	**110**	**5**	**23**	**890**	NA	**7,910**
P5-FL-8-0	06/27/16	South of Pond 5	<10	<1	**14**	**47**	**8.12**	**2,800**
P5-FL-8-0.5	06/27/16	South of Pond 5	<10	<1	**10**	**36**	**7.17**	**9,800**
		Maximum Result:	14,000	10	250	26,000	8.51	101,000

Notes:
< = Not detected above laboratory detection limits.
-- = Not available
Bold = Detection
exceeds greatest background

Abbreviations:
Dup = Duplicate sample
mg/kg = Milligrams per kilogram
NA = not analyzed
RSL = USEPA Regional Screening Level, May 2016
USEPA = U.S. Environmental Protection Agency

Table 3 - Summary of TPH
NRG Coolwater Facility
Daggett, California

			USEPA 8015B (mg/kg)	
Sample ID	**Sample Date**	**Location**	**TPH as Diesel**	**TPH as Motor Oil**
B-1	06/27/16	Southwest of Ponds	<5	<25
B-2	06/27/16	West of Ponds	<5	<25
B-3	06/27/16	West of Ponds	<5	<25
P1	06/27/16	Pond 1 Composite	**11**	**28**
P1-FL-1-0	06/27/16	North of Pond 1	<5	<25
P1-FL-1-0.5	06/27/16	North of Pond 1	<5	<25
P1-FL-2-0	06/27/16	North of Pond 1	<5	<25
P1-FL-2-0.5	06/27/16	North of Pond 1	<5	<25
P1-FL-3-0	06/27/16	East of Pond 1	**13**	**40**
P1-FL-3-0.5	06/27/16	East of Pond 1	<5	<25
P2	06/27/16	Pond 2 Composite	**10**	**34**
P2-FL-4.0	06/27/16	East of Pond 2	<5	<25
P2-FL-4-0.5	06/27/16	East of Pond 2	**10**	<25
P2-FL-4-1	06/27/16	East of Pond 2	<5	<25
P2-FL-4-3	06/27/16	East of Pond 2	<5	<25
P3	06/27/16	Pond 3 Composite	**27**	**71**
P3-FL-5-0	06/27/16	East of Pond 3	**10**	**29**
P3-FL-5-0.5	06/27/16	East of Pond 3	<5	<25
P4	06/27/16	Pond 4 Composite	**110**	**280**
P4-FL-6-0	06/27/16	East of Pond 4	**7.2**	**28**
P4-FL-6-0.5	06/27/16	East of Pond 4	**11**	**31**
P4-FL-6-1	06/27/16	East of Pond 4	<5	<25
P4-FL-6-3	06/27/16	East of Pond 4	<5	<25
P5	06/27/16	Pond 5 Composite	**84**	**260**
P5-FL-7-0	06/27/16	East of Pond 5	**53**	**130**
DUP (P5-FL-7-0)	06/27/16	East of Pond 5	**53**	**160**
P5-FL-7-0.5	06/27/16	East of Pond 5	**11**	**36**
P5-FL-7-1	06/27/16	East of Pond 5	<5	<25
P5-FL-7-3	06/27/16	East of Pond 5	<5	<25
P5-FL-8-0	06/27/16	South of Pond 5	**620**	**2,600**
P5-FL-8-0.5	06/27/16	South of Pond 5	**110**	**480**
P5-FL-8-1	06/27/16	South of Pond 5	**41**	**170**
P5-FL-8-3	06/27/16	South of Pond 5	<5	<25
		Maximum Result:	620	2,600

Notes:
< = Not detected above laboratory detection limits.
-- = Not available
Bold = Detection
exceeds greatest background

Abbreviations:
Dup = Duplicate sample
mg/kg = Milligrams per kilogram
TPH = Total petroleum hydrocarbons
USEPA = U.S. Environmental Protection Agency

Table 4 - Summary of Radium
NRG Coolwater Facility
Daggett, California

Sample ID	Sample Date	Location	USEPA 904.0 (pCi/g) Radium-226	USEPA 904.0 (pCi/g) Radium-228
PRG Residential Soil			**0.012**	**0.014**
PRG Composite Worker Soil			**3.1**	**7.5**
B-1	06/27/16	Southwest of Ponds	**1.23**	**3.78**
B-2	06/27/16	West of Ponds	**1.33**	**1.14**
B-3	06/27/16	West of Ponds	**1.16**	**3.11**
P1	06/27/16	Pond 1 Composite	**1.27**	**2.03**
P1-FL-1-0	06/27/16	North of Pond 1	**2.53**	**1.14**
P1-FL-1-0.5	06/27/16	North of Pond 1	**1.71**	**4.46**
P1-FL-2-0	06/27/16	North of Pond 1	**0.536**	**2.68**
P1-FL-2-0.5	06/27/16	North of Pond 1	**1.03**	**2.23**
P1-FL-3.0	06/27/16	East of Pond 1	**1.29**	**2.01**
P1-FL-3-0.5	06/27/16	East of Pond 1	**0.445**	**1.01**
P2	06/27/16	Pond 2 Composite	**2**	**3.96**
P2-FL-4-0	06/27/16	East of Pond 2	**1.17**	**2.1**
P2-FL-4-0.5	06/27/16	East of Pond 2	**0.806**	**0.998**
P3	06/27/16	Pond 3 Composite	**1.11**	**1.35**
P3-FL-5-0	06/27/16	East of Pond 3	**0.282**	**2.33**
P3-FL-5-0.5	06/27/16	East of Pond 3	**0.767**	**2.61**
P4	06/27/16	Pond 4 Composite	**0.872**	**3.16**
P4-FL-6-0	06/27/16	East of Pond 4	**0.259**	**1.71**
P4-FL-6-0.5	06/27/16	East of Pond 4	**1.47**	**1.76**
P5	06/27/16	Pond 5 Composite	**1.8**	**4.52**
P5-FL-7-0	06/27/16	East of Pond 5	**0.818**	**0.752**
DUP (P5-FL-7-0)	06/27/16	East of Pond 5	**0.563**	**0.766**
P5-FL-7-0.5	06/27/16	East of Pond 5	**0.291**	**0.959**
P5-FL-8-0	06/27/16	South of Pond 5	**1.26**	**1.97**
P5-FL-8-0.5	06/27/16	South of Pond 5	**1.72**	**1.17**
		Maximum Result:	2.53	4.52

Notes:

Bold = Detection

background

PRG - USEPA Preliminary Remediation Goal

Abbreviations:

Dup = Duplicate sample

pCi/g = pico Curie per gram

USEPA = U.S. Environmental Protection Agency

Attachment A
Laboratory Analytical Report and
Data Validation Memorandum

Memorandum

Environmental Resources Management

555 17th Street
Suite 1700
Denver, Colorado 80202
(303) 741-5050
(303) 773-2624 (fax)
www.erm.com

To: Alfonso Nunez

From: Shanna Bauer and Sandra Mulhearn

Date: 5 August 2016

Subject: Data Review of NRG Coolwater Soil Samples Collected June 2016

Project Number: 0355141.003

Data Packages: Eurofins Calscience, Inc. Laboratory Data Package 16-06-2043 and 16-06-2043 S1

The data quality was assessed and any necessary qualifiers were applied following the *USEPA National Functional Guidelines for Superfund Organic Methods Data Review,* August 2014 and *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review,* August 2014.

HOLDING TIME AND PRESERVATION EVALUATION

The samples were prepared and analyzed within the method-prescribed time period from the date of collection with limited exceptions. pH was analyzed outside of the 24 hour hold time in five samples. In addition, several samples were removed from hold and analyzed. A number of these were past the method-prescribed holding time and most were qualified as estimated. However, nitrate samples were analyzed after greater than two times the holding time. Non-detects were rejected (R) and detected results were estimated and biased low (J-). The sample shipments were received at the laboratory within the method-prescribed preservation requirements. Hold time exceedances and associated qualifiers are presented in Table 1.

BLANK EVALUATION

The method blank sample results were nondetected for each of the target analytes. Sample data were not qualified based on the blank sample evaluation. The method blank results indicate that no contaminants were introduced to the samples during laboratory preparation or analysis.

BLANK SPIKE EVALUATION

The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) recoveries were within the laboratory's limits of acceptance. No sample data were qualified based on the blank spike evaluation. The LCS recoveries indicate acceptable laboratory accuracy and precision.

MATRIX SPIKE EVALUATION

The matrix spike (MS) and matrix spike duplicate (MSD) recoveries were within the laboratory's limits of acceptance with some exceptions. The relative percent difference (RPD) for limited analytes exceeded the control limit. No data are qualified based upon RPD exceedances alone. Qualifiers were added to the data if both the MS and MSD recoveries were outside of limits. If only one recovery was outside of limits, no qualifiers were added to the data. Associated samples were those analyzed in the same batch as the MS/MSD and in the same depth interval as the spiked sample. Two samples (P5 and P5-FL-8-3) were rejected for antimony and One sample (P5) was rejected for lithium MS/MSD recovery below 30%. Other associated samples were qualified as estimated (J/UJ) with appropriate bias flags added. The outlying MS/MSD recoveries and RPDs and associated qualifiers are listed in Table 2.

SURROGATE SPIKE EVALUATION

The surrogate recoveries were within acceptable limits. No qualifications to the data were made based on surrogate evaluation. The surrogate recoveries indicate minimal matrix interference in the samples.

FIELD DUPLICATE EVALUATION

One sample was collected and submitted in duplicate. ERM calculated the relative percent difference (RPD) between detected results. The USEPA has not established control criteria for field duplicate samples; therefore, sample data are not qualified on the basis of field duplicate imprecision. A list of the field duplicate detections and calculated RPDs is provided in Table 3.

TPH EVALUATION

The laboratory noted that the chromatograms for a number of samples analyzed for total petroleum hydrocarbons as motor oil and diesel displayed patterns that were inconsistent with the respective reference fuel standards. The results for these samples were qualified as tentatively identified and estimated (NJ), as listed in Table 4.

OVERALL ASSESSMENT

Six samples were rejected (R) to either holding time exceedences or matrix issues. All of the data except the rejected data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

Table 1
Samples with Exceeded Holding Times
NRG Coolwater Soil Samples Collected June 2016
NRG Coolwater Facility
Daggett, California

Lab Package	Sample ID	Method	Holding Time	Time Exceeded	ERM Qualifier
16-06-2043	B-1	EPA 9045D (pH)	ASAP (24 hours)	3 hours	J
16-06-2043	B-2	EPA 9045D (pH)	ASAP (24 hours)	3 hours	J
16-06-2043	B-3	EPA 9045D (pH)	ASAP (24 hours)	3 hours	J
16-06-2043	DUP (P5-FL-7-0)	EPA 9045D (pH)	ASAP (24 hours)	3 hours	J
16-06-2043	P5-FL-8-0.5	EPA 9045D (pH)	ASAP (24 hours)	3 hours	J
16-06-2043-S1	P1-FL-2-1	EPA 300 (Fluoride, Chloride, Sulfate)	28 days	3 days	J-/UJ
16-06-2043-S1	P1-FL-2-1	EPA 300 (Nitrate)	7 days	24 days	J-
16-06-2043-S1	P1-FL-2-3	EPA 300 (Fluoride, Chloride, Sulfate)	28 days	3 days	J-/UJ
16-06-2043-S1	P1-FL-2-3	EPA 300 (Nitrate)	7 days	24 days	J-
16-06-2043-S1	P1-FL-3-1	EPA 300 (Fluoride, Chloride, Sulfate)	28 days	3 days	J-/UJ
16-06-2043-S1	P1-FL-3-1	EPA 300 (Nitrate)	7 days	24 days	J-
16-06-2043-S1	P1-FL-3-3	EPA 300 (Fluoride, Chloride, Sulfate)	28 days	3 days	J-/UJ
16-06-2043-S1	P1-FL-3-3	EPA 300 (Nitrate)	7 days	24 days	J-
16-06-2043-S1	P2-FL-4-1	EPA 300 (Fluoride, Chloride, Sulfate)	28 days	3 days	J-/UJ
16-06-2043-S1	P2-FL-4-1	EPA 300 (Nitrate)	7 days	24 days	J-
16-06-2043-S1	P2-FL-4-3	EPA 300 (Fluoride, Chloride, Sulfate)	28 days	3 days	J-/UJ
16-06-2043-S1	P2-FL-4-3	EPA 300 (Nitrate)	7 days	24 days	J-
16-06-2043-S1	P3-FL-5-1	EPA 300 (Fluoride, Chloride, Sulfate)	28 days	3 days	J-/UJ
16-06-2043-S1	P3-FL-5-1	EPA 300 (Nitrate)	7 days	24 days	R

Table 1
Samples with Exceeded Holding Times
NRG Coolwater Soil Samples Collected June 2016
NRG Coolwater Facility
Daggett, California

Lab Package	Sample ID	Method	Holding Time	Time Exceeded	ERM Qualifier
16-06-2043-S1	P3-FL-5-3	EPA 300 (Fluoride, Chloride, Sulfate)	28 days	3 days	J-/UJ
16-06-2043-S1	P3-FL-5-3	EPA 300 (Nitrate)	7 days	24 days	R
16-06-2043-S1	P4-FL-6-1	EPA 300 (Fluoride, Chloride, Sulfate)	28 days	3 days	J-/UJ
16-06-2043-S1	P4-FL-6-1	EPA 300 (Nitrate)	7 days	24 days	R
16-06-2043-S1	P4-FL-6-3	EPA 300 (Fluoride, Chloride, Sulfate)	28 days	3 days	J-/UJ
16-06-2043-S1	P4-FL-6-3	EPA 300 (Nitrate)	7 days	24 days	J-
16-06-2043-S1	P5-FL-7-1	EPA 300 (Fluoride, Chloride, Sulfate)	28 days	3 days	J-/UJ
16-06-2043-S1	P5-FL-7-1	EPA 300 (Nitrate)	7 days	24 days	J-
16-06-2043-S1	P5-FL-7-3	EPA 300 (Fluoride, Chloride, Sulfate)	28 days	3 days	J-/UJ
16-06-2043-S1	P5-FL-7-3	EPA 300 (Nitrate)	7 days	24 days	J-
16-06-2043-S1	P1-FL-2-1	Total Dissolved Solids	7 days	23 days	J
16-06-2043-S1	P1-FL-2-3	Total Dissolved Solids	7 days	23 days	J
16-06-2043-S1	P1-FL-3-1	Total Dissolved Solids	7 days	23 days	J
16-06-2043-S1	P1-FL-3-3	Total Dissolved Solids	7 days	23 days	J
16-06-2043-S1	P2-FL-4-1	Total Dissolved Solids	7 days	23 days	J
16-06-2043-S1	P2-FL-4-3	Total Dissolved Solids	7 days	23 days	J
16-06-2043-S1	P3-FL-5-1	Total Dissolved Solids	7 days	23 days	J
16-06-2043-S1	P3-FL-5-3	Total Dissolved Solids	7 days	23 days	J
16-06-2043-S1	P4-FL-6-1	Total Dissolved Solids	7 days	23 days	J
16-06-2043-S1	P4-FL-6-3	Total Dissolved Solids	7 days	23 days	J
16-06-2043-S1	P5-FL-7-1	Total Dissolved Solids	7 days	23 days	J
16-06-2043-S1	P5-FL-7-3	Total Dissolved Solids	7 days	23 days	J

Table 1
Samples with Exceeded Holding Times
NRG Coolwater Soil Samples Collected June 2016
NRG Coolwater Facility
Daggett, California

Lab Package	Sample ID	Method	Holding Time	Time Exceeded	ERM Qualifier
16-06-2043-S1	P2-FL-4-1	TPH as Motor Oil	14 days till extraction	8 days	UJ
16-06-2043-S1	P2-FL-4-3	TPH as Motor Oil	14 days till extraction	8 days	UJ
16-06-2043-S1	P4-FL-6-1	TPH as Motor Oil	14 days till extraction	8 days	UJ
16-06-2043-S1	P4-FL-6-3	TPH as Motor Oil	14 days till extraction	8 days	UJ
16-06-2043-S1	P5-FL-7-1	TPH as Motor Oil	14 days till extraction	8 days	UJ
16-06-2043-S1	P5-FL-7-3	TPH as Motor Oil	14 days till extraction	8 days	UJ
16-06-2043-S1	P5-FL-8-1	TPH as Motor Oil	14 days till extraction	8 days	J-
16-06-2043-S1	P5-FL-8-3	TPH as Motor Oil	14 days till extraction	8 days	UJ
16-06-2043-S1	P2-FL-4-1	TPH as Diesel	14 days till extraction	8 days	UJ
16-06-2043-S1	P2-FL-4-3	TPH as Diesel	14 days till extraction	8 days	UJ
16-06-2043-S1	P4-FL-6-1	TPH as Diesel	14 days till extraction	8 days	UJ
16-06-2043-S1	P4-FL-6-3	TPH as Diesel	14 days till extraction	8 days	UJ
16-06-2043-S1	P5-FL-7-1	TPH as Diesel	14 days till extraction	8 days	UJ
16-06-2043-S1	P5-FL-7-3	TPH as Diesel	14 days till extraction	8 days	UJ
16-06-2043-S1	P5-FL-8-1	TPH as Diesel	14 days till extraction	8 days	J-
16-06-2043-S1	P5-FL-8-3	TPH as Diesel	14 days till extraction	8 days	UJ

Key:
J = Estimated detected result
UJ = Nondetected, estimated report limit
R = Rejected result

Table 2
Spike Recoveries Outside of Acceptable Limits
NRG Coolwater Soil Samples Collected June 2016
NRG Coolwater Facility
Daggett, California

Lab Package	Spike Sample ID	Associated Sample	Compound	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	ERM Qualifier
LCS/LCSD									
LCS/LCSD recoveries were within limits.									
MS/MSD									
16-06-2043	P1-FL-1-0 MS/MSD	P1-FL-1-0	Fluoride	50/49	80-120	3	20	ND	UJ
16-06-2043	P1-FL-1-0 MS/MSD	P1-FL-1-0	Chloride	66/77	80-120	16	20	ND	UJ
16-06-2043	P1-FL-1-0 MS/MSD	P1-FL-1-0	Nitrate (as N)	65/76	80-120	15	20	2.7	J-
16-06-2043	P1-FL-1-0 MS/MSD	P1-FL-1-0	Sulfate	50/60	80-120	10	20	230	J-
16-06-2043	--	P1-FL-2-0	Fluoride	50/49	80-120	3	20	1.8	J-
16-06-2043	--	P1-FL-2-0	Chloride	66/77	80-120	16	20	86	J-
16-06-2043	--	P1-FL-2-0	Nitrate (as N)	65/76	80-120	15	20	5.1	J-
16-06-2043	--	P1-FL-2-0	Sulfate	50/60	80-120	10	20	4700	J-
16-06-2043	--	P1-FL-3-0	Fluoride	50/49	80-120	3	20	2.4	J-
16-06-2043	--	P1-FL-3-0	Chloride	66/77	80-120	16	20	98	J-
16-06-2043	--	P1-FL-3-0	Nitrate (as N)	65/76	80-120	15	20	11	J-
16-06-2043	--	P1-FL-3-0	Sulfate	50/60	80-120	10	20	7600	J-
16-06-2043	--	P2-FL-4.0	Fluoride	50/49	80-120	3	20	1.1	J-
16-06-2043	--	P2-FL-4.0	Chloride	66/77	80-120	16	20	950	J-
16-06-2043	--	P2-FL-4.0	Nitrate (as N)	65/76	80-120	15	20	160	J-
16-06-2043	--	P2-FL-4.0	Sulfate	50/60	80-120	10	20	8700	J-
16-06-2043	--	P3-FL-5-0	Fluoride	50/49	80-120	3	20	4.6	J-
16-06-2043	--	P3-FL-5-0	Chloride	66/77	80-120	16	20	36	J-
16-06-2043	--	P3-FL-5-0	Nitrate (as N)	65/76	80-120	15	20	4900	J-
16-06-2043	--	P3-FL-5-0	Sulfate	50/60	80-120	10	20	19000	J-
16-06-2043	--	P4-FL-6-0	Fluoride	50/49	80-120	3	20	4.2	J-
16-06-2043	--	P4-FL-6-0	Chloride	66/77	80-120	16	20	750	J-
16-06-2043	--	P4-FL-6-0	Nitrate (as N)	65/76	80-120	15	20	9.1	J-
16-06-2043	--	P4-FL-6-0	Sulfate	50/60	80-120	10	20	8300	J-
16-06-2043	--	P5-FL-7-0	Fluoride	50/49	80-120	3	20	9	J-
16-06-2043	--	P5-FL-7-0	Chloride	66/77	80-120	16	20	27	J-
16-06-2043	--	P5-FL-7-0	Nitrate (as N)	65/76	80-120	15	20	14000	J-
16-06-2043	--	P5-FL-7-0	Sulfate	50/60	80-120	10	20	20000	J-

Table 2
Spike Recoveries Outside of Acceptable Limits
NRG Coolwater Soil Samples Collected June 2016
NRG Coolwater Facility
Daggett, California

Lab Package	Spike Sample ID	Associated Sample	Compound	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	ERM Qualifier
16-06-2043	--	P5-FL-8-0	Fluoride	50/49	80-120	3	20	ND	UJ
16-06-2043	--	P5-FL-8-0	Chloride	66/77	80-120	16	20	ND	UJ
16-06-2043	--	P5-FL-8-0	Nitrate (as N)	65/76	80-120	15	20	14	J-
16-06-2043	--	P5-FL-8-0	Sulfate	50/60	80-120	10	20	47	J-
16-06-2043	--	DUP	Fluoride	50/49	80-120	3	20	6.6	J-
16-06-2043	--	DUP	Chloride	66/77	80-120	16	20	26	J-
16-06-2043	--	DUP	Nitrate (as N)	65/76	80-120	15	20	10000	J-
16-06-2043	--	DUP	Sulfate	50/60	80-120	10	20	26000	J-
16-06-2043	P1 MS/MSD	P1	Fluoride	24/28	80-120	12	20	2.2	J-
16-06-2043	P1 MS/MSD	P1	Chloride	52/129	80-120	32	20	760	J
16-06-2043	P1 MS/MSD	--	Nitrate (as N)	50/80	80-120	35	20	11	--
16-06-2043	P1 MS/MSD	P1	Sulfate	221/439	80-120	11	20	8000	J+
16-06-2043	--	P5	Fluoride	--	--	--	--	1.7	J-
16-06-2043	--	P5	Chloride	--	--	--	--	31	J
16-06-2043	--	P5	Sulfate	--	--	--	--	32	J+
16-06-2043	--	P4	Fluoride	--	--	--	--	ND	UJ
16-06-2043	--	P4	Chloride	--	--	--	--	ND	UJ
16-06-2043	--	P3	Fluoride	--	--	--	--	5.7	J-
16-06-2043	--	P3	Chloride	--	--	--	--	35	J
16-06-2043	--	P3	Sulfate	--	--	--	--	14000	J+
16-06-2043	--	P2	Fluoride	--	--	--	--	2.5	J-
16-06-2043	--	P2	Chloride	--	--	--	--	16	J
16-06-2043	--	P2	Sulfate	--	--	--	--	9500	J+
16-06-2043	P5 MS/MSD	P5	Antimony	19/20	50-115	7	20	ND	R
16-06-2043	P5 MS/MSD	--	Barium	4X/4X	75-125	4X	20	287	--
16-06-2043	P5 MS/MSD	P5	Thallium	59/69	75-125	15	20	ND	UJ
16-06-2043	P5 MS/MSD	P5	Lithium	5/-65	75-125	0	20	ND	R
16-06-2043	P5 MS/MSD	--	Calcium	4X/4X	75-125	4X	20	61700	--
16-06-2043	P5 MS/MSD	--	Magnesium	4X/4X	75-125	4X	20	7660	--
16-06-2043	P5 MS/MSD	--	Potassium	4X/4X	75-125	4X	20	2090	--
16-06-2043	P5 MS/MSD	--	Sodium	4X/4X	75-125	4X	20	12200	--

Table 2
Spike Recoveries Outside of Acceptable Limits
NRG Coolwater Soil Samples Collected June 2016
NRG Coolwater Facility
Daggett, California

Lab Package	Spike Sample ID	Associated Sample	Compound	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	ERM Qualifier
16-06-2043	P5 MS/MSD	--	Boron	4X/4X	75-125	4X	20	260	--
16-06-2043	--	P4	Antimony	--	--	--	--	ND	UJ
16-06-2043	--	P4	Thallium	--	--	--	--	ND	UJ
16-06-2043	--	P4	Lithium	--	--	--	--	ND	UJ
16-06-2043	--	P3	Antimony	--	--	--	--	ND	UJ
16-06-2043	--	P3	Thallium	--	--	--	--	ND	UJ
16-06-2043	--	P3	Lithium	--	--	--	--	ND	UJ
16-06-2043	--	P2	Antimony	--	--	--	--	ND	UJ
16-06-2043	--	P2	Thallium	--	--	--	--	ND	UJ
16-06-2043	--	P2	Lithium	--	--	--	--	ND	UJ
16-06-2043	P1-FL-1-0 MS/MSD	P1-FL-1-0	Antimony	37/33	50-115	11	20	ND	UJ
16-06-2043	P1-FL-1-0 MS/MSD	--	Barium	4X/4X	75-125	4X	20	127	--
16-06-2043	P1-FL-1-0 MS/MSD	--	Zinc	129/103	75-125	12	20	26	--
16-06-2043	P1-FL-1-0 MS/MSD	--	Calcium	4X/4X	75-125	4X	20	5690	--
16-06-2043	P1-FL-1-0 MS/MSD	--	Magnesium	4X/4X	75-125	4X	20	2710	--
16-06-2043	P1-FL-1-0 MS/MSD	--	Potassium	4X/4X	75-125	4X	20	1530	--
16-06-2043	--	P1-FL-1-0	Antimony	--	--	--	--	ND	UJ
16-06-2043	--	P1-FL-2-0	Antimony	--	--	--	--	ND	UJ
16-06-2043	--	P1-FL-3-0	Antimony	--	--	--	--	ND	UJ
16-06-2043	--	P1-FL-4-0	Antimony	--	--	--	--	ND	UJ
16-06-2043	--	P1-FL-5-0	Antimony	--	--	--	--	ND	UJ
16-06-2043	--	P1-FL-6-0	Antimony	--	--	--	--	ND	UJ
16-06-2043	--	P1-FL-7-0	Antimony	--	--	--	--	ND	UJ
16-06-2043	--	P1-FL-8-0	Antimony	--	--	--	--	ND	UJ
16-06-2043-S1	Batch MS/MSD	--	Flouride	33/33	80-120	0	20	--	--
16-06-2043-S1	Batch MS/MSD	--	Nitrate (as N)	85/79	80-120	7	20	--	--
16-06-2043-S1	Batch MS/MSD	--	Sulfate	78/72	80-120	8	20	--	--
16-06-2043-S1	P5-FL-8-1 MS/MSD	--	TPH as Motor Oil	89/112	64-130	17	15	--	--
16-06-2043-S1	P5-FL-8-3 MS/MSD	P5-FL-8-3	Antimony	11/10	50-115	3	20	ND	R

Table 2
Spike Recoveries Outside of Acceptable Limits
NRG Coolwater Soil Samples Collected June 2016
NRG Coolwater Facility
Daggett, California

Lab Package	Spike Sample ID	Associated Sample	Compound	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	ERM Qualifier
16-06-2043-S1	P5-FL-8-3 MS/MSD	--	Barium	4X/4X	75-125	4X	20	--	--
16-06-2043-S1	P5-FL-8-3 MS/MSD	--	Vanadium	67/84	75-125	7	20	--	--
16-06-2043-S1	P5-FL-8-3 MS/MSD	--	Calcium	4X/4X	75-125	4X	20	--	--
16-06-2043-S1	P5-FL-8-3 MS/MSD	--	Magnesium	4X/4X	75-125	4X	20	--	--
16-06-2043-S1	P5-FL-8-3 MS/MSD	--	Potassium	4X/4X	75-125	4X	20	--	--
16-06-2043-S1	--	P1-FL-1-1	Antimony	--	--	--	--	ND	UJ
16-06-2043-S1	--	P1-FL-1-3	Antimony	--	--	--	--	ND	UJ
16-06-2043-S1	--	P1-FL-2-1	Antimony	--	--	--	--	ND	UJ
16-06-2043-S1	--	P1-FL-2-3	Antimony	--	--	--	--	ND	UJ
16-06-2043-S1	--	P1-FL-3-1	Antimony	--	--	--	--	ND	UJ
16-06-2043-S1	--	P1-FL-3-3	Antimony	--	--	--	--	ND	UJ
16-06-2043-S1	--	P2-FL-4-1	Antimony	--	--	--	--	ND	UJ
16-06-2043-S1	--	P2-FL-4-3	Antimony	--	--	--	--	ND	UJ
16-06-2043-S1	--	P3-FL-5-1	Antimony	--	--	--	--	ND	UJ
16-06-2043-S1	--	P3-FL-5-3	Antimony	--	--	--	--	ND	UJ
16-06-2043-S1	--	P4-FL-6-1	Antimony	--	--	--	--	ND	UJ
16-06-2043-S1	--	P4-FL-6-3	Antimony	--	--	--	--	ND	UJ
16-06-2043-S1	--	P5-FL-7-1	Antimony	--	--	--	--	ND	UJ
16-06-2043-S1	--	P5-FL-7-3	Antimony	--	--	--	--	ND	UJ
16-06-2043-S1	--	P5-FL-8-1	Antimony	--	--	--	--	ND	UJ
16-06-2043-S1	Batch MS/MSD	--	Selenium	102/89	79-127	14	9	--	--

Key:
J = Estimated detected result
UJ = Nondetected, estimated report limit
J/UJ = Detected results are estimated; nondetected results are estimated at the report limit
R = Rejected result
RPD = Relative percent difference
NA = Not applicable; associated samples not qualified
ND = Not detected

Table 3
Field Duplicate Results and Calculated Relative Percent Differences
NRG Coolwater Soil Samples Collected June 2016
NRG Coolwater Facility
Daggett, California

Lab Package	Sample ID	Compound	Concentration		Report Limit	Units	RPD (%)
			Sample	Duplicate			
16-06-20443	P5-FL-7-0 / DUP	Fluoride	9	6.8	5	mg/Kg	27.8
		Chloride	14000	10000	500	mg/Kg	33.3
		Nitrate (as N)	27	26	5	mg/Kg	3.8
		Sulfate	20000	26000	500	mg/Kg	26.1
		Arsenic	21.6	21	0.75	mg/Kg	2.8
		Barium	120	115	0.5	mg/Kg	4.3
		Beryllium	0.295	0.267	0.25	mg/Kg	10.0
		Cadmium	0.674	0.661	0.5	mg/Kg	1.9
		Chromium	16	15.7	0.25	mg/Kg	1.9
		Cobalt	2.82	2.71	0.25	mg/Kg	4.0
		Copper	47.2	52	0.5	mg/Kg	9.7
		Lead	6.36	6.61	0.5	mg/Kg	3.9
		Molybdenum	3.27	4.39	0.25	mg/Kg	29.2
		Nickel	11.2	11.3	0.25	mg/Kg	0.9
		Selenium	21.4	29.9	0.75	mg/Kg	33.1
		Silver	1.06	0.987	0.25	mg/Kg	7.1
		Vanadium	22.4	22.4	0.25	mg/Kg	0.0
		Zinc	27.9	26.3	1	mg/Kg	5.9
		Calcium	176000	163000	50	mg/Kg	7.7
		Magnesium	16300	17800	5	mg/Kg	8.8
		Potassium	1030	1130	25	mg/Kg	9.3
		Sodium	24200	27900	25	mg/Kg	14.2
		Boron	606	747	1	mg/Kg	20.8
		TPH as Motor Oil	130	160	25	mg/Kg	20.7
		TPH as Diesel	53	53	5	mg/Kg	0.0
		pH	8.49	8.41	0.01	mg/Kg	0.9
		Solids, Total Dissolved	93000	101000	100	mg/Kg	8.2

Key:
mg/Kg = Milligrams per Kilogram
RPD = Relative percent difference

Table 4
Suspect TPH Results
NRG Coolwater Soil Samples Collected June 2016
NRG Coolwater Facility
Daggett, California

Lab Package	Sample ID	Compound	Reported Concentration	Units	ERM Qualifier	Notes
16-06-2043	P1-FL-3-0	TPH as Motor Oil	40	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P1-FL-3-0	TPH as Diesel	13	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P2-FL-4-0.5	TPH as Diesel	10	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P3-FL-5-0	TPH as Motor Oil	29	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P3-FL-5-0	TPH as Diesel	10	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P4-FL-6-0	TPH as Motor Oil	28	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P4-FL-6-0	TPH as Diesel	7.2	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P4-FL-6-0.5	TPH as Motor Oil	31	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P4-FL-6-0.5	TPH as Diesel	11	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P5-FL-7-0	TPH as Motor Oil	130	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P5-FL-7-0	TPH as Diesel	53	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P5-FL-7-0.5	TPH as Motor Oil	36	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P5-FL-7-0.5	TPH as Diesel	11	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.

Table 4
Suspect TPH Results
NRG Coolwater Soil Samples Collected June 2016
NRG Coolwater Facility
Daggett, California

Lab Package	Sample ID	Compound	Reported Concentration	Units	ERM Qualifier	Notes
16-06-2043	P5-FL-8-0	TPH as Motor Oil	2600	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P5-FL-8-0	TPH as Diesel	620	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P5-FL-8-0.5	TPH as Motor Oil	480	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	DUP	TPH as Motor Oil	160	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	DUP	TPH as Diesel	53	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P5	TPH as Motor Oil	260	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P5	TPH as Diesel	84	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P4	TPH as Motor Oil	280	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P4	TPH as Diesel	110	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P3	TPH as Motor Oil	71	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P3	TPH as Diesel	27	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P2	TPH as Motor Oil	34	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P2	TPH as Diesel	10	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.

Table 4
Suspect TPH Results
NRG Coolwater Soil Samples Collected June 2016
NRG Coolwater Facility
Daggett, California

Lab Package	Sample ID	Compound	Reported Concentration	Units	ERM Qualifier	Notes
16-06-2043	P1	TPH as Motor Oil	28	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043	P1	TPH as Diesel	11	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043-S1	P5-FL-8-1	TPH as Motor Oil	170	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
16-06-2043-S1	P5-FL-8-1	TPH as Diesel	41	mg/Kg	NJ	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.

