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September 21, 2018

Mabbett File No. 2018016.002

Joe Laughton
Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
8 New Bond Street
Worcester, MA 01606

Re: Notice of Availability of Response Summary for Public Involvement Plan

Former Buckley & Mann Site

17 Lawrence Street Norfolk, Massachusetts

Release Tracking Number 2-3000173

Dear Mr. Laughton:

Mabbett & Associates (Mabbett) is providing this notification letter on behalf of Buckley & Mann, Inc., the owner of the above-referenced site, to notify you of the availability of the Response Summary containing responses to public comments received on the Draft Public Involvement Plan, which was presented at a public meeting on August 7, 2018.

The Response Summary is available for review in electronic format through the MassDEP website using the following link: https://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=2-3000173. The Response Summary will also be available for review at the Norfolk and Franklin Public Libraries, and included as an appendix to the Final Public Involvement Plan. The Final Public Involvement Plan will be prepared and submitted to the MassDEP website and the document repositories during the week of September 24, 2018.

Very truly yours,

MABBETT & ASSOCIATES, INC.

BY:

Stephen A. Vetere, PE, LSP, LEP

Stephin Vehice

Section Lead, Site Assessment and Remediation

cc: PIP Petitioner Mailing List

Town of Norfolk: Town Administrator, Board of Selectmen, Board of Health, Zoning Board of Appeals

RESPONSE SUMMARY DRAFT PUBLIC INVOLVEMENT PLAN FORMER BUCKLEY & MANN SITE NORFOLK, MASSACHUSETTS RTN 2-3000173

Comments received from Eric Diamond (ED) on August 7, 2018:

ED-1: Thank you for the outline of the PIP process tonight. Near the end, you had a slide titled next steps, and listed re-recording the AUL. Is there an assumption or an agreement already in place that this site will have a AUL in the future?

Response: There are no assumptions or agreements in place regarding the remedial actions that will occur at the Site. Remedial actions will be selected based on the data collected during the Phase II investigation and the conclusions of the risk assessments. However, it is presumed that soils in certain areas will remain at the Site with contaminants that are above levels that allow for unrestricted use, and there may be other soils where contaminants are at such levels where an Activity and Use Limitation will necessarily be part of the final remedy in order to reduce risks to a level that will achieve compliance with the MCP.

ED-2: When site work is performed, who is allowed to be onsite to witness the testing? Does Mabbett do its own testing, or is it completed by a third party? Is the towns LSP allowed / obligated to be on site during all testing? What if the town does not fund the town LSP to be on site to witness testing? Probably a question for the town's LSP, is there enough money in the budget to witness or do independent testing?

Response: The Site is located on private property that is currently owned by Buckley & Mann. Therefore, anyone wishing to observe sampling and testing activities would need to coordinate through the property owner. Mabbett does have staff members that collect environmental samples, however the recent sampling has been performed by IC Environmental, another qualified environmental consulting firm. We refer your question regarding funding for LSP oversight of sampling activities to the Town. The Town's LSP, or other members of the Town government, are welcome to observe sampling activities conducted by Buckley & Mann.

Comments received from Sandy Myatt (SM) on August 27, 2018:

SM-1: POST-RAO SAMPLING DETAILS: Section 2.3 of Draft PIP states "Environmental sampling data collected during these (2011-2015) assessment activities was consistent with the data collected during response actions and has not revealed any new or additional reporting conditions." Please provide the documentation for tests cited (locations, chain of custody, all results and engineer/LSP performing tests).

Response: Please see Exhibit A of this Response Summary for the requested information.

SM-2: APRIL 2018 TEST DATA: Section 2.4 of Draft PIP states "In April 2018, additional soil sampling was performed within the Carbonizer Lagoon..." Please provide the documentation for tests cited (locations, chain of custody, all results) done April – August 2018.

Response: Please see Exhibit A of this Response Summary for the requested information. This information was also provided in the Draft Phase II Scope of Work, submitted for public comment on September 4, 2018.

SM-3: REPORTING EXCEEDANCES TO DEP: Section 2.4 of Daft PIP states that the detections of "antimony, cadmium, and 2-methylapthalene in soil above RCS-1" were reported to the DEP and that "these

detections do not represent a new release condition" and the "revised notification was submitted in the interest of completeness and transparency." Three additional exceedances above reportable concentrations from the March 2018 sampling exist for Chromium III, Lead and Zinc. Chromium speciation was never done in previous RTN 2-3000173 testing. In addition, Arsenic and Lead in surface waters of Bush Pond are exceedances in this ZONE II. To be complete and transparent, please explain if all exceedances will be reported to the public and DEP throughout this process and reasons they would not be reported.

Response: The initial assessment work at the Site was performed in 1986 and continued into the late 1990s. Some of this work was performed prior to establishment of the MCP (1993), therefore the way in which the initial release was reported to MassDEP was not consistent with the current process. However, in 1998/1999, a Release Abatement Measure (RAM) was implemented to address contaminated soils. The RAM Transmittal Form (BWSC Form 106) submitted with the RAM Completion Statement identifies metals, PAHs, and TPH as the contaminants that triggered the 120-day reporting condition.

The detection of a contaminant in soil or groundwater above a reportable concentration only triggers a 120-day reporting obligation the first time it is detected. If the same contaminant is detected above reportable concentrations in subsequent sampling events, no new reporting obligation is triggered. Chromium, lead, and zinc are all heavy metals that were known to be present at the Site and part of the release that was reported to MassDEP in the 1980s. Similarly, antimony, cadmium, and 2-methylnaphthalene (which were detected above RCS-1 in the March 2018 sampling within the Carbonizer Lagoon) are heavy metals/PAHs whose presence in the environment has also been previously reported to MassDEP, and their detection above RCS-1 did not create a new reporting requirement.

Chromium speciation was performed on a subset of the 2018 analyses and has demonstrated that hexavalent chromium makes up a relatively small percentage of the total chromium detected in soil samples collected from the Site. Hexavalent chromium has not been detected above a reportable concentration. Chromium speciation results have provided additional evidence that the less toxic, less mobile form of chromium (trivalent chromium) is the dominant species at the Site.

There are no reportable concentration thresholds in the MCP for surface water samples. Releases triggering 120-day notification requirements as suggested by the commenter apply to soil and groundwater only.

Buckley & Mann will continue to provide the results of analytical testing to MassDEP at standard MCP reporting milestones. All such documents filed with MassDEP are available to the public on the MassDEP website. Buckley & Mann will also continue to provide the results to the public through the PIP process and through other channels, including through the Town, as was done with the 2018 soil sampling data upon which this comment is based. Buckley & Mann will report releases to MassDEP when obligated to do so under the MCP.

SM-4: IMMINENT HAZARD: Is iron flocculent either in the Tail Race, Carbonizer Trench, Carbonizer Lagoon, Mill River or any of the wetlands between the Tail Race and the Mill River? Is iron flocculent an Imminent Hazard? Who's responsible for reporting Imminent Hazards to MassDEP?

Response: Iron flocculant has been observed in the Tail Race, Carbonizer Lagoon, and on the banks of the Mill River. The presence of iron flocculant could be a potential Imminent Hazard condition if it was determined to produce immediate or acute adverse impacts to freshwater fish populations. To date, this condition has not been observed at the Site. Buckley & Mann has outlined an investigative strategy in the Phase II Scope of Work to determine whether the presence of iron flocculant at the Site adversely impacts environmental receptors, and the degree to which iron flocculent is related to the MCP release at the Site.

It should also be noted that the results of four soil samples collected from the Tail Race in March 2018 did not identify any metals above reportable concentrations (Exhibit A). In two samples collected from the Tail Race, petroleum hydrocarbons and PAHs were not detected. Additional sampling is planned to further characterize material in the Tail Race and more clearly understand the source of iron flocculant and whether it poses potential human health or environmental risks.

SM-5: TIER CLASSIFICATION: Does this site meet any of the criteria for Tier I? Please list all existing groundwater reportable concentrations (RCGW-1) at this site. Who is responsible for reclassification when data warrants a change to Tier I?

Response: The Site does not meet any of the criteria for Tier I. Groundwater sampling results from 2014-2015 (the most recent comprehensive sampling events available) are included in Exhibit B to this Response Summary. The only exceedance of RCGW-1 in any of these samples was arsenic. Re-analysis of these samples after filtering indicated that dissolved arsenic was only present at detectable concentrations in a single monitoring well, MW-3DX, in a single sample collected in September 2015. Re-sampling of this well in October 2015 did not reproduce this result. It should be noted that arsenic is a metal which is also naturally occurring and is expected to be present in the environment even in the absence of the Site. Based upon the information derived to date, it appears that arsenic may be naturally occurring in this area but additional characterization will be undertaken to reconfirm our preliminary determination.

SM-6: RESPONSIBILITY at BUCKLEY & MANN: Who is legally responsible for 17 Lawrence Street and associated costs of the disposal site? What happens to the process if funds are not available to complete cleanup?

Response: Buckley & Mann is legally responsible for environmental response actions at the Site as owner of the property. The ongoing assessment work is being performed to evaluate the extent of remedial actions that will be required to achieve a Permanent Solution under the MCP. The proposed residential development project will move forward after a Permanent Solution has been achieved, or at the point when sufficient work has been done to fully understand the scope of work necessary to achieve a Permanent Solution, so that uncertainty regarding the cost of environmental cleanup will not be a factor in the redevelopment of the property.

SM-7: PHASE II SCOPE OF WORK: Considering Buckley and Mann represents only a portion of the site's mill history (circa 1901), additional locations and tests for contaminants should reflect the history of the site dating back to when it was a shoddy mill, felting mill, a paper mill and a tannery (circa 1830s). Please review and present to the public all historical mill layouts and their chemicals for possible contamination when the Phase II Scope of Work is presented on September 4, 2018. A detailed map of proposed test locations and associated tables of existing sampling results with locations on the map would help the public understand the proposed Phase II field investigations.

Response: Historical information regarding the existence of a shoddy mill and paper mill on the Buckley & Mann property was provided to the project team at the September 4, 2018 public meeting. This information is being reviewed and its implications on the Phase II Scope of Work will be addressed in the response to public comments on the Phase II Scope of Work.

SM-8: Please email future PIP correspondence to: <u>friendsoflawrencest@gmail.com</u>

Response: Future PIP correspondence will be emailed to this address.