Key:
mg/kg = Milligrams per kilogram
NJ = Tentatively Identified Estimated value - chromatogram did not resemble the standard hydrocarbon pattern
TPH = Total petroleum hydrocarbons

eurofins | Calscience

WORK ORDER NUMBER: 16-06-2043

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ERM-WEST

Client Project Name: NRG Coolwater

Attention: Steve Williams
2875 Michelle Dr.
Suite 200
Irvine, CA 92606-1021

Approved for release on 07/18/2016 by:
Virendra Patel
Project Manager

ResultLink

Email your PM

eurofins | Calscience

Contents

Client Project Name: NRG Coolwater
Work Order Number: 16-06-2043

eurofins | Calscience

Work Order Narrative

Work Order: 16-06-2043 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 06/28/16. They were assigned to Work Order 16-06-2043.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Return to Contents

eurofins | Calscience

Sample Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	PO Number:	
		Date/Time Received:	06/28/16 18:40
		Number of Containers:	127
Attn:	Steve Williams		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
P5-1	16-06-2043-1	06/27/16 07:25	2	Solid
P5-2	16-06-2043-2	06/27/16 07:30	2	Solid
P5-3	16-06-2043-3	06/27/16 07:35	2	Solid
P5-4	16-06-2043-4	06/27/16 07:40	2	Solid
P5-5	16-06-2043-5	06/27/16 07:45	2	Solid
P4-1	16-06-2043-6	06/27/16 08:15	2	Solid
P4-2	16-06-2043-7	06/27/16 08:20	2	Solid
P4-3	16-06-2043-8	06/27/16 08:25	2	Solid
P4-4	16-06-2043-9	06/27/16 08:30	2	Solid
P4-5	16-06-2043-10	06/27/16 08:35	2	Solid
P3-1	16-06-2043-11	06/27/16 08:20	2	Solid
P3-2	16-06-2043-12	06/27/16 08:25	2	Solid
P3-3	16-06-2043-13	06/27/16 08:40	2	Solid
P3-4	16-06-2043-14	06/27/16 08:30	2	Solid
P3-5	16-06-2043-15	06/27/16 08:35	2	Solid
P2-1	16-06-2043-16	06/27/16 09:05	2	Solid
P2-2	16-06-2043-17	06/27/16 09:10	2	Solid
P2-3	16-06-2043-18	06/27/16 09:15	2	Solid
P2-4	16-06-2043-19	06/27/16 09:20	2	Solid
P2-5	16-06-2043-20	06/27/16 09:25	2	Solid
P1-1	16-06-2043-21	06/27/16 09:00	2	Solid
P1-2	16-06-2043-22	06/27/16 09:05	2	Solid
P1-3	16-06-2043-23	06/27/16 09:10	2	Solid
P1-4	16-06-2043-24	06/27/16 09:15	2	Solid
P1-5	16-06-2043-25	06/27/16 09:20	2	Solid
P1-FL-1-0	16-06-2043-26	06/27/16 14:40	2	Solid
P1-FL-1-0.5	16-06-2043-27	06/27/16 14:45	2	Solid
P1-FL-1-1	16-06-2043-28	06/27/16 14:50	2	Solid
P1-FL-1-3	16-06-2043-29	06/27/16 14:55	2	Solid
P1-FL-2-0	16-06-2043-30	06/27/16 14:15	2	Solid
P1-FL-2-0.5	16-06-2043-31	06/27/16 14:20	2	Solid
P1-FL-2-1	16-06-2043-32	06/27/16 14:25	2	Solid
P1-FL-2-3	16-06-2043-33	06/27/16 14:30	2	Solid
P1-FL-3-0	16-06-2043-34	06/27/16 13:45	2	Solid
P1-FL-3-0.5	16-06-2043-35	06/27/16 13:50	2	Solid
P1-FL-3-1	16-06-2043-36	06/27/16 13:55	2	Solid
P1-FL-3-3	16-06-2043-37	06/27/16 14:00	2	Solid
P2-FL-4.0	16-06-2043-38	06/27/16 13:20	2	Solid
P2-FL-4-0.5	16-06-2043-39	06/27/16 13:25	2	Solid
P2-FL-4-1	16-06-2043-40	06/27/16 13:30	2	Solid
P2-FL-4-3	16-06-2043-41	06/27/16 13:35	2	Solid
P3-FL-5-0	16-06-2043-42	06/27/16 11:30	2	Solid

Return to Contents

eurofins | Calscience

Sample Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	PO Number:	
		Date/Time Received:	06/28/16 18:40
		Number of Containers:	127
Attn:	Steve Williams		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
P3-FL-5-0.5	16-06-2043-43	06/27/16 11:35	2	Solid
P3-FL-5-1	16-06-2043-44	06/27/16 11:40	2	Solid
P3-FL-5-3	16-06-2043-45	06/27/16 11:45	2	Solid
P4-FL-6-0	16-06-2043-46	06/27/16 11:00	2	Solid
P4-FL-6-0.5	16-06-2043-47	06/27/16 11:05	2	Solid
P4-FL-6-1	16-06-2043-48	06/27/16 11:10	2	Solid
P4-FL-6-3	16-06-2043-49	06/27/16 11:15	2	Solid
P5-FL-7-0	16-06-2043-50	06/27/16 10:45	2	Solid
P5-FL-7-0.5	16-06-2043-51	06/27/16 10:50	2	Solid
P5-FL-7-1	16-06-2043-52	06/27/16 10:55	2	Solid
P5-FL-7-3	16-06-2043-53	06/27/16 11:00	2	Solid
P5-FL-8-0	16-06-2043-54	06/27/16 10:00	2	Solid
P5-FL-8-0.5	16-06-2043-55	06/27/16 10:05	2	Solid
P5-FL-8-1	16-06-2043-56	06/27/16 10:10	2	Solid
P5-FL-8-3	16-06-2043-57	06/27/16 10:15	2	Solid
B-1	16-06-2043-58	06/27/16 15:25	2	Solid
B-2	16-06-2043-59	06/27/16 15:15	2	Solid
DUP	16-06-2043-60	06/27/16 00:00	2	Solid
B-3	16-06-2043-61	06/27/16 15:30	2	Solid
P5	16-06-2043-62	06/27/16 00:00	1	Solid
P4	16-06-2043-63	06/27/16 00:00	1	Solid
P3	16-06-2043-64	06/27/16 00:00	1	Solid
P2	16-06-2043-65	06/27/16 00:00	1	Solid
P1	16-06-2043-66	06/27/16 00:00	1	Solid

Return to Contents

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P1-FL-1-0 (16-06-2043-26)						
Nitrate (as N)	2.7		1.0	mg/kg	EPA 300.0	N/A
Sulfate	230		10	mg/kg	EPA 300.0	N/A
Arsenic	2.22		0.761	mg/kg	EPA 6010B	EPA 3050B
Barium	127		0.508	mg/kg	EPA 6010B	EPA 3050B
Chromium	5.09		0.254	mg/kg	EPA 6010B	EPA 3050B
Cobalt	3.47		0.254	mg/kg	EPA 6010B	EPA 3050B
Copper	5.73		0.508	mg/kg	EPA 6010B	EPA 3050B
Lead	3.67		0.508	mg/kg	EPA 6010B	EPA 3050B
Nickel	3.89		0.254	mg/kg	EPA 6010B	EPA 3050B
Vanadium	17.1		0.254	mg/kg	EPA 6010B	EPA 3050B
Zinc	26.4		1.02	mg/kg	EPA 6010B	EPA 3050B
Calcium	5690		5.08	mg/kg	EPA 6010B	EPA 3050B
Magnesium	2710		5.08	mg/kg	EPA 6010B	EPA 3050B
Potassium	1530		25.4	mg/kg	EPA 6010B	EPA 3050B
Sodium	92.8		25.4	mg/kg	EPA 6010B	EPA 3050B
Boron	4.19		1.02	mg/kg	EPA 6010B	EPA 3050B
pH	6.34		0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	4070		10.0	mg/kg	SM 2540 C (M)	N/A
P1-FL-1-0.5 (16-06-2043-27)						
Nitrate (as N)	1.2		1.0	mg/kg	EPA 300.0	N/A
Sulfate	77		10	mg/kg	EPA 300.0	N/A
Arsenic	3.27		0.728	mg/kg	EPA 6010B	EPA 3050B
Barium	94.5		0.485	mg/kg	EPA 6010B	EPA 3050B
Chromium	4.93		0.243	mg/kg	EPA 6010B	EPA 3050B
Cobalt	3.20		0.243	mg/kg	EPA 6010B	EPA 3050B
Copper	5.19		0.485	mg/kg	EPA 6010B	EPA 3050B
Lead	3.24		0.485	mg/kg	EPA 6010B	EPA 3050B
Nickel	3.47		0.243	mg/kg	EPA 6010B	EPA 3050B
Vanadium	18.5		0.243	mg/kg	EPA 6010B	EPA 3050B
Zinc	22.5		0.971	mg/kg	EPA 6010B	EPA 3050B
Calcium	5110		4.85	mg/kg	EPA 6010B	EPA 3050B
Magnesium	2380		4.85	mg/kg	EPA 6010B	EPA 3050B
Potassium	1440		24.3	mg/kg	EPA 6010B	EPA 3050B
Sodium	90.7		24.3	mg/kg	EPA 6010B	EPA 3050B
Boron	2.64		0.971	mg/kg	EPA 6010B	EPA 3050B
Mercury	0.0846		0.0794	mg/kg	EPA 7471A	EPA 7471A Total
pH	6.53		0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	5350		10.0	mg/kg	SM 2540 C (M)	N/A

* MDL is shown

Return to Contents

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P1-FL-2-0 (16-06-2043-30)						
Fluoride	1.8		1.0	mg/kg	EPA 300.0	N/A
Chloride	86		10	mg/kg	EPA 300.0	N/A
Nitrate (as N)	5.1		1.0	mg/kg	EPA 300.0	N/A
Sulfate	4700		100	mg/kg	EPA 300.0	N/A
Arsenic	7.25		0.725	mg/kg	EPA 6010B	EPA 3050B
Barium	95.0		0.483	mg/kg	EPA 6010B	EPA 3050B
Chromium	6.25		0.242	mg/kg	EPA 6010B	EPA 3050B
Cobalt	3.25		0.242	mg/kg	EPA 6010B	EPA 3050B
Copper	10.7		0.483	mg/kg	EPA 6010B	EPA 3050B
Lead	2.32		0.483	mg/kg	EPA 6010B	EPA 3050B
Nickel	5.53		0.242	mg/kg	EPA 6010B	EPA 3050B
Vanadium	21.7		0.242	mg/kg	EPA 6010B	EPA 3050B
Zinc	26.0		0.966	mg/kg	EPA 6010B	EPA 3050B
Calcium	37700		4.83	mg/kg	EPA 6010B	EPA 3050B
Magnesium	4870		4.83	mg/kg	EPA 6010B	EPA 3050B
Potassium	1690		24.2	mg/kg	EPA 6010B	EPA 3050B
Sodium	684		24.2	mg/kg	EPA 6010B	EPA 3050B
Boron	47.9		0.966	mg/kg	EPA 6010B	EPA 3050B
pH	6.36		0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	22000		100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P1-FL-2-0.5 (16-06-2043-31)						
Chloride	450		10	mg/kg	EPA 300.0	N/A
Nitrate (as N)	68		1.0	mg/kg	EPA 300.0	N/A
Sulfate	4100		50	mg/kg	EPA 300.0	N/A
Arsenic	5.24		0.750	mg/kg	EPA 6010B	EPA 3050B
Barium	89.7		0.500	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.281		0.250	mg/kg	EPA 6010B	EPA 3050B
Chromium	5.99		0.250	mg/kg	EPA 6010B	EPA 3050B
Cobalt	3.33		0.250	mg/kg	EPA 6010B	EPA 3050B
Copper	8.50		0.500	mg/kg	EPA 6010B	EPA 3050B
Lead	2.64		0.500	mg/kg	EPA 6010B	EPA 3050B
Nickel	5.10		0.250	mg/kg	EPA 6010B	EPA 3050B
Vanadium	17.8		0.250	mg/kg	EPA 6010B	EPA 3050B
Zinc	23.8		1.00	mg/kg	EPA 6010B	EPA 3050B
Calcium	21100		5.00	mg/kg	EPA 6010B	EPA 3050B
Magnesium	3730		5.00	mg/kg	EPA 6010B	EPA 3050B
Potassium	1830		25.0	mg/kg	EPA 6010B	EPA 3050B
Sodium	1060		25.0	mg/kg	EPA 6010B	EPA 3050B
Boron	26.5		1.00	mg/kg	EPA 6010B	EPA 3050B
pH	6.59		0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	18100		100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		Page 4 of 24

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P1-FL-3-0 (16-06-2043-34)						
Fluoride	2.4		1.0	mg/kg	EPA 300.0	N/A
Chloride	98		10	mg/kg	EPA 300.0	N/A
Nitrate (as N)	11		1.0	mg/kg	EPA 300.0	N/A
Sulfate	7600		100	mg/kg	EPA 300.0	N/A
Arsenic	12.5		0.761	mg/kg	EPA 6010B	EPA 3050B
Barium	103		0.508	mg/kg	EPA 6010B	EPA 3050B
Chromium	9.60		0.254	mg/kg	EPA 6010B	EPA 3050B
Cobalt	2.71		0.254	mg/kg	EPA 6010B	EPA 3050B
Copper	38.1		0.508	mg/kg	EPA 6010B	EPA 3050B
Lead	1.28		0.508	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	0.304		0.254	mg/kg	EPA 6010B	EPA 3050B
Nickel	10.1		0.254	mg/kg	EPA 6010B	EPA 3050B
Silver	0.534		0.254	mg/kg	EPA 6010B	EPA 3050B
Vanadium	19.4		0.254	mg/kg	EPA 6010B	EPA 3050B
Zinc	58.9		1.02	mg/kg	EPA 6010B	EPA 3050B
Calcium	93600		50.8	mg/kg	EPA 6010B	EPA 3050B
Magnesium	8560		5.08	mg/kg	EPA 6010B	EPA 3050B
Potassium	1610		25.4	mg/kg	EPA 6010B	EPA 3050B
Sodium	1140		25.4	mg/kg	EPA 6010B	EPA 3050B
Boron	148		1.02	mg/kg	EPA 6010B	EPA 3050B
TPH as Motor Oil	40	HD	25	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	13	HD	5.0	mg/kg	EPA 8015B (M)	EPA 3550B
pH	7.24		0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	23400		100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		Page 5 of 24

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P1-FL-3-0.5 (16-06-2043-35)						
Chloride	280		10	mg/kg	EPA 300.0	N/A
Nitrate (as N)	13		1.0	mg/kg	EPA 300.0	N/A
Sulfate	2200		50	mg/kg	EPA 300.0	N/A
Arsenic	4.36		0.781	mg/kg	EPA 6010B	EPA 3050B
Barium	69.4		0.521	mg/kg	EPA 6010B	EPA 3050B
Chromium	6.06		0.260	mg/kg	EPA 6010B	EPA 3050B
Cobalt	3.46		0.260	mg/kg	EPA 6010B	EPA 3050B
Copper	11.3		0.521	mg/kg	EPA 6010B	EPA 3050B
Lead	2.55		0.521	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	0.277		0.260	mg/kg	EPA 6010B	EPA 3050B
Nickel	4.79		0.260	mg/kg	EPA 6010B	EPA 3050B
Vanadium	20.5		0.260	mg/kg	EPA 6010B	EPA 3050B
Zinc	20.6		1.04	mg/kg	EPA 6010B	EPA 3050B
Calcium	21500		5.21	mg/kg	EPA 6010B	EPA 3050B
Magnesium	3480		5.21	mg/kg	EPA 6010B	EPA 3050B
Potassium	1750		26.0	mg/kg	EPA 6010B	EPA 3050B
Sodium	1360		26.0	mg/kg	EPA 6010B	EPA 3050B
Boron	31.5		1.04	mg/kg	EPA 6010B	EPA 3050B
pH	7.42		0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	23600		100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P2-FL-4.0 (16-06-2043-38)						
Fluoride	1.1		1.0	mg/kg	EPA 300.0	N/A
Chloride	950		200	mg/kg	EPA 300.0	N/A
Nitrate (as N)	160		20	mg/kg	EPA 300.0	N/A
Sulfate	8700		200	mg/kg	EPA 300.0	N/A
Arsenic	5.71		0.781	mg/kg	EPA 6010B	EPA 3050B
Barium	69.3		0.521	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.274		0.260	mg/kg	EPA 6010B	EPA 3050B
Chromium	6.51		0.260	mg/kg	EPA 6010B	EPA 3050B
Cobalt	3.39		0.260	mg/kg	EPA 6010B	EPA 3050B
Copper	13.2		0.521	mg/kg	EPA 6010B	EPA 3050B
Lead	2.33		0.521	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	0.293		0.260	mg/kg	EPA 6010B	EPA 3050B
Nickel	5.37		0.260	mg/kg	EPA 6010B	EPA 3050B
Vanadium	18.9		0.260	mg/kg	EPA 6010B	EPA 3050B
Zinc	23.2		1.04	mg/kg	EPA 6010B	EPA 3050B
Calcium	33800		5.21	mg/kg	EPA 6010B	EPA 3050B
Magnesium	5020		5.21	mg/kg	EPA 6010B	EPA 3050B
Potassium	1700		26.0	mg/kg	EPA 6010B	EPA 3050B
Sodium	3420		26.0	mg/kg	EPA 6010B	EPA 3050B
Boron	81.0		1.04	mg/kg	EPA 6010B	EPA 3050B
pH	7.49		0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	30100		100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P2-FL-4-0.5 (16-06-2043-39)						
Chloride	1500		100	mg/kg	EPA 300.0	N/A
Nitrate (as N)	250		10	mg/kg	EPA 300.0	N/A
Sulfate	4100		100	mg/kg	EPA 300.0	N/A
Arsenic	3.64		0.761	mg/kg	EPA 6010B	EPA 3050B
Barium	67.2		0.508	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.301		0.254	mg/kg	EPA 6010B	EPA 3050B
Chromium	6.33		0.254	mg/kg	EPA 6010B	EPA 3050B
Cobalt	3.78		0.254	mg/kg	EPA 6010B	EPA 3050B
Copper	8.43		0.508	mg/kg	EPA 6010B	EPA 3050B
Lead	2.63		0.508	mg/kg	EPA 6010B	EPA 3050B
Nickel	4.63		0.254	mg/kg	EPA 6010B	EPA 3050B
Vanadium	20.3		0.254	mg/kg	EPA 6010B	EPA 3050B
Zinc	22.4		1.02	mg/kg	EPA 6010B	EPA 3050B
Calcium	16200		5.08	mg/kg	EPA 6010B	EPA 3050B
Magnesium	3740		5.08	mg/kg	EPA 6010B	EPA 3050B
Potassium	1790		25.4	mg/kg	EPA 6010B	EPA 3050B
Sodium	2890		25.4	mg/kg	EPA 6010B	EPA 3050B
Boron	23.8		1.02	mg/kg	EPA 6010B	EPA 3050B
TPH as Diesel	10	HD	5.0	mg/kg	EPA 8015B (M)	EPA 3550B
pH	7.80		0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	26100		100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		Page 8 of 24

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P3-FL-5-0 (16-06-2043-42)						
Fluoride	4.6		2.0	mg/kg	EPA 300.0	N/A
Chloride	4900		400	mg/kg	EPA 300.0	N/A
Nitrate (as N)	36		2.0	mg/kg	EPA 300.0	N/A
Sulfate	19000		400	mg/kg	EPA 300.0	N/A
Arsenic	22.2		0.789	mg/kg	EPA 6010B	EPA 3050B
Barium	127		0.526	mg/kg	EPA 6010B	EPA 3050B
Cadmium	0.609		0.526	mg/kg	EPA 6010B	EPA 3050B
Chromium	12.6		0.263	mg/kg	EPA 6010B	EPA 3050B
Cobalt	2.41		0.263	mg/kg	EPA 6010B	EPA 3050B
Copper	47.5		0.526	mg/kg	EPA 6010B	EPA 3050B
Lead	6.08		0.526	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	1.94		0.263	mg/kg	EPA 6010B	EPA 3050B
Nickel	11.5		0.263	mg/kg	EPA 6010B	EPA 3050B
Selenium	5.97		0.789	mg/kg	EPA 6010B	EPA 3050B
Silver	1.05		0.263	mg/kg	EPA 6010B	EPA 3050B
Vanadium	17.3		0.263	mg/kg	EPA 6010B	EPA 3050B
Zinc	35.4		1.05	mg/kg	EPA 6010B	EPA 3050B
Calcium	183000		52.6	mg/kg	EPA 6010B	EPA 3050B
Magnesium	10500		5.26	mg/kg	EPA 6010B	EPA 3050B
Potassium	1410		26.3	mg/kg	EPA 6010B	EPA 3050B
Sodium	16900		26.3	mg/kg	EPA 6010B	EPA 3050B
Boron	433		1.05	mg/kg	EPA 6010B	EPA 3050B
TPH as Motor Oil	29	HD	25	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	10	HD	5.0	mg/kg	EPA 8015B (M)	EPA 3550B
pH	8.28		0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	78400		100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P3-FL-5-0.5 (16-06-2043-43)						
Fluoride	4.4		1.0	mg/kg	EPA 300.0	N/A
Chloride	910		10	mg/kg	EPA 300.0	N/A
Sulfate	14000		200	mg/kg	EPA 300.0	N/A
Arsenic	12.8		0.739	mg/kg	EPA 6010B	EPA 3050B
Barium	86.2		0.493	mg/kg	EPA 6010B	EPA 3050B
Chromium	6.82		0.246	mg/kg	EPA 6010B	EPA 3050B
Cobalt	1.42		0.246	mg/kg	EPA 6010B	EPA 3050B
Copper	26.5		0.493	mg/kg	EPA 6010B	EPA 3050B
Lead	3.26		0.493	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	0.895		0.246	mg/kg	EPA 6010B	EPA 3050B
Nickel	6.40		0.246	mg/kg	EPA 6010B	EPA 3050B
Selenium	3.34		0.739	mg/kg	EPA 6010B	EPA 3050B
Silver	0.583		0.246	mg/kg	EPA 6010B	EPA 3050B
Vanadium	9.59		0.246	mg/kg	EPA 6010B	EPA 3050B
Zinc	21.2		0.985	mg/kg	EPA 6010B	EPA 3050B
Calcium	108000		49.3	mg/kg	EPA 6010B	EPA 3050B
Magnesium	5840		4.93	mg/kg	EPA 6010B	EPA 3050B
Potassium	683		24.6	mg/kg	EPA 6010B	EPA 3050B
Sodium	3580		24.6	mg/kg	EPA 6010B	EPA 3050B
Boron	207		0.985	mg/kg	EPA 6010B	EPA 3050B
pH	7.86		0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	50900		100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		Page 10 of 24

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P4-FL-6-0 (16-06-2043-46)						
Fluoride	4.2		1.0	mg/kg	EPA 300.0	N/A
Chloride	750		10	mg/kg	EPA 300.0	N/A
Nitrate (as N)	9.1		1.0	mg/kg	EPA 300.0	N/A
Sulfate	8300		200	mg/kg	EPA 300.0	N/A
Arsenic	21.2		0.714	mg/kg	EPA 6010B	EPA 3050B
Barium	123		0.476	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.247		0.238	mg/kg	EPA 6010B	EPA 3050B
Cadmium	0.613		0.476	mg/kg	EPA 6010B	EPA 3050B
Chromium	13.2		0.238	mg/kg	EPA 6010B	EPA 3050B
Cobalt	2.45		0.238	mg/kg	EPA 6010B	EPA 3050B
Copper	41.2		0.476	mg/kg	EPA 6010B	EPA 3050B
Lead	4.69		0.476	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	1.04		0.238	mg/kg	EPA 6010B	EPA 3050B
Nickel	10.3		0.238	mg/kg	EPA 6010B	EPA 3050B
Selenium	8.19		0.714	mg/kg	EPA 6010B	EPA 3050B
Silver	0.924		0.238	mg/kg	EPA 6010B	EPA 3050B
Vanadium	18.9		0.238	mg/kg	EPA 6010B	EPA 3050B
Zinc	34.0		0.952	mg/kg	EPA 6010B	EPA 3050B
Calcium	203000		47.6	mg/kg	EPA 6010B	EPA 3050B
Magnesium	11300		4.76	mg/kg	EPA 6010B	EPA 3050B
Potassium	1100		23.8	mg/kg	EPA 6010B	EPA 3050B
Sodium	6360		23.8	mg/kg	EPA 6010B	EPA 3050B
Boron	407		0.952	mg/kg	EPA 6010B	EPA 3050B
TPH as Motor Oil	28	HD	25	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	7.2	HD	5.0	mg/kg	EPA 8015B (M)	EPA 3550B
pH	8.32		0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	39400		100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P4-FL-6-0.5 (16-06-2043-47)						
Fluoride	2.9		1.0	mg/kg	EPA 300.0	N/A
Chloride	870		100	mg/kg	EPA 300.0	N/A
Nitrate (as N)	17		1.0	mg/kg	EPA 300.0	N/A
Sulfate	7600		100	mg/kg	EPA 300.0	N/A
Arsenic	11.6		0.765	mg/kg	EPA 6010B	EPA 3050B
Barium	118		0.510	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.425		0.255	mg/kg	EPA 6010B	EPA 3050B
Cadmium	0.520		0.510	mg/kg	EPA 6010B	EPA 3050B
Chromium	11.9		0.255	mg/kg	EPA 6010B	EPA 3050B
Cobalt	4.78		0.255	mg/kg	EPA 6010B	EPA 3050B
Copper	23.0		0.510	mg/kg	EPA 6010B	EPA 3050B
Lead	5.77		0.510	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	0.479		0.255	mg/kg	EPA 6010B	EPA 3050B
Nickel	8.61		0.255	mg/kg	EPA 6010B	EPA 3050B
Selenium	3.67		0.765	mg/kg	EPA 6010B	EPA 3050B
Silver	0.408		0.255	mg/kg	EPA 6010B	EPA 3050B
Vanadium	26.5		0.255	mg/kg	EPA 6010B	EPA 3050B
Zinc	38.3		1.02	mg/kg	EPA 6010B	EPA 3050B
Calcium	77900		51.0	mg/kg	EPA 6010B	EPA 3050B
Magnesium	7670		5.10	mg/kg	EPA 6010B	EPA 3050B
Potassium	2120		25.5	mg/kg	EPA 6010B	EPA 3050B
Sodium	5080		25.5	mg/kg	EPA 6010B	EPA 3050B
Boron	183		1.02	mg/kg	EPA 6010B	EPA 3050B
TPH as Motor Oil	31	HD	25	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	11	HD	5.0	mg/kg	EPA 8015B (M)	EPA 3550B
pH	8.22		0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	27200		100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P5-FL-7-0 (16-06-2043-50)						
Fluoride	9.0		5.0	mg/kg	EPA 300.0	N/A
Chloride	14000		500	mg/kg	EPA 300.0	N/A
Nitrate (as N)	27		5.0	mg/kg	EPA 300.0	N/A
Sulfate	20000		500	mg/kg	EPA 300.0	N/A
Arsenic	21.6		0.750	mg/kg	EPA 6010B	EPA 3050B
Barium	120		0.500	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.295		0.250	mg/kg	EPA 6010B	EPA 3050B
Cadmium	0.674		0.500	mg/kg	EPA 6010B	EPA 3050B
Chromium	16.0		0.250	mg/kg	EPA 6010B	EPA 3050B
Cobalt	2.82		0.250	mg/kg	EPA 6010B	EPA 3050B
Copper	47.2		0.500	mg/kg	EPA 6010B	EPA 3050B
Lead	6.36		0.500	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	3.27		0.250	mg/kg	EPA 6010B	EPA 3050B
Nickel	11.2		0.250	mg/kg	EPA 6010B	EPA 3050B
Selenium	21.4		0.750	mg/kg	EPA 6010B	EPA 3050B
Silver	1.06		0.250	mg/kg	EPA 6010B	EPA 3050B
Vanadium	22.4		0.250	mg/kg	EPA 6010B	EPA 3050B
Zinc	27.9		1.00	mg/kg	EPA 6010B	EPA 3050B
Calcium	176000		50.0	mg/kg	EPA 6010B	EPA 3050B
Magnesium	16300		5.00	mg/kg	EPA 6010B	EPA 3050B
Potassium	1030		25.0	mg/kg	EPA 6010B	EPA 3050B
Sodium	24200		25.0	mg/kg	EPA 6010B	EPA 3050B
Boron	606		1.00	mg/kg	EPA 6010B	EPA 3050B
TPH as Motor Oil	130	HD	25	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	53	HD	5.0	mg/kg	EPA 8015B (M)	EPA 3550B
pH	8.49		0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	93000		100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P5-FL-7-0.5 (16-06-2043-51)						
Fluoride	4.8		2.0	mg/kg	EPA 300.0	N/A
Chloride	3700		200	mg/kg	EPA 300.0	N/A
Nitrate (as N)	28		2.0	mg/kg	EPA 300.0	N/A
Sulfate	13000		200	mg/kg	EPA 300.0	N/A
Arsenic	9.50		0.765	mg/kg	EPA 6010B	EPA 3050B
Barium	80.7		0.510	mg/kg	EPA 6010B	EPA 3050B
Chromium	7.47		0.255	mg/kg	EPA 6010B	EPA 3050B
Cobalt	2.48		0.255	mg/kg	EPA 6010B	EPA 3050B
Copper	20.5		0.510	mg/kg	EPA 6010B	EPA 3050B
Lead	3.86		0.510	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	1.20		0.255	mg/kg	EPA 6010B	EPA 3050B
Nickel	5.67		0.255	mg/kg	EPA 6010B	EPA 3050B
Selenium	6.73		0.765	mg/kg	EPA 6010B	EPA 3050B
Silver	0.410		0.255	mg/kg	EPA 6010B	EPA 3050B
Vanadium	15.1		0.255	mg/kg	EPA 6010B	EPA 3050B
Zinc	22.5		1.02	mg/kg	EPA 6010B	EPA 3050B
Calcium	64400		51.0	mg/kg	EPA 6010B	EPA 3050B
Magnesium	7000		5.10	mg/kg	EPA 6010B	EPA 3050B
Potassium	1230		25.5	mg/kg	EPA 6010B	EPA 3050B
Sodium	9430		25.5	mg/kg	EPA 6010B	EPA 3050B
Boron	219		1.02	mg/kg	EPA 6010B	EPA 3050B
TPH as Motor Oil	36	HD	25	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	11	HD	5.0	mg/kg	EPA 8015B (M)	EPA 3550B
pH	8.46		0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	59200		100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P5-FL-8-0 (16-06-2043-54)						
Nitrate (as N)	14		1.0	mg/kg	EPA 300.0	N/A
Sulfate	47		10	mg/kg	EPA 300.0	N/A
Arsenic	5.03		0.769	mg/kg	EPA 6010B	EPA 3050B
Barium	131		0.513	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.544		0.256	mg/kg	EPA 6010B	EPA 3050B
Chromium	10.2		0.256	mg/kg	EPA 6010B	EPA 3050B
Cobalt	6.72		0.256	mg/kg	EPA 6010B	EPA 3050B
Copper	11.7		0.513	mg/kg	EPA 6010B	EPA 3050B
Lead	6.24		0.513	mg/kg	EPA 6010B	EPA 3050B
Nickel	8.55		0.256	mg/kg	EPA 6010B	EPA 3050B
Vanadium	36.2		0.256	mg/kg	EPA 6010B	EPA 3050B
Zinc	55.4		1.03	mg/kg	EPA 6010B	EPA 3050B
Lithium	2.87		2.56	mg/kg	EPA 6010B	EPA 3050B
Calcium	11500		5.13	mg/kg	EPA 6010B	EPA 3050B
Magnesium	5580		5.13	mg/kg	EPA 6010B	EPA 3050B
Potassium	2530		25.6	mg/kg	EPA 6010B	EPA 3050B
Sodium	191		25.6	mg/kg	EPA 6010B	EPA 3050B
Boron	9.29		1.03	mg/kg	EPA 6010B	EPA 3050B
TPH as Motor Oil	2600	HD	620	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	620	HD	120	mg/kg	EPA 8015B (M)	EPA 3550B
pH	8.12		0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	2800		10.0	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P5-FL-8-0.5 (16-06-2043-55)						
Nitrate (as N)	10		1.0	mg/kg	EPA 300.0	N/A
Sulfate	36		10	mg/kg	EPA 300.0	N/A
Arsenic	5.81		0.769	mg/kg	EPA 6010B	EPA 3050B
Barium	151		0.513	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.624		0.256	mg/kg	EPA 6010B	EPA 3050B
Chromium	11.8		0.256	mg/kg	EPA 6010B	EPA 3050B
Cobalt	8.01		0.256	mg/kg	EPA 6010B	EPA 3050B
Copper	13.3		0.513	mg/kg	EPA 6010B	EPA 3050B
Lead	6.85		0.513	mg/kg	EPA 6010B	EPA 3050B
Nickel	8.91		0.256	mg/kg	EPA 6010B	EPA 3050B
Vanadium	43.3		0.256	mg/kg	EPA 6010B	EPA 3050B
Zinc	65.6		1.03	mg/kg	EPA 6010B	EPA 3050B
Lithium	2.64		2.56	mg/kg	EPA 6010B	EPA 3050B
Calcium	14000		5.13	mg/kg	EPA 6010B	EPA 3050B
Magnesium	6370		5.13	mg/kg	EPA 6010B	EPA 3050B
Potassium	2540		25.6	mg/kg	EPA 6010B	EPA 3050B
Sodium	250		25.6	mg/kg	EPA 6010B	EPA 3050B
Boron	8.75		1.03	mg/kg	EPA 6010B	EPA 3050B
TPH as Motor Oil	480	HD	120	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	110		25	mg/kg	EPA 8015B (M)	EPA 3550B
pH	7.17	BU	0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	9800		10.0	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
B-1 (16-06-2043-58)						
Nitrate (as N)	2.0		1.0	mg/kg	EPA 300.0	N/A
Arsenic	3.04		0.765	mg/kg	EPA 6010B	EPA 3050B
Barium	79.8		0.510	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.363		0.255	mg/kg	EPA 6010B	EPA 3050B
Chromium	7.35		0.255	mg/kg	EPA 6010B	EPA 3050B
Cobalt	5.44		0.255	mg/kg	EPA 6010B	EPA 3050B
Copper	7.77		0.510	mg/kg	EPA 6010B	EPA 3050B
Lead	3.78		0.510	mg/kg	EPA 6010B	EPA 3050B
Nickel	5.45		0.255	mg/kg	EPA 6010B	EPA 3050B
Vanadium	23.8		0.255	mg/kg	EPA 6010B	EPA 3050B
Zinc	32.0		1.02	mg/kg	EPA 6010B	EPA 3050B
Lithium	4.07		2.55	mg/kg	EPA 6010B	EPA 3050B
Calcium	9580		5.10	mg/kg	EPA 6010B	EPA 3050B
Magnesium	3970		5.10	mg/kg	EPA 6010B	EPA 3050B
Potassium	2070		25.5	mg/kg	EPA 6010B	EPA 3050B
Sodium	144		25.5	mg/kg	EPA 6010B	EPA 3050B
Boron	3.36		1.02	mg/kg	EPA 6010B	EPA 3050B
pH	7.42	BU	0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	15000		100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
B-2 (16-06-2043-59)						
Chloride	23		10	mg/kg	EPA 300.0	N/A
Nitrate (as N)	40		1.0	mg/kg	EPA 300.0	N/A
Sulfate	45		10	mg/kg	EPA 300.0	N/A
Arsenic	2.75		0.754	mg/kg	EPA 6010B	EPA 3050B
Barium	102		0.503	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.300		0.251	mg/kg	EPA 6010B	EPA 3050B
Chromium	6.17		0.251	mg/kg	EPA 6010B	EPA 3050B
Cobalt	3.84		0.251	mg/kg	EPA 6010B	EPA 3050B
Copper	7.08		0.503	mg/kg	EPA 6010B	EPA 3050B
Lead	3.95		0.503	mg/kg	EPA 6010B	EPA 3050B
Nickel	5.16		0.251	mg/kg	EPA 6010B	EPA 3050B
Vanadium	16.2		0.251	mg/kg	EPA 6010B	EPA 3050B
Zinc	21.4		1.01	mg/kg	EPA 6010B	EPA 3050B
Calcium	7660		5.03	mg/kg	EPA 6010B	EPA 3050B
Magnesium	3040		5.03	mg/kg	EPA 6010B	EPA 3050B
Potassium	1980		25.1	mg/kg	EPA 6010B	EPA 3050B
Sodium	138		25.1	mg/kg	EPA 6010B	EPA 3050B
Boron	5.70		1.01	mg/kg	EPA 6010B	EPA 3050B
pH	6.87	BU	0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	2810		10.0	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		Page 18 of 24

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
DUP (16-06-2043-60)						
Fluoride	6.8		5.0	mg/kg	EPA 300.0	N/A
Chloride	10000		500	mg/kg	EPA 300.0	N/A
Nitrate (as N)	26		5.0	mg/kg	EPA 300.0	N/A
Sulfate	26000		500	mg/kg	EPA 300.0	N/A
Arsenic	21.0		0.785	mg/kg	EPA 6010B	EPA 3050B
Barium	115		0.524	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.267		0.262	mg/kg	EPA 6010B	EPA 3050B
Cadmium	0.661		0.524	mg/kg	EPA 6010B	EPA 3050B
Chromium	15.7		0.262	mg/kg	EPA 6010B	EPA 3050B
Cobalt	2.71		0.262	mg/kg	EPA 6010B	EPA 3050B
Copper	52.0		0.524	mg/kg	EPA 6010B	EPA 3050B
Lead	6.61		0.524	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	4.39		0.262	mg/kg	EPA 6010B	EPA 3050B
Nickel	11.3		0.262	mg/kg	EPA 6010B	EPA 3050B
Selenium	29.9		0.785	mg/kg	EPA 6010B	EPA 3050B
Silver	0.987		0.262	mg/kg	EPA 6010B	EPA 3050B
Vanadium	22.4		0.262	mg/kg	EPA 6010B	EPA 3050B
Zinc	26.3		1.05	mg/kg	EPA 6010B	EPA 3050B
Calcium	163000		52.4	mg/kg	EPA 6010B	EPA 3050B
Magnesium	17800		5.24	mg/kg	EPA 6010B	EPA 3050B
Potassium	1130		26.2	mg/kg	EPA 6010B	EPA 3050B
Sodium	27900		26.2	mg/kg	EPA 6010B	EPA 3050B
Boron	747		1.05	mg/kg	EPA 6010B	EPA 3050B
TPH as Motor Oil	160	HD	50	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	53	HD	10	mg/kg	EPA 8015B (M)	EPA 3550B
pH	8.41	BU	0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	101000		1000	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
B-3 (16-06-2043-61)						
Chloride	69		10	mg/kg	EPA 300.0	N/A
Nitrate (as N)	38		1.0	mg/kg	EPA 300.0	N/A
Sulfate	42		10	mg/kg	EPA 300.0	N/A
Arsenic	4.04		0.758	mg/kg	EPA 6010B	EPA 3050B
Barium	125		0.505	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.366		0.253	mg/kg	EPA 6010B	EPA 3050B
Cadmium	0.559		0.505	mg/kg	EPA 6010B	EPA 3050B
Chromium	11.7		0.253	mg/kg	EPA 6010B	EPA 3050B
Cobalt	4.84		0.253	mg/kg	EPA 6010B	EPA 3050B
Copper	14.2		0.505	mg/kg	EPA 6010B	EPA 3050B
Lead	6.99		0.505	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	0.465		0.253	mg/kg	EPA 6010B	EPA 3050B
Nickel	8.61		0.253	mg/kg	EPA 6010B	EPA 3050B
Silver	0.388		0.253	mg/kg	EPA 6010B	EPA 3050B
Vanadium	19.0		0.253	mg/kg	EPA 6010B	EPA 3050B
Zinc	53.1		1.01	mg/kg	EPA 6010B	EPA 3050B
Calcium	14500		5.05	mg/kg	EPA 6010B	EPA 3050B
Magnesium	4130		5.05	mg/kg	EPA 6010B	EPA 3050B
Potassium	2090		25.3	mg/kg	EPA 6010B	EPA 3050B
Sodium	426		25.3	mg/kg	EPA 6010B	EPA 3050B
Boron	19.5		1.01	mg/kg	EPA 6010B	EPA 3050B
pH	7.62	BU	0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	7690		10.0	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		Page 20 of 24

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P5 (16-06-2043-62)						
Fluoride	1.7		1.0	mg/kg	EPA 300.0	N/A
Chloride	31		10	mg/kg	EPA 300.0	N/A
Nitrate (as N)	3.1		1.0	mg/kg	EPA 300.0	N/A
Sulfate	32		10	mg/kg	EPA 300.0	N/A
Arsenic	12.1		0.718	mg/kg	EPA 6010B	EPA 3050B
Barium	287		0.478	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.789		0.239	mg/kg	EPA 6010B	EPA 3050B
Cadmium	1.40		0.478	mg/kg	EPA 6010B	EPA 3050B
Chromium	24.8		0.239	mg/kg	EPA 6010B	EPA 3050B
Cobalt	6.28		0.239	mg/kg	EPA 6010B	EPA 3050B
Copper	48.9		0.478	mg/kg	EPA 6010B	EPA 3050B
Lead	25.1		0.478	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	2.43		0.239	mg/kg	EPA 6010B	EPA 3050B
Nickel	14.4		0.239	mg/kg	EPA 6010B	EPA 3050B
Selenium	12.3		0.718	mg/kg	EPA 6010B	EPA 3050B
Silver	0.480		0.239	mg/kg	EPA 6010B	EPA 3050B
Vanadium	37.8		0.239	mg/kg	EPA 6010B	EPA 3050B
Zinc	48.3		0.957	mg/kg	EPA 6010B	EPA 3050B
Calcium	61700		47.8	mg/kg	EPA 6010B	EPA 3050B
Magnesium	7660		4.78	mg/kg	EPA 6010B	EPA 3050B
Potassium	2090		23.9	mg/kg	EPA 6010B	EPA 3050B
Sodium	12200		23.9	mg/kg	EPA 6010B	EPA 3050B
Boron	260		0.957	mg/kg	EPA 6010B	EPA 3050B
Mercury	0.113		0.0847	mg/kg	EPA 7471A	EPA 7471A Total
TPH as Motor Oil	260	HD	50	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	84	HD	9.9	mg/kg	EPA 8015B (M)	EPA 3550B
pH	7.96		0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	31400		100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P4 (16-06-2043-63)						
Arsenic	11.9		0.761	mg/kg	EPA 6010B	EPA 3050B
Barium	167		0.508	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.401		0.254	mg/kg	EPA 6010B	EPA 3050B
Cadmium	0.738		0.508	mg/kg	EPA 6010B	EPA 3050B
Chromium	16.5		0.254	mg/kg	EPA 6010B	EPA 3050B
Cobalt	3.53		0.254	mg/kg	EPA 6010B	EPA 3050B
Copper	42.8		0.508	mg/kg	EPA 6010B	EPA 3050B
Lead	13.5		0.508	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	1.18		0.254	mg/kg	EPA 6010B	EPA 3050B
Nickel	11.6		0.254	mg/kg	EPA 6010B	EPA 3050B
Selenium	4.92		0.761	mg/kg	EPA 6010B	EPA 3050B
Silver	0.493		0.254	mg/kg	EPA 6010B	EPA 3050B
Vanadium	24.3		0.254	mg/kg	EPA 6010B	EPA 3050B
Zinc	49.2		1.02	mg/kg	EPA 6010B	EPA 3050B
Calcium	69700		50.8	mg/kg	EPA 6010B	EPA 3050B
Magnesium	6440		5.08	mg/kg	EPA 6010B	EPA 3050B
Potassium	1330		25.4	mg/kg	EPA 6010B	EPA 3050B
Sodium	5220		25.4	mg/kg	EPA 6010B	EPA 3050B
Boron	194		1.02	mg/kg	EPA 6010B	EPA 3050B
TPH as Motor Oil	280	HD	25	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	110	HD	5.0	mg/kg	EPA 8015B (M)	EPA 3550B
pH	7.93		0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	23700		100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		Page 22 of 24

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P3 (16-06-2043-64)						
Fluoride	5.7		2.0	mg/kg	EPA 300.0	N/A
Chloride	5000		200	mg/kg	EPA 300.0	N/A
Nitrate (as N)	35		2.0	mg/kg	EPA 300.0	N/A
Sulfate	14000		200	mg/kg	EPA 300.0	N/A
Arsenic	14.5		0.758	mg/kg	EPA 6010B	EPA 3050B
Barium	90.0		0.505	mg/kg	EPA 6010B	EPA 3050B
Chromium	8.41		0.253	mg/kg	EPA 6010B	EPA 3050B
Cobalt	16.0		0.253	mg/kg	EPA 6010B	EPA 3050B
Copper	39.6		0.505	mg/kg	EPA 6010B	EPA 3050B
Lead	1.42		0.505	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	2.06		0.253	mg/kg	EPA 6010B	EPA 3050B
Nickel	10.8		0.253	mg/kg	EPA 6010B	EPA 3050B
Silver	0.276		0.253	mg/kg	EPA 6010B	EPA 3050B
Vanadium	26.6		0.253	mg/kg	EPA 6010B	EPA 3050B
Zinc	24.4		1.01	mg/kg	EPA 6010B	EPA 3050B
Calcium	57800		50.5	mg/kg	EPA 6010B	EPA 3050B
Magnesium	7150		5.05	mg/kg	EPA 6010B	EPA 3050B
Potassium	1570		25.3	mg/kg	EPA 6010B	EPA 3050B
Sodium	7760		25.3	mg/kg	EPA 6010B	EPA 3050B
Boron	150		1.01	mg/kg	EPA 6010B	EPA 3050B
TPH as Motor Oil	71	HD	25	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	27	HD	5.0	mg/kg	EPA 8015B (M)	EPA 3550B
pH	8.51		0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	47000		100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P2 (16-06-2043-65)						
Fluoride	2.5		1.0	mg/kg	EPA 300.0	N/A
Chloride	1600		200	mg/kg	EPA 300.0	N/A
Nitrate (as N)	16		1.0	mg/kg	EPA 300.0	N/A
Sulfate	9500		200	mg/kg	EPA 300.0	N/A
Arsenic	7.07		0.761	mg/kg	EPA 6010B	EPA 3050B
Barium	77.5		0.508	mg/kg	EPA 6010B	EPA 3050B
Chromium	5.79		0.254	mg/kg	EPA 6010B	EPA 3050B
Cobalt	2.37		0.254	mg/kg	EPA 6010B	EPA 3050B
Copper	29.6		0.508	mg/kg	EPA 6010B	EPA 3050B
Lead	1.05		0.508	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	0.711		0.254	mg/kg	EPA 6010B	EPA 3050B
Nickel	6.80		0.254	mg/kg	EPA 6010B	EPA 3050B
Vanadium	18.5		0.254	mg/kg	EPA 6010B	EPA 3050B
Zinc	21.4		1.02	mg/kg	EPA 6010B	EPA 3050B
Calcium	47600		50.8	mg/kg	EPA 6010B	EPA 3050B
Magnesium	4820		5.08	mg/kg	EPA 6010B	EPA 3050B
Potassium	1340		25.4	mg/kg	EPA 6010B	EPA 3050B
Sodium	4930		25.4	mg/kg	EPA 6010B	EPA 3050B
Boron	82.7		1.02	mg/kg	EPA 6010B	EPA 3050B
TPH as Motor Oil	34	HD	25	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	10	HD	5.0	mg/kg	EPA 8015B (M)	EPA 3550B
pH	8.31		0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	27200		100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		Page 24 of 24

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P1 (16-06-2043-66)						
Fluoride	2.2		1.0	mg/kg	EPA 300.0	N/A
Chloride	760		200	mg/kg	EPA 300.0	N/A
Nitrate (as N)	11		1.0	mg/kg	EPA 300.0	N/A
Sulfate	8000		200	mg/kg	EPA 300.0	N/A
Arsenic	11.5		0.718	mg/kg	EPA 6010B	EPA 3050B
Barium	88.0		0.478	mg/kg	EPA 6010B	EPA 3050B
Chromium	9.63		0.239	mg/kg	EPA 6010B	EPA 3050B
Cobalt	2.11		0.239	mg/kg	EPA 6010B	EPA 3050B
Copper	73.1		0.478	mg/kg	EPA 6010B	EPA 3050B
Lead	0.747		0.478	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	0.398		0.239	mg/kg	EPA 6010B	EPA 3050B
Nickel	13.2		0.239	mg/kg	EPA 6010B	EPA 3050B
Silver	0.406		0.239	mg/kg	EPA 6010B	EPA 3050B
Vanadium	18.7		0.239	mg/kg	EPA 6010B	EPA 3050B
Zinc	27.0		0.957	mg/kg	EPA 6010B	EPA 3050B
Calcium	65600		47.8	mg/kg	EPA 6010B	EPA 3050B
Magnesium	7080		4.78	mg/kg	EPA 6010B	EPA 3050B
Potassium	999		23.9	mg/kg	EPA 6010B	EPA 3050B
Sodium	2250		23.9	mg/kg	EPA 6010B	EPA 3050B
Boron	69.9		0.957	mg/kg	EPA 6010B	EPA 3050B
TPH as Motor Oil	28	HD	25	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	11	HD	5.0	mg/kg	EPA 8015B (M)	EPA 3550B
pH	7.88		0.01	pH units	EPA 9045D	N/A
Solids, Total Dissolved	25000		100	mg/kg	SM 2540 C (M)	N/A

Subcontracted analyses, if any, are not included in this summary.

Return to Contents

* MDL is shown

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: EPA 300.0
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-1-0	**16-06-2043-26-A**	**06/27/16 14:40**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 14:59**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	1.0	1.00	
Chloride	ND	10	1.00	
Nitrate (as N)	2.7	1.0	1.00	
Sulfate	230	10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-1-0.5	**16-06-2043-27-A**	**06/27/16 14:45**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 15:18**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	1.0	1.00	
Chloride	ND	10	1.00	
Nitrate (as N)	1.2	1.0	1.00	
Sulfate	77	10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-0	**16-06-2043-30-A**	**06/27/16 14:15**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 15:36**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	1.8	1.0	1.00	
Chloride	86	10	1.00	
Nitrate (as N)	5.1	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-0	**16-06-2043-30-A**	**06/27/16 14:15**	**Solid**	**IC 10**	**07/01/16**	**07/03/16 00:12**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Sulfate	4700	100	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-0.5	**16-06-2043-31-A**	**06/27/16 14:20**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 15:55**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	1.0	1.00	
Chloride	450	10	1.00	
Nitrate (as N)	68	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-0.5	**16-06-2043-31-A**	**06/27/16 14:20**	**Solid**	**IC 10**	**07/01/16**	**07/03/16 00:31**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Sulfate	4100	50	5.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: EPA 300.0
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-0	**16-06-2043-34-A**	**06/27/16 13:45**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 16:14**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	2.4	1.0	1.00	
Chloride	98	10	1.00	
Nitrate (as N)	11	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-0	**16-06-2043-34-A**	**06/27/16 13:45**	**Solid**	**IC 10**	**07/01/16**	**07/03/16 00:50**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Sulfate	7600	100	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-0.5	**16-06-2043-35-A**	**06/27/16 13:50**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 16:33**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	1.0	1.00	
Chloride	280	10	1.00	
Nitrate (as N)	13	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-0.5	**16-06-2043-35-A**	**06/27/16 13:50**	**Solid**	**IC 10**	**07/01/16**	**07/03/16 01:09**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Sulfate	2200	50	5.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4.0	**16-06-2043-38-A**	**06/27/16 13:20**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 16:52**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	1.1	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4.0	**16-06-2043-38-A**	**06/27/16 13:20**	**Solid**	**IC 10**	**07/01/16**	**07/03/16 01:28**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Chloride	950	200	20.0	
Nitrate (as N)	160	20	20.0	
Sulfate	8700	200	20.0	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: EPA 300.0
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4-0.5	**16-06-2043-39-A**	**06/27/16 13:25**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 17:11**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	1.0	1.00	

P2-FL-4-0.5	**16-06-2043-39-A**	**06/27/16 13:25**	**Solid**	**IC 10**	**07/01/16**	**07/03/16 01:47**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Chloride	1500	100	10.0	
Nitrate (as N)	250	10	10.0	
Sulfate	4100	100	10.0	

P3-FL-5-0	**16-06-2043-42-A**	**06/27/16 11:30**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 17:30**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	4.6	2.0	2.00	
Nitrate (as N)	36	2.0	2.00	

P3-FL-5-0	**16-06-2043-42-A**	**06/27/16 11:30**	**Solid**	**IC 10**	**07/01/16**	**07/06/16 22:00**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Chloride	4900	400	40.0	
Sulfate	19000	400	40.0	

P3-FL-5-0.5	**16-06-2043-43-A**	**06/27/16 11:35**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 17:49**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	4.4	1.0	1.00	
Chloride	910	10	1.00	
Nitrate (as N)	ND	1.0	1.00	

P3-FL-5-0.5	**16-06-2043-43-A**	**06/27/16 11:35**	**Solid**	**IC 10**	**07/01/16**	**07/03/16 02:25**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Sulfate	14000	200	20.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: EPA 300.0
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-0	**16-06-2043-46-A**	**06/27/16 11:00**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 19:01**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	4.2	1.0	1.00	
Chloride	750	10	1.00	
Nitrate (as N)	9.1	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-0	**16-06-2043-46-A**	**06/27/16 11:00**	**Solid**	**IC 10**	**07/01/16**	**07/03/16 02:44**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Sulfate	8300	200	20.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-0.5	**16-06-2043-47-A**	**06/27/16 11:05**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 19:20**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	2.9	1.0	1.00	
Nitrate (as N)	17	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-0.5	**16-06-2043-47-A**	**06/27/16 11:05**	**Solid**	**IC 10**	**07/01/16**	**07/03/16 03:03**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Chloride	870	100	10.0	
Sulfate	7600	100	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0	**16-06-2043-50-A**	**06/27/16 10:45**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 19:39**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	9.0	5.0	5.00	
Nitrate (as N)	27	5.0	5.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0	**16-06-2043-50-A**	**06/27/16 10:45**	**Solid**	**IC 10**	**07/01/16**	**07/03/16 04:18**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Chloride	14000	500	50.0	
Sulfate	20000	500	50.0	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: EPA 300.0
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0.5	**16-06-2043-51-A**	**06/27/16 10:50**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 19:58**	**160701L01P**

Comment(s): - The reporting limit is elevated resulting from matrix interference.

Parameter	Result	RL	DF	Qualifiers
Fluoride	4.8	2.0	2.00	
Nitrate (as N)	28	2.0	2.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0.5	**16-06-2043-51-A**	**06/27/16 10:50**	**Solid**	**IC 10**	**07/01/16**	**07/03/16 04:37**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Chloride	3700	200	20.0	
Sulfate	13000	200	20.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-0	**16-06-2043-54-A**	**06/27/16 10:00**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 20:17**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	1.0	1.00	
Chloride	ND	10	1.00	
Nitrate (as N)	14	1.0	1.00	
Sulfate	47	10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-0.5	**16-06-2043-55-A**	**06/27/16 10:05**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 20:37**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	1.0	1.00	
Chloride	ND	10	1.00	
Nitrate (as N)	10	1.0	1.00	
Sulfate	36	10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-1	**16-06-2043-58-A**	**06/27/16 15:25**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 20:55**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	1.0	1.00	
Chloride	ND	10	1.00	
Nitrate (as N)	2.0	1.0	1.00	
Sulfate	ND	10	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: EPA 300.0
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2	**16-06-2043-59-A**	**06/27/16 15:15**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 21:14**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	1.0	1.00	
Chloride	23	10	1.00	
Nitrate (as N)	40	1.0	1.00	
Sulfate	45	10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP	**16-06-2043-60-A**	**06/27/16 00:00**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 21:33**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	6.8	5.0	5.00	
Nitrate (as N)	26	5.0	5.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP	**16-06-2043-60-A**	**06/27/16 00:00**	**Solid**	**IC 10**	**07/01/16**	**07/03/16 04:56**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Chloride	10000	500	50.0	
Sulfate	26000	500	50.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-3	**16-06-2043-61-A**	**06/27/16 15:30**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 21:52**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	1.0	1.00	
Chloride	69	10	1.00	
Nitrate (as N)	38	1.0	1.00	
Sulfate	42	10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5	**16-06-2043-62-A**	**06/27/16 00:00**	**Solid**	**IC 10**	**07/01/16**	**07/02/16 00:24**	**160701L02P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	1.7	1.0	1.00	
Chloride	31	10	1.00	
Nitrate (as N)	3.1	1.0	1.00	
Sulfate	32	10	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: EPA 300.0
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4	**16-06-2043-63-A**	**06/27/16 00:00**	**Solid**	**IC 10**	**07/01/16**	**07/02/16 00:43**	**160701L02P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	1.0	1.00	
Chloride	ND	10	1.00	
Nitrate (as N)	ND	1.0	1.00	
Sulfate	ND	10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3	**16-06-2043-64-A**	**06/27/16 00:00**	**Solid**	**IC 10**	**07/01/16**	**07/02/16 01:01**	**160701L02P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	5.7	2.0	2.00	
Nitrate (as N)	35	2.0	2.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3	**16-06-2043-64-A**	**06/27/16 00:00**	**Solid**	**IC 10**	**07/01/16**	**07/03/16 05:15**	**160701L02P**

Parameter	Result	RL	DF	Qualifiers
Chloride	5000	200	20.0	
Sulfate	14000	200	20.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2	**16-06-2043-65-A**	**06/27/16 00:00**	**Solid**	**IC 10**	**07/01/16**	**07/02/16 01:20**	**160701L02P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	2.5	1.0	1.00	
Nitrate (as N)	16	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2	**16-06-2043-65-A**	**06/27/16 00:00**	**Solid**	**IC 10**	**07/01/16**	**07/03/16 05:34**	**160701L02P**

Parameter	Result	RL	DF	Qualifiers
Chloride	1600	200	20.0	
Sulfate	9500	200	20.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1	**16-06-2043-66-A**	**06/27/16 00:00**	**Solid**	**IC 10**	**07/01/16**	**07/02/16 01:39**	**160701L02P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	2.2	1.0	1.00	
Nitrate (as N)	11	1.0	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: EPA 300.0
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1	**16-06-2043-66-A**	**06/27/16 00:00**	**Solid**	**IC 10**	**07/01/16**	**07/03/16 05:53**	**160701L02P**

Parameter	Result	RL	DF	Qualifiers
Chloride	760	200	20.0	
Sulfate	8000	200	20.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-922-739**	**N/A**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 14:19**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	1.0	1.00	
Chloride	ND	10	1.00	
Nitrate (as N)	ND	1.0	1.00	
Sulfate	ND	10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-922-740**	**N/A**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 23:46**	**160701L02P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	1.0	1.00	
Chloride	ND	10	1.00	
Nitrate (as N)	ND	1.0	1.00	
Sulfate	ND	10	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: EPA 9045D
Units: pH units

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-1-0	**16-06-2043-26-A**	**06/27/16 14:40**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Result	RL	DF	Qualifiers
pH	6.34	0.01	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-1-0.5	**16-06-2043-27-A**	**06/27/16 14:45**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Result	RL	DF	Qualifiers
pH	6.53	0.01	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-0	**16-06-2043-30-A**	**06/27/16 14:15**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Result	RL	DF	Qualifiers
pH	6.36	0.01	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-0.5	**16-06-2043-31-A**	**06/27/16 14:20**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Result	RL	DF	Qualifiers
pH	6.59	0.01	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-0	**16-06-2043-34-A**	**06/27/16 13:45**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Result	RL	DF	Qualifiers
pH	7.24	0.01	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-0.5	**16-06-2043-35-A**	**06/27/16 13:50**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Result	RL	DF	Qualifiers
pH	7.42	0.01	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4.0	**16-06-2043-38-A**	**06/27/16 13:20**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Result	RL	DF	Qualifiers
pH	7.49	0.01	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4-0.5	**16-06-2043-39-A**	**06/27/16 13:25**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Result	RL	DF	Qualifiers
pH	7.80	0.01	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: EPA 9045D
Units: pH units

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3-FL-5-0	**16-06-2043-42-A**	**06/27/16 11:30**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Result	RL	DF	Qualifiers
pH	8.28	0.01	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3-FL-5-0.5	**16-06-2043-43-A**	**06/27/16 11:35**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Result	RL	DF	Qualifiers
pH	7.86	0.01	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-0	**16-06-2043-46-A**	**06/27/16 11:00**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Result	RL	DF	Qualifiers
pH	8.32	0.01	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-0.5	**16-06-2043-47-A**	**06/27/16 11:05**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Result	RL	DF	Qualifiers
pH	8.22	0.01	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0	**16-06-2043-50-A**	**06/27/16 10:45**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Result	RL	DF	Qualifiers
pH	8.49	0.01	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0.5	**16-06-2043-51-A**	**06/27/16 10:50**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Result	RL	DF	Qualifiers
pH	8.46	0.01	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-0	**16-06-2043-54-A**	**06/27/16 10:00**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Result	RL	DF	Qualifiers
pH	8.12	0.01	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-0.5	**16-06-2043-55-A**	**06/27/16 10:05**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 21:30**	**G0629PHD6**

Parameter	Result	RL	DF	Qualifiers
pH	7.17	0.01	1.00	BU

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: EPA 9045D
Units: pH units

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-1	**16-06-2043-58-A**	**06/27/16 15:25**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 21:30**	**G0629PHD6**

Parameter	Result	RL	DF	Qualifiers
pH	7.42	0.01	1.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2	**16-06-2043-59-A**	**06/27/16 15:15**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 21:30**	**G0629PHD6**

Parameter	Result	RL	DF	Qualifiers
pH	6.87	0.01	1.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP	**16-06-2043-60-A**	**06/27/16 00:00**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 21:30**	**G0629PHD6**

Parameter	Result	RL	DF	Qualifiers
pH	8.41	0.01	1.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-3	**16-06-2043-61-A**	**06/27/16 15:30**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 21:30**	**G0629PHD6**

Parameter	Result	RL	DF	Qualifiers
pH	7.62	0.01	1.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5	**16-06-2043-62-A**	**06/27/16 00:00**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Result	RL	DF	Qualifiers
pH	7.96	0.01	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4	**16-06-2043-63-A**	**06/27/16 00:00**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Result	RL	DF	Qualifiers
pH	7.93	0.01	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3	**16-06-2043-64-A**	**06/27/16 00:00**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Result	RL	DF	Qualifiers
pH	8.51	0.01	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2	**16-06-2043-65-A**	**06/27/16 00:00**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Result	RL	DF	Qualifiers
pH	8.31	0.01	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	N/A
		Method:	EPA 9045D
		Units:	pH units
Project: NRG Coolwater			Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1	**16-06-2043-66-A**	**06/27/16 00:00**	**Solid**	**PH 4**	**06/29/16**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Result	RL	DF	Qualifiers
pH	7.88	0.01	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: SM 2540 C (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-1-0	**16-06-2043-26-A**	**06/27/16 14:40**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	4070	10.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-1-0.5	**16-06-2043-27-A**	**06/27/16 14:45**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	5350	10.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-0	**16-06-2043-30-A**	**06/27/16 14:15**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	22000	100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-0.5	**16-06-2043-31-A**	**06/27/16 14:20**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	18100	100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-0	**16-06-2043-34-A**	**06/27/16 13:45**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	23400	100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-0.5	**16-06-2043-35-A**	**06/27/16 13:50**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	23600	100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4.0	**16-06-2043-38-A**	**06/27/16 13:20**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	30100	100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4-0.5	**16-06-2043-39-A**	**06/27/16 13:25**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	26100	100	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: SM 2540 C (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3-FL-5-0	**16-06-2043-42-A**	**06/27/16 11:30**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	78400	100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3-FL-5-0.5	**16-06-2043-43-A**	**06/27/16 11:35**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	50900	100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-0	**16-06-2043-46-A**	**06/27/16 11:00**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	39400	100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-0.5	**16-06-2043-47-A**	**06/27/16 11:05**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	27200	100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0	**16-06-2043-50-A**	**06/27/16 10:45**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	93000	100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0.5	**16-06-2043-51-A**	**06/27/16 10:50**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	59200	100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-0	**16-06-2043-54-A**	**06/27/16 10:00**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	2800	10.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-0.5	**16-06-2043-55-A**	**06/27/16 10:05**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	9800	10.0	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: SM 2540 C (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-1	**16-06-2043-58-A**	**06/27/16 15:25**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	15000	100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2	**16-06-2043-59-A**	**06/27/16 15:15**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	2810	10.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP	**16-06-2043-60-A**	**06/27/16 00:00**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	101000	1000	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-3	**16-06-2043-61-A**	**06/27/16 15:30**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	7690	10.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5	**16-06-2043-62-A**	**06/27/16 00:00**	**Solid**	**N/A**	**07/06/16**	**07/06/16 19:00**	**G0706TDSB3**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	31400	100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4	**16-06-2043-63-A**	**06/27/16 00:00**	**Solid**	**N/A**	**07/06/16**	**07/06/16 19:00**	**G0706TDSB3**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	23700	100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3	**16-06-2043-64-A**	**06/27/16 00:00**	**Solid**	**N/A**	**07/06/16**	**07/06/16 19:00**	**G0706TDSB3**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	47000	100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2	**16-06-2043-65-A**	**06/27/16 00:00**	**Solid**	**N/A**	**07/06/16**	**07/06/16 19:00**	**G0706TDSB3**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	27200	100	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: SM 2540 C (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1	**16-06-2043-66-A**	**06/27/16 00:00**	**Solid**	**N/A**	**07/06/16**	**07/06/16 19:00**	**G0706TDSB3**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	25000	100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-182-418**	**N/A**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	ND	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-182-419**	**N/A**	**Solid**	**N/A**	**07/06/16**	**07/06/16 19:00**	**G0706TDSB3**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	ND	1.0	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: NRG Coolwater			Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-1-0	**16-06-2043-26-A**	**06/27/16 14:40**	**Solid**	**GC 49**	**07/01/16**	**07/01/16 22:15**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	77	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-1-0.5	**16-06-2043-27-A**	**06/27/16 14:45**	**Solid**	**GC 49**	**07/01/16**	**07/01/16 22:33**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	61	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-0	**16-06-2043-30-A**	**06/27/16 14:15**	**Solid**	**GC 49**	**07/01/16**	**07/06/16 20:34**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	114	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-0.5	**16-06-2043-31-A**	**06/27/16 14:20**	**Solid**	**GC 49**	**07/01/16**	**07/06/16 20:52**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	113	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-0	**16-06-2043-34-A**	**06/27/16 13:45**	**Solid**	**GC 49**	**07/01/16**	**07/06/16 21:09**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	40	25	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	111	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-0.5	**16-06-2043-35-A**	**06/27/16 13:50**	**Solid**	**GC 49**	**07/01/16**	**07/06/16 21:26**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	113	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4.0	**16-06-2043-38-A**	**06/27/16 13:20**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 00:00**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	87	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4-0.5	**16-06-2043-39-A**	**06/27/16 13:25**	**Solid**	**GC 49**	**07/01/16**	**07/06/16 21:43**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	113	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3-FL-5-0	**16-06-2043-42-A**	**06/27/16 11:30**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 00:52**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	29	25	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	76	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3-FL-5-0.5	**16-06-2043-43-A**	**06/27/16 11:35**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 00:35**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	88	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: NRG Coolwater			Page 3 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-0	**16-06-2043-46-A**	**06/27/16 11:00**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 04:04**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	28	25	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	70	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-0.5	**16-06-2043-47-A**	**06/27/16 11:05**	**Solid**	**GC 49**	**07/01/16**	**07/06/16 22:01**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	31	25	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	108	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0	**16-06-2043-50-A**	**06/27/16 10:45**	**Solid**	**GC 49**	**07/01/16**	**07/06/16 22:18**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	130	25	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	97	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0.5	**16-06-2043-51-A**	**06/27/16 10:50**	**Solid**	**GC 49**	**07/01/16**	**07/06/16 22:36**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	36	25	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	88	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-0	**16-06-2043-54-A**	**06/27/16 10:00**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 05:13**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	2600	620	25.0	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	116	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-0.5	**16-06-2043-55-A**	**06/27/16 10:05**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 05:31**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	480	120	5.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	91	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-1	**16-06-2043-58-A**	**06/27/16 15:25**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 02:54**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	106	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2	**16-06-2043-59-A**	**06/27/16 15:15**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 03:12**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	75	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP	**16-06-2043-60-A**	**06/27/16 00:00**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 03:29**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	160	50	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	118	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-3	**16-06-2043-61-A**	**06/27/16 15:30**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 03:47**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	90	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5	**16-06-2043-62-A**	**06/27/16 00:00**	**Solid**	**GC 46**	**07/01/16**	**07/05/16 16:39**	**160701B04**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	260	50	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	125	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4	**16-06-2043-63-A**	**06/27/16 00:00**	**Solid**	**GC 46**	**07/01/16**	**07/05/16 16:56**	**160701B04**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	280	25	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	118	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3	**16-06-2043-64-A**	**06/27/16 00:00**	**Solid**	**GC 46**	**07/01/16**	**07/05/16 17:14**	**160701B04**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	71	25	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	108	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2	**16-06-2043-65-A**	**06/27/16 00:00**	**Solid**	**GC 46**	**07/01/16**	**07/05/16 17:31**	**160701B04**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	34	25	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	106	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1	**16-06-2043-66-A**	**06/27/16 00:00**	**Solid**	**GC 46**	**07/01/16**	**07/05/16 17:48**	**160701B04**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	28	25	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	99	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-420-1864**	**N/A**	**Solid**	**GC 46**	**07/01/16**	**07/01/16 17:32**	**160701B04**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	68	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-420-1868**	**N/A**	**Solid**	**GC 49**	**07/01/16**	**07/01/16 20:13**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	90	61-145	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-1-0	**16-06-2043-26-A**	**06/27/16 14:40**	**Solid**	**GC 49**	**07/01/16**	**07/01/16 22:15**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	77	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-1-0.5	**16-06-2043-27-A**	**06/27/16 14:45**	**Solid**	**GC 49**	**07/01/16**	**07/01/16 22:33**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	61	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-0	**16-06-2043-30-A**	**06/27/16 14:15**	**Solid**	**GC 49**	**07/01/16**	**07/06/16 20:34**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	114	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-0.5	**16-06-2043-31-A**	**06/27/16 14:20**	**Solid**	**GC 49**	**07/01/16**	**07/06/16 20:52**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	113	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-0	**16-06-2043-34-A**	**06/27/16 13:45**	**Solid**	**GC 49**	**07/01/16**	**07/06/16 21:09**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	13	5.0	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	111	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-0.5	**16-06-2043-35-A**	**06/27/16 13:50**	**Solid**	**GC 49**	**07/01/16**	**07/06/16 21:26**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	113	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4.0	**16-06-2043-38-A**	**06/27/16 13:20**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 00:00**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	87	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4-0.5	**16-06-2043-39-A**	**06/27/16 13:25**	**Solid**	**GC 49**	**07/01/16**	**07/06/16 21:43**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	10	5.0	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	113	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3-FL-5-0	**16-06-2043-42-A**	**06/27/16 11:30**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 00:52**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	10	5.0	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	76	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3-FL-5-0.5	**16-06-2043-43-A**	**06/27/16 11:35**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 00:35**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	88	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-0	**16-06-2043-46-A**	**06/27/16 11:00**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 04:04**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	7.2	5.0	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	70	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-0.5	**16-06-2043-47-A**	**06/27/16 11:05**	**Solid**	**GC 49**	**07/01/16**	**07/06/16 22:01**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	11	5.0	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	108	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0	**16-06-2043-50-A**	**06/27/16 10:45**	**Solid**	**GC 49**	**07/01/16**	**07/06/16 22:18**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	53	5.0	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	97	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0.5	**16-06-2043-51-A**	**06/27/16 10:50**	**Solid**	**GC 49**	**07/01/16**	**07/06/16 22:36**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	11	5.0	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	88	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-0	**16-06-2043-54-A**	**06/27/16 10:00**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 05:13**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	620	120	25.0	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	116	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-0.5	**16-06-2043-55-A**	**06/27/16 10:05**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 05:31**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	110	25	5.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	91	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-1	**16-06-2043-58-A**	**06/27/16 15:25**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 02:54**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	106	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2	**16-06-2043-59-A**	**06/27/16 15:15**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 03:12**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	75	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP	**16-06-2043-60-A**	**06/27/16 00:00**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 03:29**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	53	10	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	118	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-3	**16-06-2043-61-A**	**06/27/16 15:30**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 03:47**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	90	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5	**16-06-2043-62-A**	**06/27/16 00:00**	**Solid**	**GC 46**	**07/01/16**	**07/05/16 16:39**	**160701B03**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	84	9.9	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	125	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4	**16-06-2043-63-A**	**06/27/16 00:00**	**Solid**	**GC 46**	**07/01/16**	**07/05/16 16:56**	**160701B03**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	110	5.0	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	118	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3	**16-06-2043-64-A**	**06/27/16 00:00**	**Solid**	**GC 46**	**07/01/16**	**07/05/16 17:14**	**160701B03**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	27	5.0	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	108	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2	**16-06-2043-65-A**	**06/27/16 00:00**	**Solid**	**GC 46**	**07/01/16**	**07/05/16 17:31**	**160701B03**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	10	5.0	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	106	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1	**16-06-2043-66-A**	**06/27/16 00:00**	**Solid**	**GC 46**	**07/01/16**	**07/05/16 17:48**	**160701B03**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	11	5.0	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	99	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-422-2525**	**N/A**	**Solid**	**GC 46**	**07/01/16**	**07/01/16 17:32**	**160701B03**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	68	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-422-2527**	**N/A**	**Solid**	**GC 49**	**07/01/16**	**07/01/16 20:13**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	90	61-145	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: NRG Coolwater			Page 1 of 27