Comments received from Christopher Wagner (CW) on August 27, 2018:

- CW-1: Dear Stephen, My name is Chris Wagner and I am writing to express the concerns of Arthur Wagner, Geraldine Wagner, and myself regarding the proposed Abbyville Commons and Abbyville Preserve projects at 17 Lawrence Street, and the adjacent parcels. In reading the final Environmental Notification Form (ENF), I found that there are environmental impacts that have not been given adequate attention or investigation. The ENF specifically mentions two certified vernal pools in very close proximity to the proposed project footprint, as well as four other potential vernal pools. There has been no evaluation of whether those four additional vernal pools represent habitat for protected species. I am particularly concerned since the BSG Group, Inc.'s report and findings included in DiPlacido Development Corporation's request for a Project Review dated 6/12/17, notes the following two areas on the property.
 - Wetland G "...has been certified as a vernal pool and characterized as a cottonwood open pool cover type. The pool appears to have been certified due to the presence of fairy shrimp but does not appear to support mole salamander species."
 - Wetland L "...includes two basins with sufficient biological indicator evidence to be certified as vernal pools. This is one of the areas on site mapped as Woodland Vernal Pool cover type, and provides potential breeding habitat for the marbled salamander."

Yet, there has been absolutely no effort made to examine the certified vernal pools in Wetland G, or the potential vernal pools in Wetland L. Wetland L includes Lagoons 1, 2, and 3, as defined in your PIP presentation. All of these pools are within the 1000 foot buffer required of marbled salamander habitat, Lagoons 1 and 2 were included in the previous AUL, and Lagoon 3 is adjacent to the former AUL boundary. Overall, I see no effort being made to examine the former Buckley and Mann site and surrounding areas for protected species and habitat. Habitat maps were redrawn just prior to this project's proposal, but there is no evidence of physical investigation of the site. An appropriate investigation would at least have to take place in the spring, when the vernal pool species are active, Furthermore, impacts on the Mill River, and downstream impact on the Charles River Watershed are of specific concern.

Response: State-listed species concerns are regulated by the Massachusetts Wetlands Protection Act (M.G.L. Ch. 131, § 40) (WPA) and its implementing regulations (310 CMR 10.00 et seq.) and the Massachusetts Endangered Species Act (M.G.L. Ch. 131A; MESA) and MESA Regulations (321 CMR 10.00 et seq.). Both WPA and MESA regulations contain a presumption that a determination regarding state-listed species rendered by the Massachusetts Natural Heritage and Endangered Species Program (NHESP) is accurate.

In September 2014, a NHESP inspector visited the property to determine whether there were marbled salamanders present. The inspector did not identify any marbled salamanders, or other species requiring further protection, during his site visit, and the Massachusetts Division of Fisheries & Wildlife subsequently redrew the overlay district to exclude the property. On July 13, 2017, NHESP provided a "final decision" letter concluding that the proposed development will not result in a "prohibited Take" of state-listed rare species. Please note that a "Take" under MESA is defined to include any unacceptable effect on a state-listed species. A copy of this letter is provided as Exhibit C to this Response Summary.

CW-2: We also have concerns with both the use of the Buckley and Mann former mill site for a staging area, and the subsequent dismantling of the foundations and culverts in the area. Although the buildings were razed by the town, this land was never previously tested by the DEP. We do not know what exists in these soils and structures, which would be disturbed and released with these

proposed construction activities. Toxic chemicals were released into landfill area and wastewater lagoons, as found by the DEP, so logic would hold that those same hazardous materials existent around and beneath ear the buildings where they were handled. The ENF makes no mention of this likelihood in discussions of this demolition and handling and disposal of the resultant solid waste. I feel that there are multiple concerns for release of carcinogens and other hazardous waste into the water supply and air.

Response: Extensive exploration of the former building foundation areas was performed in 2014. Several test pits were excavated within this area in an effort to verify that no floor drains or subsurface conduits were present within the former building footprints (none were encountered). Soil samples were collected for laboratory analysis during this effort. The results of this sampling are provided in Exhibit A to this Response Summary.

Comments received from Margaret Bedard (MB) on August 27, 2018:

MB-1: How far is the setback for the development from the contaminated soil?

Response: The closest proposed residential property line to the former AUL area is approximately 100 feet. There is no setback requirement in the MCP with regard to contaminated soil, the allowable use of land is generally determined by the findings of a human health risk assessment. Note that the proposed residential property boundary is hydrogeologically upgradient of the Buckley & Mann Site, meaning that the direction of groundwater flow is from the Buckley & Mann site away from the proposed development.

MB-2: Please explain the PIP process in detail.

Response: The best source of additional information on the PIP process is the MassDEP guidance document for the preparation of Public Involvement Plans: *Public Involvement Plan Interim Guidance for Waiver Sites*. This document is available for review at the document repositories or can be downloaded using the following link: https://www.mass.gov/files/documents/2016/08/rd/91-800.pdf.

MB-3: Please explain the clean-up process in detail.

Response: The general process for the assessment and cleanup of contaminated sites in Massachusetts is outlined in the Massachusetts Contingency Plan (MCP, 310 CMR 40.0000). A brief explanation of the process was provided during the public meetings on August 7, 2018 and September 4, 2018. The MCP provides a framework for the assessment and cleanup of sites, but the process for individual sites is dependent upon a number of factors, including but not limited to, the nature of historical site operations, the types of contaminants present, the impacted environmental media, and the extent of contamination.

MB-4: How are we protected from the contamination during the clean-up?

Response: Any cleanup actions that involve the disturbance of potentially contaminated environmental media (i.e. soil, sediment, groundwater) would be designed to include engineering controls to prevent the migration of contaminants beyond the work area. During the planning of such activities, potential mechanisms for contaminant migration and potential human exposure would be evaluated, and controls would be developed to mitigate any potential for exposure. For example, if excavation of contaminated soil were planned, the potential mechanisms for contaminant migration would include controls for both erosion and fugitive dusts. Potential routes of exposure to contaminants would be through direct contact with contaminated soil or inhalation of fugitive dusts. To mitigate these concerns and prevent exposures, soil excavation activities would be designed to prevent erosion of soils in open excavations or soil stockpiles, and would implement dust control measures to prevent the generation and off-site migration

of dust. Monitoring and testing programs would be established to verify the effectiveness of these measures.

MB-5: How do we know animals, small critters like bugs & birds, disturbances in weather can't migrate contamination to us?

Response: Animals are generally not considered to provide a viable risk of spreading contamination to humans, except if the animals are themselves impacted by contamination and are consumed/eaten by humans. With respect to potential impacts to animals from contaminants, the environmental risk characterization will address this possibility.

MB-6: Who is ultimately responsible to complete this clean-up?

Response: Buckley & Mann, the current owners of the property, are legally responsible for achieving compliance with the MCP.

MB-7: Are there records on workers at Buckley & Mann?

Response: There are no known records on former employees of Buckley & Mann.

MB-8: Who else has reported on the Buckley and Mann site besides the Mann family?

Response: To date, information on the historical operations of the facility has been provided by members of the Mann family. Additional resources including historical mapping and other literature have also been utilized in the development of our understanding of the site history. Additional interviews of others familiar with the historical operations are planned and information gathered during these interviews will be integrated into the Phase II Scope of Work.

MB-9: How did the previous clean-up lapse?

Response: The previous site cleanup did not "lapse". It was reviewed by MassDEP, as is routinely done to continually monitor the status of contaminated sites in Massachusetts, and deficiencies were identified in the level of detail provided in the 2001 risk assessment and Activity and Use Limitation (AUL). MassDEP provided Buckley & Mann with a period of 180 days to remedy the issues identified, however, the additional data collection (sampling) and analysis required to improve the 2001 site closure report to meet present-day standards was determined to require additional time. Therefore, the Permanent Solution was retracted so that the additional work could be performed.

MB-10: How do we ensure it doesn't lapse again?

Response: A Phase II Scope of Work has been developed with the objective of collecting the additional data needed to perform a risk assessment that meets present day standards and identifies cleanup requirements that will protect human health, safety, public welfare, and the environment. A cleanup plan that uses sound science and good judgement, and is consistent with the current MCP, will be undertaken to ensure the remedy selected is the final remedy for the Site.

MB-11: Where does water come from during clean-up?

Response: Typically, if a significant source of water is required to perform an environmental cleanup, a utility connection, with a one-way valve, to a public or private water supply is made. If a lesser amount of water is required to perform the cleanup, then water would be imported to the site in trucks or tanks.

MB-12: How do we watch for contamination and ensure we aren't getting additional exposure?

Response: Engineering controls employed to prevent exposure to contaminants during cleanup operations typically include monitoring of erosion controls to ensure impacted soils are not migrating

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during precipitation events; monitoring of air to ensure that dusts are not generated during soil handling; wetting of soils to prevent dust generation; and inspection/testing of soil, water, or air to verify the effectiveness of these controls.

MB-13: There are 6 contaminants above the allowed level, how many are below?

Response: In 2018, soil samples have been collected and analyzed for the presence of heavy metals, extractable petroleum hydrocarbons (EPH), and polycyclic aromatic hydrocarbons (PAH) since these are the chemicals known to have been used at the Site and are the chemicals that have been identified as risk drivers during historical site assessment activities.

The laboratory method for testing of soil and groundwater for heavy metals typically reports the 14 heavy metals for which MassDEP has published risk-based screening criteria. Five of these metals have been detected in at least one soil sample above the most stringent human health risk assessment standards published in the MCP (Method 1 S-1/GW-1 standards), the other nine have been detected below this risk assessment standard in at least one sample. It should be noted that these metals are naturally occurring and are expected to be present in the environment even in the absence of the Site or other anthropogenic sources.

The laboratory method for testing of soil and groundwater for EPH and PAH typically reports 20 different compounds, one of which has been detected above Method 1 S-1/GW-1 standards. Two petroleum hydrocarbon ranges and one additional PAH were detected in the 2018 soil samples below this risk assessment standard. The other 16 compounds were not detected above laboratory reporting limits.

MB-14: What are the dangers and exposure as these chemical mix and create new and more dangerous chemicals?

Response: The industry standard for characterizing risks associated with exposure to multiple chemicals is to evaluate cumulative site risks by adding together the potential risks posed by each chemical. Although synergism is a recognized phenomenon, the conservatism built into the risk assessment framework under the MCP is considered sufficient to account for any potential synergistic effects created by the interaction between two different chemicals.

With respect to new and more dangerous chemicals being created, the heavy metals that are present in the environment are stable and incapable of being converted into other chemicals. The petroleum hydrocarbons and PAHs present in the environment are organic contaminants that may undergo transformation or degradation due to natural physical, chemical, and biological processes, but typically this renders these contaminants less harmful, not more harmful.