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-1-0	**16-06-2043-26-A**	**06/27/16 14:40**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:17**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.761	1.02	
Arsenic	2.22	0.761	1.02	
Barium	127	0.508	1.02	
Beryllium	ND	0.254	1.02	
Cadmium	ND	0.508	1.02	
Chromium	5.09	0.254	1.02	
Cobalt	3.47	0.254	1.02	
Copper	5.73	0.508	1.02	
Lead	3.67	0.508	1.02	
Molybdenum	ND	0.254	1.02	
Nickel	3.89	0.254	1.02	
Selenium	ND	0.761	1.02	
Silver	ND	0.254	1.02	
Thallium	ND	0.761	1.02	
Vanadium	17.1	0.254	1.02	
Zinc	26.4	1.02	1.02	
Lithium	ND	2.54	1.02	
Calcium	5690	5.08	1.02	
Magnesium	2710	5.08	1.02	
Potassium	1530	25.4	1.02	
Sodium	92.8	25.4	1.02	
Boron	4.19	1.02	1.02	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: NRG Coolwater			Page 2 of 27

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-1-0.5	**16-06-2043-27-A**	**06/27/16 14:45**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:18**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.728	0.971	
Arsenic	3.27	0.728	0.971	
Barium	94.5	0.485	0.971	
Beryllium	ND	0.243	0.971	
Cadmium	ND	0.485	0.971	
Chromium	4.93	0.243	0.971	
Cobalt	3.20	0.243	0.971	
Copper	5.19	0.485	0.971	
Lead	3.24	0.485	0.971	
Molybdenum	ND	0.243	0.971	
Nickel	3.47	0.243	0.971	
Selenium	ND	0.728	0.971	
Silver	ND	0.243	0.971	
Thallium	ND	0.728	0.971	
Vanadium	18.5	0.243	0.971	
Zinc	22.5	0.971	0.971	
Lithium	ND	2.43	0.971	
Calcium	5110	4.85	0.971	
Magnesium	2380	4.85	0.971	
Potassium	1440	24.3	0.971	
Sodium	90.7	24.3	0.971	
Boron	2.64	0.971	0.971	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-0	**16-06-2043-30-A**	**06/27/16 14:15**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:24**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.725	0.966	
Arsenic	7.25	0.725	0.966	
Barium	95.0	0.483	0.966	
Beryllium	ND	0.242	0.966	
Cadmium	ND	0.483	0.966	
Chromium	6.25	0.242	0.966	
Cobalt	3.25	0.242	0.966	
Copper	10.7	0.483	0.966	
Lead	2.32	0.483	0.966	
Molybdenum	ND	0.242	0.966	
Nickel	5.53	0.242	0.966	
Selenium	ND	0.725	0.966	
Silver	ND	0.242	0.966	
Thallium	ND	0.725	0.966	
Vanadium	21.7	0.242	0.966	
Zinc	26.0	0.966	0.966	
Lithium	ND	2.42	0.966	
Calcium	37700	4.83	0.966	
Magnesium	4870	4.83	0.966	
Potassium	1690	24.2	0.966	
Sodium	684	24.2	0.966	
Boron	47.9	0.966	0.966	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-0.5	**16-06-2043-31-A**	**06/27/16 14:20**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:25**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.750	1.00	
Arsenic	5.24	0.750	1.00	
Barium	89.7	0.500	1.00	
Beryllium	0.281	0.250	1.00	
Cadmium	ND	0.500	1.00	
Chromium	5.99	0.250	1.00	
Cobalt	3.33	0.250	1.00	
Copper	8.50	0.500	1.00	
Lead	2.64	0.500	1.00	
Molybdenum	ND	0.250	1.00	
Nickel	5.10	0.250	1.00	
Selenium	ND	0.750	1.00	
Silver	ND	0.250	1.00	
Thallium	ND	0.750	1.00	
Vanadium	17.8	0.250	1.00	
Zinc	23.8	1.00	1.00	
Lithium	ND	2.50	1.00	
Calcium	21100	5.00	1.00	
Magnesium	3730	5.00	1.00	
Potassium	1830	25.0	1.00	
Sodium	1060	25.0	1.00	
Boron	26.5	1.00	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-0	**16-06-2043-34-A**	**06/27/16 13:45**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:27**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.761	1.02	
Arsenic	12.5	0.761	1.02	
Barium	103	0.508	1.02	
Beryllium	ND	0.254	1.02	
Cadmium	ND	0.508	1.02	
Chromium	9.60	0.254	1.02	
Cobalt	2.71	0.254	1.02	
Copper	38.1	0.508	1.02	
Lead	1.28	0.508	1.02	
Molybdenum	0.304	0.254	1.02	
Nickel	10.1	0.254	1.02	
Selenium	ND	0.761	1.02	
Silver	0.534	0.254	1.02	
Thallium	ND	0.761	1.02	
Vanadium	19.4	0.254	1.02	
Zinc	58.9	1.02	1.02	
Lithium	ND	2.54	1.02	
Magnesium	8560	5.08	1.02	
Potassium	1610	25.4	1.02	
Sodium	1140	25.4	1.02	
Boron	148	1.02	1.02	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-0	**16-06-2043-34-A**	**06/27/16 13:45**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 22:02**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Calcium	93600	50.8	10.2	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-0.5	**16-06-2043-35-A**	**06/27/16 13:50**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:28**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.781	1.04	
Arsenic	4.36	0.781	1.04	
Barium	69.4	0.521	1.04	
Beryllium	ND	0.260	1.04	
Cadmium	ND	0.521	1.04	
Chromium	6.06	0.260	1.04	
Cobalt	3.46	0.260	1.04	
Copper	11.3	0.521	1.04	
Lead	2.55	0.521	1.04	
Molybdenum	0.277	0.260	1.04	
Nickel	4.79	0.260	1.04	
Selenium	ND	0.781	1.04	
Silver	ND	0.260	1.04	
Thallium	ND	0.781	1.04	
Vanadium	20.5	0.260	1.04	
Zinc	20.6	1.04	1.04	
Lithium	ND	2.60	1.04	
Calcium	21500	5.21	1.04	
Magnesium	3480	5.21	1.04	
Potassium	1750	26.0	1.04	
Sodium	1360	26.0	1.04	
Boron	31.5	1.04	1.04	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4.0	**16-06-2043-38-A**	**06/27/16 13:20**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:29**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.781	1.04	
Arsenic	5.71	0.781	1.04	
Barium	69.3	0.521	1.04	
Beryllium	0.274	0.260	1.04	
Cadmium	ND	0.521	1.04	
Chromium	6.51	0.260	1.04	
Cobalt	3.39	0.260	1.04	
Copper	13.2	0.521	1.04	
Lead	2.33	0.521	1.04	
Molybdenum	0.293	0.260	1.04	
Nickel	5.37	0.260	1.04	
Selenium	ND	0.781	1.04	
Silver	ND	0.260	1.04	
Thallium	ND	0.781	1.04	
Vanadium	18.9	0.260	1.04	
Zinc	23.2	1.04	1.04	
Lithium	ND	2.60	1.04	
Calcium	33800	5.21	1.04	
Magnesium	5020	5.21	1.04	
Potassium	1700	26.0	1.04	
Sodium	3420	26.0	1.04	
Boron	81.0	1.04	1.04	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: NRG Coolwater			Page 8 of 27

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4-0.5	**16-06-2043-39-A**	**06/27/16 13:25**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:30**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.761	1.02	
Arsenic	3.64	0.761	1.02	
Barium	67.2	0.508	1.02	
Beryllium	0.301	0.254	1.02	
Cadmium	ND	0.508	1.02	
Chromium	6.33	0.254	1.02	
Cobalt	3.78	0.254	1.02	
Copper	8.43	0.508	1.02	
Lead	2.63	0.508	1.02	
Molybdenum	ND	0.254	1.02	
Nickel	4.63	0.254	1.02	
Selenium	ND	0.761	1.02	
Silver	ND	0.254	1.02	
Thallium	ND	0.761	1.02	
Vanadium	20.3	0.254	1.02	
Zinc	22.4	1.02	1.02	
Lithium	ND	2.54	1.02	
Calcium	16200	5.08	1.02	
Magnesium	3740	5.08	1.02	
Potassium	1790	25.4	1.02	
Sodium	2890	25.4	1.02	
Boron	23.8	1.02	1.02	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3-FL-5-0	**16-06-2043-42-A**	**06/27/16 11:30**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:31**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.789	1.05	
Arsenic	22.2	0.789	1.05	
Barium	127	0.526	1.05	
Beryllium	ND	0.263	1.05	
Cadmium	0.609	0.526	1.05	
Chromium	12.6	0.263	1.05	
Cobalt	2.41	0.263	1.05	
Copper	47.5	0.526	1.05	
Lead	6.08	0.526	1.05	
Molybdenum	1.94	0.263	1.05	
Nickel	11.5	0.263	1.05	
Selenium	5.97	0.789	1.05	
Silver	1.05	0.263	1.05	
Thallium	ND	0.789	1.05	
Vanadium	17.3	0.263	1.05	
Zinc	35.4	1.05	1.05	
Lithium	ND	2.63	1.05	
Magnesium	10500	5.26	1.05	
Potassium	1410	26.3	1.05	
Sodium	16900	26.3	1.05	
Boron	433	1.05	1.05	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3-FL-5-0	**16-06-2043-42-A**	**06/27/16 11:30**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 22:04**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Calcium	183000	52.6	10.5	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3-FL-5-0.5	**16-06-2043-43-A**	**06/27/16 11:35**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:33**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.739	0.985	
Arsenic	12.8	0.739	0.985	
Barium	86.2	0.493	0.985	
Beryllium	ND	0.246	0.985	
Cadmium	ND	0.493	0.985	
Chromium	6.82	0.246	0.985	
Cobalt	1.42	0.246	0.985	
Copper	26.5	0.493	0.985	
Lead	3.26	0.493	0.985	
Molybdenum	0.895	0.246	0.985	
Nickel	6.40	0.246	0.985	
Selenium	3.34	0.739	0.985	
Silver	0.583	0.246	0.985	
Thallium	ND	0.739	0.985	
Vanadium	9.59	0.246	0.985	
Zinc	21.2	0.985	0.985	
Lithium	ND	2.46	0.985	
Magnesium	5840	4.93	0.985	
Potassium	683	24.6	0.985	
Sodium	3580	24.6	0.985	
Boron	207	0.985	0.985	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3-FL-5-0.5	**16-06-2043-43-A**	**06/27/16 11:35**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 22:05**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Calcium	108000	49.3	9.85	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: NRG Coolwater			Page 11 of 27

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-0	**16-06-2043-46-A**	**06/27/16 11:00**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:34**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.714	0.952	
Arsenic	21.2	0.714	0.952	
Barium	123	0.476	0.952	
Beryllium	0.247	0.238	0.952	
Cadmium	0.613	0.476	0.952	
Chromium	13.2	0.238	0.952	
Cobalt	2.45	0.238	0.952	
Copper	41.2	0.476	0.952	
Lead	4.69	0.476	0.952	
Molybdenum	1.04	0.238	0.952	
Nickel	10.3	0.238	0.952	
Selenium	8.19	0.714	0.952	
Silver	0.924	0.238	0.952	
Thallium	ND	0.714	0.952	
Vanadium	18.9	0.238	0.952	
Zinc	34.0	0.952	0.952	
Lithium	ND	2.38	0.952	
Magnesium	11300	4.76	0.952	
Potassium	1100	23.8	0.952	
Sodium	6360	23.8	0.952	
Boron	407	0.952	0.952	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-0	**16-06-2043-46-A**	**06/27/16 11:00**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 22:06**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Calcium	203000	47.6	9.52	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-0.5	**16-06-2043-47-A**	**06/27/16 11:05**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:35**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.765	1.02	
Arsenic	11.6	0.765	1.02	
Barium	118	0.510	1.02	
Beryllium	0.425	0.255	1.02	
Cadmium	0.520	0.510	1.02	
Chromium	11.9	0.255	1.02	
Cobalt	4.78	0.255	1.02	
Copper	23.0	0.510	1.02	
Lead	5.77	0.510	1.02	
Molybdenum	0.479	0.255	1.02	
Nickel	8.61	0.255	1.02	
Selenium	3.67	0.765	1.02	
Silver	0.408	0.255	1.02	
Thallium	ND	0.765	1.02	
Vanadium	26.5	0.255	1.02	
Zinc	38.3	1.02	1.02	
Lithium	ND	2.55	1.02	
Magnesium	7670	5.10	1.02	
Potassium	2120	25.5	1.02	
Sodium	5080	25.5	1.02	
Boron	183	1.02	1.02	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-0.5	**16-06-2043-47-A**	**06/27/16 11:05**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 22:07**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Calcium	77900	51.0	10.2	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0	**16-06-2043-50-A**	**06/27/16 10:45**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:40**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.750	1.00	
Arsenic	21.6	0.750	1.00	
Barium	120	0.500	1.00	
Beryllium	0.295	0.250	1.00	
Cadmium	0.674	0.500	1.00	
Chromium	16.0	0.250	1.00	
Cobalt	2.82	0.250	1.00	
Copper	47.2	0.500	1.00	
Lead	6.36	0.500	1.00	
Molybdenum	3.27	0.250	1.00	
Nickel	11.2	0.250	1.00	
Selenium	21.4	0.750	1.00	
Silver	1.06	0.250	1.00	
Thallium	ND	0.750	1.00	
Vanadium	22.4	0.250	1.00	
Zinc	27.9	1.00	1.00	
Lithium	ND	2.50	1.00	
Magnesium	16300	5.00	1.00	
Potassium	1030	25.0	1.00	
Sodium	24200	25.0	1.00	
Boron	606	1.00	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0	**16-06-2043-50-A**	**06/27/16 10:45**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 22:08**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Calcium	176000	50.0	10.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: NRG Coolwater			Page 14 of 27

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0.5	**16-06-2043-51-A**	**06/27/16 10:50**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:41**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.765	1.02	
Arsenic	9.50	0.765	1.02	
Barium	80.7	0.510	1.02	
Beryllium	ND	0.255	1.02	
Cadmium	ND	0.510	1.02	
Chromium	7.47	0.255	1.02	
Cobalt	2.48	0.255	1.02	
Copper	20.5	0.510	1.02	
Lead	3.86	0.510	1.02	
Molybdenum	1.20	0.255	1.02	
Nickel	5.67	0.255	1.02	
Selenium	6.73	0.765	1.02	
Silver	0.410	0.255	1.02	
Thallium	ND	0.765	1.02	
Vanadium	15.1	0.255	1.02	
Zinc	22.5	1.02	1.02	
Lithium	ND	2.55	1.02	
Magnesium	7000	5.10	1.02	
Potassium	1230	25.5	1.02	
Sodium	9430	25.5	1.02	
Boron	219	1.02	1.02	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0.5	**16-06-2043-51-A**	**06/27/16 10:50**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 22:09**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Calcium	64400	51.0	10.2	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-0	**16-06-2043-54-A**	**06/27/16 10:00**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:43**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.769	1.03	
Arsenic	5.03	0.769	1.03	
Barium	131	0.513	1.03	
Beryllium	0.544	0.256	1.03	
Cadmium	ND	0.513	1.03	
Chromium	10.2	0.256	1.03	
Cobalt	6.72	0.256	1.03	
Copper	11.7	0.513	1.03	
Lead	6.24	0.513	1.03	
Molybdenum	ND	0.256	1.03	
Nickel	8.55	0.256	1.03	
Selenium	ND	0.769	1.03	
Silver	ND	0.256	1.03	
Thallium	ND	0.769	1.03	
Vanadium	36.2	0.256	1.03	
Zinc	55.4	1.03	1.03	
Lithium	2.87	2.56	1.03	
Calcium	11500	5.13	1.03	
Magnesium	5580	5.13	1.03	
Potassium	2530	25.6	1.03	
Sodium	191	25.6	1.03	
Boron	9.29	1.03	1.03	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: NRG Coolwater			Page 16 of 27

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-0.5	**16-06-2043-55-A**	**06/27/16 10:05**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:44**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.769	1.03	
Arsenic	5.81	0.769	1.03	
Barium	151	0.513	1.03	
Beryllium	0.624	0.256	1.03	
Cadmium	ND	0.513	1.03	
Chromium	11.8	0.256	1.03	
Cobalt	8.01	0.256	1.03	
Copper	13.3	0.513	1.03	
Lead	6.85	0.513	1.03	
Molybdenum	ND	0.256	1.03	
Nickel	8.91	0.256	1.03	
Selenium	ND	0.769	1.03	
Silver	ND	0.256	1.03	
Thallium	ND	0.769	1.03	
Vanadium	43.3	0.256	1.03	
Zinc	65.6	1.03	1.03	
Lithium	2.64	2.56	1.03	
Calcium	14000	5.13	1.03	
Magnesium	6370	5.13	1.03	
Potassium	2540	25.6	1.03	
Sodium	250	25.6	1.03	
Boron	8.75	1.03	1.03	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-1	**16-06-2043-58-A**	**06/27/16 15:25**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:45**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.765	1.02	
Arsenic	3.04	0.765	1.02	
Barium	79.8	0.510	1.02	
Beryllium	0.363	0.255	1.02	
Cadmium	ND	0.510	1.02	
Chromium	7.35	0.255	1.02	
Cobalt	5.44	0.255	1.02	
Copper	7.77	0.510	1.02	
Lead	3.78	0.510	1.02	
Molybdenum	ND	0.255	1.02	
Nickel	5.45	0.255	1.02	
Selenium	ND	0.765	1.02	
Silver	ND	0.255	1.02	
Thallium	ND	0.765	1.02	
Vanadium	23.8	0.255	1.02	
Zinc	32.0	1.02	1.02	
Lithium	4.07	2.55	1.02	
Calcium	9580	5.10	1.02	
Magnesium	3970	5.10	1.02	
Potassium	2070	25.5	1.02	
Sodium	144	25.5	1.02	
Boron	3.36	1.02	1.02	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2	**16-06-2043-59-A**	**06/27/16 15:15**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:46**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.754	1.01	
Arsenic	2.75	0.754	1.01	
Barium	102	0.503	1.01	
Beryllium	0.300	0.251	1.01	
Cadmium	ND	0.503	1.01	
Chromium	6.17	0.251	1.01	
Cobalt	3.84	0.251	1.01	
Copper	7.08	0.503	1.01	
Lead	3.95	0.503	1.01	
Molybdenum	ND	0.251	1.01	
Nickel	5.16	0.251	1.01	
Selenium	ND	0.754	1.01	
Silver	ND	0.251	1.01	
Thallium	ND	0.754	1.01	
Vanadium	16.2	0.251	1.01	
Zinc	21.4	1.01	1.01	
Lithium	ND	2.51	1.01	
Calcium	7660	5.03	1.01	
Magnesium	3040	5.03	1.01	
Potassium	1980	25.1	1.01	
Sodium	138	25.1	1.01	
Boron	5.70	1.01	1.01	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP	**16-06-2043-60-A**	**06/27/16 00:00**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:47**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.785	1.05	
Arsenic	21.0	0.785	1.05	
Barium	115	0.524	1.05	
Beryllium	0.267	0.262	1.05	
Cadmium	0.661	0.524	1.05	
Chromium	15.7	0.262	1.05	
Cobalt	2.71	0.262	1.05	
Copper	52.0	0.524	1.05	
Lead	6.61	0.524	1.05	
Molybdenum	4.39	0.262	1.05	
Nickel	11.3	0.262	1.05	
Selenium	29.9	0.785	1.05	
Silver	0.987	0.262	1.05	
Thallium	ND	0.785	1.05	
Vanadium	22.4	0.262	1.05	
Zinc	26.3	1.05	1.05	
Lithium	ND	2.62	1.05	
Magnesium	17800	5.24	1.05	
Potassium	1130	26.2	1.05	
Sodium	27900	26.2	1.05	
Boron	747	1.05	1.05	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP	**16-06-2043-60-A**	**06/27/16 00:00**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 22:10**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Calcium	163000	52.4	10.5	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: NRG Coolwater			Page 20 of 27

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-3	**16-06-2043-61-A**	**06/27/16 15:30**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:48**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.758	1.01	
Arsenic	4.04	0.758	1.01	
Barium	125	0.505	1.01	
Beryllium	0.366	0.253	1.01	
Cadmium	0.559	0.505	1.01	
Chromium	11.7	0.253	1.01	
Cobalt	4.84	0.253	1.01	
Copper	14.2	0.505	1.01	
Lead	6.99	0.505	1.01	
Molybdenum	0.465	0.253	1.01	
Nickel	8.61	0.253	1.01	
Selenium	ND	0.758	1.01	
Silver	0.388	0.253	1.01	
Thallium	ND	0.758	1.01	
Vanadium	19.0	0.253	1.01	
Zinc	53.1	1.01	1.01	
Lithium	ND	2.53	1.01	
Calcium	14500	5.05	1.01	
Magnesium	4130	5.05	1.01	
Potassium	2090	25.3	1.01	
Sodium	426	25.3	1.01	
Boron	19.5	1.01	1.01	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5	**16-06-2043-62-A**	**06/27/16 00:00**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:49**	**160630L01A**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.718	0.957	
Arsenic	12.1	0.718	0.957	
Barium	287	0.478	0.957	
Beryllium	0.789	0.239	0.957	
Cadmium	1.40	0.478	0.957	
Chromium	24.8	0.239	0.957	
Cobalt	6.28	0.239	0.957	
Copper	48.9	0.478	0.957	
Lead	25.1	0.478	0.957	
Molybdenum	2.43	0.239	0.957	
Nickel	14.4	0.239	0.957	
Selenium	12.3	0.718	0.957	
Silver	0.480	0.239	0.957	
Thallium	ND	0.718	0.957	
Vanadium	37.8	0.239	0.957	
Zinc	48.3	0.957	0.957	
Lithium	ND	2.39	0.957	
Calcium	61700	47.8	9.57	
Magnesium	7660	4.78	0.957	
Potassium	2090	23.9	0.957	
Sodium	12200	23.9	0.957	
Boron	260	0.957	0.957	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: NRG Coolwater			Page 22 of 27

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4	**16-06-2043-63-A**	**06/27/16 00:00**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:51**	**160630L01A**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.761	1.02	
Arsenic	11.9	0.761	1.02	
Barium	167	0.508	1.02	
Beryllium	0.401	0.254	1.02	
Cadmium	0.738	0.508	1.02	
Chromium	16.5	0.254	1.02	
Cobalt	3.53	0.254	1.02	
Copper	42.8	0.508	1.02	
Lead	13.5	0.508	1.02	
Molybdenum	1.18	0.254	1.02	
Nickel	11.6	0.254	1.02	
Selenium	4.92	0.761	1.02	
Silver	0.493	0.254	1.02	
Thallium	ND	0.761	1.02	
Vanadium	24.3	0.254	1.02	
Zinc	49.2	1.02	1.02	
Lithium	ND	2.54	1.02	
Magnesium	6440	5.08	1.02	
Potassium	1330	25.4	1.02	
Sodium	5220	25.4	1.02	
Boron	194	1.02	1.02	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4	**16-06-2043-63-A**	**06/27/16 00:00**	**Solid**	**ICP 7300**	**06/30/16**	**07/09/16 10:55**	**160630L01A**

Parameter	Result	RL	DF	Qualifiers
Calcium	69700	50.8	10.2	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3	**16-06-2043-64-A**	**06/27/16 00:00**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:56**	**160630L01A**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.758	1.01	
Arsenic	14.5	0.758	1.01	
Barium	90.0	0.505	1.01	
Beryllium	ND	0.253	1.01	
Cadmium	ND	0.505	1.01	
Chromium	8.41	0.253	1.01	
Cobalt	16.0	0.253	1.01	
Copper	39.6	0.505	1.01	
Lead	1.42	0.505	1.01	
Molybdenum	2.06	0.253	1.01	
Nickel	10.8	0.253	1.01	
Selenium	ND	0.758	1.01	
Silver	0.276	0.253	1.01	
Thallium	ND	0.758	1.01	
Vanadium	26.6	0.253	1.01	
Zinc	24.4	1.01	1.01	
Lithium	ND	2.53	1.01	
Magnesium	7150	5.05	1.01	
Potassium	1570	25.3	1.01	
Sodium	7760	25.3	1.01	
Boron	150	1.01	1.01	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3	**16-06-2043-64-A**	**06/27/16 00:00**	**Solid**	**ICP 7300**	**06/30/16**	**07/09/16 10:56**	**160630L01A**

Parameter	Result	RL	DF	Qualifiers
Calcium	57800	50.5	10.1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: NRG Coolwater			Page 24 of 27

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2	**16-06-2043-65-A**	**06/27/16 00:00**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:57**	**160630L01A**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.761	1.02	
Arsenic	7.07	0.761	1.02	
Barium	77.5	0.508	1.02	
Beryllium	ND	0.254	1.02	
Cadmium	ND	0.508	1.02	
Chromium	5.79	0.254	1.02	
Cobalt	2.37	0.254	1.02	
Copper	29.6	0.508	1.02	
Lead	1.05	0.508	1.02	
Molybdenum	0.711	0.254	1.02	
Nickel	6.80	0.254	1.02	
Selenium	ND	0.761	1.02	
Silver	ND	0.254	1.02	
Thallium	ND	0.761	1.02	
Vanadium	18.5	0.254	1.02	
Zinc	21.4	1.02	1.02	
Lithium	ND	2.54	1.02	
Magnesium	4820	5.08	1.02	
Potassium	1340	25.4	1.02	
Sodium	4930	25.4	1.02	
Boron	82.7	1.02	1.02	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2	**16-06-2043-65-A**	**06/27/16 00:00**	**Solid**	**ICP 7300**	**06/30/16**	**07/09/16 10:57**	**160630L01A**

Parameter	Result	RL	DF	Qualifiers
Calcium	47600	50.8	10.2	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1	**16-06-2043-66-A**	**06/27/16 00:00**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:58**	**160630L01A**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.718	0.957	
Arsenic	11.5	0.718	0.957	
Barium	88.0	0.478	0.957	
Beryllium	ND	0.239	0.957	
Cadmium	ND	0.478	0.957	
Chromium	9.63	0.239	0.957	
Cobalt	2.11	0.239	0.957	
Copper	73.1	0.478	0.957	
Lead	0.747	0.478	0.957	
Molybdenum	0.398	0.239	0.957	
Nickel	13.2	0.239	0.957	
Selenium	ND	0.718	0.957	
Silver	0.406	0.239	0.957	
Thallium	ND	0.718	0.957	
Vanadium	18.7	0.239	0.957	
Zinc	27.0	0.957	0.957	
Lithium	ND	2.39	0.957	
Magnesium	7080	4.78	0.957	
Potassium	999	23.9	0.957	
Sodium	2250	23.9	0.957	
Boron	69.9	0.957	0.957	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1	**16-06-2043-66-A**	**06/27/16 00:00**	**Solid**	**ICP 7300**	**06/30/16**	**07/09/16 10:58**	**160630L01A**

Parameter	Result	RL	DF	Qualifiers
Calcium	65600	47.8	9.57	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-002-22900**	**N/A**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:10**	**160630L01A**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.789	1.05	
Arsenic	ND	0.789	1.05	
Barium	ND	0.526	1.05	
Beryllium	ND	0.263	1.05	
Cadmium	ND	0.526	1.05	
Chromium	ND	0.263	1.05	
Cobalt	ND	0.263	1.05	
Copper	ND	0.526	1.05	
Lead	ND	0.526	1.05	
Molybdenum	ND	0.263	1.05	
Nickel	ND	0.263	1.05	
Selenium	ND	0.789	1.05	
Silver	ND	0.263	1.05	
Thallium	ND	0.789	1.05	
Vanadium	ND	0.263	1.05	
Zinc	ND	1.05	1.05	
Lithium	ND	2.63	1.05	
Calcium	ND	5.26	1.05	
Magnesium	ND	5.26	1.05	
Potassium	ND	26.3	1.05	
Sodium	ND	26.3	1.05	
Boron	ND	1.05	1.05	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-002-22899**	**N/A**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:08**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.773	1.03	
Arsenic	ND	0.773	1.03	
Barium	ND	0.515	1.03	
Beryllium	ND	0.258	1.03	
Cadmium	ND	0.515	1.03	
Chromium	ND	0.258	1.03	
Cobalt	ND	0.258	1.03	
Copper	ND	0.515	1.03	
Lead	ND	0.515	1.03	
Molybdenum	ND	0.258	1.03	
Nickel	ND	0.258	1.03	
Selenium	ND	0.773	1.03	
Silver	ND	0.258	1.03	
Thallium	ND	0.773	1.03	
Vanadium	ND	0.258	1.03	
Zinc	ND	1.03	1.03	
Lithium	ND	2.58	1.03	
Calcium	ND	5.15	1.03	
Magnesium	ND	5.15	1.03	
Potassium	ND	25.8	1.03	
Sodium	ND	25.8	1.03	
Boron	ND	1.03	1.03	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 7471A Total
Method: EPA 7471A
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-1-0	**16-06-2043-26-A**	**06/27/16 14:40**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 13:30**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0794	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-1-0.5	**16-06-2043-27-A**	**06/27/16 14:45**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 13:37**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	0.0846	0.0794	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-0	**16-06-2043-30-A**	**06/27/16 14:15**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 13:39**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0794	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-0.5	**16-06-2043-31-A**	**06/27/16 14:20**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 13:41**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0794	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-0	**16-06-2043-34-A**	**06/27/16 13:45**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 13:44**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0877	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-0.5	**16-06-2043-35-A**	**06/27/16 13:50**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 13:46**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0794	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4.0	**16-06-2043-38-A**	**06/27/16 13:20**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 13:53**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0820	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4-0.5	**16-06-2043-39-A**	**06/27/16 13:25**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 13:55**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0806	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 7471A Total
Method: EPA 7471A
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3-FL-5-0	**16-06-2043-42-A**	**06/27/16 11:30**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 13:57**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0877	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3-FL-5-0.5	**16-06-2043-43-A**	**06/27/16 11:35**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 13:59**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0794	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-0	**16-06-2043-46-A**	**06/27/16 11:00**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 14:02**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0794	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-0.5	**16-06-2043-47-A**	**06/27/16 11:05**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 14:04**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0820	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0	**16-06-2043-50-A**	**06/27/16 10:45**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 14:06**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0806	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0.5	**16-06-2043-51-A**	**06/27/16 10:50**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 14:09**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0847	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-0	**16-06-2043-54-A**	**06/27/16 10:00**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 14:11**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0877	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-0.5	**16-06-2043-55-A**	**06/27/16 10:05**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 14:13**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0820	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 7471A Total
Method: EPA 7471A
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-1	**16-06-2043-58-A**	**06/27/16 15:25**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 14:20**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0794	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2	**16-06-2043-59-A**	**06/27/16 15:15**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 14:22**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0877	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP	**16-06-2043-60-A**	**06/27/16 00:00**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 14:24**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0847	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-3	**16-06-2043-61-A**	**06/27/16 15:30**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 14:26**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0877	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5	**16-06-2043-62-A**	**06/27/16 00:00**	**Solid**	**Mercury 04**	**07/06/16**	**07/07/16 14:29**	**160706L03**

Parameter	Result	RL	DF	Qualifiers
Mercury	0.113	0.0847	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4	**16-06-2043-63-A**	**06/27/16 00:00**	**Solid**	**Mercury 04**	**07/06/16**	**07/07/16 14:31**	**160706L03**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0862	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3	**16-06-2043-64-A**	**06/27/16 00:00**	**Solid**	**Mercury 04**	**07/06/16**	**07/07/16 14:33**	**160706L03**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0862	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2	**16-06-2043-65-A**	**06/27/16 00:00**	**Solid**	**Mercury 04**	**07/06/16**	**07/07/16 14:35**	**160706L03**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0833	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 7471A Total
Method: EPA 7471A
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1	**16-06-2043-66-A**	**06/27/16 00:00**	**Solid**	**Mercury 04**	**07/06/16**	**07/07/16 14:37**	**160706L03**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0806	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-16-272-2286**	**N/A**	**Solid**	**Mercury 04**	**07/06/16**	**07/06/16 21:20**	**160706L03**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0833	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-16-272-2290**	**N/A**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 13:26**	**160707L01**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0833	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Quality Control - Spike/Spike Duplicate

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	N/A
		Method:	EPA 300.0
Project: NRG Coolwater			Page 1 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
P1-FL-1-0	**Sample**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 14:59**	**160701S01P**
P1-FL-1-0	**Matrix Spike**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 22:11**	**160701S01P**
P1-FL-1-0	**Matrix Spike Duplicate**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 22:30**	**160701S01P**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Fluoride	ND	25.00	12.60	50	12.28	49	80-120	3	0-20	3
Chloride	ND	500.0	328.8	66	386.6	77	80-120	16	0-20	3
Nitrate (as N)	2.720	50.00	35.07	65	40.81	76	80-120	15	0-20	3
Sulfate	225.3	500.0	475.6	50	526.7	60	80-120	10	0-20	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - Spike/Spike Duplicate

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	N/A
		Method:	EPA 300.0
Project: NRG Coolwater			Page 2 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
P1	**Sample**	**Solid**	**IC 10**	**07/01/16**	**07/03/16 05:53**	**160701S02P**
P1	**Matrix Spike**	**Solid**	**IC 10**	**07/01/16**	**07/02/16 02:17**	**160701S02P**
P1	**Matrix Spike Duplicate**	**Solid**	**IC 10**	**07/01/16**	**07/02/16 02:36**	**160701S02P**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Fluoride	2.210	25.00	8.260	24	9.280	28	80-120	12	0-20	3
Chloride	757.4	500.0	1017	52	1405	129	80-120	32	0-20	3,4
Nitrate (as N)	10.68	50.00	35.86	50	50.87	80	80-120	35	0-20	3,4
Sulfate	8020	500.0	9125	221	10210	439	80-120	11	0-20	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - Spike/Spike Duplicate

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: NRG Coolwater			Page 3 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
16-06-2086-4	**Sample**	**Solid**	**GC 46**	**07/01/16**	**07/01/16 20:26**	**160701S04**
16-06-2086-4	**Matrix Spike**	**Solid**	**GC 46**	**07/01/16**	**07/01/16 19:00**	**160701S04**
16-06-2086-4	**Matrix Spike Duplicate**	**Solid**	**GC 46**	**07/01/16**	**07/01/16 19:17**	**160701S04**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	ND	400.0	337.2	84	346.1	87	64-130	3	0-15	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - Spike/Spike Duplicate

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: NRG Coolwater			Page 4 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
P2-FL-4.0	**Sample**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 00:00**	**160701S09**
P2-FL-4.0	**Matrix Spike**	**Solid**	**GC 49**	**07/01/16**	**07/01/16 21:40**	**160701S09**
P2-FL-4.0	**Matrix Spike Duplicate**	**Solid**	**GC 49**	**07/01/16**	**07/01/16 21:58**	**160701S09**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	ND	400.0	394.5	99	405.9	101	64-130	3	0-15	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - Spike/Spike Duplicate

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: NRG Coolwater			Page 5 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
16-06-2086-4	**Sample**	**Solid**	**GC 46**	**07/01/16**	**07/01/16 20:26**	**160701S03**
16-06-2086-4	**Matrix Spike**	**Solid**	**GC 46**	**07/01/16**	**07/01/16 18:25**	**160701S03**
16-06-2086-4	**Matrix Spike Duplicate**	**Solid**	**GC 46**	**07/01/16**	**07/01/16 18:43**	**160701S03**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	ND	400.0	305.9	76	356.0	89	64-130	15	0-15	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - Spike/Spike Duplicate

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: NRG Coolwater			Page 6 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
P2-FL-4.0	**Sample**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 00:00**	**160701S08**
P2-FL-4.0	**Matrix Spike**	**Solid**	**GC 49**	**07/01/16**	**07/01/16 21:05**	**160701S08**
P2-FL-4.0	**Matrix Spike Duplicate**	**Solid**	**GC 49**	**07/01/16**	**07/01/16 21:23**	**160701S08**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	ND	400.0	288.5	72	298.8	75	64-130	4	0-15	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - Spike/Spike Duplicate

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: NRG Coolwater			Page 7 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
P5	**Sample**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:49**	**160630S01**
P5	**Matrix Spike**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:15**	**160630S01**
P5	**Matrix Spike Duplicate**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:16**	**160630S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	25.00	4.645	19	4.974	20	50-115	7	0-20	3
Arsenic	12.11	25.00	38.15	104	40.37	113	75-125	6	0-20	
Barium	287.4	25.00	302.3	4X	297.4	4X	75-125	4X	0-20	Q
Beryllium	0.7891	25.00	27.83	108	27.82	108	75-125	0	0-20	
Cadmium	1.399	25.00	26.33	100	26.03	99	75-125	1	0-20	
Chromium	24.81	25.00	51.08	105	50.09	101	75-125	2	0-20	
Cobalt	6.283	25.00	32.24	104	31.72	102	75-125	2	0-20	
Copper	48.95	25.00	73.66	99	72.99	96	75-125	1	0-20	
Lead	25.08	25.00	49.53	98	48.89	95	75-125	1	0-20	
Molybdenum	2.427	25.00	28.06	103	28.74	105	75-125	2	0-20	
Nickel	14.43	25.00	39.64	101	38.90	98	75-125	2	0-20	
Selenium	12.32	25.00	37.68	101	39.96	111	75-125	6	0-20	
Silver	0.4798	12.50	13.89	107	14.22	110	75-125	2	0-20	
Thallium	ND	25.00	14.84	59	17.26	69	75-125	15	0-20	3
Vanadium	37.80	25.00	65.32	110	62.93	101	75-125	4	0-20	
Zinc	48.29	25.00	72.70	98	69.35	84	75-125	5	0-20	
Lithium	ND	25.00	1.237	5	-16.15	-65	75-125	0	0-20	3
Calcium	61740	25.00	33540	4X	53460	4X	75-125	4X	0-20	Q
Magnesium	7660	25.00	6169	4X	6042	4X	75-125	4X	0-20	Q
Potassium	2091	250.0	2521	4X	2415	4X	75-125	4X	0-20	Q
Sodium	12210	250.0	12740	4X	12290	4X	75-125	4X	0-20	Q
Boron	260.3	25.00	254.6	4X	260.4	4X	75-125	4X	0-20	Q

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - Spike/Spike Duplicate

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: NRG Coolwater			Page 8 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
P1-FL-1-0	**Sample**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:17**	**160630S06**
P1-FL-1-0	**Matrix Spike**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:13**	**160630S06**
P1-FL-1-0	**Matrix Spike Duplicate**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:14**	**160630S06**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	25.00	9.176	37	8.237	33	50-115	11	0-20	3
Arsenic	2.221	25.00	28.26	104	25.86	95	75-125	9	0-20	
Barium	127.1	25.00	160.1	4X	129.5	4X	75-125	4X	0-20	Q
Beryllium	ND	25.00	25.83	103	23.99	96	75-125	7	0-20	
Cadmium	ND	25.00	24.97	100	23.78	95	75-125	5	0-20	
Chromium	5.089	25.00	32.02	108	29.80	99	75-125	7	0-20	
Cobalt	3.472	25.00	29.37	104	26.89	94	75-125	9	0-20	
Copper	5.734	25.00	33.28	110	30.80	100	75-125	8	0-20	
Lead	3.675	25.00	29.58	104	26.98	93	75-125	9	0-20	
Molybdenum	ND	25.00	24.40	98	22.60	90	75-125	8	0-20	
Nickel	3.895	25.00	30.01	104	27.43	94	75-125	9	0-20	
Selenium	ND	25.00	23.80	95	22.69	91	75-125	5	0-20	
Silver	ND	12.50	12.63	101	12.00	96	75-125	5	0-20	
Thallium	ND	25.00	24.09	96	22.99	92	75-125	5	0-20	
Vanadium	17.11	25.00	46.56	118	41.25	97	75-125	12	0-20	
Zinc	26.44	25.00	58.76	129	52.13	103	75-125	12	0-20	3
Lithium	ND	25.00	23.03	92	21.57	86	75-125	7	0-20	
Calcium	5694	25.00	6416	4X	5499	4X	75-125	4X	0-20	Q
Magnesium	2713	25.00	3229	4X	2695	4X	75-125	4X	0-20	Q
Potassium	1533	250.0	2071	4X	1761	4X	75-125	4X	0-20	Q
Sodium	92.84	250.0	376.6	114	336.0	97	75-125	11	0-20	
Boron	4.189	25.00	27.76	94	26.05	87	75-125	6	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - Spike/Spike Duplicate

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: NRG Coolwater			Page 9 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
16-07-0013-1	**Sample**	**Sediment**	**Mercury 04**	**07/06/16**	**07/06/16 21:25**	**160706S03**
16-07-0013-1	**Matrix Spike**	**Sediment**	**Mercury 04**	**07/06/16**	**07/06/16 21:27**	**160706S03**
16-07-0013-1	**Matrix Spike Duplicate**	**Sediment**	**Mercury 04**	**07/06/16**	**07/06/16 21:29**	**160706S03**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.1457	0.8350	0.9119	92	0.8694	87	76-136	5	0-16	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - Spike/Spike Duplicate

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: NRG Coolwater			Page 10 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
P1-FL-1-0	**Sample**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 13:30**	**160707S01**
P1-FL-1-0	**Matrix Spike**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 13:33**	**160707S01**
P1-FL-1-0	**Matrix Spike Duplicate**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 13:35**	**160707S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	ND	0.8350	0.9802	117	0.8883	106	71-137	10	0-14	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - Sample Duplicate

ERM-WEST	Date Received: 06/28/16
2875 Michelle Dr., Suite 200	Work Order: 16-06-2043
Irvine, CA 92606-1021	Preparation: N/A
	Method: EPA 9045D
Project: NRG Coolwater	Page 1 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
P2-FL-4.0	**Sample**	**Solid**	**PH 4**	**06/29/16 00:00**	**06/29/16 16:19**	**G0629PHD5**
P2-FL-4.0	**Sample Duplicate**	**Solid**	**PH 4**	**06/29/16 00:00**	**06/29/16 16:19**	**G0629PHD5**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
pH	7.490	7.700	3	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - Sample Duplicate

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	N/A
		Method:	EPA 9045D
Project: NRG Coolwater			Page 2 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
P5-FL-8-0.5	**Sample**	**Solid**	**PH 4**	**06/29/16 00:00**	**06/29/16 21:30**	**G0629PHD6**
P5-FL-8-0.5	**Sample Duplicate**	**Solid**	**PH 4**	**06/29/16 00:00**	**06/29/16 21:30**	**G0629PHD6**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
pH	7.170	6.670	7	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - Sample Duplicate

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	N/A
		Method:	SM 2540 C (M)
Project: NRG Coolwater			Page 3 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
P3-FL-5-0	**Sample**	**Solid**	**N/A**	**07/06/16 00:00**	**07/06/16 17:00**	**G0706TDSD1**
P3-FL-5-0	**Sample Duplicate**	**Solid**	**N/A**	**07/06/16 00:00**	**07/06/16 17:00**	**G0706TDSD1**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Solids, Total Dissolved	78390	71390	9	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - Sample Duplicate

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	N/A
		Method:	SM 2540 C (M)
Project: NRG Coolwater			Page 4 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
P1	**Sample**	**Solid**	**N/A**	**07/06/16 00:00**	**07/06/16 19:00**	**G0706TDSD3**
P1	**Sample Duplicate**	**Solid**	**N/A**	**07/06/16 00:00**	**07/06/16 19:00**	**G0706TDSD3**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Solids, Total Dissolved	24970	27000	8	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - LCS

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	N/A
		Method:	EPA 300.0
Project: NRG Coolwater			Page 1 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-922-739	**LCS**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 14:38**	**160701L01P**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Fluoride	25.00	24.32	97	90-110	
Chloride	500.0	493.3	99	90-110	
Nitrate (as N)	50.00	49.11	98	90-110	
Sulfate	500.0	488.9	98	90-110	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - LCS

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	N/A
		Method:	EPA 300.0
Project: NRG Coolwater			Page 2 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-922-740	**LCS**	**Solid**	**IC 10**	**07/01/16**	**07/02/16 00:05**	**160701L02P**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Fluoride	25.00	25.44	102	90-110	
Chloride	500.0	496.3	99	90-110	
Nitrate (as N)	50.00	49.56	99	90-110	
Sulfate	500.0	490.8	98	90-110	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - LCS

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: NRG Coolwater			Page 3 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-420-1864	**LCS**	**Solid**	**GC 46**	**07/01/16**	**07/01/16 18:07**	**160701B04**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Motor Oil	400.0	357.1	89	75-123	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - LCS

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: NRG Coolwater			Page 4 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-420-1868	**LCS**	**Solid**	**GC 49**	**07/01/16**	**07/01/16 20:48**	**160701B09**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Motor Oil	400.0	409.5	102	75-123	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - LCS

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: NRG Coolwater			Page 5 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-422-2525	**LCS**	**Solid**	**GC 46**	**07/01/16**	**07/01/16 17:50**	**160701B03**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Diesel	400.0	379.6	95	75-123	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - LCS

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: NRG Coolwater			Page 6 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-422-2527	**LCS**	**Solid**	**GC 49**	**07/01/16**	**07/01/16 20:30**	**160701B08**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Diesel	400.0	306.6	77	75-123	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - LCS

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: NRG Coolwater			Page 7 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-002-22900	**LCS**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:11**	**160630L01A**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	25.00	24.38	98	80-120	73-127	
Arsenic	25.00	24.23	97	80-120	73-127	
Barium	25.00	26.15	105	80-120	73-127	
Beryllium	25.00	23.59	94	80-120	73-127	
Cadmium	25.00	25.37	101	80-120	73-127	
Chromium	25.00	25.96	104	80-120	73-127	
Cobalt	25.00	27.10	108	80-120	73-127	
Copper	25.00	25.62	102	80-120	73-127	
Lead	25.00	25.34	101	80-120	73-127	
Molybdenum	25.00	24.89	100	80-120	73-127	
Nickel	25.00	26.95	108	80-120	73-127	
Selenium	25.00	22.96	92	80-120	73-127	
Silver	12.50	12.51	100	80-120	73-127	
Thallium	25.00	25.09	100	80-120	73-127	
Vanadium	25.00	24.68	99	80-120	73-127	
Zinc	25.00	25.72	103	80-120	73-127	
Lithium	25.00	24.24	97	80-120	73-127	
Calcium	25.00	27.03	108	80-120	73-127	
Magnesium	25.00	26.62	106	80-120	73-127	
Potassium	250.0	247.9	99	80-120	73-127	
Sodium	250.0	245.9	98	80-120	73-127	
Boron	25.00	20.22	81	80-120	73-127	

Total number of LCS compounds: 22
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - LCS

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: NRG Coolwater			Page 8 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-002-22899	**LCS**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:09**	**160630L06**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	25.00	23.62	94	80-120	73-127	
Arsenic	25.00	23.33	93	80-120	73-127	
Barium	25.00	25.39	102	80-120	73-127	
Beryllium	25.00	22.78	91	80-120	73-127	
Cadmium	25.00	24.43	98	80-120	73-127	
Chromium	25.00	25.04	100	80-120	73-127	
Cobalt	25.00	26.00	104	80-120	73-127	
Copper	25.00	24.67	99	80-120	73-127	
Lead	25.00	24.54	98	80-120	73-127	
Molybdenum	25.00	24.04	96	80-120	73-127	
Nickel	25.00	26.18	105	80-120	73-127	
Selenium	25.00	22.33	89	80-120	73-127	
Silver	12.50	12.16	97	80-120	73-127	
Thallium	25.00	24.22	97	80-120	73-127	
Vanadium	25.00	23.86	95	80-120	73-127	
Zinc	25.00	24.98	100	80-120	73-127	
Lithium	25.00	23.29	93	80-120	73-127	
Calcium	25.00	28.11	112	80-120	73-127	
Magnesium	25.00	26.79	107	80-120	73-127	
Potassium	250.0	238.9	96	80-120	73-127	
Sodium	250.0	245.0	98	80-120	73-127	
Boron	25.00	19.91	80	80-120	73-127	

Total number of LCS compounds: 22
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Return to Contents

eurofins | Calscience

Quality Control - LCS

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: NRG Coolwater			Page 9 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-16-272-2286	**LCS**	**Solid**	**Mercury 04**	**07/06/16**	**07/06/16 21:23**	**160706L03**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Mercury	0.8350	0.7331	88	85-121	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Quality Control - LCS

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: NRG Coolwater			Page 10 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-16-272-2290	**LCS**	**Solid**	**Mercury 04**	**07/07/16**	**07/07/16 13:28**	**160707L01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Mercury	0.8350	0.8897	107	85-121	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

eurofins | Calscience

Sample Analysis Summary Report

Work Order: 16-06-2043 Page 1 of 1

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA 300.0	N/A	969	IC 10	1
EPA 6010B	EPA 3050B	935	ICP 7300	1
EPA 7471A	EPA 7471A Total	868	Mercury 04	1
EPA 8015B (M)	EPA 3550B	682	GC 49	1
EPA 8015B (M)	EPA 3550B	972	GC 46	1
EPA 9045D	N/A	650	PH 4	1
SM 2540 C (M)	N/A	1009	N/A	1

Return to Contents

eurofins | Calscience

Glossary of Terms and Qualifiers

Work Order: 16-06-2043 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Return to Contents

Virendra Patel

From: Alfonso Nunez <Alfonso.Nunez@erm.com>
Sent: Wednesday, June 29, 2016 12:28 PM
To: Steve Williams; Virendra Patel; Steve Ossim
Subject: RE: NRG Coolwater -- 16-06-2043 <response requested>

Sorry Virendra,
The change in labs, led to some mis-steps.

SAMPLE ANALYIS

The proposed sample analysis is based on the constituents of concern listed in the WDR; the requirements listed in Hazardous and Solid Waste Management System Disposal of Coal Combustion Residuals from Electric Utilities (U.S. Environmental Protection Agency [USEPA], 2014); and total petroleum hydrocarbons based on operation equipment. The list of analysis and analytical methods are summarized below.

- California Title 22 metals, boron, calcium, lithium, magnesium, potassium, and sodium by USEPA Methods 6010 and 7471;
- Chloride, fluoride, nitrate, and sulfate by USEPA 300.0;
- pH by 9045;
- Total dissolved solids by USEPA Method 106.1;
- Total petroleum hydrocarbons as diesel and as motor oil by USEPA Method 8015b; and
- Radium 226 and 228 by USEPA 903.1 and USEPA 904.0

Return to Contents

From: Steve Williams
Sent: Wednesday, June 29, 2016 11:17 AM
To: Virendra Patel; Steve Ossim; Alfonso Nunez
Subject: RE: NRG Coolwater -- 16-06-2043 <response requested>

Alf, please QC and verify chain with the work plan.

Steve Williams PG, CHG
Partner

ERM
2875 Michelle Dr. Suite 200
Irvine, California 92606
Cell: 949-294-0835
Office Direct: 949-623-4674
Office main: 949-623-4700

Steve.williams@erm.com
Visit us at www.erm.com

From: Virendra Patel [mailto:VirendraPatel@eurofinsUS.com]
Sent: Wednesday, June 29, 2016 11:16 AM
To: Steve Ossim; Alfonso Nunez
Cc: Steve Williams
Subject: RE: NRG Coolwater -- 16-06-2043 <response requested>

The COCs didn't the following:

T22 is to include – Calcium, Lithium, Magnesium, Potassium, Sodium?
TPH is to report TPH diesel and Motor Oil?

Please advise. Thanks!

Best Regards,

Virendra Patel
Project Manager

Eurofins Calscience, Inc.
7440 Lincoln Way
Garden Grove, CA 92841
USA
P: +1 714 895 5494
F: +1 714 894 7501

Email: virendrapatel@eurofinsUS.com
Website: www.eurofinsUS.com/Calscience

From: Steve Ossim [mailto:Steve.Ossim@erm.com]
Sent: Wednesday, June 29, 2016 10:25 AM
To: Alfonso Nunez; Virendra Patel
Cc: Steve Williams
Subject: RE: NRG Coolwater -- 16-06-2043 <response requested>

For the first 4 items, the correct sample times are those written on the labels. P2-2 is 9:10am, P2-3 is 9:15am, P2-4 is 9:20am, P2-5 is 9:25am.

For the last item the chain should read P1-FL-2-1. Label is correct.

From: Alfonso Nunez
Sent: Wednesday, June 29, 2016 10:14 AM
To: Steve Ossim
Cc: Steve Williams
Subject: FW: NRG Coolwater -- 16-06-2043 <response requested>
Importance: High

Steve o
Can you help?
Lets chat

Return to Contents

From: Virendra Patel [mailto:VirendraPatel@eurofinsUS.com]
Sent: Wednesday, June 29, 2016 10:03 AM
To: Alfonso Nunez; Steve Williams
Cc: Erick Ovalle
Subject: NRG Coolwater -- 16-06-2043 <response requested>
Importance: High

Alfonso/Steve,

Good Morning. For the subject project COCs, please provide clarification on the following items:

Sample #17 – P2-2, COC has collection time of 09:15am – sample label has 09:10am – **What is correct collection time?**
Sample #18 – P2-3, COC has collection time of 09:20am – sample label has 09:15am – **What is correct collection time?**
Sample #19 – P2-4, COC has collection time of 09:25am – sample label has 09:20am – **What is correct collection time?**
Sample #20 – P2-5, COC has collection time of 09:30am – sample label has 09:25am – **What is correct collection time?**
Sample #32 – COC has sample ID of P1-FL-1 – sample label has ID of P1-FL-2-1? **What is correct sample ID?**

Best Regards,

Virendra Patel
Project Manager

Eurofins Calscience, Inc.
7440 Lincoln Way
Garden Grove, CA 92841
USA
P: +1 714 895 5494
F: +1 714 894 7501

Email: virendrapatel@eurofinsUS.com
Website: www.eurofinsUS.com/Calscience

Return to Contents

Return to Contents

eurofins | Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: **16-06-2043**

DATE: 06/27/16

PAGE: 1 OF 8

LABORATORY CLIENT: Environmental Resource Management (ERM)

2875 Michelle Drive, Suite 200

CITY: Irvine STATE: CA ZIP: 92606

TEL: 949-623-4700 E-MAIL: steve.williams@erm.com

CLIENT PROJECT NAME / NUMBER: NRG Coolwater

P.O. NO.: 355141.02

PROJECT CONTACT: Steve Williams

SAMPLER(S): (PRINT) Steve Ossim; Shad Whitten

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS X STANDARD

☒ COELT EDF GLOBAL ID: GB362036002 LOG CODE:

SPECIAL INSTRUCTIONS: also send to: steve.ossim@erm.com, alfonso.nunez@erm.com

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	T22 Metals o 6010/747X o 6020/747X	Cl, Fl, Nitrate, Sulfate, EPA 300.0	pH by 9045	TDS 160.1	TPH 8015B	Radium 226 + 228 by USEPA 903.1 +	Notes
1	P5-1	6/27/2016	7:25	soil	1-8oz/1-4oz	X			x	x	x	x	x	x	Composite P5-1 to P5-5 into "P5"
2	P5-2	6/27/2016	7:30	soil	1-8oz/1-4oz										
3	P5-3	6/27/2016	7:35	soil	1-8oz/1-4oz										
4	P5-4	6/27/2016	7:40	soil	1-8oz/1-4oz										
5	P5-5	6/27/2016	7:45	soil	1-8oz/1-4oz										
6	P4-1	6/27/2016	8:15	soil	1-8oz/1-4oz				x	x	x	x	x	x	Composite P4-1 to P4-5 into "P4"
7	P4-2	6/27/2016	8:20	soil	1-8oz/1-4oz										
8	P4-3	6/27/2016	8:25	soil	1-8oz/1-4oz										
9	P4-4	6/27/2016	8:30	soil	1-8oz/1-4oz										
10	P4-5	6/27/2016	8:35	soil	1-8oz/1-4oz										

Relinquished by: (Signature) Done for Steve Ossim	Received by: (Signature/Affiliation) ECI	Date: 6/28/16	Time: 1652
Relinquished by: (Signature) Rudy V	Received by: (Signature/Affiliation) ECI	Date: 062816	Time: 1840.
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

06/02/14 Revision

Return to Contents

eurofins | Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 06-2043

DATE: 06/27/16

PAGE: 2 OF 8

LABORATORY CLIENT: Environmental Resource Management (ERM)

2875 Michelle Drive, Suite 200

CITY: Irvine STATE: CA ZIP: 92606

TEL: 949-623-4700 E-MAIL: steve.williams@erm.com

CLIENT PROJECT NAME / NUMBER: NRG Coolwater

P.O. NO.: 355141.02

PROJECT CONTACT: Steve Williams

SAMPLER(S): (PRINT) Steve Ossim; Shad Whitten

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS X STANDARD

☒ COELT EDF GLOBAL ID: GB362036002 LOG CODE:

SPECIAL INSTRUCTIONS: also send to: steve.ossim@erm.com, alfonso.nunez@erm.com

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	T22 Metals o 6010/747X o 6020/747X	Cl, Fl, Nitrate, Sulfate, EPA 300.0	pH by 9045	TDS 160.1	TPH 8015B	Radium 226 + 228 by USEPA 903.1 +				Notes
11	P3-1	6/27/2016	8:20	soil	1-8oz/1-4oz	X												
12	P3-2	6/27/2016	8:25	soil	1-8oz/1-4oz													
13	P3-3	6/27/2016	8:40	soil	1-8oz/1-4oz				x	x	x	x	x	x				Composite P3-1 to P3-5 into "P3"
14	P3-4	6/27/2016	8:30	soil	1-8oz/1-4oz													
15	P3-5	6/27/2016	8:35	soil	1-8oz/1-4oz													
16	P2-1	6/27/2016	9:05	soil	1-8oz/1-4oz													
17	P2-2	6/27/2016	9:15	soil	1-8oz/1-4oz													
18	P2-3	6/27/2016	9:20	soil	1-8oz/1-4oz				x	x	x	x	x	x				Composite P2-1 to P2-5 into "P2"
19	P2-4	6/27/2016	9:25	soil	1-8oz/1-4oz													
20	P2-5	6/27/2016	9:30	soil	1-8oz/1-4oz													

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Owen for Steve Ossim	ECI	6/28/16	1652
Rudy M	ECI	062816	1840
		Date:	Time:

06/02/14 Revision

Return to Contents

eurofins | Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 06-2043

DATE: 06/27/16

PAGE: 3 OF 8

LABORATORY CLIENT: Environmental Resource Management (ERM)

2875 Michelle Drive, Suite 200

CITY: Irvine STATE: CA ZIP: 92606

TEL: 949-623-4700 E-MAIL: steve.williams@erm.com

CLIENT PROJECT NAME / NUMBER: NRG Coolwater

P.O. NO.: 355141.02

PROJECT CONTACT: Steve Williams

SAMPLER(S): (PRINT) Steve Ossim; Shad Whitten

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS X STANDARD

☒ COELT EDF GLOBAL ID: 6B362036002 LOG CODE:

SPECIAL INSTRUCTIONS: also send to: steve.ossim@erm.com, alfonso.nunez@erm.com

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	T22 Metals o 6010/747X o 6020/747X	Cl, Fl, Nitrate, Sulfate, EPA 300.0	pH by 9045	TDS 160.1	TPH 8015B	Radium 226 + 228 by USEPA 903.1 +	Notes
21	P1-1	6/27/2016	9:00	soil	1-8oz/1-4oz				x	x	x	x	x	x	Composite P1-1 to P1-5 into "P1"
22	P1-2	6/27/2016	9:05	soil	1-8oz/1-4oz										
23	P1-3	6/27/2016	9:10	soil	1-8oz/1-4oz										
24	P1-4	6/27/2016	9:15	soil	1-8oz/1-4oz										
25	P1-5	6/27/2016	9:20	soil	1-8oz/1-4oz										

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
for Steve Oss.	ECI	6/28/16	1652
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
	ECI	062816	1840
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

06/02/14 Revision

Return to Contents

eurofins | Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 06-2043

DATE: 06/27/16

PAGE: 4 OF 8

LABORATORY CLIENT: Environmental Resource Management (ERM)

2875 Michelle Drive, Suite 200

CITY: Irvine STATE: CA ZIP: 92606

TEL: 949-623-4700 E-MAIL: steve.williams@erm.com

CLIENT PROJECT NAME / NUMBER: NRG Coolwater

P.O. NO.: 355141.02

PROJECT CONTACT: Steve Williams

SAMPLER(S): (PRINT) Steve Ossim; Shad Whitten

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS X STANDARD

☒ COELT EDF GLOBAL ID: GB362036002 LOG CODE:

SPECIAL INSTRUCTIONS: also send to: steve.ossim@erm.com, alfonso.nunez@erm.com

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	T22 Metals o 6010/747X o 6020/747X	Cl, Fl, Nitrate, Sulfate, EPA 300.0	pH by 9045	TDS 160.1	TPH 8015B	Radium 226 + 228 by USEPA 903.1 +	
26	P1-FL-1-0	6/27/2016	14:40	soil	1-8oz/1-4oz				x	x	x	x	x	x	
27	P1-FL-1-0.5	6/27/2016	14:45	soil	1-8oz/1-4oz				x	x	x	x	x	x	
28	P1-FL-1-1	6/27/2016	14:50	soil	1-8oz/1-4oz										Hold
29	P1-FL-1-3	6/27/2016	14:55	soil	1-8oz/1-4oz										Hold
30	P1-FL-2-0	6/27/2016	14:15	soil	1-8oz/1-4oz				x	x	x	x	x	x	
31	P1-FL-2-0.5	6/27/2016	14:20	soil	1-8oz/1-4oz				x	x	x	x	x	x	
32	P1-FL-1	6/27/2016	14:25	soil	1-8oz/1-4oz										Hold
33	P1-FL-2-3	6/27/2016	14:30	soil	1-8oz/1-4oz										Hold
34															

Relinquished by: (Signature) for Steve Ossim	Received by: (Signature/Affiliation) ECI	Date: 6/28/16	Time: 1652
Relinquished by: (Signature)	Received by: (Signature/Affiliation) ECI	Date: 062816	Time: 1840.
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

06/02/14 Revision

Return to Contents

eurofins | Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 06-2043

DATE: 06/27/16

PAGE: 5 OF 8

LABORATORY CLIENT: Environmental Resource Management (ERM)

2875 Michelle Drive, Suite 200

CITY: Irvine STATE: CA ZIP: 92606

TEL: 949-623-4700 E-MAIL: steve.williams@erm.com

CLIENT PROJECT NAME / NUMBER: NRG Coolwater

P.O. NO.: 355141.02

PROJECT CONTACT: Steve Williams

SAMPLER(S): (PRINT) Steve Ossim; Shad Whitten

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS X STANDARD

☒ COELT EDF GLOBAL ID: GB 362036002 LOG CODE:

SPECIAL INSTRUCTIONS: also send to: steve.ossim@erm.com, alfonso.nunez@erm.com

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	T22 Metals o 6010/747X o 6020/747X	Cl, Fl, Nitrate, Sulfate, EPA 300.0	pH by 9045	TDS 160.1	TPH 8015B	Radium 226 + 228 by USEPA 903.1 +	
34	P1-FL-3-0	6/27/2016	13:45	soil	1-8oz/1-4oz				x	x	x	x	x	x	
35	P1-FL-3-0.5	6/27/2016	13:50	soil	1-8oz/1-4oz				x	x	x	x	x	x	
36	P1-FL-3-1	6/27/2016	13:55	soil	1-8oz/1-4oz										Hold
37	P1-FL-3-3	6/27/2016	14:00	soil	1-8oz/1-4oz										Hold
38	P2-FL-4-0	6/27/2016	13:20	soil	1-8oz/1-4oz				x	x	x	x	x	x	
39	P2-FL-4-0.5	6/27/2016	13:25	soil	1-8oz/1-4oz				x	x	x	x	x	x	
40	P2-FL-4-1	6/27/2016	13:30	soil	1-8oz/1-4oz										Hold
41	P2-FL-4-3	6/27/2016	13:35	soil	1-8oz/1-4oz										Hold

Relinquished by: (Signature) Done for Steve Ossim	Received by: (Signature/Affiliation) GCI	Date: 6/28/16	Time: 1652
Relinquished by: (Signature)	Received by: (Signature/Affiliation) ECI	Date: 06 28 16	Time: 1652
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

06/02/14 Revision

Return to Contents

eurofins | Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 06-2043

DATE: 06/27/16

PAGE: 6 OF 8

LABORATORY CLIENT: Environmental Resource Management (ERM)

2875 Michelle Drive, Suite 200

CITY: Irvine STATE: CA ZIP: 92606

TEL: 949-623-4700 E-MAIL: steve.williams@erm.com

CLIENT PROJECT NAME / NUMBER: NRG Coolwater

P.O. NO.: 355141.02

PROJECT CONTACT: Steve Williams

SAMPLER(S): (PRINT) Steve Ossim; Shad Whitten

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS X STANDARD

☒ COELT EDF GLOBAL ID: 68362036002 LOG CODE:

SPECIAL INSTRUCTIONS: also send to: steve.ossim@erm.com, alfonso.nunez@erm.com

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	T22 Metals o 6010/747X o 6020/747X	Cl, Fl, Nitrate, Sulfate, EPA 300.0	pH by 9045	TDS 160.1	TPH 8015B	Radium 226 + 228 by USEPA 903.1 +												
43	P3-FL-5-0	6/27/2016	11:30	soil	1-8oz/1-4oz				x	x	x	x	x	x												
43	P3-FL-5-0.5	6/27/2016	11:35	soil	1-8oz/1-4oz				x	x	x	x	x	x												
44	P3-FL-5-1	6/27/2016	11:40	soil	1-8oz/1-4oz										Hold											
45	P3-FL-5-3	6/27/2016	11:45	soil	1-8oz/1-4oz										Hold											
46	P4-FL-6-0	6/27/2016	11:00	soil	1-8oz/1-4oz				x	x	x	x	x	x												
47	P4-FL-6-0.5	6/27/2016	11:05	soil	1-8oz/1-4oz				x	x	x	x	x	x												
48	P4-FL-6-1	6/27/2016	11:10	soil	1-8oz/1-4oz										Hold											
49	P4-FL-6-3	6/27/2016	11:15	soil	1-8oz/1-4oz										Hold											

Relinquished by: (Signature) Done for Steve Ossim	Received by: (Signature/Affiliation) ECI	Date: 6/28/16	Time: 1652
Relinquished by: (Signature)	Received by: (Signature/Affiliation) ECI	Date: 062816	Time: 1840.
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

06/02/14 Revision

Return to Contents

eurofins | Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

CHAIN OF CUSTODY RECORD

WO #: / LAB USE ONLY: 06-2043

DATE: 06/27/16

PAGE: 7 OF 8

LABORATORY CLIENT: Environmental Resource Management (ERM)

2875 Michelle Drive, Suite 200

CITY: Irvine STATE: CA ZIP: 92606

TEL: 949-623-4700 E-MAIL: steve.williams@erm.com

CLIENT PROJECT NAME / NUMBER: NRG Coolwater

P.O. NO.: 355141.02

PROJECT CONTACT: Steve Williams

SAMPLER(S): (PRINT) Steve Ossim; Shad Whitten

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS X STANDARD

☒ COELT EDF GLOBAL ID: GB362036002 LOG CODE:

SPECIAL INSTRUCTIONS: also send to: steve.ossim@erm.com, alfonso.nunez@erm.com

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	T22 Metals o 6010/747X o 6020/747X	Cl, Fl, Nitrate, Sulfate, EPA 300.0	pH by 9045	TDS 160.1	TPH 8015B	Radium 226 + 228 by USEPA 903.1 +	
50	P5-FL-7-0	6/27/2016	10:45	soil	1-8oz/1-4oz				x	x	x	x	x	x	
51	P5-FL-7-0.5	6/27/2016	10:50	soil	1-8oz/1-4oz				x	x	x	x	x	x	
52	P5-FL-7-1	6/27/2016	10:55	soil	1-8oz/1-4oz										Hold
53	P5-FL-7-3	6/27/2016	11:00	soil	1-8oz/1-4oz										Hold
54	P5-FL-8-0	6/27/2016	10:00	soil	1-8oz/1-4oz				x	x	x	x	x	x	
55	P5-FL-8-0.5	6/27/2016	10:05	soil	1-8oz/1-4oz				x	x	x	x	x	x	
56	P5-FL-8-1	6/27/2016	10:10	soil	1-8oz/1-4oz										Hold
57	P5-FL-8-3	6/27/2016	10:15	soil	1-8oz/1-4oz										Hold

Relinquished by: (Signature) Done for Steve Ossim	Received by: (Signature/Affiliation) ECL	Date: 6/28/16	Time: 1652
Relinquished by: (Signature)	Received by: (Signature/Affiliation) ECL	Date: 062816	Time: 1840
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

06/02/14 Revision

Return to Contents

eurofins | Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: 06-2043

DATE: 06/27/16

PAGE: 8 OF 8

LABORATORY CLIENT: Environmental Resource Management (ERM)

2875 Michelle Drive, Suite 200

CITY: Irvine STATE: CA ZIP: 92606

TEL: 949-623-4700 E-MAIL: steve.williams@erm.com

CLIENT PROJECT NAME / NUMBER: NRG Coolwater

P.O. NO.: 355141.02

PROJECT CONTACT: Steve Williams

SAMPLER(S): (PRINT) Steve Ossim; Shad Whitten

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS X STANDARD

☐ [X] COELT EDF GLOBAL ID: GB362036002 LOG CODE:

SPECIAL INSTRUCTIONS: also send to: steve.ossim@erm.com, alfonso.nunez@erm.com

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	T22 Metals - 6010/747A o 6020/747A	Cl, Fl, Nitrate, Sulfate, EPA 300.0	pH by 9045	TDS 160.1	TPH 8015B	Radium 226 + 228 by USEPA 903.1 +
58	B-1	6/27/2016	15:25	soil	1-8oz/1-4oz				x	x	x	x	x	x
59	B-2	6/27/2016	15:15	soil	1-8oz/1-4oz				x	x	x	x	x	x
60	DUP	6/27/2016	--	soil	1-8oz/1-4oz				x	x	x	x	x	x
61	B-3	6/27/2016	15:30	soil	1-8oz/1-4oz				x	x	x	x	x	x

Relinquished by: (Signature) Dmc for Steve Ossim	Received by: (Signature/Affiliation) ECI	Date: 6/28/16	Time: 1652
Relinquished by: (Signature)	Received by: (Signature/Affiliation) ECI	Date: 062816	Time: 1840
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

06/02/14 Revision

Return to Contents

eurofins | Calscience

WORK ORDER NUMBER: 16-06- 2056 (43) 6/28/16

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 2

CLIENT: ERM

DATE: 06 / 28 / 2016

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2A (CF: 0.0°C); Temperature (w/o CF): 2.5 °C (w/ CF): 2.5 °C; ☐ Blank ☑ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter Checked by: 676

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 676

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 1053

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☐	☑	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOA**h** ☐ VOA**na$_2$** ☐ 100PJ ☐ 100PJ**na$_2$** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB

☐ 125PB**znna** ☐ 250AGB ☐ 250CGB ☐ 250CGB**s** ☐ 250PB ☐ 250PB**n** ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s**

☐ 500PB ☐ 1AGB ☐ 1AGB**na$_2$** ☐ 1AGB**s** ☐ 1PB ☐ 1PB**na** ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☑ 4ozCGJ ☑ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 1053

Reviewed by: 689

Return to Contents

eurofins | Calscience

WORK ORDER NUMBER: 16-06- 2043

SAMPLE RECEIPT CHECKLIST

COOLER 2 OF 2

CLIENT: ERM

DATE: 06 / 28 / 2016

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2A (CF: 0.0°C); Temperature (w/o CF): 2.4 °C (w/ CF): 2.4 °C; ☐ Blank ☑ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter Checked by: 676

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 676

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 1053

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOA**h** ☐ VOA**na$_2$** ☐ 100PJ ☐ 100PJ**na$_2$** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB

☐ 125PB**znna** ☐ 250AGB ☐ 250CGB ☐ 250CGB**s** ☐ 250PB ☐ 250PB**n** ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s**

☐ 500PB ☐ 1AGB ☐ 1AGB**na$_2$** ☐ 1AGB**s** ☐ 1PB ☐ 1PB**na** ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☑ 4ozCGJ ☑ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 1053

Reviewed by: 657

Return to Contents

eurofins | Calscience

WORK ORDER NUMBER: 16-06- 2043

SAMPLE ANOMALY REPORT

DATE: 06 / 28 / 2016

SAMPLES, CONTAINERS, AND LABELS:

- ☐ Sample(s) NOT RECEIVED but listed on COC
- ☐ Sample(s) received but NOT LISTED on COC
- ☐ Holding time expired (list client or ECI sample ID and analysis)
- ☐ Insufficient sample amount for requested analysis (list analysis)
- ☐ Improper container(s) used (list analysis)
- ☐ Improper preservative used (list analysis)
- ☐ No preservative noted on COC or label (list analysis and notify lab)
- ☐ Sample container(s) not labeled
- ☐ Client sample label(s) illegible (list container type and analysis)
- ☑ Client sample label(s) do not match COC (comment)
  - ☐ Project information
  - ☑ Client sample ID
  - ☑ Sampling date and/or time
  - ☐ Number of container(s)
  - ☐ Requested analysis
- ☐ Sample container(s) compromised (comment)
  - ☐ Broken
  - ☐ Water present in sample container
- ☐ Air sample container(s) compromised (comment)
  - ☐ Flat
  - ☐ Very low in volume
  - ☐ Leaking (not transferred; duplicate bag submitted)
  - ☐ Leaking (transferred into ECI Tedlar™ bags*)
  - ☐ Leaking (transferred into client's Tedlar™ bags*)

* Transferred at client's request.