MB-15: Shouldn't there be additional testing on the mixing of chemicals, what danger that poses to us and the future proposed community?

Response: As mentioned above, the risk assessment will evaluate the cumulative risks to receptors as the sum of the risks posed by each chemical.

MB-16: There are various chemicals tied to each industry, tannery, paper, felt (mercury), have all of those chemicals been tested for?

Response: Typically, the focus of environmental assessment efforts is on those chemicals that have been identified by MassDEP (or other regulatory agencies) as having characteristics that could result in cancer or non-cancer health effects. The laboratory testing methods that have been employed at the Site include a wide range of chemicals that are designed to evaluate each of the chemicals for which MassDEP has

identified a risk limit. The laboratory testing methods used for this Site include chemicals that may be present at sites with a history of textile, paper, felt, or tannery operations.

MB-17: How can any living Mann family member report on a factory that is over 150 years old?

Response: As part of the due diligence that is typical of an environmental site assessment, the project team has interviewed past owners/operators of the Site to gather information to assist with the characterization of the Site. These interviews are not the only source of information that are used to develop investigative strategies, but they play an important role in our understanding of the historical operations at the Site. Other sources of information, such as historical maps and other written records, are also reviewed to establish site history.

Comments Received from Sandy Myatt (SM) on August 27, 2018:

Phase II Scope of Work Questions:

SM-9: Please review this linked file Ecological Risk Assessment: https://www.mass.gov/files/documents/2016/08/ms/ecor511.pdf. We will have some questions at the next PIP meeting regarding the April 2018 Project Summary and the linked information from MassDEP.

Response: The content of this MassDEP presentation was discussed at the September 4, 2018 public meeting and will be addressed further in the Phase II Scope of Work.

SM-10: Can the files of the Mabbett PIP "draft reports" be made available ahead of time via email or online through file sharing (preferable 12 hours ahead) so that the Public can be better prepared?

Response: In the future, draft reports will be made available prior to the public meeting.

SM-11: When will Mabbett present the responses to each of the concerns and questions raised via the July 3 Survey Letter and during the Draft PIP Comment Period? A public meeting to present the responses and conduct a Q&A period would be helpful after each comment period. Can these Q&A sessions be scheduled as part of the "Responses to Comments"?

Response: Reponses to the concerns and questions raised by the PIP via the July 3 Survey Letter are included in Exhibit D to this Response Summary.

EXHIBIT A



Table A-1 2013 Soil Analytical Results Former Buckley and Mann Site Norfolk, Massachusetts

LOCATION			P1 TP21	P1 TP6	P1 TP13	P2 TP1	P2 TP2	P2 TP4	P3 TP1	P3 TP4	P4 TP3
SAMPLING DATE			9/4/2013	9/4/2013	9/4/2013	9/4/2013	9/4/2013	9/4/2013	9/4/2013	9/4/2013	9/4/2013
SAMPLE DEPTH (FT BGS)			0-2	0-2	0-2	2-4	4-6	0-2	2-4	0-2	0-2
MCP METHOD 1 STANDARDS	S-1/GW-1	S-1/GW-3									
Metals (mg/kg)	-										
Arsenic	20	20	14.3	NA	10.0	NA	9.76	NA	16.0	NA	10.9
Barium	1000	1000	29.0	NA	15.1	NA	28.5	NA	99.2	NA	28.2
Cadmium	70	70	1.07 U	NA	1.01 U	NA	1.11 U	NA	1.42	NA	1.24 U
Chromium	1000	1000	5.57	NA	5.07 U	NA	10.4	NA	45.5	NA	9.18
Lead	200	200	19.0	NA	5.07 U	NA	20.3	NA	221	NA	15.7
Mercury	20	20	0.0912 U	NA	0.0865 U	NA	0.0933 U	NA	0.578	NA	0.106 U
Selenium	400	400	5.35 U	NA	5.07 U	NA	5.54 U	NA	5.59 U	NA	6.20 U
Silver	100	100	5.35 U	NA	5.07 U	NA	5.54 U	NA	5.59 U	NA	6.20 U
Extractable Petroleum Hydrocarbons (mg/kg)											
C11-C22 Aromatics			26.2	16.1 U	35.4	22.6	25.4	25.1	29.3	19.5	25.4
C11-C22 Aromatics, Adjusted	1000	1000	26.2	16.1 U	31.2	21.3	25.2	22.4	26.6	19.5	25.4
C9-C18 Aliphatics	1000	1000	16.5 U	16.1 U	15.6 U	18.1 U	16.9 U	17.4 U	17.4 U	15.8 U	19.2 U
C19-C36 Aliphatics	3000	3000	16.5 U	16.1 U	28.8	18.1 U	16.9 U	33.4	17.4 U	15.8 U	19.2 U
2-Methylnaphthalene	0.7	300	0.100 U	0.100 U	0.104 U	0.120 U	0.112 U	0.127	0.116 U	0.105 U	0.128 U
Acenaphthene	4	1000	0.100 U	0.100 U	0.104 U	0.120 U	0.112 U	0.116 U	0.116 U	0.105 U	0.128 U
Acenaphthylene	1	10	0.100 U	0.100 U	0.104 U	0.120 U	0.112 U	0.116 U	0.116 U	0.105 U	0.128 U
Anthracene	1000	1000	0.100 U	0.100 U	0.248	0.211	0.112 U	0.116 U	0.116 U	0.105 U	0.128 U
Benzo(a)anthracene	7	7	0.100 U	0.100 U	0.328	0.120 U	0.112 U	0.171	0.221	0.105 U	0.128 U
Benzo(a)pyrene	2	2	0.100 U	0.100 U	0.152	0.120 U	0.112 U	0.116 U	0.116 U	0.105 U	0.128 U
Benzo(b)fluoranthene	7	7	0.100 U	0.100 U	0.288	0.178	0.112 U	0.173	0.223	0.105 U	0.128 U
Benzo(ghi)perylene	1000	1000	0.100 U	0.100 U	0.104 U	0.120 U	0.112 U	0.116 U	0.116 U	0.105 U	0.128 U
Benzo(k)fluoranthene	70	70	0.100 U	0.100 U	0.104 U	0.120 U	0.112 U	0.116 U	0.116 U	0.105 U	0.128 U
Chrysene	70	70	0.100 U	0.100 U	0.332	0.170	0.112 U	0.303	0.328	0.105 U	0.128 U
Dibenzo(a,h)anthracene	0.7	0.7	0.100 U	0.100 U	0.104 U	0.120 U	0.112 U	0.116 U	0.116 U	0.105 U	0.128 U
Fluoranthene	1000	1000	0.100 U	0.100 U	0.916	0.293	0.157	0.720	0.848	0.105 U	0.128 U
Fluorene	1000	1000	0.100 U	0.100 U	0.104 U	0.120 U	0.112 U	0.116 U	0.116 U	0.105 U	0.128 U
Indeno(1,2,3-cd)Pyrene	7	7	0.100 U	0.100 U	0.325	0.120 U	0.112 U	0.116 U	0.116 U	0.105 U	0.128 U
Naphthalene	4	500	0.100 U	0.100 U	0.104 U	0.120 U	0.112 U	0.116 U	0.116 U	0.105 U	0.128 U
Phenanthrene	10	500	0.100 U	0.100 U	0.881	0.200	0.112 U	0.731	0.544	0.105 U	0.128 U
Pyrene	1000	1000	0.100 U	0.100 U	0.576	0.165	0.112 U	0.427	0.492	0.105 U	0.128 U
Volatile Petroleum Hydrocarbons (mg/kg)											
C5-C8 Aliphatics			11.0 U	10.8 U	10.4 U	12.0 U	11.2 U		11.6 U	10.5 U	12.8 U
C5-C8 Aliphatics, Adjusted	100	100	11.0 U	10.8 U	10.4 U	12.0 U	11.2 U		11.6 U	10.5 U	12.8 U
C9-C12 Aliphatics			11.0 U	10.8 U	10.4 U	12.0 U	11.2 U		11.6 U		12.8 U
C9-C12 Aliphatics, Adjusted	1000	1000	11.0 U	10.8 U	10.4 U	12.0 U	11.2 U		11.6 U	10.5 U	12.8 U
C9-C10 Aromatics	100	100	11.0 U	10.8 U	10.4 U	12.0 U	11.2 U		11.6 U	10.5 U	12.8 U
Methyl Tert-Butyl Ether	0.1	100	0.110 U	0.108 U	0.104 U	0.120 U	0.112 U		0.116 U	0.105 U	0.128 U
Benzene	2	40	0.110 U	0.108 U	0.104 U	0.120 U	0.112 U		0.116 U	0.105 U	0.128 U
Toluene	30	500	0.110 U	0.108 U	0.104 U	0.120 U	0.112 U		0.116 U	0.105 U	0.128 U
Ethylbenzene	40	500	0.110 U	0.108 U	0.104 U	0.120 U	0.112 U		0.116 U	0.105 U	0.128 U
m,p-Xylene	400	500	0.110 U	0.108 U	0.104 U	0.120 U	0.112 U		0.116 U	0.105 U	0.128 U
o-Xylene	400	500	0.110 U	0.108 U	0.104 U	0.120 U	0.112 U		0.116 U	3.99	0.128 U
Naphthalene	4	500	0.110 U	0.108 U	0.558	0.120 U	0.112 U		0.116 U	0.105 U	0.128 U

Notes:

- 1. mg/kg = milligrams per kilogram
- 2. bold type = detected constituents
- 3. shaded cells = MCP standard exceeded
- 4. U = not detected above laboratory limits
- 5. NA = not analyzed for this constituent

Table A-2 2014 Soil Analytical Results Former Buckley and Mann Site Norfolk, Massachusetts