Comments

(-16) Received 1 of 2 containers (4 oz CGJ) labeled as P1-2 (Date/Time matched)

(-22) Received 1 of 2 containers (4 oz CGJ) labeled as ~~P1-2~~ P2-1 (Date/Time matched)

6/28/16

(-32) Labeled as P1-FL-2-1 (Date/Time matched)

Collection time per label
(-17) 9:10 (-18) 9:15
(-19) 9:20 (-20) 9:25

MISCELLANEOUS: (Describe)

Comments

HEADSPACE:

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

ECI Sample ID	ECI Container ID	Total Number**	ECI Sample ID	ECI Container ID	Total Number**

(Containers with bubble for other analysis)

ECI Sample ID	ECI Container ID	Total Number**	Requested Analysis

Comments: _____

Reported by: 1053

Reviewed by: 659

** Record the total number of containers (i.e., vials or bottles) for the affected sample.

Return to Contents

eurofins | Calscience

Subcontractor Analysis Report

Work Order: 16-06-2043 Page 1 of 1

One or more samples in this work order have tests that were subcontracted. The subcontract report(s) follows.

For subcontracted tests, please reference the laboratory information noted below.

1. GEL Laboratories, LLC - Charleston,SC NELAP 01151CA
   Radiochemistry

Return to Contents

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

July 14, 2016

Mr. Virendra R. Patel
Calscience Environmental Laboratories, Inc.
7440 Lincoln Way
Garden Grove, California 92841-1427

Re: Radiochemistry Analyses
Work Order: 400455

Dear Mr. Patel:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on June 30, 2016. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4289.

Sincerely,

Hope Taylor for
Julie Robinson
Project Manager

Purchase Order: PO
Chain of Custody: 16-06-2043
Enclosures

Return to Contents

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis Report
for

CALS003 Eurofins Calscience, Inc.

Client SDG: 400455 GEL Work Order: 400455

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a Tracer compound

** Analyte is a surrogate compound

U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Julie Robinson.

Return to Contents

Reviewed by _____

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: P5
Sample ID: 400455001
Matrix: Soil
Collect Date: 27-JUN-16 07:25
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228		4.52	+/-1.54	1.80	3.00	pCi/g			AXM6	07/11/16	1501	1579093	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		1.80	+/-0.492	0.454	1.00	pCi/g			LXP1	07/11/16	0820	1579030	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0929	1578723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			90.1	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID:	P4	Project:	CALS00116
Sample ID:	400455002	Client ID:	CALS003
Matrix:	Soil		
Collect Date:	27-JUN-16 08:35		
Receive Date:	30-JUN-16		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228		3.16	+/-1.35	1.79	3.00	pCi/g			AXM6	07/11/16	1501	1579093	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		0.872	+/-0.383	0.413	1.00	pCi/g			LXP1	07/11/16	0820	1579030	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0929	1578723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			101	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: P3
Sample ID: 400455003
Matrix: Soil
Collect Date: 27-JUN-16 08:35
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228	U	1.35	+/-1.18	1.91	3.00	pCi/g			AXM6	07/11/16	1501	1579093	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		1.11	+/-0.366	0.325	1.00	pCi/g			LXP1	07/11/16	0820	1579030	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0929	1578723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			103	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: P2
Sample ID: 400455004
Matrix: Soil
Collect Date: 27-JUN-16 09:25
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228		3.96	+/-2.00	2.96	3.00	pCi/g			AXM6	07/12/16	1439	1579093	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		2.00	+/-0.467	0.212	1.00	pCi/g			LXP1	07/11/16	0820	1579030	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0929	1578723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			83.1	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: P1
Sample ID: 400455005
Matrix: Soil
Collect Date: 27-JUN-16 09:20
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228		2.03	+/-1.26	1.89	3.00	pCi/g			AXM6	07/11/16	1504	1579093	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		1.27	+/-0.420	0.436	1.00	pCi/g			LXP1	07/11/16	0820	1579030	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0929	1578723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			103	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: P1-FL-1-0
Sample ID: 400455006
Matrix: Soil
Collect Date: 27-JUN-16 14:40
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228	U	1.14	+/-1.25	2.09	3.00	pCi/g			AXM6	07/11/16	1504	1579093	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		2.53	+/-0.611	0.517	1.00	pCi/g			LXP1	07/11/16	0820	1579030	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0929	1578723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			104	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: P1-FL-1-0.5
Sample ID: 400455007
Matrix: Soil
Collect Date: 27-JUN-16 14:45
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228		4.46	+/-1.66	2.24	3.00	pCi/g			AXM6	07/11/16	1504	1579093	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		1.71	+/-0.448	0.334	1.00	pCi/g			LXP1	07/11/16	0850	1579030	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0929	1578723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			99.1	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: P1-FL-2-0
Sample ID: 400455010
Matrix: Soil
Collect Date: 27-JUN-16 14:15
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228		2.68	+/-1.42	2.06	3.00	pCi/g			AXM6	07/11/16	1504	1579093	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		0.536	+/-0.348	0.483	1.00	pCi/g			LXP1	07/11/16	0850	1579030	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0929	1578723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			96.1	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: P1-FL-2-0.5
Sample ID: 400455011
Matrix: Soil
Collect Date: 27-JUN-16 14:20
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228		2.23	+/-1.21	1.72	3.00	pCi/g			AXM6	07/11/16	1504	1579093	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		1.03	+/-0.414	0.478	1.00	pCi/g			LXP1	07/11/16	0850	1579030	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0929	1578723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			95.2	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: P1-FL-3.0
Sample ID: 400455014
Matrix: Soil
Collect Date: 27-JUN-16 13:45
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228	U	2.01	+/-1.35	2.10	3.00	pCi/g			AXM6	07/11/16	1504	1579093	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		1.29	+/-0.482	0.536	1.00	pCi/g			LXP1	07/11/16	0850	1579030	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0929	1578723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			98.8	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: P1-FL-3-0.5
Sample ID: 400455015
Matrix: Soil
Collect Date: 27-JUN-16 13:50
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228	U	1.01	+/-1.11	1.85	3.00	pCi/g			AXM6	07/12/16	1439	1579093	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		0.445	+/-0.265	0.356	1.00	pCi/g			LXP1	07/11/16	0850	1579030	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0929	1578723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			78.7	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID:	P2-FL-4-0	Project:	CALS00116
Sample ID:	400455018	Client ID:	CALS003
Matrix:	Soil		
Collect Date:	27-JUN-16 13:20		
Receive Date:	30-JUN-16		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228	U	1.28	+/-1.18	1.90	3.00	pCi/g			AXM6	07/11/16	1625	1579093	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		1.17	+/-0.369	0.372	1.00	pCi/g			LXP1	07/13/16	0815	1579031	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0929	1578723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			99.6	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: P2-FL-4-0.5
Sample ID: 400455019
Matrix: Soil
Collect Date: 27-JUN-16 13:25
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228	U	0.998	+/-1.25	2.13	3.00	pCi/g			AXM6	07/11/16	1505	1579093	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		0.806	+/-0.349	0.400	1.00	pCi/g			LXP1	07/13/16	0815	1579031	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0929	1578723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			101	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: P3-FL-5-0
Sample ID: 400455022
Matrix: Soil
Collect Date: 27-JUN-16 11:30
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228		2.33	+/-1.42	2.13	3.00	pCi/g			AXM6	07/11/16	1505	1579093	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226	U	0.282	+/-0.213	0.312	1.00	pCi/g			LXP1	07/13/16	0815	1579031	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0929	1578723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			95.9	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: P3-FL-5-0.5
Sample ID: 400455023
Matrix: Soil
Collect Date: 27-JUN-16 11:35
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228		2.61	+/-1.16	1.49	3.00	pCi/g			AXM6	07/11/16	1505	1579093	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		0.767	+/-0.365	0.459	1.00	pCi/g			LXP1	07/13/16	0815	1579031	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0929	1578723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			100	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: P4-FL-6-0
Sample ID: 400455026
Matrix: Soil
Collect Date: 27-JUN-16 11:00
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228	U	1.71	+/-1.47	2.38	3.00	pCi/g			AXM6	07/12/16	1105	1579094	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226	U	0.259	+/-0.210	0.322	1.00	pCi/g			LXP1	07/13/16	0815	1579031	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0929	1578723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			99.6	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: P4-FL-6-0.5
Sample ID: 400455027
Matrix: Soil
Collect Date: 27-JUN-16 11:05
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228	U	1.76	+/-1.80	2.99	3.00	pCi/g			AXM6	07/12/16	1105	1579094	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		1.47	+/-0.428	0.411	1.00	pCi/g			LXP1	07/13/16	0815	1579031	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0929	1578723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			90.3	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: P5-FL-7-0
Sample ID: 400455030
Matrix: Soil
Collect Date: 27-JUN-16 10:45
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228	U	0.752	+/-1.00	1.72	3.00	pCi/g			AXM6	07/12/16	1105	1579094	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		0.818	+/-0.314	0.336	1.00	pCi/g			LXP1	07/13/16	0850	1579031	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0929	1578723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			96.8	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID:	P5-FL-7-0.5	Project:	CALS00116
Sample ID:	400455031	Client ID:	CALS003
Matrix:	Soil		
Collect Date:	27-JUN-16 10:50		
Receive Date:	30-JUN-16		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228	U	0.959	+/-1.68	2.90	3.00	pCi/g			AXM6	07/12/16	1105	1579094	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226	U	0.291	+/-0.219	0.322	1.00	pCi/g			LXP1	07/13/16	0850	1579031	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0929	1578723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			90.4	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: P5-FL-8-0
Sample ID: 400455034
Matrix: Soil
Collect Date: 27-JUN-16 10:00
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228		1.97	+/-1.23	1.77	3.00	pCi/g			AXM6	07/13/16	1228	1579094	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		1.26	+/-0.385	0.356	1.00	pCi/g			LXP1	07/13/16	0850	1579031	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0929	1578723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			77.2	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: P5-FL-8-0.5
Sample ID: 400455035
Matrix: Soil
Collect Date: 27-JUN-16 10:05
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228	U	1.17	+/-1.17	1.93	3.00	pCi/g			AXM6	07/12/16	1105	1579094	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		1.72	+/-0.444	0.365	1.00	pCi/g			LXP1	07/13/16	0850	1579031	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0933	1578724

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			93.5	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: B-1
Sample ID: 400455038
Matrix: Soil
Collect Date: 27-JUN-16 15:25
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228		3.78	+/-1.73	2.40	3.00	pCi/g			AXM6	07/12/16	1105	1579094	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		1.23	+/-0.398	0.407	1.00	pCi/g			LXP1	07/13/16	0850	1579031	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0933	1578724

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			81.4	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: B-2
Sample ID: 400455039
Matrix: Soil
Collect Date: 27-JUN-16 15:15
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228	U	1.14	+/-1.48	2.52	3.00	pCi/g			AXM6	07/13/16	1228	1579094	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		1.33	+/-0.430	0.440	1.00	pCi/g			LXP1	07/13/16	0850	1579031	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0933	1578724

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			63.5	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: DUP
Sample ID: 400455040
Matrix: Soil
Collect Date: 27-JUN-16 15:15
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228	U	0.766	+/-1.28	2.25	3.00	pCi/g			AXM6	07/12/16	1109	1579094	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		0.563	+/-0.275	0.350	1.00	pCi/g			LXP1	07/13/16	0925	1579031	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0933	1578724

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			87	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 14, 2016

Company : Calscience Environmental Laboratories, Inc.
Address : 7440 Lincoln Way

Garden Grove, California 92841--1427
Contact: Mr. Virendra R. Patel
Project: Radiochemistry Analyses

Client Sample ID: B-3
Sample ID: 400455041
Matrix: Soil
Collect Date: 27-JUN-16 15:30
Receive Date: 30-JUN-16
Collector: Client

Project: CALS00116
Client ID: CALS003

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
Gas Flow Radium 228 "Dry Weight Corrected"													
Radium-228		3.11	+/-1.56	2.25	3.00	pCi/g			AXM6	07/12/16	1109	1579094	1
Rad Radium-226													
Lucas Cell, Ra226, solid "Dry Weight Corrected"													
Radium-226		1.16	+/-0.425	0.468	1.00	pCi/g			LXP1	07/13/16	0925	1579031	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	NXP2	07/01/16	0933	1578724

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	Gas Flow Radium 228 "Dry Weight Corrected"			97.3	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 14, 2016

Calscience Environmental Laboratories, Inc.
7440 Lincoln Way
Garden Grove, California

Contact: **Mr. Virendra R. Patel**

Workorder: **400455**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch 1579093											
QC1203578690 400455018 DUP											
Radium-228	U	1.28	U	2.10	pCi/g	N/A		N/A	AXM6	07/11/16	16:25
	Uncertainty	+/-1.18		+/-1.66							
QC1203578691 LCS											
Radium-228	65.9			68.2	pCi/g		103	(75%-125%)		07/11/16	15:04
	Uncertainty			+/-4.70							
QC1203578689 MB											
Radium-228			U	2.35	pCi/g					07/11/16	16:25
	Uncertainty			+/-1.54							
Batch 1579094											
QC1203578693 400455038 DUP											
Radium-228		3.78		2.77	pCi/g	31		(0% - 100%)	AXM6	07/12/16	11:10
	Uncertainty	+/-1.73		+/-1.33							
QC1203578694 LCS											
Radium-228	66.6			69.2	pCi/g		104	(75%-125%)		07/12/16	11:10
	Uncertainty			+/-4.96							
QC1203578692 MB											
Radium-228			U	0.840	pCi/g					07/12/16	11:10
	Uncertainty			+/-1.36							
Rad Ra-226											
Batch 1579030											
QC1203578579 400455001 DUP											
Radium-226		1.80		1.38	pCi/g	26.6		(0% - 100%)	LXP1	07/11/16	09:30
	Uncertainty	+/-0.492		+/-0.423							
QC1203578581 LCS											
Radium-226	20.2			18.1	pCi/g		89.2	(75%-125%)		07/11/16	10:00
	Uncertainty			+/-1.42							
QC1203578578 MB											
Radium-226			U	0.433	pCi/g					07/11/16	09:30
	Uncertainty			+/-0.351							
QC1203578580 400455001 MS											
Radium-226	20.2	1.80		26.2	pCi/g		121	(75%-125%)		07/11/16	09:30
	Uncertainty	+/-0.492		+/-1.83							
Batch 1579031											
QC1203578583 400455018 DUP											
Radium-226		1.17		0.757	pCi/g	43.2		(0% - 100%)	LXP1	07/13/16	09:25
	Uncertainty	+/-0.369		+/-0.296							
QC1203578585 LCS											
Radium-226	18.9			21.5	pCi/g		114	(75%-125%)		07/13/16	09:25
	Uncertainty			+/-1.45							
QC1203578582 MB											
Radium-226			U	0.281	pCi/g					07/13/16	09:25
	Uncertainty			+/-0.261							

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: **400455**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Ra-226											
Batch 1579031											
QC1203578584 400455018 MS											
Radium-226	19.8	1.17		19.2	pCi/g		91	(75%-125%)	LXP1	07/13/16	09:25
	Uncertainty	+/-0.369		+/-1.27							

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

**	Analyte is a Tracer compound
<	Result is less than value reported
>	Result is greater than value reported
BD	Results are either below the MDC or tracer recovery is low
FA	Failed analysis.
H	Analytical holding time was exceeded
J	Value is estimated
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
M	M if above MDC and less than LLD
M	REMP Result > MDC/CL and < RDL
N/A	RPD or %Recovery limits do not apply.
N1	See case narrative
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
UI	Gamma Spectroscopy--Uncertain identification
UJ	Gamma Spectroscopy--Uncertain identification
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h	Preparation or preservation holding time was exceeded

Return to Contents

GEL LABORATORIES LLC
2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: **400455**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Return to Contents

There are no "Data Exception Reports" associated with this analytical report.

Return to Contents

eurofins | Calscience

Ship to: Julie Robinson (843.769.7376 ext 4289)
GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407

400455

CHAIN OF CUSTODY RECORD

DATE:

PAGE: 1 OF 7

LABORATORY CLIENT: **Eurofins Calscience, Inc.**	CLIENT PROJECT NAME / NUMBER: **16-06-2043**
ADDRESS: **7440 Lincoln Way**	P.O. NO.:
CITY: **Garden Grove, CA 92841-1427**	PROJECT CONTACT: **Virendra Patel**
TEL: **714-895-5494** E-mail: VirendraPatel@eurofinsUS.com	SAMPLER(S): (SIGNATURE) COELT LOG CODE ☐☐☐☐
	LAB USE ONLY / WO#
	COOLER RECEIPT Temp = ____ °C

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ☐ 5 DAYS ☒ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ LOCUS EIM53 EDD ☒ COELT EDF ☒ 6B362036002

SPECIAL INSTRUCTIONS
Log code: ERMC

GEL Quote: GELP16-0739

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	CEL Sample #	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	Radium 226 - EPA 903.1	Radium 228 - EPA 904.0	
	P5-1		06/27/16	07:25	S	1	X	X	Composite P5-1 to P5-5 into "P5"
	P5-2		06/27/16	07:30	S	1			
	P5-3		06/27/16	07:35	S	1			
	P5-4		06/27/16	07:40	S	1			
	P5-5		06/27/16	07:45	S	1			
	P4-1		06/27/16	08:15	S	1	X	X	Composite P4-1 to P4-5 into "P4"
	P4-2		06/27/16	08:20	S	1			
	P4-3		06/27/16	08:25	S	1			
	P4-4		06/27/16	08:30	S	1			
	P4-5		06/27/16	08:35	S	1			

Relinquished by: (Signature) (Eurofins Calscience)	Received by: (Signature) FedEx AB# 776641860935	Date: 6/29/2016	Time: 1615
Relinquished by: (Signature)	Received by: (Signature)	Date: 6/30/16	Time: 9:15
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Return to Contents

eurofins | Calscience

Ship to: Julie Robinson (843.769.7376 ext 4289)
GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407

CHAIN OF CUSTODY RECORD

DATE:
PAGE: 2 OF 7

LABORATORY CLIENT: **Eurofins Calscience, Inc.**
ADDRESS: **7440 Lincoln Way**
CITY: **Garden Grove, CA 92841-1427**
TEL: **714-895-5494** E-mail: VirendraPatel@eurofinsUS.com

CLIENT PROJECT NAME / NUMBER: **16-06-2043**
PROJECT CONTACT: **Virendra Patel**
SAMPLER(S): (SIGNATURE)
COELT LOG CODE
P.O. NO.:
LAB USE ONLY / WO#:
COOLER RECEIPT Temp = °C

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ☐ 5 DAYS ☒ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ LOCUS EIM53 EDD ☒ COELT EDF ☒ 6B362036002

SPECIAL INSTRUCTIONS
Log code: ERMC

GEL Quote: GELP16-0739

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	CEL Sample #	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Radium 226 - EPA 903.1	Radium 228 - EPA 904.0	
	P3-1		06/27/16	08:20	S	1	X	X	Composite P3-1 to P3-5 into "P3"
	P3-2		06/27/16	08:25	S	1			
	P3-3		06/27/16	08:40	S	1			
	P3-4		06/27/16	08:30	S	1			
	P3-5		06/27/16	08:35	S	1			
	P2-1		06/27/16	09:05	S	1	X	X	Composite P2-1 to P2-5 into "P2"
	P2-2		06/27/16	09:10	S	1			
	P2-3		06/27/16	09:15	S	1			
	P2-4		06/27/16	09:20	S	1			
	P2-5		06/27/16	09:25	S	1			

Relinquished by: (Signature) (Eurofins Calscience)	Received by: (Signature) FedEx AB# 776641860935	Date: 6/29/2016	Time: 1615
Relinquished by: (Signature)	Received by: (Signature)	Date: 6/30/16	Time: 0915
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Return to Contents

eurofins | Calscience

Ship to: Julie Robinson (843.769.7376 ext 4289)
GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407

CHAIN OF CUSTODY RECORD

DATE:
PAGE: 3 OF 7

LABORATORY CLIENT: **Eurofins Calscience, Inc.**
ADDRESS: **7440 Lincoln Way**
CITY: **Garden Grove, CA 92841-1427**
TEL: **714-895-5494** E-mail: VirendraPatel@eurofinsUS.com

CLIENT PROJECT NAME / NUMBER: **16-06-2043**
PROJECT CONTACT: **Virendra Patel**
SAMPLER(S): (SIGNATURE)
P.O. NO.:
LAB USE ONLY / WO#
COELT LOG CODE
COOLER RECEIPT Temp = ____ °C

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ☐ 5 DAYS ☒ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ LOCUS EIM53 EDD ☒ COELT EDF ☒ 6B362036002

SPECIAL INSTRUCTIONS
Log code: ERMC

GEL Quote: GELP16-0739

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	CEL Sample #	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	Radium 226 - EPA 903.1	Radium 228 - EPA 904.0	
	P1-1		06/27/16	09:00	S	1	X	X	Composite P1-1 to P1-5 into "P1"
	P1-2		06/27/16	09:05	S	1			
	P1-3		06/27/16	09:10	S	1			
	P1-4		06/27/16	09:15	S	1			
	P1-5		06/27/16	09:20	S	1			
	P1-FL-1-0		06/27/16	14:40	S	1	X	X	
	P1-FL-1-0.5		06/27/16	14:45	S	1	X	X	
	P1-FL-1-1		06/27/16	14:50	S	1			Hold
	P1-FL-1-3		06/27/16	14:55	S	1			Hold
	P1-FL-2-0		06/27/16	14:15	S	1	X	X	

Relinquished by: (Signature) (Eurofins Calscience)	Received by: (Signature) FedEx AB# 776641860935	Date: 6/29/2016	Time: 1615
Relinquished by: (Signature)	Received by: (Signature)	Date: 6/30/16	Time: 0915
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Return to Contents

eurofins | Calscience

Ship to: Julie Robinson (843.769.7376 ext 4289)
GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407

CHAIN OF CUSTODY RECORD

DATE:
PAGE: 4 OF 7

LABORATORY CLIENT: **Eurofins Calscience, Inc.**
ADDRESS: **7440 Lincoln Way**
CITY: **Garden Grove, CA 92841-1427**
TEL: **714-895-5494** E-mail: VirendraPatel@eurofinsUS.com

CLIENT PROJECT NAME / NUMBER: **16-06-2043**
PROJECT CONTACT: **Virendra Patel**
SAMPLER(S): (SIGNATURE)
COELT LOG CODE
P.O. NO.:
LAB USE ONLY / WO#
COOLER RECEIPT Temp = _____ °C

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ☐ 5 DAYS ☒ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ LOCUS EIM53 EDD ☒ COELT EDF ☒ 6B362036002

SPECIAL INSTRUCTIONS
Log code: ERMC

GEL Quote: GELP16-0739

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	CEL Sample #	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	Radium 226 - EPA 903.1	Radium 228 - EPA 904.0									
	P1-FL-2-0.5		06/27/16	14:20	S	1	X	X									
	P1-FL-2-1		06/27/16	14:25	S	1											Hold
	P1-FL-2-3		06/27/16	14:30	S	1											Hold
	P1-FL-3-0		06/27/16	13:45	S	1	X	X									
	P1-FL-3-0.5		06/27/16	13:50	S	1	X	X									
	P1-FL-3-1		06/27/16	13:55	S	1											Hold
	P1-FL-3-3		06/27/16	14:00	S	1											Hold
	P2-FL-4-0		06/27/16	13:20	S	1	X	X									
	P2-FL-4-0.5		06/27/16	13:25	S	1	X	X									
	P2-FL-4-1		06/27/16	13:30	S	1											Hold

Relinquished by: (Signature) (Eurofins Calscience)	Received by: (Signature) FedEx AB# 776641860935	Date: 6/29/2016	Time: 1615
Relinquished by: (Signature)	Received by: (Signature)	Date: 6/30/16	Time: 0915
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Return to Contents

eurofins | Calscience

Ship to: Julie Robinson (843.769.7376 ext 4289)
GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407

CHAIN OF CUSTODY RECORD

DATE:
PAGE: 5 OF 7

LABORATORY CLIENT: **Eurofins Calscience, Inc.**
ADDRESS: **7440 Lincoln Way**
CITY: **Garden Grove, CA 92841-1427**
TEL: **714-895-5494** E-mail: VirendraPatel@eurofinsUS.com

CLIENT PROJECT NAME / NUMBER: **16-06-2043**
PROJECT CONTACT: **Virendra Patel**
SAMPLER(S): (SIGNATURE)
COELT LOG CODE
P.O. NO.:
LAB USE ONLY / WO#
COOLER RECEIPT Temp.= °C

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ☐ 5 DAYS ☒ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ LOCUS EIM53 EDD ☒ COELT EDF ☒ 6B362036002

SPECIAL INSTRUCTIONS
Log code: ERMC

GEL Quote: GELP16-0739

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	CEL Sample #	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	Radium 226 - EPA 903.1	Radium 228 - EPA 904.0										
	P2-FL-4-3		06/27/16	13:35	S	1												Hold
	P3-FL-5-0		06/27/16	11:30	S	1	X	X										
	P3-FL-5-0.5		06/27/16	11:35	S	1	X	X										
	P3-FL-5-1		06/27/16	11:40	S	1												Hold
	P3-FL-5-3		06/27/16	11:45	S	1												Hold
	P4-FL-6-0		06/27/16	11:00	S	1	X	X										
	P4-FL-6-0.5		06/27/16	11:05	S	1	X	X										
	P4-FL-6-1		06/27/16	11:10	S	1												Hold
	P4-FL-6-3		06/27/16	11:15	S	1												Hold
	P5-FL-7-0		06/27/16	10:45	S	1	X	X										

Relinquished by: (Signature) (Eurofins Calscience)	Received by: (Signature) FedEx AB# 776641860935	Date: 6/29/2016	Time: 1615
Relinquished by: (Signature)	Received by: (Signature)	Date: 6/30/16	Time: 0915
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Return to Contents

eurofins | Calscience

Ship to: Julie Robinson (843.769.7376 ext 4289)
GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407

CHAIN OF CUSTODY RECORD

DATE:
PAGE: 6 OF 7

LABORATORY CLIENT: **Eurofins Calscience, Inc.**
ADDRESS: **7440 Lincoln Way**
CITY: **Garden Grove, CA 92841-1427**
TEL: **714-895-5494** E-mail: VirendraPatel@eurofinsUS.com

CLIENT PROJECT NAME / NUMBER: **16-06-2043**
PROJECT CONTACT: **Virendra Patel**
SAMPLER(S): (SIGNATURE)
COELT LOG CODE
P.O. NO.:
LAB USE ONLY / WO#
COOLER RECEIPT Temp = °C

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ☐ 5 DAYS ☒ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ LOCUS EIM53 EDD ☒ COELT EDF ☒ 6B362036002

SPECIAL INSTRUCTIONS
Log code: ERMC

GEL Quote: GELP16-0739

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	CEL Sample #	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	Radium 226 - EPA 903.1	Radium 228 - EPA 904.0										
	P5-FL-7-0.5		06/27/16	10:50	S	1	X	X										
	P5-FL-7-1		06/27/16	10:55	S	1												Hold
	P5-FL-7-3		06/27/16	11:00	S	1												Hold
	P5-FL-8-0		06/27/16	10:00	S	1	X	X										
	P5-FL-8-0.5		06/27/16	10:05	S	1	X	X										
	P5-FL-8-1		06/27/16	10:10	S	1												Hold
	P5-FL-8-3		06/27/16	10:15	S	1												Hold
	B-1		06/27/16	15:25	S	1	X	X										
	B-2		06/27/16	15:15	S	1	X	X										
	DUP		06/27/16	--	S	1	X	X										

Relinquished by: (Signature) (Eurofins Calscience)	Received by: (Signature) FedEx AB# 776641860935	Date: 6/29/2016	Time: 1615
Relinquished by: (Signature)	Received by: (Signature)	Date: 6/30/16	Time: 0915
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Return to Contents

eurofins | Calscience

Ship to: Julie Robinson (843.769.7376 ext 4289)
GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407

CHAIN OF CUSTODY RECORD

DATE:

PAGE: 7 OF 7

LABORATORY CLIENT: **Eurofins Calscience, Inc.**	CLIENT PROJECT NAME / NUMBER: **16-06-2043**
ADDRESS: **7440 Lincoln Way**	P.O. NO.:
CITY: **Garden Grove, CA 92841-1427**	PROJECT CONTACT: **Virendra Patel**
TEL: **714-895-5494** E-mail: VirendraPatel@eurofinsUS.com	SAMPLER(S): (SIGNATURE)
	LAB USE ONLY / WO#
	COELT LOG CODE
	COOLER RECEIPT Temp = °C

TURNAROUND TIME

☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ☐ 5 DAYS ☒ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)

☐ LOCUS EIM53 EDD ☒ COELT EDF ☒ 6B362036002

SPECIAL INSTRUCTIONS

Log code: ERMC

GEL Quote: GELP16-0739

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	CEL Sample #	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT.	Radium 226 - EPA 903.1	Radium 228 - EPA 904.0
	B-3		06/27/16	15:30	S	1	X	X

Relinquished by: (Signature) (Eurofins Calscience)	Received by: (Signature) FedEx AB# 776641860935	Date: 6/29/2016	Time: 1615
Relinquished by: (Signature)	Received by: (Signature)	Date: 6/30/16	Time: 0915
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Return to Contents

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client:			**SDG/AR/COC/Work Order:**	400455
Received By:	Sara Gribble		**Date Received:**	6/30/16

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 cpm
Classified Radioactive II or III by RSO?		✓	If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?		✓	
Package, COC, and/or Samples marked as beryllium or asbestos containing?		✓	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: .
Samples identified as Foreign Soil?		✓	

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: (Ice bags) Blue ice Dry ice None Other (describe) *all temperatures are recorded in Celsius 2°C
2a	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): ES102009184
3	Chain of custody documents included with shipment?	✓			
4	Sample containers intact and sealed?			✓	Circle Applicable: Seals broken (Damaged container) Leaking container Other (describe) P1-FL-1-0.5 received broken
5	Samples requiring chemical preservation at proper pH?		✓		Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6	Do Low Level Perchlorate samples have headspace as required?		✓		Sample ID's and containers affected:
7	VOA vials contain acid preservation?		✓		(If unknown, select No)
8	VOA vials free of headspace (defined as < 6mm bubble)?		✓		Sample ID's and containers affected:
9	Are Encore containers present?			✓	(If yes, immediately deliver to Volatiles laboratory)
10	Samples received within holding time?	✓			ID's and tests affected:
11	Sample ID's on COC match ID's on bottles?	✓			Sample ID's and containers affected:
12	Date & time on COC match date & time on bottles?	✓			Sample ID's affected:
13	Number of containers received match number indicated on COC?	✓			Sample ID's affected:
14	Are sample containers identifiable as GEL provided?			✓	
15	COC form is properly signed in relinquished/received sections?	✓			
16	Carrier and tracking number.				Circle Applicable: (FedEx Air) FedEx Ground UPS Field Services Courier Other 7766 4186 0935

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials SL Date 6/30/16 Page 1 of 1

GL-CHL-SR-001 Rev 3

List of current GEL Certifications as of 14 July 2016

State	Certification
Alaska	UST−0110
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
Delaware	SC00012
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA160006
Maryland	270
Massachusetts	M−SC012
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122016−1
New Hampshire NELAP	205415
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	9904
Pennsylvania NELAP	68−00485
S.Carolina Radchem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−16−11
Utah NELAP	SC000122016−20
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
West Virginia	997404

Return to Contents

eurofins | Calscience

Supplemental Report 1

Additional requested analyses are reported as a stand-alone report.