LOCATION			TP-1	TP-2	TP-4	TP-5	TP-10	TP-12	TP-14	TP-15	TP-17
SAMPLING DATE			8/20/2014	8/20/2014	8/20/2014	8/20/2014	8/20/2014	8/20/2014	8/20/2014	8/20/2014	8/20/2014
SAMPLE DEPTH (FT BGS)											
MCP METHOD 1 STANDARDS	S-1/GW-1	S-1/GW-3									
Metals (mg/kg)											
Antimony	20	20	5.06 U	5.73 U	5.13 U	5.28 U	5.64 U	5.04 U	5.13 U		
Arsenic	20	20	5.06 U	5.73 U	5.13 U	5.28 U	5.64 U	5.04 U	5.13 U		
Barium	1000	1000	18.4	46.1	23.1	28.5	53.4	18.9	19.8	24.8	29.6
Beryllium	90	90	1.52 U	1.72 U	1.54 U	1.59 U	1.69 U	1.51 U	1.54 U	1.53 U	1.67 U
Cadmium	70	70	1.01 U	1.15 U	1.03 U	1.06 U	5.34	1.01 U	1.03 U	1.02 U	1.11 U
Chromium	1000	1000	5.06 U	17.9	13.7	8.10	21.0	5.78	5.95	10.5	9.43
Lead	200	200	19.8	115	24.5	30.6	118	5.04 U	5.13 U	10.1	24.6
Mercury	20	20	0.16	0.0976 U	0.0902 U	0.0883 U	0.286	0.0865 U	0.0874 U	0.0883 U	0.0943 U
Nickel	600	600	5.06 U	19.5	23.3	22.7	9.33	8.87	12.4	22.2	8.62
Selenium	400	400	5.06 U	5.73 U	5.13 U	5.28 U	5.64 U	5.04 U	5.13 U	5.11 U	5.57 U
Silver	100	100	5.06 U	5.73 U	5.13 U	5.28 U	5.64 U	5.04 U	5.13 U	5.11 U	5.57 U
Thallium	8	8	1.52 U	1.72 U	1.54 U	1.59 U	1.69 U	1.51 U	1.54 U	1.53 U	1.67 U
Vanadium	400	400	6.28	11.3	13.9	9.58	16.3	6.99	6.77	10.3	13.6
Zinc	1000	1000	68.6	115	44.5	37.7	239	20.2	26.2	36.6	48.5
Extractable Petroleum Hydrocarbons (mg/kg)											
C11-C22 Aromatics, Adjusted	1000	1000	NA	NA	NA	NA	17.0 U	NA	NA	NA	NA
C11-C22 Aromatics, Unadjusted			NA	NA	NA	NA	17.0 U	NA	NA	NA	NA
C9-C18 Aliphatics	1000	1000	NA	NA	NA	NA	17.0 U	NA	NA	NA	NA
C19-C36 Aliphatics	3000	3000	NA	NA	NA	NA	21.9	NA	NA	NA	NA
2-Methylnaphthalene	0.7	300	NA	NA	NA	NA	0.114 U	NA	NA	NA	NA
Acenaphthene	4	1000	NA	NA	NA	NA	0.114 U	NA	NA	NA	NA
Acenaphthylene	1	10	NA	NA	NA	NA	0.114 U	NA	NA	NA	
Anthracene	1000	1000	NA	NA	NA	NA	0.114 U	NA	NA	NA	NA
Benzo(a)anthracene	7	7	NA	NA	NA	NA	0.216	NA	NA	NA	NA
Benzo(a)pyrene	2	2	NA	NA	NA	NA	0.114 U	NA	NA	NA	NA
Benzo(b)fluoranthene	7	7	NA	NA	NA	NA	0.190	NA	NA	NA	NA
Benzo(ghi)perylene	1000	1000	NA	NA	NA	NA	0.114 U	NA	NA	NA	NA
Benzo(k)fluoranthene	70	70	NA	NA	NA	NA	0.114 U	NA	NA	NA	NA
Chrysene	70	70	NA	NA	NA	NA	0.293	NA	NA	NA	NA
Dibenzo(a,h)anthracene	0.7	0.7	NA	NA	NA	NA	0.114 U	NA	NA	NA	NA
Fluoranthene	1000	1000	NA	NA	NA	NA	0.512	NA	NA	NA	NA
Fluorene	1000	1000	NA	NA	NA	NA	0.114 U	NA	NA	NA	NA
Indeno(1,2,3-cd)Pyrene	7	7	NA	NA	NA	NA	0.114 U	NA	NA	NA	NA
Naphthalene	4	500	NA	NA	NA	NA	0.114 U	NA	NA	NA	NA
Phenanthrene	10	500	NA	NA	NA	NA	0.519	NA	NA	NA	
Pyrene	1000	1000	NA	NA	NA	NA	0.432	NA	NA	NA	NA

Notes:

- 1. mg/kg = milligrams per kilogram
- 2. bold type = detected constituents
- 3. shaded cells = MCP standard exceeded
- 4. U = not detected above laboratory limits
- 5. NA = not analyzed for this constituent

RL Reporting Limit

Reported Date: 25-Sep-13

CLIENT:	Kurz Environmen 1309044	tal		Client Sample Tag Numl		l
Lab Order:				_		2
Project:	090413			Collection D		,
Lab ID:	1309044-001A	Date Received:	: 9/6/2013	Mat	rix: SOIL	
Analyses		Result	RL Qua	l Units	DF	Date Analyzed
EPH RANGES	S - MADEP EPH					Analyst: KG
(*	Prep Method:	(eph_Spr)	Prep D	oate: 9/9/2013	3 11:26:33 AM	
Adjusted C11	-C22 Aromatics	26.2	16.5	mg/Kg-dry	1	9/9/2013
C09-C18 Alip	hatics	ND	16.5	mg/Kg-dry	1	9/9/2013
C19-C36 Alip	hatics	ND	16.5	mg/Kg-dry	1	9/9/2013
	11-C22 Aromatics	26.2	16.5	mg/Kg-dry	1	9/9/2013
,	orooctadecane	60.2	40-140	%REC	1	9/9/2013
Surr: o-Ter		80.9	40-140	%REC	1	9/9/2013
TOTAL META	ALS BY ICP - SW6010	С				Analyst: QS
	Prep Method:	(SW3050B)	Prep D	Date: 9/10/20	13 10:29:50 AN	Л
Arsenic		14.3	5.35	mg/Kg-dry	1	9/11/2013
Barium		29.0	5.35	mg/Kg-dry	1	9/11/2013
Cadmium		ND	1.07	mg/Kg-dry	1	9/11/2013
Chromium		5.57	5.35	mg/Kg-dry	1	9/11/2013
Lead		19.0	5.35	mg/Kg-dry	1	9/11/2013
		ND	5.35	mg/Kg-dry	1	9/11/2013
Selenium		ND ND	5.35	mg/Kg-dry	1	9/11/2013
Silver		ND	3.03	mg/rtg-ury		011112010
MERCURY -	SW7471B					Analyst: EC
×	Prep Method:	(SW7471B)	Prep D	Date: 9/12/20	13 5:07:02 PM	
Mercury		ND	0.0912	mg/Kg-dry	1	9/12/2013
EPH TARGE	T ANALYTES - MADEF	PEPH				Analyst: Js
	Prep Method:	(eph_Spr)	Prep D	Date: 9/9/201	3 11:26:33 AM	
Naphthalene		ND	0.100	mg/Kg	1	9/9/2013 7:23:00 PM
2-Methylnaph	nthalene	ND	0.100	mg/Kg	1	9/9/2013 7:23:00 PM
Acenaphthen		ND	0.100	mg/Kg	1	9/9/2013 7:23:00 PM
Phenanthrene		ND	0.100	mg/Kg	1	9/9/2013 7:23:00 PM
		ND	0.100	mg/Kg	1	9/9/2013 7:23:00 PM
Acenaphthyle	SIIC .	ND ND	0.100	mg/Kg	1	9/9/2013 7:23:00 PM
Fluorene		ND ND	0.100	mg/Kg	1	9/9/2013 7:23:00 PM
Anthracene		עאו	0.100	mg/ng		5.5/2010 1.20.00 1 W
Qualifiers:	B Analyte detected in the	ne associated Method Bl	ank	BRL Below Rep		
	E Value above quantita	tion range		H Holding tin	nes for preparation	on or analysis exceeded
	J Analyte detected belo	ow quantitation limits		ND Not Detecte	ed at the Reporting	ng Limit
				C C I D		1226

Surr: 2,2-Difluorobiphenyl

Surr: 2-Fluorobiphenyl

Reported Date: 25-Sep-13

CLIENT:

Kurz Environmental

1309044

Lab Order: **Project:**

090413

Client Sample ID: P1 TP21

Tag Number:

Collection Date: 9/4/2013

Matrix SOII

Lab ID:	1309044-001A	Date Received:	: 9/6/2013		Matrix: SOIL	
Analyses		Result	RL Q	ual Units	DF	Date Analyzed
EPH TARGET	ANALYTES - MADEF	PEPH				Analyst: Jsi
	Prep Method:	(eph_Spr)	Prep	Date:	9/9/2013 11:26:33 AM	
Fluoranthene		ND	0.100	mg/Kg	1	9/9/2013 7:23:00 PM
Pyrene		ND	0.100	mg/Kg	1	9/9/2013 7:23:00 PM
Benzo(a)Anth	racene	ND	0.100	mg/Kg	1	9/9/2013 7:23:00 PM
Chrysene		ND	0.100	mg/Kg	1	9/9/2013 7:23:00 PM
Benzo(b)Fluoi	ranthene	ND	0.100	mg/Kg	1	9/9/2013 7:23:00 PM
Benzo(k)Fluor	ranthene	ND	0.100	mg/Kg	1	9/9/2013 7:23:00 PM
Benzo(a)Pyre	ene	ND	0.100	mg/Kg	1	9/9/2013 7:23:00 PM
Indeno(1,2,3-0	cd)Pyrene	ND	0.100	mg/Kg	1	9/9/2013 7:23:00 PM
Dibenz(a,h)Ar	nthracene	ND	0.100	mg/Kg	1	9/9/2013 7:23:00 PM
Benzo(g,h,i)P	erylene	ND	0.100	mg/Kg	1	9/9/2013 7:23:00 PM
Total PAH Tai	rget Concentration	ND	0.100	mg/Kg	1	9/9/2013 7:23:00 PM

40-140

40-140

%REC

%REC

87.9

56.9

Qualifiers:

В Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits J

RL Reporting Limit

BRL Below Reporting Limit

Holding times for preparation or analysis exceeded Н

9/9/2013 7:23:00 PM

9/9/2013 7:23:00 PM

ND Not Detected at the Reporting Limit

Reported Date: 25-Sep-13

CLIENT:

Kurz Environmental

1309044

Lab Order: Project: Lab ID:

090413

1309044-001B

Date Received: 9/6/2013

Client Sample ID: P1 TP21

Tag Number:

Collection Date: 9/4/2013

Matrix: SOIL

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
VPH - MADEP VPH					Analyst: ZC
Prep Method:		Prep	Date:		
Unadjusted C5-C8 Aliphatic HC	ND	11.0	mg/Kg-dry	1	9/10/2013 12:12:00 PM
Unadjusted C9-C12 Aliphatic HC	ND	11.0	mg/Kg-dry	1	9/10/2013 12:12:00 PM
Methyl Tert-Butyl Ether	ND	0.110	mg/Kg-dry	1	9/10/2013 12:12:00 PM
Benzene	ND	0.110	mg/Kg-dry	1	9/10/2013 12:12:00 PM
Toluene	ND	0.110	mg/Kg-dry	1	9/10/2013 12:12:00 PM
Ethylbenzene	ND	0.110	mg/Kg-dry	1	9/10/2013 12:12:00 PM
m,p-Xylene	ND	0.110	mg/Kg-dry	1	9/10/2013 12:12:00 PM
o-Xylene	ND	0.110	mg/Kg-dry	1	9/10/2013 12:12:00 PM
Naphthalene	ND	0.110	mg/Kg-dry	1	9/10/2013 12:12:00 PM
C9-C10 Aromatic Hydrocarbons	ND	11.0	mg/Kg-dry	1	9/10/2013 12:12:00 PM
Adjusted C5-C8 Aliphatic HC	ND	11.0	mg/Kg-dry	1	9/10/2013 12:12:00 PM
Adjusted C9-C12 Aliphatic HC	ND	11.0	mg/Kg-dry	1	9/10/2013 12:12:00 PM
Surr: 2,5-Dibromotoluene FID	88.7	70-130	%REC	1	9/10/2013 12:12:00 PM
Surr: 2,5-Dibromotoluene PID	93.4	70-130	%REC	1	9/10/2013 12:12:00 PM

Qualifiers:

Analyte detected in the associated Method Blank В

Ε Value above quantitation range

Analyte detected below quantitation limits

RL Reporting Limit

BRL Below Reporting Limit

Holding times for preparation or analysis exceeded Η

ND Not Detected at the Reporting Limit

Reported Date: 25-Sep-13

CLIENT:

Kurz Environmental

Client Sample ID: P1 TP6

Lab Order:

1309044

Tag Number:

Project:

090413

Collection Date: 9/4/2013

Lab ID:

1309044-002A

Date Received: 9/6/2013

Matrix: SOIL

Date Received	• 7/0/2013	man	iix. GOIL	
Result	RL Q	ual Units	DF	Date Analyzed
				Analyst: KG
(eph_Spr)	Prep	Date: 9/9/2013	11:26:33 AM	
ND	16.1	mg/Kg-dry	1	9/9/2013
ND	16.1	mg/Kg-dry	1	9/9/2013
ND	16.1	mg/Kg-dry	1	9/9/2013
ND	16.1	mg/Kg-dry	1	9/9/2013
72.0	40-140	%REC	1	9/9/2013
73.3	40-140	%REC	1	9/9/2013
	Result (eph_Spr) ND ND ND ND ND ND 72.0	(eph_Spr) Pres ND 16.1 ND 16.1 ND 16.1 ND 16.1 72.0 40-140	Result RL Qual Units (eph_Spr) Prep Date: 9/9/2013 ND 16.1 mg/Kg-dry ND 40.140 %REC	Result RL Qual Units DF (eph_Spr) Prep Date: 9/9/2013 11:26:33 AM ND 16.1 mg/Kg-dry 1 ND 16.1 mg/Kg-dry 1 ND 16.1 mg/Kg-dry 1 ND 16.1 mg/Kg-dry 1 72.0 40-140 %REC 1

EPH TARGET ANALYTES - MADEP EPH

Analyst: **Jsi**

Prep Method	: (eph_Spr)	Prep	Date:	9/9/2013 11:26:33 AM	
Naphthalene	ND	0.100	mg/Kg	1	9/9/2013 7:56:00 PM
2-Methylnaphthalene	ND	0.100	mg/Kg	1	9/9/2013 7:56:00 PM
Acenaphthene	ND	0.100	mg/Kg	1	9/9/2013 7:56:00 PM
Phenanthrene	ND	0.100	mg/Kg	1	9/9/2013 7:56:00 PM
Acenaphthylene	ND	0.100	mg/Kg	1	9/9/2013 7:56:00 PM
Fluorene	ND	0.100	mg/Kg	1	9/9/2013 7:56:00 PM
Anthracene	ND	0.100	mg/Kg	1	9/9/2013 7:56:00 PM
Fluoranthene	ND	0.100	mg/Kg	1	9/9/2013 7:56:00 PM
Pyrene	ND	0.100	mg/Kg	1	9/9/2013 7:56:00 PM
Benzo(a)Anthracene	ND	0.100	mg/Kg	1	9/9/2013 7:56:00 PM
Chrysene	ND	0.100	mg/Kg	1	9/9/2013 7:56:00 PM
Benzo(b)Fluoranthene	ND	0.100	mg/Kg	1	9/9/2013 7:56:00 PM
Benzo(k)Fluoranthene	ND	0.100	mg/Kg	1	9/9/2013 7:56:00 PM
Benzo(a)Pyrene	ND	0.100	mg/Kg	1	9/9/2013 7:56:00 PM
Indeno(1,2,3-cd)Pyrene	ND	0.100	mg/Kg	1	9/9/2013 7:56:00 PM
Dibenz(a,h)Anthracene	ND	0.100	mg/Kg	1	9/9/2013 7:56:00 PM
Benzo(g,h,i)Perylene	ND	0.100	mg/Kg	1	9/9/2013 7:56:00 PM
Total PAH Target Concentration	ND	0.100	mg/Kg	1	9/9/2013 7:56:00 PM
Surr: 2,2-Difluorobiphenyl	87.8	40-140	%REC	1	9/9/2013 7:56:00 PM
Surr: 2-Fluorobiphenyl	54.1	40-140	%REC	1	9/9/2013 7:56:00 PM

Qualifiers:

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits J
- RL Reporting Limit

- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Spike Recovery outside recovery limits

Reported Date: 25-Sep-13

CLIENT:

Kurz Environmental

Client Sample ID: P1 TP6

Lab Order:

1309044

Tag Number:

Project:

090413

Collection Date: 9/4/2013

Lab ID:

1309044-002B

Date Received: 9/6/2013

Matrix: SOIL

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
VPH - MADEP VPH					Analyst: ZC
Prep Method:		Prep			
Unadjusted C5-C8 Aliphatic HC	ND	10.8	mg/Kg-dry	1	9/10/2013 12:49:00 PM
Unadjusted C9-C12 Aliphatic HC	ND	10.8	mg/Kg-dry	1	9/10/2013 12:49:00 PM
Methyl Tert-Butyl Ether	ND	0.108	mg/Kg-dry	1	9/10/2013 12:49:00 PM
Benzene	ND	0.108	mg/Kg-dry	1	9/10/2013 12:49:00 PM
Toluene	ND	0.108	mg/Kg-dry	1	9/10/2013 12:49:00 PM
Ethylbenzene	ND	0.108	mg/Kg-dry	1	9/10/2013 12:49:00 PM
m,p-Xylene	ND	0.108	mg/Kg-dry	1	9/10/2013 12:49:00 PM
o-Xylene	ND	0.108	mg/Kg-dry	1	9/10/2013 12:49:00 PM
Naphthalene	ND	0.108	mg/Kg-dry	1	9/10/2013 12:49:00 PM
C9-C10 Aromatic Hydrocarbons	ND	10.8	mg/Kg-dry	1	9/10/2013 12:49:00 PM
Adjusted C5-C8 Aliphatic HC	ND	10.8	mg/Kg-dry	1	9/10/2013 12:49:00 PM
Adjusted C9-C12 Aliphatic HC	ND	10.8	mg/Kg-dry	1	9/10/2013 12:49:00 PM
Surr: 2,5-Dibromotoluene FID	92.5	70-130	%REC	1	9/10/2013 12:49:00 PM
Surr: 2,5-Dibromotoluene PID	108	70-130	%REC	1	9/10/2013 12:49:00 PM

Qualifiers:

Analyte detected in the associated Method Blank В

Е Value above quantitation range

Analyte detected below quantitation limits

RL Reporting Limit

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 25-Sep-13

							~	D 1 (ED1)	
CLIENT:		Kurz Environmen	ital		C			D: P1 TP13	3
Lab Order:		1309044				T	ag Numbe	er:	
Project:		090413				Coll	ection Da	te: 9/4/201	3
Lab ID:		1309044-003A	Date Received	l: 9/6/2013	3		Matr	ix: SOIL	
Analyses			Result	RL	Qual	Uni	ts	DF	Date Analyzed
EPH RANGE	ES - N	IADEP EPH							Analyst: KG
		Prep Method:	(eph_Spr)	F	Prep Dat	te:	9/9/2013	11:26:33 AM	
Adjusted C1	1-C22	? Aromatics	31.2	15.6		mg/k	(g-dry	1	9/11/2013
C09-C18 Ali	phatic	S	ND	15.6		mg/k	(g-dry	1	9/11/2013
C19-C36 Ali			28.8	15.6		mg/k	(g-dry	1	9/11/2013
		22 Aromatics	35.4	15.6			(g-dry	1	9/11/2013
•		ctadecane	88.3	40-140		%RE		1	9/11/2013
Surr: o-Te			94.7	40-140		%RE		1	9/11/2013
TOTAL MET	ALS	BY ICP - SW6010	C						Analyst: QS
		Prep Method:	(SW3050B)	F	Prep Dat	te:	9/10/2013	3 10:29:50 Al	п
Arsenic			10.0	5.07		mg/k	(g-dry	1	9/11/2013
Barium			15.1	5.07		mg/k	(g-dry	1	9/11/2013
Cadmium			ND	1.01		mg/k	(g-dry	1	9/11/2013
Chromium			ND	5.07		mg/k	(g-dry	1	9/11/2013
Lead			ND	5.07		mg/k	(g-dry	1	9/11/2013
Selenium			ND	5.07		mg/k	(g-dry	1	9/11/2013
Silver			ND	5.07		mg/k	(g-dry	1	9/11/2013
MERCURY -	· SW7	′471B							Analyst: EC
		Prep Method:	(SW7471B)	F	rep Da	te:	9/12/2013	3 5:07:02 PM	
Mercury			ND	0.0865		mg/ŀ	(g-dry	1	9/12/2013
EPH TARGE	ET AN	IALYTES - MADEF	PEPH						Analyst: Jsi
		Prep Method:	(eph_Spr)	F	Prep Dat	te:	9/9/2013	11:26:33 AM	_
Naphthalene			ND	0.104		ma/k	(g-dry	1	9/11/2013 2:18:00 PM
2-Methylnap		ne	ND	0.104			(g-dry (g-dry	1	9/11/2013 2:18:00 PM
Acenaphthe		ALIC .	ND	0.104			(g-dry (g-dry	1	9/11/2013 2:18:00 PM
Phenanthre			0.881	0.104		_	(g-dry (g-dry	1	9/11/2013 2:18:00 PM
Acenaphthy			ND	0.104			(g-dry (g-dry	1	9/11/2013 2:18:00 PM
	iene		ND ND	0.104			(g-dry (g-dry	1	9/11/2013 2:18:00 PM
Fluorene			0.248	0.104			(g-ary (g-dry	1	9/11/2013 2:18:00 PM
Anthracene			U.Z40	0.104		mg/r	vg-ury	1	0, 1 1/2010 Z. 10.00 1 W
Qualifiers:	В	Analyte detected in the	ne associated Method B	lank	В	RL I	Below Repor	ting Limit	
	E	Value above quantita	tion range			H I	Holding time	s for preparation	on or analysis exceeded
	J	Analyte detected belo	w quantitation limits		1	MD 1	Not Detected	at the Reporti	ng Limit
		Section of Section (Section)							244