WORK ORDER NUMBER: 16-06-2043

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ERM-WEST

Client Project Name: NRG Coolwater

Attention: Steve Williams
2875 Michelle Dr.
Suite 200
Irvine, CA 92606-1021

Approved for release on 08/01/2016 by:
Virendra Patel
Project Manager

ResultLink

Email your PM

eurofins | Calscience

Contents

Client Project Name: NRG Coolwater
Work Order Number: 16-06-2043

eurofins | Calscience

Work Order Narrative

Work Order: 16-06-2043 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 06/28/16. They were assigned to Work Order 16-06-2043.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Return to Contents

eurofins | Calscience

Sample Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	PO Number:	355141.02
		Date/Time Received:	06/28/16 18:40
		Number of Containers:	127
Attn:	Steve Williams		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
P1-FL-1-1	16-06-2043-28	06/27/16 14:50	2	Solid
P1-FL-1-3	16-06-2043-29	06/27/16 14:55	2	Solid
P1-FL-2-1	16-06-2043-32	06/27/16 14:25	2	Solid
P1-FL-2-3	16-06-2043-33	06/27/16 14:30	2	Solid
P1-FL-3-1	16-06-2043-36	06/27/16 13:55	2	Solid
P1-FL-3-3	16-06-2043-37	06/27/16 14:00	2	Solid
P2-FL-4-1	16-06-2043-40	06/27/16 13:30	2	Solid
P2-FL-4-3	16-06-2043-41	06/27/16 13:35	2	Solid
P3-FL-5-1	16-06-2043-44	06/27/16 11:40	2	Solid
P3-FL-5-3	16-06-2043-45	06/27/16 11:45	2	Solid
P4-FL-6-1	16-06-2043-48	06/27/16 11:10	2	Solid
P4-FL-6-3	16-06-2043-49	06/27/16 11:15	2	Solid
P5-FL-7-0	16-06-2043-50	06/27/16 10:45	2	Solid
P5-FL-7-1	16-06-2043-52	06/27/16 10:55	2	Solid
P5-FL-7-3	16-06-2043-53	06/27/16 11:00	2	Solid
P5-FL-8-1	16-06-2043-56	06/27/16 10:10	2	Solid
P5-FL-8-3	16-06-2043-57	06/27/16 10:15	2	Solid
DUP	16-06-2043-60	06/27/16 00:00	2	Solid
P5	16-06-2043-62	06/27/16 00:00	1	Solid

Return to Contents

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P1-FL-1-1 (16-06-2043-28)						
Arsenic	1.55		0.735	mg/kg	EPA 6010B	EPA 3050B
Barium	36.9		0.490	mg/kg	EPA 6010B	EPA 3050B
Chromium	2.79		0.245	mg/kg	EPA 6010B	EPA 3050B
Cobalt	1.98		0.245	mg/kg	EPA 6010B	EPA 3050B
Copper	2.68		0.490	mg/kg	EPA 6010B	EPA 3050B
Lead	1.46		0.490	mg/kg	EPA 6010B	EPA 3050B
Nickel	1.77		0.245	mg/kg	EPA 6010B	EPA 3050B
Vanadium	13.0		0.245	mg/kg	EPA 6010B	EPA 3050B
Zinc	11.9		0.980	mg/kg	EPA 6010B	EPA 3050B
Lithium	2.84		2.45	mg/kg	EPA 6010B	EPA 3050B
Calcium	3260		4.90	mg/kg	EPA 6010B	EPA 3050B
Magnesium	1250		4.90	mg/kg	EPA 6010B	EPA 3050B
Potassium	816		24.5	mg/kg	EPA 6010B	EPA 3050B
Sodium	84.5		24.5	mg/kg	EPA 6010B	EPA 3050B
Boron	1.81		0.980	mg/kg	EPA 6010B	EPA 3050B
P1-FL-1-3 (16-06-2043-29)						
Arsenic	1.08		0.785	mg/kg	EPA 6010B	EPA 3050B
Barium	31.4		0.524	mg/kg	EPA 6010B	EPA 3050B
Chromium	2.94		0.262	mg/kg	EPA 6010B	EPA 3050B
Cobalt	2.15		0.262	mg/kg	EPA 6010B	EPA 3050B
Copper	2.65		0.524	mg/kg	EPA 6010B	EPA 3050B
Lead	1.47		0.524	mg/kg	EPA 6010B	EPA 3050B
Nickel	1.88		0.262	mg/kg	EPA 6010B	EPA 3050B
Vanadium	13.3		0.262	mg/kg	EPA 6010B	EPA 3050B
Zinc	15.0		1.05	mg/kg	EPA 6010B	EPA 3050B
Lithium	3.84		2.62	mg/kg	EPA 6010B	EPA 3050B
Calcium	2250		5.24	mg/kg	EPA 6010B	EPA 3050B
Magnesium	1460		5.24	mg/kg	EPA 6010B	EPA 3050B
Potassium	920		26.2	mg/kg	EPA 6010B	EPA 3050B
Sodium	78.0		26.2	mg/kg	EPA 6010B	EPA 3050B
Boron	1.54		1.05	mg/kg	EPA 6010B	EPA 3050B

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P1-FL-2-1 (16-06-2043-32)						
Chloride	280	BU	50	mg/kg	EPA 300.0	N/A
Nitrate (as N)	50	BU	5.0	mg/kg	EPA 300.0	N/A
Sulfate	410	BU	50	mg/kg	EPA 300.0	N/A
Arsenic	4.26		0.714	mg/kg	EPA 6010B	EPA 3050B
Barium	75.1		0.476	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.369		0.238	mg/kg	EPA 6010B	EPA 3050B
Chromium	8.73		0.238	mg/kg	EPA 6010B	EPA 3050B
Cobalt	4.73		0.238	mg/kg	EPA 6010B	EPA 3050B
Copper	7.47		0.476	mg/kg	EPA 6010B	EPA 3050B
Lead	3.43		0.476	mg/kg	EPA 6010B	EPA 3050B
Nickel	5.77		0.238	mg/kg	EPA 6010B	EPA 3050B
Vanadium	23.3		0.238	mg/kg	EPA 6010B	EPA 3050B
Zinc	26.7		0.952	mg/kg	EPA 6010B	EPA 3050B
Lithium	8.07		2.38	mg/kg	EPA 6010B	EPA 3050B
Calcium	7650		4.76	mg/kg	EPA 6010B	EPA 3050B
Magnesium	3790		4.76	mg/kg	EPA 6010B	EPA 3050B
Potassium	2590		23.8	mg/kg	EPA 6010B	EPA 3050B
Sodium	1370		23.8	mg/kg	EPA 6010B	EPA 3050B
Boron	5.04		0.952	mg/kg	EPA 6010B	EPA 3050B
Solids, Total Dissolved	6910	BU	10.0	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P1-FL-2-3 (16-06-2043-33)						
Chloride	140	BU	10	mg/kg	EPA 300.0	N/A
Nitrate (as N)	27	BU	1.0	mg/kg	EPA 300.0	N/A
Sulfate	510	BU	10	mg/kg	EPA 300.0	N/A
Arsenic	2.19		0.750	mg/kg	EPA 6010B	EPA 3050B
Barium	42.8		0.500	mg/kg	EPA 6010B	EPA 3050B
Chromium	4.68		0.250	mg/kg	EPA 6010B	EPA 3050B
Cobalt	2.99		0.250	mg/kg	EPA 6010B	EPA 3050B
Copper	4.23		0.500	mg/kg	EPA 6010B	EPA 3050B
Lead	1.99		0.500	mg/kg	EPA 6010B	EPA 3050B
Nickel	3.27		0.250	mg/kg	EPA 6010B	EPA 3050B
Vanadium	15.7		0.250	mg/kg	EPA 6010B	EPA 3050B
Zinc	17.3		1.00	mg/kg	EPA 6010B	EPA 3050B
Lithium	4.79		2.50	mg/kg	EPA 6010B	EPA 3050B
Calcium	5040		5.00	mg/kg	EPA 6010B	EPA 3050B
Magnesium	2200		5.00	mg/kg	EPA 6010B	EPA 3050B
Potassium	1350		25.0	mg/kg	EPA 6010B	EPA 3050B
Sodium	405		25.0	mg/kg	EPA 6010B	EPA 3050B
Boron	2.84		1.00	mg/kg	EPA 6010B	EPA 3050B
Solids, Total Dissolved	4460	BU	10.0	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P1-FL-3-1 (16-06-2043-36)						
Chloride	170	BU	50	mg/kg	EPA 300.0	N/A
Nitrate (as N)	7.0	BU	5.0	mg/kg	EPA 300.0	N/A
Sulfate	2700	BU	50	mg/kg	EPA 300.0	N/A
Arsenic	5.81		0.769	mg/kg	EPA 6010B	EPA 3050B
Barium	68.2		0.513	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.287		0.256	mg/kg	EPA 6010B	EPA 3050B
Chromium	6.90		0.256	mg/kg	EPA 6010B	EPA 3050B
Cobalt	3.42		0.256	mg/kg	EPA 6010B	EPA 3050B
Copper	16.0		0.513	mg/kg	EPA 6010B	EPA 3050B
Lead	2.52		0.513	mg/kg	EPA 6010B	EPA 3050B
Nickel	5.69		0.256	mg/kg	EPA 6010B	EPA 3050B
Vanadium	21.1		0.256	mg/kg	EPA 6010B	EPA 3050B
Zinc	22.2		1.03	mg/kg	EPA 6010B	EPA 3050B
Lithium	2.97		2.56	mg/kg	EPA 6010B	EPA 3050B
Calcium	26600		5.13	mg/kg	EPA 6010B	EPA 3050B
Magnesium	4070		5.13	mg/kg	EPA 6010B	EPA 3050B
Potassium	1780		25.6	mg/kg	EPA 6010B	EPA 3050B
Sodium	1500		25.6	mg/kg	EPA 6010B	EPA 3050B
Boron	35.0		1.03	mg/kg	EPA 6010B	EPA 3050B
Solids, Total Dissolved	24200	BU	100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P1-FL-3-3 (16-06-2043-37)						
Chloride	220	BU	50	mg/kg	EPA 300.0	N/A
Nitrate (as N)	7.6	BU	5.0	mg/kg	EPA 300.0	N/A
Sulfate	2000	BU	50	mg/kg	EPA 300.0	N/A
Arsenic	3.42		0.781	mg/kg	EPA 6010B	EPA 3050B
Barium	53.8		0.521	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.322		0.260	mg/kg	EPA 6010B	EPA 3050B
Chromium	7.10		0.260	mg/kg	EPA 6010B	EPA 3050B
Cobalt	3.71		0.260	mg/kg	EPA 6010B	EPA 3050B
Copper	8.22		0.521	mg/kg	EPA 6010B	EPA 3050B
Lead	3.01		0.521	mg/kg	EPA 6010B	EPA 3050B
Nickel	4.39		0.260	mg/kg	EPA 6010B	EPA 3050B
Vanadium	24.5		0.260	mg/kg	EPA 6010B	EPA 3050B
Zinc	20.5		1.04	mg/kg	EPA 6010B	EPA 3050B
Lithium	4.41		2.60	mg/kg	EPA 6010B	EPA 3050B
Calcium	12500		5.21	mg/kg	EPA 6010B	EPA 3050B
Magnesium	3230		5.21	mg/kg	EPA 6010B	EPA 3050B
Potassium	1960		26.0	mg/kg	EPA 6010B	EPA 3050B
Sodium	1530		26.0	mg/kg	EPA 6010B	EPA 3050B
Boron	18.5		1.04	mg/kg	EPA 6010B	EPA 3050B
Solids, Total Dissolved	16100	BU	100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P2-FL-4-1 (16-06-2043-40)						
Chloride	630	BU	50	mg/kg	EPA 300.0	N/A
Nitrate (as N)	81	BU	5.0	mg/kg	EPA 300.0	N/A
Sulfate	1200	BU	50	mg/kg	EPA 300.0	N/A
Arsenic	3.45		0.761	mg/kg	EPA 6010B	EPA 3050B
Barium	83.3		0.508	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.337		0.254	mg/kg	EPA 6010B	EPA 3050B
Chromium	7.26		0.254	mg/kg	EPA 6010B	EPA 3050B
Cobalt	4.60		0.254	mg/kg	EPA 6010B	EPA 3050B
Copper	7.00		0.508	mg/kg	EPA 6010B	EPA 3050B
Lead	4.24		0.508	mg/kg	EPA 6010B	EPA 3050B
Nickel	4.94		0.254	mg/kg	EPA 6010B	EPA 3050B
Vanadium	24.3		0.254	mg/kg	EPA 6010B	EPA 3050B
Zinc	27.2		1.02	mg/kg	EPA 6010B	EPA 3050B
Lithium	6.61		2.54	mg/kg	EPA 6010B	EPA 3050B
Calcium	8510		5.08	mg/kg	EPA 6010B	EPA 3050B
Magnesium	3570		5.08	mg/kg	EPA 6010B	EPA 3050B
Potassium	1830		25.4	mg/kg	EPA 6010B	EPA 3050B
Sodium	1720		25.4	mg/kg	EPA 6010B	EPA 3050B
Boron	8.47		1.02	mg/kg	EPA 6010B	EPA 3050B
Solids, Total Dissolved	10800	BU	100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P2-FL-4-3 (16-06-2043-41)						
Chloride	150	BU	50	mg/kg	EPA 300.0	N/A
Nitrate (as N)	27	BU	5.0	mg/kg	EPA 300.0	N/A
Sulfate	1400	BU	50	mg/kg	EPA 300.0	N/A
Arsenic	1.41		0.725	mg/kg	EPA 6010B	EPA 3050B
Barium	20.3		0.483	mg/kg	EPA 6010B	EPA 3050B
Chromium	3.36		0.242	mg/kg	EPA 6010B	EPA 3050B
Cobalt	1.65		0.242	mg/kg	EPA 6010B	EPA 3050B
Copper	2.89		0.483	mg/kg	EPA 6010B	EPA 3050B
Lead	1.27		0.483	mg/kg	EPA 6010B	EPA 3050B
Nickel	1.77		0.242	mg/kg	EPA 6010B	EPA 3050B
Vanadium	14.2		0.242	mg/kg	EPA 6010B	EPA 3050B
Zinc	8.55		0.966	mg/kg	EPA 6010B	EPA 3050B
Calcium	4360		4.83	mg/kg	EPA 6010B	EPA 3050B
Magnesium	1110		4.83	mg/kg	EPA 6010B	EPA 3050B
Potassium	592		24.2	mg/kg	EPA 6010B	EPA 3050B
Sodium	348		24.2	mg/kg	EPA 6010B	EPA 3050B
Boron	4.53		0.966	mg/kg	EPA 6010B	EPA 3050B
Solids, Total Dissolved	8010	BU	10.0	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P3-FL-5-1 (16-06-2043-44)						
Chloride	1200	BU	100	mg/kg	EPA 300.0	N/A
Sulfate	5900	BU	100	mg/kg	EPA 300.0	N/A
Arsenic	6.87		0.765	mg/kg	EPA 6010B	EPA 3050B
Barium	80.6		0.510	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.280		0.255	mg/kg	EPA 6010B	EPA 3050B
Chromium	6.52		0.255	mg/kg	EPA 6010B	EPA 3050B
Cobalt	3.49		0.255	mg/kg	EPA 6010B	EPA 3050B
Copper	11.3		0.510	mg/kg	EPA 6010B	EPA 3050B
Lead	3.90		0.510	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	0.592		0.255	mg/kg	EPA 6010B	EPA 3050B
Nickel	5.54		0.255	mg/kg	EPA 6010B	EPA 3050B
Selenium	0.815		0.765	mg/kg	EPA 6010B	EPA 3050B
Vanadium	16.5		0.255	mg/kg	EPA 6010B	EPA 3050B
Zinc	24.2		1.02	mg/kg	EPA 6010B	EPA 3050B
Lithium	3.72		2.55	mg/kg	EPA 6010B	EPA 3050B
Calcium	26900		5.10	mg/kg	EPA 6010B	EPA 3050B
Magnesium	4080		5.10	mg/kg	EPA 6010B	EPA 3050B
Potassium	1640		25.5	mg/kg	EPA 6010B	EPA 3050B
Sodium	4720		25.5	mg/kg	EPA 6010B	EPA 3050B
Boron	74.8		1.02	mg/kg	EPA 6010B	EPA 3050B
Solids, Total Dissolved	32400	BU	100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P3-FL-5-3 (16-06-2043-45)						
Chloride	360	BU	50	mg/kg	EPA 300.0	N/A
Sulfate	1500	BU	50	mg/kg	EPA 300.0	N/A
Arsenic	3.27		0.714	mg/kg	EPA 6010B	EPA 3050B
Barium	57.5		0.476	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.283		0.238	mg/kg	EPA 6010B	EPA 3050B
Chromium	6.04		0.238	mg/kg	EPA 6010B	EPA 3050B
Cobalt	3.95		0.238	mg/kg	EPA 6010B	EPA 3050B
Copper	6.46		0.476	mg/kg	EPA 6010B	EPA 3050B
Lead	2.94		0.476	mg/kg	EPA 6010B	EPA 3050B
Nickel	4.27		0.238	mg/kg	EPA 6010B	EPA 3050B
Vanadium	19.9		0.238	mg/kg	EPA 6010B	EPA 3050B
Zinc	22.3		0.952	mg/kg	EPA 6010B	EPA 3050B
Lithium	6.30		2.38	mg/kg	EPA 6010B	EPA 3050B
Calcium	10800		4.76	mg/kg	EPA 6010B	EPA 3050B
Magnesium	3160		4.76	mg/kg	EPA 6010B	EPA 3050B
Potassium	1640		23.8	mg/kg	EPA 6010B	EPA 3050B
Sodium	1220		23.8	mg/kg	EPA 6010B	EPA 3050B
Boron	16.1		0.952	mg/kg	EPA 6010B	EPA 3050B
Solids, Total Dissolved	12600	BU	100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P4-FL-6-1 (16-06-2043-48)						
Chloride	430	BU	50	mg/kg	EPA 300.0	N/A
Sulfate	1800	BU	50	mg/kg	EPA 300.0	N/A
Arsenic	5.15		0.761	mg/kg	EPA 6010B	EPA 3050B
Barium	92.0		0.508	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.633		0.254	mg/kg	EPA 6010B	EPA 3050B
Chromium	11.9		0.254	mg/kg	EPA 6010B	EPA 3050B
Cobalt	7.60		0.254	mg/kg	EPA 6010B	EPA 3050B
Copper	14.3		0.508	mg/kg	EPA 6010B	EPA 3050B
Lead	5.60		0.508	mg/kg	EPA 6010B	EPA 3050B
Nickel	8.77		0.254	mg/kg	EPA 6010B	EPA 3050B
Vanadium	29.7		0.254	mg/kg	EPA 6010B	EPA 3050B
Zinc	41.4		1.02	mg/kg	EPA 6010B	EPA 3050B
Lithium	12.7		2.54	mg/kg	EPA 6010B	EPA 3050B
Calcium	11600		5.08	mg/kg	EPA 6010B	EPA 3050B
Magnesium	6140		5.08	mg/kg	EPA 6010B	EPA 3050B
Potassium	2800		25.4	mg/kg	EPA 6010B	EPA 3050B
Sodium	2920		25.4	mg/kg	EPA 6010B	EPA 3050B
Boron	18.9		1.02	mg/kg	EPA 6010B	EPA 3050B
Solids, Total Dissolved	17700	BU	100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P4-FL-6-3 (16-06-2043-49)						
Chloride	350	BU	50	mg/kg	EPA 300.0	N/A
Nitrate (as N)	10	BU	5.0	mg/kg	EPA 300.0	N/A
Sulfate	790	BU	50	mg/kg	EPA 300.0	N/A
Arsenic	4.53		0.750	mg/kg	EPA 6010B	EPA 3050B
Barium	109		0.500	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.450		0.250	mg/kg	EPA 6010B	EPA 3050B
Chromium	9.50		0.250	mg/kg	EPA 6010B	EPA 3050B
Cobalt	6.03		0.250	mg/kg	EPA 6010B	EPA 3050B
Copper	9.07		0.500	mg/kg	EPA 6010B	EPA 3050B
Lead	3.83		0.500	mg/kg	EPA 6010B	EPA 3050B
Nickel	6.28		0.250	mg/kg	EPA 6010B	EPA 3050B
Vanadium	35.3		0.250	mg/kg	EPA 6010B	EPA 3050B
Zinc	32.5		1.00	mg/kg	EPA 6010B	EPA 3050B
Lithium	10.1		2.50	mg/kg	EPA 6010B	EPA 3050B
Calcium	12400		5.00	mg/kg	EPA 6010B	EPA 3050B
Magnesium	4480		5.00	mg/kg	EPA 6010B	EPA 3050B
Potassium	1360		25.0	mg/kg	EPA 6010B	EPA 3050B
Sodium	754		25.0	mg/kg	EPA 6010B	EPA 3050B
Boron	9.11		1.00	mg/kg	EPA 6010B	EPA 3050B
Solids, Total Dissolved	7310	BU	10.0	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		Page 12 of 17

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P5-FL-7-0 (16-06-2043-50)						
Arsenic	21.6		0.750	mg/kg	EPA 6010B	EPA 3050B
Barium	120		0.500	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.295		0.250	mg/kg	EPA 6010B	EPA 3050B
Cadmium	0.674		0.500	mg/kg	EPA 6010B	EPA 3050B
Chromium	16.0		0.250	mg/kg	EPA 6010B	EPA 3050B
Cobalt	2.82		0.250	mg/kg	EPA 6010B	EPA 3050B
Copper	47.2		0.500	mg/kg	EPA 6010B	EPA 3050B
Lead	6.36		0.500	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	3.27		0.250	mg/kg	EPA 6010B	EPA 3050B
Nickel	11.2		0.250	mg/kg	EPA 6010B	EPA 3050B
Selenium	21.4		0.750	mg/kg	EPA 6010B	EPA 3050B
Silver	1.06		0.250	mg/kg	EPA 6010B	EPA 3050B
Vanadium	22.4		0.250	mg/kg	EPA 6010B	EPA 3050B
Zinc	27.9		1.00	mg/kg	EPA 6010B	EPA 3050B
Calcium	176000		50.0	mg/kg	EPA 6010B	EPA 3050B
Magnesium	16300		5.00	mg/kg	EPA 6010B	EPA 3050B
Potassium	1030		25.0	mg/kg	EPA 6010B	EPA 3050B
Sodium	24200		25.0	mg/kg	EPA 6010B	EPA 3050B
Boron	606		1.00	mg/kg	EPA 6010B	EPA 3050B
Selenium	0.466		0.150	mg/L	EPA 6010B	EPA 1311
Selenium	1.18		0.150	mg/L	EPA 6010B	T22.11.5. AII
TPH as Motor Oil	130	HD	25	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	53	HD	5.0	mg/kg	EPA 8015B (M)	EPA 3550B
Solids, Total Dissolved	93000		100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P5-FL-7-1 (16-06-2043-52)						
Chloride	1700	BU	100	mg/kg	EPA 300.0	N/A
Nitrate (as N)	13	BU	10	mg/kg	EPA 300.0	N/A
Sulfate	7600	BU	100	mg/kg	EPA 300.0	N/A
Arsenic	6.19		0.765	mg/kg	EPA 6010B	EPA 3050B
Barium	81.3		0.510	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.351		0.255	mg/kg	EPA 6010B	EPA 3050B
Chromium	7.56		0.255	mg/kg	EPA 6010B	EPA 3050B
Cobalt	4.48		0.255	mg/kg	EPA 6010B	EPA 3050B
Copper	12.3		0.510	mg/kg	EPA 6010B	EPA 3050B
Lead	4.58		0.510	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	0.628		0.255	mg/kg	EPA 6010B	EPA 3050B
Nickel	6.31		0.255	mg/kg	EPA 6010B	EPA 3050B
Selenium	1.22		0.765	mg/kg	EPA 6010B	EPA 3050B
Vanadium	19.2		0.255	mg/kg	EPA 6010B	EPA 3050B
Zinc	30.3		1.02	mg/kg	EPA 6010B	EPA 3050B
Lithium	4.91		2.55	mg/kg	EPA 6010B	EPA 3050B
Calcium	22900		5.10	mg/kg	EPA 6010B	EPA 3050B
Magnesium	4240		5.10	mg/kg	EPA 6010B	EPA 3050B
Potassium	1780		25.5	mg/kg	EPA 6010B	EPA 3050B
Sodium	4620		25.5	mg/kg	EPA 6010B	EPA 3050B
Boron	46.4		1.02	mg/kg	EPA 6010B	EPA 3050B
Solids, Total Dissolved	30800	BU	100	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P5-FL-7-3 (16-06-2043-53)						
Chloride	110	BU	50	mg/kg	EPA 300.0	N/A
Nitrate (as N)	23	BU	5.0	mg/kg	EPA 300.0	N/A
Sulfate	890	BU	50	mg/kg	EPA 300.0	N/A
Arsenic	2.89		0.750	mg/kg	EPA 6010B	EPA 3050B
Barium	49.8		0.500	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.266		0.250	mg/kg	EPA 6010B	EPA 3050B
Chromium	6.07		0.250	mg/kg	EPA 6010B	EPA 3050B
Cobalt	3.41		0.250	mg/kg	EPA 6010B	EPA 3050B
Copper	5.73		0.500	mg/kg	EPA 6010B	EPA 3050B
Lead	2.50		0.500	mg/kg	EPA 6010B	EPA 3050B
Nickel	3.59		0.250	mg/kg	EPA 6010B	EPA 3050B
Vanadium	24.0		0.250	mg/kg	EPA 6010B	EPA 3050B
Zinc	19.0		1.00	mg/kg	EPA 6010B	EPA 3050B
Lithium	4.83		2.50	mg/kg	EPA 6010B	EPA 3050B
Calcium	8680		5.00	mg/kg	EPA 6010B	EPA 3050B
Magnesium	2480		5.00	mg/kg	EPA 6010B	EPA 3050B
Potassium	1160		25.0	mg/kg	EPA 6010B	EPA 3050B
Sodium	612		25.0	mg/kg	EPA 6010B	EPA 3050B
Boron	9.25		1.00	mg/kg	EPA 6010B	EPA 3050B
Solids, Total Dissolved	7910	BU	10.0	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		Page 15 of 17

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P5-FL-8-1 (16-06-2043-56)						
Arsenic	2.74		0.746	mg/kg	EPA 6010B	EPA 3050B
Barium	119		0.498	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.740		0.249	mg/kg	EPA 6010B	EPA 3050B
Chromium	15.0		0.249	mg/kg	EPA 6010B	EPA 3050B
Cobalt	8.74		0.249	mg/kg	EPA 6010B	EPA 3050B
Copper	15.1		0.498	mg/kg	EPA 6010B	EPA 3050B
Lead	6.78		0.498	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	0.392		0.249	mg/kg	EPA 6010B	EPA 3050B
Nickel	9.17		0.249	mg/kg	EPA 6010B	EPA 3050B
Vanadium	51.2		0.249	mg/kg	EPA 6010B	EPA 3050B
Zinc	52.3		0.995	mg/kg	EPA 6010B	EPA 3050B
Lithium	15.2		2.49	mg/kg	EPA 6010B	EPA 3050B
Calcium	8330		4.98	mg/kg	EPA 6010B	EPA 3050B
Magnesium	6930		4.98	mg/kg	EPA 6010B	EPA 3050B
Potassium	2570		24.9	mg/kg	EPA 6010B	EPA 3050B
Sodium	362		24.9	mg/kg	EPA 6010B	EPA 3050B
Boron	10.9		0.995	mg/kg	EPA 6010B	EPA 3050B
TPH as Motor Oil	170	HD,ET	25	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	41	HD,ET	5.0	mg/kg	EPA 8015B (M)	EPA 3550B
P5-FL-8-3 (16-06-2043-57)						
Arsenic	1.97		0.765	mg/kg	EPA 6010B	EPA 3050B
Barium	109		0.510	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.628		0.255	mg/kg	EPA 6010B	EPA 3050B
Chromium	13.1		0.255	mg/kg	EPA 6010B	EPA 3050B
Cobalt	8.74		0.255	mg/kg	EPA 6010B	EPA 3050B
Copper	11.7		0.510	mg/kg	EPA 6010B	EPA 3050B
Lead	5.81		0.510	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	0.569		0.255	mg/kg	EPA 6010B	EPA 3050B
Nickel	8.72		0.255	mg/kg	EPA 6010B	EPA 3050B
Vanadium	42.1		0.255	mg/kg	EPA 6010B	EPA 3050B
Zinc	45.5		1.02	mg/kg	EPA 6010B	EPA 3050B
Lithium	12.0		2.55	mg/kg	EPA 6010B	EPA 3050B
Calcium	5620		5.10	mg/kg	EPA 6010B	EPA 3050B
Magnesium	5400		5.10	mg/kg	EPA 6010B	EPA 3050B
Potassium	2590		25.5	mg/kg	EPA 6010B	EPA 3050B
Sodium	586		25.5	mg/kg	EPA 6010B	EPA 3050B
Boron	7.74		1.02	mg/kg	EPA 6010B	EPA 3050B

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		Page 16 of 17

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
DUP (16-06-2043-60)						
Fluoride	6.8		5.0	mg/kg	EPA 300.0	N/A
Chloride	10000		500	mg/kg	EPA 300.0	N/A
Nitrate (as N)	26		5.0	mg/kg	EPA 300.0	N/A
Sulfate	26000		500	mg/kg	EPA 300.0	N/A
Arsenic	21.0		0.785	mg/kg	EPA 6010B	EPA 3050B
Barium	115		0.524	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.267		0.262	mg/kg	EPA 6010B	EPA 3050B
Cadmium	0.661		0.524	mg/kg	EPA 6010B	EPA 3050B
Chromium	15.7		0.262	mg/kg	EPA 6010B	EPA 3050B
Cobalt	2.71		0.262	mg/kg	EPA 6010B	EPA 3050B
Copper	52.0		0.524	mg/kg	EPA 6010B	EPA 3050B
Lead	6.61		0.524	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	4.39		0.262	mg/kg	EPA 6010B	EPA 3050B
Nickel	11.3		0.262	mg/kg	EPA 6010B	EPA 3050B
Selenium	29.9		0.785	mg/kg	EPA 6010B	EPA 3050B
Silver	0.987		0.262	mg/kg	EPA 6010B	EPA 3050B
Vanadium	22.4		0.262	mg/kg	EPA 6010B	EPA 3050B
Zinc	26.3		1.05	mg/kg	EPA 6010B	EPA 3050B
Calcium	163000		52.4	mg/kg	EPA 6010B	EPA 3050B
Magnesium	17800		5.24	mg/kg	EPA 6010B	EPA 3050B
Potassium	1130		26.2	mg/kg	EPA 6010B	EPA 3050B
Sodium	27900		26.2	mg/kg	EPA 6010B	EPA 3050B
Boron	747		1.05	mg/kg	EPA 6010B	EPA 3050B
Selenium	0.383		0.150	mg/L	EPA 6010B	EPA 1311
Selenium	1.06		0.150	mg/L	EPA 6010B	T22.11.5. AII
TPH as Motor Oil	160	HD	50	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	53	HD	10	mg/kg	EPA 8015B (M)	EPA 3550B
Solids, Total Dissolved	101000		1000	mg/kg	SM 2540 C (M)	N/A

Return to Contents

* MDL is shown

eurofins | Calscience

Detections Summary

Client:	ERM-WEST	Work Order:	16-06-2043
	2875 Michelle Dr., Suite 200	Project Name:	NRG Coolwater
	Irvine, CA 92606-1021	Received:	06/28/16
Attn:	Steve Williams		Page 17 of 17

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
P5 (16-06-2043-62)						
Fluoride	1.7		1.0	mg/kg	EPA 300.0	N/A
Chloride	31		10	mg/kg	EPA 300.0	N/A
Nitrate (as N)	3.1		1.0	mg/kg	EPA 300.0	N/A
Sulfate	32		10	mg/kg	EPA 300.0	N/A
Arsenic	12.1		0.718	mg/kg	EPA 6010B	EPA 3050B
Barium	287		0.478	mg/kg	EPA 6010B	EPA 3050B
Beryllium	0.789		0.239	mg/kg	EPA 6010B	EPA 3050B
Cadmium	1.40		0.478	mg/kg	EPA 6010B	EPA 3050B
Chromium	24.8		0.239	mg/kg	EPA 6010B	EPA 3050B
Cobalt	6.28		0.239	mg/kg	EPA 6010B	EPA 3050B
Copper	48.9		0.478	mg/kg	EPA 6010B	EPA 3050B
Lead	25.1		0.478	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	2.43		0.239	mg/kg	EPA 6010B	EPA 3050B
Nickel	14.4		0.239	mg/kg	EPA 6010B	EPA 3050B
Selenium	12.3		0.718	mg/kg	EPA 6010B	EPA 3050B
Silver	0.480		0.239	mg/kg	EPA 6010B	EPA 3050B
Vanadium	37.8		0.239	mg/kg	EPA 6010B	EPA 3050B
Zinc	48.3		0.957	mg/kg	EPA 6010B	EPA 3050B
Calcium	61700		47.8	mg/kg	EPA 6010B	EPA 3050B
Magnesium	7660		4.78	mg/kg	EPA 6010B	EPA 3050B
Potassium	2090		23.9	mg/kg	EPA 6010B	EPA 3050B
Sodium	12200		23.9	mg/kg	EPA 6010B	EPA 3050B
Boron	260		0.957	mg/kg	EPA 6010B	EPA 3050B
Selenium	0.558		0.150	mg/L	EPA 6010B	T22.11.5. AII
Mercury	0.113		0.0847	mg/kg	EPA 7471A	EPA 7471A Total
TPH as Motor Oil	260	HD	50	mg/kg	EPA 8015B (M)	EPA 3550B
TPH as Diesel	84	HD	9.9	mg/kg	EPA 8015B (M)	EPA 3550B
Solids, Total Dissolved	31400		100	mg/kg	SM 2540 C (M)	N/A

Subcontracted analyses, if any, are not included in this summary.

Return to Contents

* MDL is shown

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: EPA 300.0
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-1	**16-06-2043-32-A**	**06/27/16 14:25**	**Solid**	**IC 10**	**07/26/16**	**07/27/16 02:27**	**160726L01P**

Comment(s): - The reporting limit is elevated resulting from matrix interference.
- Sample was not received within recommended holding time.

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	5.0	5.00	BU
Chloride	280	50	5.00	BU
Nitrate (as N)	50	5.0	5.00	BU
Sulfate	410	50	5.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-3	**16-06-2043-33-A**	**06/27/16 14:30**	**Solid**	**IC 10**	**07/26/16**	**07/27/16 02:46**	**160726L01P**

Comment(s): - Sample was not received within recommended holding time.

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	1.0	1.00	BU
Chloride	140	10	1.00	BU
Nitrate (as N)	27	1.0	1.00	BU
Sulfate	510	10	1.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-1	**16-06-2043-36-A**	**06/27/16 13:55**	**Solid**	**IC 10**	**07/26/16**	**07/27/16 03:05**	**160726L01P**

Comment(s): - The reporting limit is elevated resulting from matrix interference.
- Sample was not received within recommended holding time.