S Spike Recovery outside recovery limits

RL Reporting Limit

Reported Date: 25-Sep-13

CLIENT:

Kurz Environmental

Client Sample ID: P1 TP13

Lab Order:

1309044

Tag Number:

Project:

090413

Collection Date: 9/4/2013

Lab ID: 1309044-003A Date Received: 9/6/2013

Matrix: SOIL

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
PH TARGET ANALYTES - MADE	P EPH				Analyst: Jsi
Prep Method:	(eph_Spr)	Prep	Date: 9/9/2013	11:26:33 AM	
Fluoranthene	0.916	0.104	mg/Kg-dry	1	9/11/2013 2:18:00 PM
Pyrene	0.576	0.104	mg/Kg-dry	1	9/11/2013 2:18:00 PM
Benzo(a)Anthracene	0.328	0.104	mg/Kg-dry	1	9/11/2013 2:18:00 PM
Chrysene	0.332	0.104	mg/Kg-dry	1	9/11/2013 2:18:00 PM
Benzo(b)Fluoranthene	0.288	0.104	mg/Kg-dry	1	9/11/2013 2:18:00 PM
Benzo(k)Fluoranthene	ND	0.104	mg/Kg-dry	1	9/11/2013 2:18:00 PM
Benzo(a)Pyrene	0.152	0.104	mg/Kg-dry	1	9/11/2013 2:18:00 PM
Indeno(1,2,3-cd)Pyrene	0.325	0.104	mg/Kg-dry	1	9/11/2013 2:18:00 PM
Dibenz(a,h)Anthracene	ND	0.104	mg/Kg-dry	1	9/11/2013 2:18:00 PM
Benzo(g,h,i)Perylene	ND	0.104	mg/Kg-dry	1	9/11/2013 2:18:00 PM
Total PAH Target Concentration	4.20	0.104	mg/Kg-dry	1	9/11/2013 2:18:00 PM
Surr: 2,2-Difluorobiphenyl	90.2	40-140	%REC	1	9/11/2013 2:18:00 PM
Surr: 2-Fluorobiphenyl	61.5	40-140	%REC	1	9/11/2013 2:18:00 PM

Qualifiers:

Analyte detected in the associated Method Blank В

Value above quantitation range E

Analyte detected below quantitation limits

RL Reporting Limit

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 25-Sep-13

CLIENT:

Kurz Environmental

Client Sample ID: P1 TP13

Lab Order:

1309044

Project:

Tag Number:

090413

Collection Date: 9/4/2013

Lab ID:

1309044-003B

Date Received: 9/6/2013

Matrix: SOIL

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
VPH - MADEP VPH					Analyst: ZC
Prep Method:		Prep	Date:		
Unadjusted C5-C8 Aliphatic HC	ND	10.4	mg/Kg-dry	1	9/10/2013 1:27:00 AM
Unadjusted C9-C12 Aliphatic HC	ND	10.4	mg/Kg-dry	1	9/10/2013 1:27:00 AM
Methyl Tert-Butyl Ether	ND	0.104	mg/Kg-dry	1	9/10/2013 1:27:00 AM
Benzene	ND	0.104	mg/Kg-dry	1	9/10/2013 1:27:00 AM
Toluene	ND	0.104	mg/Kg-dry	1	9/10/2013 1:27:00 AM
Ethylbenzene	ND	0.104	mg/Kg-dry	1	9/10/2013 1:27:00 AM
m,p-Xylene	ND	0.104	mg/Kg-dry	1	9/10/2013 1:27:00 AM
o-Xylene	ND	0.104	mg/Kg-dry	1	9/10/2013 1:27:00 AM
Naphthalene	0.558	0.104	mg/Kg-dry	1	9/10/2013 1:27:00 AM
C9-C10 Aromatic Hydrocarbons	ND	10.4	mg/Kg-dry	1	9/10/2013 1:27:00 AM
Adjusted C5-C8 Aliphatic HC	ND	10.4	mg/Kg-dry	1	9/10/2013 1:27:00 AM
Adjusted C9-C12 Aliphatic HC	ND	10.4	mg/Kg-dry	1	9/10/2013 1:27:00 AM
Surr: 2,5-Dibromotoluene FID	88.8	70-130	%REC	1	9/10/2013 1:27:00 AM
Surr: 2,5-Dibromotoluene PID	101	70-130	%REC	1	9/10/2013 1:27:00 AM

Qualifiers:

Analyte detected in the associated Method Blank В

Value above quantitation range E

Analyte detected below quantitation limits

RL Reporting Limit

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 25-Sep-13

CLIENT:

Kurz Environmental

Client Sample ID: P2 TP1 2-4'

Lab Order:

1309044

Tag Number:

Project:

Collection Date: 9/4/2013

090413

Lab ID:

Analyses

1309044-004A

Date Received: 9/6/2013

RL Qual Units

Result

Matrix: SOIL

DF

EPH	RANGES	- MADEP	EPH

Analyst: KG

Date Analyzed

Prep Method:	(eph_Spr)	Prep	Date: 9/9/2013	11:26:33	AM
Adjusted C11-C22 Aromatics	21.3	18.1	mg/Kg-dry	1	9/11/2013
C09-C18 Aliphatics	ND	18.1	mg/Kg-dry	1	9/11/2013
C19-C36 Aliphatics	ND	18.1	mg/Kg-dry	1	9/11/2013
Unadjusted C11-C22 Aromatics	22.6	18.1	mg/Kg-dry	1	9/11/2013
Surr: 1-Chlorooctadecane	67.3	40-140	%REC	1	9/11/2013
Surr: o-Terphenyl	65.7	40-140	%REC	1	9/11/2013

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method:	(eph_Spr)	Prep	Date: 9/9/2013	3 11:26:33 AM	
Naphthalene	ND	0.120	mg/Kg-dry	1	9/11/2013 2:52:00 PM
2-Methylnaphthalene	ND	0.120	mg/Kg-dry	1	9/11/2013 2:52:00 PM
Acenaphthene	ND	0.120	mg/Kg-dry	1	9/11/2013 2:52:00 PM
Phenanthrene	0.200	0.120	mg/Kg-dry	1	9/11/2013 2:52:00 PM
Acenaphthylene	ND	0.120	mg/Kg-dry	1	9/11/2013 2:52:00 PM
Fluorene	ND	0.120	mg/Kg-dry	1	9/11/2013 2:52:00 PM
Anthracene	0.211	0.120	mg/Kg-dry	1	9/11/2013 2:52:00 PM
Fluoranthene	0.293	0.120	mg/Kg-dry	1	9/11/2013 2:52:00 PM
Pyrene	0.165	0.120	mg/Kg-dry	1	9/11/2013 2:52:00 PM
Benzo(a)Anthracene	ND	0.120	mg/Kg-dry	1	9/11/2013 2:52:00 PM
Chrysene	0.170	0.120	mg/Kg-dry	1	9/11/2013 2:52:00 PM
Benzo(b)Fluoranthene	0.178	0.120	mg/Kg-dry	1	9/11/2013 2:52:00 PM
Benzo(k)Fluoranthene	ND	0.120	mg/Kg-dry	1	9/11/2013 2:52:00 PM
Benzo(a)Pyrene	ND	0.120	mg/Kg-dry	1	9/11/2013 2:52:00 PM
Indeno(1,2,3-cd)Pyrene	ND	0.120	mg/Kg-dry	1	9/11/2013 2:52:00 PM
Dibenz(a,h)Anthracene	ND	0.120	mg/Kg-dry	1	9/11/2013 2:52:00 PM
Benzo(g,h,i)Perylene	ND	0.120	mg/Kg-dry	1	9/11/2013 2:52:00 PM
Total PAH Target Concentration	1.28	0.120	mg/Kg-dry	1	9/11/2013 2:52:00 PM
Surr: 2,2-Difluorobiphenyl	90.0	40-140	%REC	1	9/11/2013 2:52:00 PM
Surr: 2-Fluorobiphenyl	57.5	40-140	%REC	1	9/11/2013 2:52:00 PM

Qualifiers:

В Analyte detected in the associated Method Blank BRL Below Reporting Limit

Value above quantitation range E

Holding times for preparation or analysis exceeded H

J Analyte detected below quantitation limits

Not Detected at the Reporting Limit ND

RL Reporting Limit

Reported Date: 25-Sep-13

CLIENT: Lab Order: Kurz Environmental

Project:

1309044

090413

Client Sample ID: P2 TP1 2-4'

Tag Number:

Collection Date: 9/4/2013

Lab ID:	1309044-004B	Date Received	Date Received: 9/6/2013		trix: SOIL	
Analyses		Result	RL Q	ual Units	DF	Date Analyzed
VPH - MADEF	P VPH					Analyst: ZC
	Prep Method:		Prep	Date:		
Unadjusted C	5-C8 Aliphatic HC	ND	12.0	mg/Kg-dry	1	9/10/2013 2:06:00 AM
Unadjusted C	9-C12 Aliphatic HC	ND	12.0	mg/Kg-dry	1	9/10/2013 2:06:00 AM
Methyl Tert-B	utyl Ether	ND	0.120	mg/Kg-dry	1	9/10/2013 2:06:00 AM
Benzene		ND	0.120	mg/Kg-dry	1	9/10/2013 2:06:00 AM
Toluene		ND	0.120	mg/Kg-dry	1	9/10/2013 2:06:00 AM
Ethylbenzene		ND	0.120	mg/Kg-dry	1	9/10/2013 2:06:00 AM
m,p-Xylene		ND	0.120	mg/Kg-dry	1	9/10/2013 2:06:00 AM
o-Xylene		ND	0.120	mg/Kg-dry	1	9/10/2013 2:06:00 AM
Naphthalene		ND	0.120	mg/Kg-dry	[.] 1	9/10/2013 2:06:00 AM
C9-C10 Arom	atic Hydrocarbons	ND	12.0	mg/Kg-dry	1	9/10/2013 2:06:00 AM
Adjusted C5-0	C8 Aliphatic HC	ND	12.0	mg/Kg-dry	1	9/10/2013 2:06:00 AM
Adjusted C9-0	C12 Aliphatic HC	ND	12.0	mg/Kg-dry	1	9/10/2013 2:06:00 AM
Surr: 2,5-Di	ibromotoluene FID	85.1	70-130	%REC	1	9/10/2013 2:06:00 AM
Surr: 2,5-Di	ibromotoluene PID	117	70-130	%REC	1	9/10/2013 2:06:00 AM

Qualifiers:

В Analyte detected in the associated Method Blank

Value above quantitation range E

Analyte detected below quantitation limits

RL Reporting Limit

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 25-Sep-13

	Kurz Environmer	ıtal		Client Sampl		4-6'
Lab Order:	1309044			Tag Nun	nber:	
Project:	090413			Collection 1	Date: 9/4/201	3
Lab ID:	1309044-005A	Date Received	: 9/6/2013	Ma	atrix: SOIL	
Analyses		Result	RL Qu	ıal Units	DF	Date Analyzed
EPH RANGES -	MADEP EPH					Analyst: K (
	Prep Method:	(eph_Spr)	Prep	Date: 9/9/20	13 11:26:33 AW	
Adjusted C11-C	22 Aromatics	25.2	16.9	mg/Kg-dry	1	9/11/2013
C09-C18 Aliphat	tics	ND	16.9	mg/Kg-dry	1	9/11/2013
C19-C36 Aliphat	tics	ND	16.9	mg/Kg-dry	1	9/11/2013
Unadjusted C11	-C22 Aromatics	25.4	16.9	mg/Kg-dry	1	9/11/2013
Surr: 1-Chloro	octadecane	65.9	40-140	%REC	1	9/11/2013
Surr: o-Terpho	enyl	74.5	40-140	%REC	1	9/11/2013
TOTAL METALS	S BY ICP - SW6010	С				Analyst: Q \$
	Prep Method:	(SW3050B)	Prep	Date: 9/10/2	013 10:29:50 Aľ	VI
Arsenic		9.76	5.54	mg/Kg-dry	1	9/11/2013
Barium		28.5	5.54	mg/Kg-dry	1	9/11/2013
Cadmium		ND	1.11	mg/Kg-dry	1	9/11/2013
Chromium		10.4	5.54	mg/Kg-dry	1	9/11/2013
Lead		20.3	5.54	mg/Kg-dry	1	9/11/2013
Selenium		ND	5.54	mg/Kg-dry	1	9/11/2013
Silver		ND	5.54	mg/Kg-dry	1	9/11/2013
WERCURY - SW	/7471B					Analyst: E 0
MERCURY - SW	/7471B Prep Method:	(SW7471B)	Prep	Date: 9/12/2	013 5:07:02 PM	
MERCURY - SW		(SW7471B)	Prep 0.0933	Date: 9/12/20 mg/Kg-dry	013 5:07:02 PM	
Mercury		ND			- Color 24000000 Metizate 8 Case	
Mercury	Prep Method:	ND	0.0933	mg/Kg-dry	- Color 24000000 Metizate 8 Case	9/12/2013 Analyst: Js
Mercury	Prep Method:	ND P EPH	0.0933	mg/Kg-dry	1	9/12/2013 Analyst: Js
Mercury EPH TARGET A	Prep Method: NALYTES - MADEF Prep Method:	ND PEPH (eph_Spr)	0.0933 Prep	mg/Kg-dry Date: 9/9/20	1 13 11:26:33 AM	9/12/2013 Analyst: Js
Mercury EPH TARGET A Naphthalene	Prep Method: NALYTES - MADEF Prep Method:	ND PEPH (eph_Spr) ND	0.0933 Prep	mg/Kg-dry Date: 9/9/20- mg/Kg-dry	1 13 11:26:33 AM	9/12/2013 Analyst: Js 9/11/2013 3:25:00 PN
Mercury EPH TARGET A Naphthalene 2-Methylnaphtha	Prep Method: NALYTES - MADEF Prep Method:	ND PEPH (eph_Spr) ND ND	0.0933 Prep 0.112 0.112	mg/Kg-dry Date: 9/9/20 mg/Kg-dry mg/Kg-dry	1 13 11:26:33 AM 1 1	9/12/2013 Analyst: Js 9/11/2013 3:25:00 Pt 9/11/2013 3:25:00 Pt
Mercury EPH TARGET A Naphthalene 2-Methylnaphtha Acenaphthene	Prep Method: NALYTES - MADEF Prep Method:	ND PEPH (eph_Spr) ND ND ND ND	0.0933 Prep 0.112 0.112 0.112	mg/Kg-dry Date: 9/9/20- mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry	1 13 11:26:33 AM 1 1 1	9/12/2013 Analyst: Js 9/11/2013 3:25:00 PN 9/11/2013 3:25:00 PN 9/11/2013 3:25:00 PN
Naphthalene 2-Methylnaphtha Acenaphthene Phenanthrene	Prep Method: NALYTES - MADEF Prep Method:	P EPH (eph_Spr) ND ND ND ND ND ND ND	0.0933 Prep 0.112 0.112 0.112 0.112	mg/Kg-dry Date: 9/9/20 mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry	1 13 11:26:33 AM 1 1 1 1	9/12/2013 Analyst: Js 9/11/2013 3:25:00 PN 9/11/2013 3:25:00 PN 9/11/2013 3:25:00 PN 9/11/2013 3:25:00 PN

ND Not Detected at the Reporting LimitS Spike Recovery outside recovery limits

J Analyte detected below quantitation limits

RL Reporting Limit

Reported Date: 25-Sep-13

CLIENT:

Kurz Environmental

Client Sample ID: P2 TP2 4-6'

Lab Order:

1309044

Tag Number:

Project:

090413

Collection Date: 9/4/2013

Lab ID:

1309044-005A

Date Received: 9/6/2013

Matrix: SOIL

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPH TARGET ANALYTES - MADER			Analyst: Jsi		
Prep Method:	(eph_Spr)	Prep	Date: 9/9/2013	11:26:33 AM	
Fluoranthene	0.157	0.112	mg/Kg-dry	1	9/11/2013 3:25:00 PM
Pyrene	ND	0.112	mg/Kg-dry	1	9/11/2013 3:25:00 PM
Benzo(a)Anthracene	ND	0.112	mg/Kg-dry	1	9/11/2013 3:25:00 PM
Chrysene	ND	0.112	mg/Kg-dry	1	9/11/2013 3:25:00 PM
Benzo(b)Fluoranthene	ND	0.112	mg/Kg-dry	1	9/11/2013 3:25:00 PM
Benzo(k)Fluoranthene	ND	0.112	mg/Kg-dry	1	9/11/2013 3:25:00 PM
Benzo(a)Pyrene	ND	0.112	mg/Kg-dry	1	9/11/2013 3:25:00 PM
Indeno(1,2,3-cd)Pyrene	ND	0.112	mg/Kg-dry	1	9/11/2013 3:25:00 PM
Dibenz(a,h)Anthracene	ND	0.112	mg/Kg-dry	1	9/11/2013 3:25:00 PM
Benzo(g,h,i)Perylene	ND	0.112	mg/Kg-dry	1	9/11/2013 3:25:00 PM
Total PAH Target Concentration	0.157	0.112	mg/Kg-dry	1	9/11/2013 3:25:00 PM
Surr: 2,2-Difluorobiphenyl	102	40-140	%REC	1	9/11/2013 3:25:00 PM
Surr: 2-Fluorobiphenyl	62.8	40-140	%REC	1	9/11/2013 3:25:00 PM

Qualifiers:

Analyte detected in the associated Method Blank В

Value above quantitation range E

Analyte detected below quantitation limits J

RL Reporting Limit

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 25-Sep-13

CLIENT:

Kurz Environmental

Client Sample ID: P2 TP2 4-6'

Lab Order:

1309044

Project:

Tag Number:

090413

Collection Date: 9/4/2013

Lab ID:

1309044-005B

Date Received: 9/6/2013

Matrix: SOIL

Analyses	Result	RL Q	ıal Units	DF	Date Analyzed
VPH - MADEP VPH					Analyst: ZC
Prep Method:	Prep Date:				
Unadjusted C5-C8 Aliphatic HC	ND	11.2	mg/Kg-dry	1	9/10/2013 2:45:00 AM
Unadjusted C9-C12 Aliphatic HC	ND	11.2	mg/Kg-dry	1	9/10/2013 2:45:00 AM
Methyl Tert-Butyl Ether	ND	0.112	mg/Kg-dry	1	9/10/2013 2:45:00 AM
Benzene	ND	0.112	mg/Kg-dry	1	9/10/2013 2:45:00 AM
Toluene	ND	0.112	mg/Kg-dry	1	9/10/2013 2:45:00 AM
Ethylbenzene	ND	0.112	mg/Kg-dry	1	9/10/2013 2:45:00 AM
m,p-Xylene	ND	0.112	mg/Kg-dry	1	9/10/2013 2:45:00 AM
o-Xylene	ND	0.112	mg/Kg-dry	1	9/10/2013 2:45:00 AM
Naphthalene	ND	0.112	mg/Kg-dry	1	9/10/2013 2:45:00 AM
C9-C10 Aromatic Hydrocarbons	ND	11.2	mg/Kg-dry	1	9/10/2013 2:45:00 AM
Adjusted C5-C8 Aliphatic HC	ND	11.2	mg/Kg-dry	1	9/10/2013 2:45:00 AM
Adjusted C9-C12 Aliphatic HC	ND	11.2	mg/Kg-dry	1	9/10/2013 2:45:00 AM
Surr: 2,5-Dibromotoluene FID	81.9	70-130	%REC	1	9/10/2013 2:45:00 AM
Surr: 2,5-Dibromotoluene PID	106	70-130	%REC	1	9/10/2013 2:45:00 AM

Qualifiers:

Analyte detected in the associated Method Blank В

Ε Value above quantitation range

Analyte detected below quantitation limits

Reporting Limit

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 25-Sep-13

CL	IE	N	\mathbf{T} .
\sim $_{\rm L}$		T.A.	1 .