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	5.0	5.00	BU
Chloride	170	50	5.00	BU
Nitrate (as N)	7.0	5.0	5.00	BU
Sulfate	2700	50	5.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-3	**16-06-2043-37-A**	**06/27/16 14:00**	**Solid**	**IC 10**	**07/26/16**	**07/27/16 03:24**	**160726L01P**

Comment(s): - The reporting limit is elevated resulting from matrix interference.
- Sample was not received within recommended holding time.

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	5.0	5.00	BU
Chloride	220	50	5.00	BU
Nitrate (as N)	7.6	5.0	5.00	BU
Sulfate	2000	50	5.00	BU

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	N/A
		Method:	EPA 300.0
		Units:	mg/kg
Project: NRG Coolwater			Page 2 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4-1	**16-06-2043-40-A**	**06/27/16 13:30**	**Solid**	**IC 10**	**07/26/16**	**07/27/16 03:43**	**160726L01P**

Comment(s): - The reporting limit is elevated resulting from matrix interference.
- Sample was not received within recommended holding time.

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	5.0	5.00	BU
Chloride	630	50	5.00	BU
Nitrate (as N)	81	5.0	5.00	BU
Sulfate	1200	50	5.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4-3	**16-06-2043-41-A**	**06/27/16 13:35**	**Solid**	**IC 10**	**07/26/16**	**07/27/16 04:02**	**160726L01P**

Comment(s): - The reporting limit is elevated resulting from matrix interference.
- Sample was not received within recommended holding time.

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	5.0	5.00	BU
Chloride	150	50	5.00	BU
Nitrate (as N)	27	5.0	5.00	BU
Sulfate	1400	50	5.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3-FL-5-1	**16-06-2043-44-A**	**06/27/16 11:40**	**Solid**	**IC 10**	**07/26/16**	**07/27/16 04:21**	**160726L01P**

Comment(s): - The reporting limit is elevated resulting from matrix interference.
- Sample was not received within recommended holding time.

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	10	10.0	BU
Chloride	1200	100	10.0	BU
Nitrate (as N)	ND	10	10.0	BU
Sulfate	5900	100	10.0	BU

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: EPA 300.0
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3-FL-5-3	**16-06-2043-45-A**	**06/27/16 11:45**	**Solid**	**IC 10**	**07/26/16**	**07/27/16 04:40**	**160726L01P**

Comment(s): - The reporting limit is elevated resulting from matrix interference.
- Sample was not received within recommended holding time.

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	5.0	5.00	BU
Chloride	360	50	5.00	BU
Nitrate (as N)	ND	5.0	5.00	BU
Sulfate	1500	50	5.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-1	**16-06-2043-48-A**	**06/27/16 11:10**	**Solid**	**IC 10**	**07/26/16**	**07/27/16 04:59**	**160726L01P**

Comment(s): - The reporting limit is elevated resulting from matrix interference.
- Sample was not received within recommended holding time.

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	5.0	5.00	BU
Chloride	430	50	5.00	BU
Nitrate (as N)	ND	5.0	5.00	BU
Sulfate	1800	50	5.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-3	**16-06-2043-49-A**	**06/27/16 11:15**	**Solid**	**IC 10**	**07/26/16**	**07/27/16 06:37**	**160726L01P**

Comment(s): - The reporting limit is elevated resulting from matrix interference.
- Sample was not received within recommended holding time.

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	5.0	5.00	BU
Chloride	350	50	5.00	BU
Nitrate (as N)	10	5.0	5.00	BU
Sulfate	790	50	5.00	BU

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: EPA 300.0
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-1	**16-06-2043-52-A**	**06/27/16 10:55**	**Solid**	**IC 10**	**07/26/16**	**07/27/16 06:56**	**160726L01P**

Comment(s): - The reporting limit is elevated resulting from matrix interference.
- Sample was not received within recommended holding time.

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	10	10.0	BU
Chloride	1700	100	10.0	BU
Nitrate (as N)	13	10	10.0	BU
Sulfate	7600	100	10.0	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-3	**16-06-2043-53-A**	**06/27/16 11:00**	**Solid**	**IC 10**	**07/26/16**	**07/27/16 07:15**	**160726L01P**

Comment(s): - The reporting limit is elevated resulting from matrix interference.
- Sample was not received within recommended holding time.

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	5.0	5.00	BU
Chloride	110	50	5.00	BU
Nitrate (as N)	23	5.0	5.00	BU
Sulfate	890	50	5.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP	**16-06-2043-60-A**	**06/27/16 00:00**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 21:33**	**160701L01P**

Comment(s): - Sample was not received within recommended holding time.

Parameter	Result	RL	DF	Qualifiers
Fluoride	6.8	5.0	5.00	
Nitrate (as N)	26	5.0	5.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP	**16-06-2043-60-A**	**06/27/16 00:00**	**Solid**	**IC 10**	**07/01/16**	**07/03/16 04:56**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Chloride	10000	500	50.0	
Sulfate	26000	500	50.0	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: EPA 300.0
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5	**16-06-2043-62-A**	**06/27/16 00:00**	**Solid**	**IC 10**	**07/01/16**	**07/02/16 00:24**	**160701L02P**

Comment(s): - Sample was not received within recommended holding time.

Parameter	Result	RL	DF	Qualifiers
Fluoride	1.7	1.0	1.00	
Chloride	31	10	1.00	
Nitrate (as N)	3.1	1.0	1.00	
Sulfate	32	10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-922-739**	**N/A**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 14:19**	**160701L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	1.0	1.00	
Chloride	ND	10	1.00	
Nitrate (as N)	ND	1.0	1.00	
Sulfate	ND	10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-922-740**	**N/A**	**Solid**	**IC 10**	**07/01/16**	**07/01/16 23:46**	**160701L02P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	1.0	1.00	
Chloride	ND	10	1.00	
Nitrate (as N)	ND	1.0	1.00	
Sulfate	ND	10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-922-746**	**N/A**	**Solid**	**IC 10**	**07/26/16**	**07/27/16 12:42**	**160726L01P**

Parameter	Result	RL	DF	Qualifiers
Fluoride	ND	1.0	1.00	
Chloride	ND	10	1.00	
Nitrate (as N)	ND	1.0	1.00	
Sulfate	ND	10	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: SM 2540 C (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-1	**16-06-2043-32-A**	**06/27/16 14:25**	**Solid**	**N/A**	**07/26/16**	**07/26/16 22:00**	**G0726TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	6910	10.0	1.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-3	**16-06-2043-33-A**	**06/27/16 14:30**	**Solid**	**N/A**	**07/26/16**	**07/26/16 22:00**	**G0726TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	4460	10.0	1.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-1	**16-06-2043-36-A**	**06/27/16 13:55**	**Solid**	**N/A**	**07/26/16**	**07/26/16 22:00**	**G0726TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	24200	100	1.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-3	**16-06-2043-37-A**	**06/27/16 14:00**	**Solid**	**N/A**	**07/26/16**	**07/26/16 22:00**	**G0726TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	16100	100	1.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4-1	**16-06-2043-40-A**	**06/27/16 13:30**	**Solid**	**N/A**	**07/26/16**	**07/26/16 22:00**	**G0726TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	10800	100	1.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4-3	**16-06-2043-41-A**	**06/27/16 13:35**	**Solid**	**N/A**	**07/26/16**	**07/26/16 22:00**	**G0726TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	8010	10.0	1.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3-FL-5-1	**16-06-2043-44-A**	**06/27/16 11:40**	**Solid**	**N/A**	**07/26/16**	**07/26/16 22:00**	**G0726TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	32400	100	1.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3-FL-5-3	**16-06-2043-45-A**	**06/27/16 11:45**	**Solid**	**N/A**	**07/26/16**	**07/26/16 22:00**	**G0726TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	12600	100	1.00	BU

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: N/A
Method: SM 2540 C (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-1	**16-06-2043-48-A**	**06/27/16 11:10**	**Solid**	**N/A**	**07/26/16**	**07/26/16 22:00**	**G0726TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	17700	100	1.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-3	**16-06-2043-49-A**	**06/27/16 11:15**	**Solid**	**N/A**	**07/26/16**	**07/26/16 22:00**	**G0726TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	7310	10.0	1.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0	**16-06-2043-50-A**	**06/27/16 10:45**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	93000	100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-1	**16-06-2043-52-A**	**06/27/16 10:55**	**Solid**	**N/A**	**07/26/16**	**07/26/16 22:00**	**G0726TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	30800	100	1.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-3	**16-06-2043-53-A**	**06/27/16 11:00**	**Solid**	**N/A**	**07/26/16**	**07/26/16 22:00**	**G0726TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	7910	10.0	1.00	BU

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP	**16-06-2043-60-A**	**06/27/16 00:00**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	101000	1000	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5	**16-06-2043-62-A**	**06/27/16 00:00**	**Solid**	**N/A**	**07/06/16**	**07/06/16 19:00**	**G0706TDSB3**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	31400	100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-182-418**	**N/A**	**Solid**	**N/A**	**07/06/16**	**07/06/16 17:00**	**G0706TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	ND	1.0	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	N/A
		Method:	SM 2540 C (M)
		Units:	mg/kg
Project: NRG Coolwater			Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-182-419**	**N/A**	**Solid**	**N/A**	**07/06/16**	**07/06/16 19:00**	**G0706TDSB3**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	ND	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-182-423**	**N/A**	**Solid**	**N/A**	**07/26/16**	**07/26/16 22:00**	**G0726TDSB1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Dissolved	ND	1.0	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4-1	**16-06-2043-40-A**	**06/27/16 13:30**	**Solid**	**GC 47**	**07/26/16**	**07/27/16 08:55**	**160726B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	62	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4-3	**16-06-2043-41-A**	**06/27/16 13:35**	**Solid**	**GC 47**	**07/26/16**	**07/27/16 09:12**	**160726B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	70	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-1	**16-06-2043-48-A**	**06/27/16 11:10**	**Solid**	**GC 47**	**07/26/16**	**07/27/16 09:29**	**160726B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	64	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-3	**16-06-2043-49-A**	**06/27/16 11:15**	**Solid**	**GC 47**	**07/26/16**	**07/27/16 16:14**	**160726B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	103	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0	**16-06-2043-50-A**	**06/27/16 10:45**	**Solid**	**GC 49**	**07/01/16**	**07/06/16 22:18**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	130	25	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	97	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-1	**16-06-2043-52-A**	**06/27/16 10:55**	**Solid**	**GC 47**	**07/26/16**	**07/27/16 16:31**	**160726B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	98	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-3	**16-06-2043-53-A**	**06/27/16 11:00**	**Solid**	**GC 47**	**07/26/16**	**07/27/16 16:48**	**160726B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	98	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-1	**16-06-2043-56-A**	**06/27/16 10:10**	**Solid**	**GC 47**	**07/26/16**	**07/27/16 10:54**	**160726B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	170	25	1.00	HD,ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	64	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-3	**16-06-2043-57-A**	**06/27/16 10:15**	**Solid**	**GC 47**	**07/26/16**	**07/27/16 10:37**	**160726B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	68	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP	**16-06-2043-60-A**	**06/27/16 00:00**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 03:29**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	160	50	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	118	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5	**16-06-2043-62-A**	**06/27/16 00:00**	**Solid**	**GC 46**	**07/01/16**	**07/05/16 16:39**	**160701B04**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	260	50	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	125	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-420-1864**	**N/A**	**Solid**	**GC 46**	**07/01/16**	**07/01/16 17:32**	**160701B04**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	68	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-420-1868**	**N/A**	**Solid**	**GC 49**	**07/01/16**	**07/01/16 20:13**	**160701B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	90	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-420-1913**	**N/A**	**Solid**	**GC 47**	**07/26/16**	**07/27/16 06:56**	**160726B09**

Parameter	Result	RL	DF	Qualifiers
TPH as Motor Oil	ND	25	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	70	61-145	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4-1	**16-06-2043-40-A**	**06/27/16 13:30**	**Solid**	**GC 47**	**07/26/16**	**07/27/16 08:55**	**160726B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	62	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4-3	**16-06-2043-41-A**	**06/27/16 13:35**	**Solid**	**GC 47**	**07/26/16**	**07/27/16 09:12**	**160726B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	70	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-1	**16-06-2043-48-A**	**06/27/16 11:10**	**Solid**	**GC 47**	**07/26/16**	**07/27/16 09:29**	**160726B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	64	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-3	**16-06-2043-49-A**	**06/27/16 11:15**	**Solid**	**GC 47**	**07/26/16**	**07/27/16 16:14**	**160726B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	103	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0	**16-06-2043-50-A**	**06/27/16 10:45**	**Solid**	**GC 49**	**07/01/16**	**07/06/16 22:18**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	53	5.0	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	97	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-1	**16-06-2043-52-A**	**06/27/16 10:55**	**Solid**	**GC 47**	**07/26/16**	**07/27/16 16:31**	**160726B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	98	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-3	**16-06-2043-53-A**	**06/27/16 11:00**	**Solid**	**GC 47**	**07/26/16**	**07/27/16 16:48**	**160726B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	98	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-1	**16-06-2043-56-A**	**06/27/16 10:10**	**Solid**	**GC 47**	**07/26/16**	**07/27/16 10:54**	**160726B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	41	5.0	1.00	HD,ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	64	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-3	**16-06-2043-57-A**	**06/27/16 10:15**	**Solid**	**GC 47**	**07/26/16**	**07/27/16 10:37**	**160726B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	ET

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	68	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP	**16-06-2043-60-A**	**06/27/16 00:00**	**Solid**	**GC 49**	**07/01/16**	**07/02/16 03:29**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	53	10	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	118	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5	**16-06-2043-62-A**	**06/27/16 00:00**	**Solid**	**GC 46**	**07/01/16**	**07/05/16 16:39**	**160701B03**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	84	9.9	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	125	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-422-2525**	**N/A**	**Solid**	**GC 46**	**07/01/16**	**07/01/16 17:32**	**160701B03**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	68	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-422-2527**	**N/A**	**Solid**	**GC 49**	**07/01/16**	**07/01/16 20:13**	**160701B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	90	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-422-2573**	**N/A**	**Solid**	**GC 47**	**07/26/16**	**07/27/16 06:56**	**160726B08**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	70	61-145	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-1-1	**16-06-2043-28-A**	**06/27/16 14:50**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 09:25**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.735	0.980	
Arsenic	1.55	0.735	0.980	
Barium	36.9	0.490	0.980	
Beryllium	ND	0.245	0.980	
Cadmium	ND	0.490	0.980	
Chromium	2.79	0.245	0.980	
Cobalt	1.98	0.245	0.980	
Copper	2.68	0.490	0.980	
Lead	1.46	0.490	0.980	
Molybdenum	ND	0.245	0.980	
Nickel	1.77	0.245	0.980	
Selenium	ND	0.735	0.980	
Silver	ND	0.245	0.980	
Thallium	ND	0.735	0.980	
Vanadium	13.0	0.245	0.980	
Zinc	11.9	0.980	0.980	
Lithium	2.84	2.45	0.980	
Calcium	3260	4.90	0.980	
Magnesium	1250	4.90	0.980	
Potassium	816	24.5	0.980	
Sodium	84.5	24.5	0.980	
Boron	1.81	0.980	0.980	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-1-3	**16-06-2043-29-A**	**06/27/16 14:55**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 09:27**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.785	1.05	
Arsenic	1.08	0.785	1.05	
Barium	31.4	0.524	1.05	
Beryllium	ND	0.262	1.05	
Cadmium	ND	0.524	1.05	
Chromium	2.94	0.262	1.05	
Cobalt	2.15	0.262	1.05	
Copper	2.65	0.524	1.05	
Lead	1.47	0.524	1.05	
Molybdenum	ND	0.262	1.05	
Nickel	1.88	0.262	1.05	
Selenium	ND	0.785	1.05	
Silver	ND	0.262	1.05	
Thallium	ND	0.785	1.05	
Vanadium	13.3	0.262	1.05	
Zinc	15.0	1.05	1.05	
Lithium	3.84	2.62	1.05	
Calcium	2250	5.24	1.05	
Magnesium	1460	5.24	1.05	
Potassium	920	26.2	1.05	
Sodium	78.0	26.2	1.05	
Boron	1.54	1.05	1.05	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-1	**16-06-2043-32-A**	**06/27/16 14:25**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 09:28**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.714	0.952	
Arsenic	4.26	0.714	0.952	
Barium	75.1	0.476	0.952	
Beryllium	0.369	0.238	0.952	
Cadmium	ND	0.476	0.952	
Chromium	8.73	0.238	0.952	
Cobalt	4.73	0.238	0.952	
Copper	7.47	0.476	0.952	
Lead	3.43	0.476	0.952	
Molybdenum	ND	0.238	0.952	
Nickel	5.77	0.238	0.952	
Selenium	ND	0.714	0.952	
Silver	ND	0.238	0.952	
Thallium	ND	0.714	0.952	
Vanadium	23.3	0.238	0.952	
Zinc	26.7	0.952	0.952	
Lithium	8.07	2.38	0.952	
Calcium	7650	4.76	0.952	
Magnesium	3790	4.76	0.952	
Potassium	2590	23.8	0.952	
Sodium	1370	23.8	0.952	
Boron	5.04	0.952	0.952	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-2-3	**16-06-2043-33-A**	**06/27/16 14:30**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 09:29**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.750	1.00	
Arsenic	2.19	0.750	1.00	
Barium	42.8	0.500	1.00	
Beryllium	ND	0.250	1.00	
Cadmium	ND	0.500	1.00	
Chromium	4.68	0.250	1.00	
Cobalt	2.99	0.250	1.00	
Copper	4.23	0.500	1.00	
Lead	1.99	0.500	1.00	
Molybdenum	ND	0.250	1.00	
Nickel	3.27	0.250	1.00	
Selenium	ND	0.750	1.00	
Silver	ND	0.250	1.00	
Thallium	ND	0.750	1.00	
Vanadium	15.7	0.250	1.00	
Zinc	17.3	1.00	1.00	
Lithium	4.79	2.50	1.00	
Calcium	5040	5.00	1.00	
Magnesium	2200	5.00	1.00	
Potassium	1350	25.0	1.00	
Sodium	405	25.0	1.00	
Boron	2.84	1.00	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-1	**16-06-2043-36-A**	**06/27/16 13:55**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 09:34**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.769	1.03	
Arsenic	5.81	0.769	1.03	
Barium	68.2	0.513	1.03	
Beryllium	0.287	0.256	1.03	
Cadmium	ND	0.513	1.03	
Chromium	6.90	0.256	1.03	
Cobalt	3.42	0.256	1.03	
Copper	16.0	0.513	1.03	
Lead	2.52	0.513	1.03	
Molybdenum	ND	0.256	1.03	
Nickel	5.69	0.256	1.03	
Selenium	ND	0.769	1.03	
Silver	ND	0.256	1.03	
Thallium	ND	0.769	1.03	
Vanadium	21.1	0.256	1.03	
Zinc	22.2	1.03	1.03	
Lithium	2.97	2.56	1.03	
Calcium	26600	5.13	1.03	
Magnesium	4070	5.13	1.03	
Potassium	1780	25.6	1.03	
Sodium	1500	25.6	1.03	
Boron	35.0	1.03	1.03	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P1-FL-3-3	**16-06-2043-37-A**	**06/27/16 14:00**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 09:35**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.781	1.04	
Arsenic	3.42	0.781	1.04	
Barium	53.8	0.521	1.04	
Beryllium	0.322	0.260	1.04	
Cadmium	ND	0.521	1.04	
Chromium	7.10	0.260	1.04	
Cobalt	3.71	0.260	1.04	
Copper	8.22	0.521	1.04	
Lead	3.01	0.521	1.04	
Molybdenum	ND	0.260	1.04	
Nickel	4.39	0.260	1.04	
Selenium	ND	0.781	1.04	
Silver	ND	0.260	1.04	
Thallium	ND	0.781	1.04	
Vanadium	24.5	0.260	1.04	
Zinc	20.5	1.04	1.04	
Lithium	4.41	2.60	1.04	
Calcium	12500	5.21	1.04	
Magnesium	3230	5.21	1.04	
Potassium	1960	26.0	1.04	
Sodium	1530	26.0	1.04	
Boron	18.5	1.04	1.04	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4-1	**16-06-2043-40-A**	**06/27/16 13:30**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 09:36**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.761	1.02	
Arsenic	3.45	0.761	1.02	
Barium	83.3	0.508	1.02	
Beryllium	0.337	0.254	1.02	
Cadmium	ND	0.508	1.02	
Chromium	7.26	0.254	1.02	
Cobalt	4.60	0.254	1.02	
Copper	7.00	0.508	1.02	
Lead	4.24	0.508	1.02	
Molybdenum	ND	0.254	1.02	
Nickel	4.94	0.254	1.02	
Selenium	ND	0.761	1.02	
Silver	ND	0.254	1.02	
Thallium	ND	0.761	1.02	
Vanadium	24.3	0.254	1.02	
Zinc	27.2	1.02	1.02	
Lithium	6.61	2.54	1.02	
Calcium	8510	5.08	1.02	
Magnesium	3570	5.08	1.02	
Potassium	1830	25.4	1.02	
Sodium	1720	25.4	1.02	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4-1	**16-06-2043-40-A**	**06/27/16 13:30**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 13:57**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Boron	8.47	1.02	1.02	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Project: NRG Coolwater

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4-3	**16-06-2043-41-A**	**06/27/16 13:35**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 09:37**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.725	0.966	
Arsenic	1.41	0.725	0.966	
Barium	20.3	0.483	0.966	
Beryllium	ND	0.242	0.966	
Cadmium	ND	0.483	0.966	
Chromium	3.36	0.242	0.966	
Cobalt	1.65	0.242	0.966	
Copper	2.89	0.483	0.966	
Lead	1.27	0.483	0.966	
Molybdenum	ND	0.242	0.966	
Nickel	1.77	0.242	0.966	
Selenium	ND	0.725	0.966	
Silver	ND	0.242	0.966	
Thallium	ND	0.725	0.966	
Vanadium	14.2	0.242	0.966	
Zinc	8.55	0.966	0.966	
Lithium	ND	2.42	0.966	
Calcium	4360	4.83	0.966	
Magnesium	1110	4.83	0.966	
Potassium	592	24.2	0.966	
Sodium	348	24.2	0.966	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P2-FL-4-3	**16-06-2043-41-A**	**06/27/16 13:35**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 13:58**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Boron	4.53	0.966	0.966	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3-FL-5-1	**16-06-2043-44-A**	**06/27/16 11:40**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 09:39**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.765	1.02	
Arsenic	6.87	0.765	1.02	
Barium	80.6	0.510	1.02	
Beryllium	0.280	0.255	1.02	
Cadmium	ND	0.510	1.02	
Chromium	6.52	0.255	1.02	
Cobalt	3.49	0.255	1.02	
Copper	11.3	0.510	1.02	
Lead	3.90	0.510	1.02	
Molybdenum	0.592	0.255	1.02	
Nickel	5.54	0.255	1.02	
Selenium	0.815	0.765	1.02	
Silver	ND	0.255	1.02	
Thallium	ND	0.765	1.02	
Vanadium	16.5	0.255	1.02	
Zinc	24.2	1.02	1.02	
Lithium	3.72	2.55	1.02	
Calcium	26900	5.10	1.02	
Magnesium	4080	5.10	1.02	
Potassium	1640	25.5	1.02	
Sodium	4720	25.5	1.02	
Boron	74.8	1.02	1.02	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P3-FL-5-3	**16-06-2043-45-A**	**06/27/16 11:45**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 09:40**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.714	0.952	
Arsenic	3.27	0.714	0.952	
Barium	57.5	0.476	0.952	
Beryllium	0.283	0.238	0.952	
Cadmium	ND	0.476	0.952	
Chromium	6.04	0.238	0.952	
Cobalt	3.95	0.238	0.952	
Copper	6.46	0.476	0.952	
Lead	2.94	0.476	0.952	
Molybdenum	ND	0.238	0.952	
Nickel	4.27	0.238	0.952	
Selenium	ND	0.714	0.952	
Silver	ND	0.238	0.952	
Thallium	ND	0.714	0.952	
Vanadium	19.9	0.238	0.952	
Zinc	22.3	0.952	0.952	
Lithium	6.30	2.38	0.952	
Calcium	10800	4.76	0.952	
Magnesium	3160	4.76	0.952	
Potassium	1640	23.8	0.952	
Sodium	1220	23.8	0.952	
Boron	16.1	0.952	0.952	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-1	**16-06-2043-48-A**	**06/27/16 11:10**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 09:41**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.761	1.02	
Arsenic	5.15	0.761	1.02	
Barium	92.0	0.508	1.02	
Beryllium	0.633	0.254	1.02	
Cadmium	ND	0.508	1.02	
Chromium	11.9	0.254	1.02	
Cobalt	7.60	0.254	1.02	
Copper	14.3	0.508	1.02	
Lead	5.60	0.508	1.02	
Molybdenum	ND	0.254	1.02	
Nickel	8.77	0.254	1.02	
Selenium	ND	0.761	1.02	
Silver	ND	0.254	1.02	
Thallium	ND	0.761	1.02	
Vanadium	29.7	0.254	1.02	
Zinc	41.4	1.02	1.02	
Lithium	12.7	2.54	1.02	
Calcium	11600	5.08	1.02	
Magnesium	6140	5.08	1.02	
Potassium	2800	25.4	1.02	
Sodium	2920	25.4	1.02	
Boron	18.9	1.02	1.02	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-3	**16-06-2043-49-A**	**06/27/16 11:15**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 09:42**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.750	1.00	
Arsenic	4.53	0.750	1.00	
Barium	109	0.500	1.00	
Beryllium	0.450	0.250	1.00	
Cadmium	ND	0.500	1.00	
Chromium	9.50	0.250	1.00	
Cobalt	6.03	0.250	1.00	
Copper	9.07	0.500	1.00	
Lead	3.83	0.500	1.00	
Molybdenum	ND	0.250	1.00	
Nickel	6.28	0.250	1.00	
Selenium	ND	0.750	1.00	
Silver	ND	0.250	1.00	
Thallium	ND	0.750	1.00	
Vanadium	35.3	0.250	1.00	
Zinc	32.5	1.00	1.00	
Lithium	10.1	2.50	1.00	
Calcium	12400	5.00	1.00	
Magnesium	4480	5.00	1.00	
Potassium	1360	25.0	1.00	
Sodium	754	25.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P4-FL-6-3	**16-06-2043-49-A**	**06/27/16 11:15**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 14:00**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Boron	9.11	1.00	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: NRG Coolwater			Page 13 of 22

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0	**16-06-2043-50-A**	**06/27/16 10:45**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:40**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.750	1.00	
Arsenic	21.6	0.750	1.00	
Barium	120	0.500	1.00	
Beryllium	0.295	0.250	1.00	
Cadmium	0.674	0.500	1.00	
Chromium	16.0	0.250	1.00	
Cobalt	2.82	0.250	1.00	
Copper	47.2	0.500	1.00	
Lead	6.36	0.500	1.00	
Molybdenum	3.27	0.250	1.00	
Nickel	11.2	0.250	1.00	
Selenium	21.4	0.750	1.00	
Silver	1.06	0.250	1.00	
Thallium	ND	0.750	1.00	
Vanadium	22.4	0.250	1.00	
Zinc	27.9	1.00	1.00	
Lithium	ND	2.50	1.00	
Magnesium	16300	5.00	1.00	
Potassium	1030	25.0	1.00	
Sodium	24200	25.0	1.00	
Boron	606	1.00	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-0	**16-06-2043-50-A**	**06/27/16 10:45**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 22:08**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Calcium	176000	50.0	10.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-1	**16-06-2043-52-A**	**06/27/16 10:55**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 18:27**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.765	1.02	
Arsenic	6.19	0.765	1.02	
Barium	81.3	0.510	1.02	
Beryllium	0.351	0.255	1.02	
Cadmium	ND	0.510	1.02	
Chromium	7.56	0.255	1.02	
Cobalt	4.48	0.255	1.02	
Copper	12.3	0.510	1.02	
Lead	4.58	0.510	1.02	
Molybdenum	0.628	0.255	1.02	
Nickel	6.31	0.255	1.02	
Selenium	1.22	0.765	1.02	
Silver	ND	0.255	1.02	
Thallium	ND	0.765	1.02	
Vanadium	19.2	0.255	1.02	
Zinc	30.3	1.02	1.02	
Lithium	4.91	2.55	1.02	
Calcium	22900	5.10	1.02	
Magnesium	4240	5.10	1.02	
Potassium	1780	25.5	1.02	
Sodium	4620	25.5	1.02	
Boron	46.4	1.02	1.02	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: NRG Coolwater			Page 15 of 22

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-3	**16-06-2043-53-A**	**06/27/16 11:00**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 09:45**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.750	1.00	
Arsenic	2.89	0.750	1.00	
Barium	49.8	0.500	1.00	
Beryllium	0.266	0.250	1.00	
Cadmium	ND	0.500	1.00	
Chromium	6.07	0.250	1.00	
Cobalt	3.41	0.250	1.00	
Copper	5.73	0.500	1.00	
Lead	2.50	0.500	1.00	
Molybdenum	ND	0.250	1.00	
Nickel	3.59	0.250	1.00	
Selenium	ND	0.750	1.00	
Silver	ND	0.250	1.00	
Thallium	ND	0.750	1.00	
Vanadium	24.0	0.250	1.00	
Zinc	19.0	1.00	1.00	
Lithium	4.83	2.50	1.00	
Calcium	8680	5.00	1.00	
Magnesium	2480	5.00	1.00	
Potassium	1160	25.0	1.00	
Sodium	612	25.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-7-3	**16-06-2043-53-A**	**06/27/16 11:00**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 14:01**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Boron	9.25	1.00	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-1	**16-06-2043-56-A**	**06/27/16 10:10**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 09:49**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.746	0.995	
Arsenic	2.74	0.746	0.995	
Barium	119	0.498	0.995	
Beryllium	0.740	0.249	0.995	
Cadmium	ND	0.498	0.995	
Chromium	15.0	0.249	0.995	
Cobalt	8.74	0.249	0.995	
Copper	15.1	0.498	0.995	
Lead	6.78	0.498	0.995	
Molybdenum	0.392	0.249	0.995	
Nickel	9.17	0.249	0.995	
Selenium	ND	0.746	0.995	
Silver	ND	0.249	0.995	
Thallium	ND	0.746	0.995	
Vanadium	51.2	0.249	0.995	
Zinc	52.3	0.995	0.995	
Lithium	15.2	2.49	0.995	
Calcium	8330	4.98	0.995	
Magnesium	6930	4.98	0.995	
Potassium	2570	24.9	0.995	
Sodium	362	24.9	0.995	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-1	**16-06-2043-56-A**	**06/27/16 10:10**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 14:02**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Boron	10.9	0.995	0.995	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5-FL-8-3	**16-06-2043-57-A**	**06/27/16 10:15**	**Solid**	**ICP 7300**	**07/27/16**	**07/29/16 09:51**	**160727L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.765	1.02	
Arsenic	1.97	0.765	1.02	
Barium	109	0.510	1.02	
Beryllium	0.628	0.255	1.02	
Cadmium	ND	0.510	1.02	
Chromium	13.1	0.255	1.02	
Cobalt	8.74	0.255	1.02	
Copper	11.7	0.510	1.02	
Lead	5.81	0.510	1.02	
Molybdenum	0.569	0.255	1.02	
Nickel	8.72	0.255	1.02	
Selenium	ND	0.765	1.02	
Silver	ND	0.255	1.02	
Thallium	ND	0.765	1.02	
Vanadium	42.1	0.255	1.02	
Zinc	45.5	1.02	1.02	
Lithium	12.0	2.55	1.02	
Calcium	5620	5.10	1.02	
Magnesium	5400	5.10	1.02	
Potassium	2590	25.5	1.02	
Sodium	586	25.5	1.02	
Boron	7.74	1.02	1.02	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST		Date Received:	06/28/16
2875 Michelle Dr., Suite 200		Work Order:	16-06-2043
Irvine, CA 92606-1021		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: NRG Coolwater			Page 18 of 22

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP	**16-06-2043-60-A**	**06/27/16 00:00**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:47**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.785	1.05	
Arsenic	21.0	0.785	1.05	
Barium	115	0.524	1.05	
Beryllium	0.267	0.262	1.05	
Cadmium	0.661	0.524	1.05	
Chromium	15.7	0.262	1.05	
Cobalt	2.71	0.262	1.05	
Copper	52.0	0.524	1.05	
Lead	6.61	0.524	1.05	
Molybdenum	4.39	0.262	1.05	
Nickel	11.3	0.262	1.05	
Selenium	29.9	0.785	1.05	
Silver	0.987	0.262	1.05	
Thallium	ND	0.785	1.05	
Vanadium	22.4	0.262	1.05	
Zinc	26.3	1.05	1.05	
Lithium	ND	2.62	1.05	
Magnesium	17800	5.24	1.05	
Potassium	1130	26.2	1.05	
Sodium	27900	26.2	1.05	
Boron	747	1.05	1.05	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
DUP	**16-06-2043-60-A**	**06/27/16 00:00**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 22:10**	**160630L06**

Parameter	Result	RL	DF	Qualifiers
Calcium	163000	52.4	10.5	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P5	**16-06-2043-62-A**	**06/27/16 00:00**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:49**	**160630L01A**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.718	0.957	
Arsenic	12.1	0.718	0.957	
Barium	287	0.478	0.957	
Beryllium	0.789	0.239	0.957	
Cadmium	1.40	0.478	0.957	
Chromium	24.8	0.239	0.957	
Cobalt	6.28	0.239	0.957	
Copper	48.9	0.478	0.957	
Lead	25.1	0.478	0.957	
Molybdenum	2.43	0.239	0.957	
Nickel	14.4	0.239	0.957	
Selenium	12.3	0.718	0.957	
Silver	0.480	0.239	0.957	
Thallium	ND	0.718	0.957	
Vanadium	37.8	0.239	0.957	
Zinc	48.3	0.957	0.957	
Lithium	ND	2.39	0.957	
Calcium	61700	47.8	9.57	
Magnesium	7660	4.78	0.957	
Potassium	2090	23.9	0.957	
Sodium	12200	23.9	0.957	
Boron	260	0.957	0.957	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

eurofins | Calscience

Analytical Report

ERM-WEST
2875 Michelle Dr., Suite 200
Irvine, CA 92606-1021

Date Received: 06/28/16
Work Order: 16-06-2043
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: NRG Coolwater

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-002-22900**	**N/A**	**Solid**	**ICP 7300**	**06/30/16**	**07/08/16 10:10**	**160630L01A**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.789	1.05	
Arsenic	ND	0.789	1.05	
Barium	ND	0.526	1.05	
Beryllium	ND	0.263	1.05	
Cadmium	ND	0.526	1.05	
Chromium	ND	0.263	1.05	
Cobalt	ND	0.263	1.05	
Copper	ND	0.526	1.05	
Lead	ND	0.526	1.05	
Molybdenum	ND	0.263	1.05	
Nickel	ND	0.263	1.05	
Selenium	ND	0.789	1.05	
Silver	ND	0.263	1.05	
Thallium	ND	0.789	1.05	
Vanadium	ND	0.263	1.05	
Zinc	ND	1.05	1.05	
Lithium	ND	2.63	1.05	
Calcium	ND	5.26	1.05	
Magnesium	ND	5.26	1.05	
Potassium	ND	26.3	1.05	
Sodium	ND	26.3	1.05	
Boron	ND	1.05	1.05	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.