Kurz Environmental

Client Sample ID: P2 TP4

Lab Order:

1309044

Tag Number:

Project:

090413

Collection Date: 9/4/2013

Lab ID:

1309044-006A

Date Received: 9/6/2013

RL Qual Units

Matrix: SOIL

DF

Analyses		

EPH RANGES - MADEP EPH

Date Analyzed

Analyst: KG

Prep Method:	(eph_Spr)	Prep	Date: 9/13/201	3 12:46:27	PM
Adjusted C11-C22 Aromatics	22.4	17.4	mg/Kg-dry	1	9/16/2013
C09-C18 Aliphatics	ND	17.4	mg/Kg-dry	1	9/16/2013
C19-C36 Aliphatics	33.4	17.4	mg/Kg-dry	1	9/16/2013
Unadjusted C11-C22 Aromatics	25.1	17.4	mg/Kg-dry	1	9/16/2013
Surr: 1-Chlorooctadecane	59.5	40-140	%REC	1	9/16/2013
Surr: o-Terphenyl	77.2	40-140	%REC	1	9/16/2013

Result

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method	: (eph_Spr)	Prep	Date: 9/13/201	3 12:46:27	PM
Naphthalene	ND	0.116	mg/Kg-dry	1	9/11/2013 3:57:00 PM
2-Methylnaphthalene	0.127	0.116	mg/Kg-dry	1	9/11/2013 3:57:00 PM
Acenaphthene	ND	0.116	mg/Kg-dry	1	9/11/2013 3:57:00 PM
Phenanthrene	0.731	0.116	mg/Kg-dry	1	9/11/2013 3:57:00 PM
Acenaphthylene	ND	0.116	mg/Kg-dry	1	9/11/2013 3:57:00 PM
Fluorene	ND	0.116	mg/Kg-dry	1	9/11/2013 3:57:00 PM
Anthracene	ND	0.116	mg/Kg-dry	1	9/11/2013 3:57:00 PM
Fluoranthene	0.720	0.116	mg/Kg-dry	1	9/11/2013 3:57:00 PM
Pyrene	0.427	0.116	mg/Kg-dry	1	9/11/2013 3:57:00 PM
Benzo(a)Anthracene	0.171	0.116	mg/Kg-dry	1	9/11/2013 3:57:00 PM
Chrysene	0.303	0.116	mg/Kg-dry	1	9/11/2013 3:57:00 PM
Benzo(b)Fluoranthene	0.173	0.116	mg/Kg-dry	1	9/11/2013 3:57:00 PM
Benzo(k)Fluoranthene	ND	0.116	mg/Kg-dry	1	9/11/2013 3:57:00 PM
Benzo(a)Pyrene	ND	0.116	mg/Kg-dry	1	9/11/2013 3:57:00 PM
Indeno(1,2,3-cd)Pyrene	ND	0.116	mg/Kg-dry	1	9/11/2013 3:57:00 PM
Dibenz(a,h)Anthracene	ND	0.116	mg/Kg-dry	1	9/11/2013 3:57:00 PM
Benzo(g,h,i)Perylene	ND	0.116	mg/Kg-dry	1	9/11/2013 3:57:00 PM
Total PAH Target Concentration	2.73	0.116	mg/Kg-dry	1	9/11/2013 3:57:00 PM
Surr: 2,2-Difluorobiphenyl	87.9	40-140	%REC	1	9/11/2013 3:57:00 PM
Surr: 2-Fluorobiphenyl	67.8	40-140	%REC	1	9/11/2013 3:57:00 PM

Qualifiers:

В Analyte detected in the associated Method Blank BRL Below Reporting Limit

E Value above quantitation range

Holding times for preparation or analysis exceeded H

J Analyte detected below quantitation limits

Not Detected at the Reporting Limit ND

RL Reporting Limit

E

RL Reporting Limit

Value above quantitation range

Analyte detected below quantitation limits

Reported Date: 25-Sep-13

	Kurz Environmen	ıtal	•	Client Sample		2-4'
Lab Order:	1309044			Tag Numb	er:	
Project:	090413			Collection Da	ate: 9/4/2013	3
Lab ID:	1309044-007A	Date Received	: 9/6/2013	Mat	rix: SOIL	
Analyses		Result	RL Qua	l Units	DF	Date Analyzed
EPH RANGES - N	IADEP EPH					Analyst: KO
	Prep Method:	(eph_Spr)	Prep D	ate: 9/9/2013	3 11:26:33 AM	
Adjusted C11-C22	Aromatics	26.6	17.4	mg/Kg-dry	1	9/11/2013
C09-C18 Aliphatic	S	ND	17.4	mg/Kg-dry	1	9/11/2013
C19-C36 Aliphatic		ND	17.4	mg/Kg-dry	1	9/11/2013
Unadjusted C11-C		29.3	17.4	mg/Kg-dry	1	9/11/2013
Surr: 1-Chlorood		52.4	40-140	%REC	1	9/11/2013
Surr: o-Terphen		51.1	40-140	%REC	1	9/11/2013
TOTAL METALS	BY ICP - SW6010	С				Analyst: Q \$
	Prep Method:	(SW3050B)	Prep D	ate: 9/10/201	3 10:29:50 AN	П
Arsenic		16.0	5.59	mg/Kg-dry	1	9/11/2013
Б :		99.2	5.59	mg/Kg-dry	1	9/11/2013
Barium						
Barium Cadmium		1.42	1.12	mg/Kg-dry	1	9/11/2013
		1.42 45.5	1.12 5.59	mg/Kg-dry mg/Kg-dry	1 1	9/11/2013 9/11/2013
Cadmium						
Cadmium Chromium		45.5	5.59	mg/Kg-dry	1	9/11/2013
Cadmium Chromium Lead		45.5 221	5.59 5.59	mg/Kg-dry mg/Kg-dry	1 1	9/11/2013 9/11/2013
Cadmium Chromium Lead Selenium Silver	471B	45.5 221 ND	5.59 5.59 5.59	mg/Kg-dry mg/Kg-dry mg/Kg-dry	1 1 1	9/11/2013 9/11/2013 9/11/2013
Cadmium Chromium Lead Selenium Silver	471B Prep Method:	45.5 221 ND	5.59 5.59 5.59	mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry	1 1 1	9/11/2013 9/11/2013 9/11/2013 9/11/2013
Cadmium Chromium Lead Selenium		45.5 221 ND ND	5.59 5.59 5.59 5.59	mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry	1 1 1 1	9/11/2013 9/11/2013 9/11/2013 9/11/2013
Cadmium Chromium Lead Selenium Silver MERCURY - SW7		45.5 221 ND ND ND (SW7471B)	5.59 5.59 5.59 5.59	mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry ate: 9/12/201	1 1 1 1 1 3 5:07:02 PM	9/11/2013 9/11/2013 9/11/2013 9/11/2013 Analyst: EC
Cadmium Chromium Lead Selenium Silver MERCURY - SW7	Prep Method:	45.5 221 ND ND ND (SW7471B)	5.59 5.59 5.59 5.59	mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry ate: 9/12/201	1 1 1 1 1 3 5:07:02 PM	9/11/2013 9/11/2013 9/11/2013 9/11/2013 Analyst: E 0
Cadmium Chromium Lead Selenium Silver MERCURY - SW7	Prep Method:	45.5 221 ND ND (SW7471B) 0.578	5.59 5.59 5.59 5.59 Prep D	mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry ate: 9/12/201	1 1 1 1 3 5:07:02 PM	9/11/2013 9/11/2013 9/11/2013 9/11/2013 Analyst: EG 9/12/2013 Analyst: Js
Cadmium Chromium Lead Selenium Silver MERCURY - SW7 Mercury	Prep Method: ALYTES - MADEF Prep Method:	45.5 221 ND ND (SW7471B) 0.578 P EPH (eph_Spr)	5.59 5.59 5.59 5.59 Prep D	mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry ate: 9/12/201 mg/Kg-dry	1 1 1 1 3 5:07:02 PM 1	9/11/2013 9/11/2013 9/11/2013 9/11/2013 Analyst: EC 9/12/2013 Analyst: Js
Cadmium Chromium Lead Selenium Silver //ERCURY - SW7 Mercury EPH TARGET AN Naphthalene 2-Methylnaphthale	Prep Method: ALYTES - MADEF Prep Method:	45.5 221 ND ND (SW7471B) 0.578 PEPH (eph_Spr)	5.59 5.59 5.59 5.59 Prep D 0.0965	mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry ate: 9/12/201 mg/Kg-dry ate: 9/9/2013	1 1 1 1 1 3 5:07:02 PM 1 3 11:26:33 AM	9/11/2013 9/11/2013 9/11/2013 9/11/2013 Analyst: E 0
Cadmium Chromium Lead Selenium Silver MERCURY - SW7 Mercury EPH TARGET AN Naphthalene	Prep Method: ALYTES - MADEF Prep Method:	45.5 221 ND ND (SW7471B) 0.578 P EPH (eph_Spr)	5.59 5.59 5.59 5.59 Prep D 0.0965	mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry ate: 9/12/201 mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry	1 1 1 1 1 3 5:07:02 PM 1 3 11:26:33 AM 1	9/11/2013 9/11/2013 9/11/2013 9/11/2013 Analyst: EG 9/12/2013 Analyst: Js 9/11/2013 4:30:00 Pf 9/11/2013 4:30:00 Pf 9/11/2013 4:30:00 Pf
Cadmium Chromium Lead Selenium Silver MERCURY - SW7 Mercury EPH TARGET AN Naphthalene 2-Methylnaphthale Acenaphthene Phenanthrene	Prep Method: ALYTES - MADEF Prep Method:	45.5 221 ND ND ND (SW7471B) 0.578 P EPH (eph_Spr) ND ND ND	5.59 5.59 5.59 5.59 Prep D 0.0965 Prep D 0.116 0.116 0.116	mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry ate: 9/12/201 mg/Kg-dry ate: 9/9/2013 mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry	1 1 1 1 1 3 5:07:02 PM 1 3 11:26:33 AM 1 1	9/11/2013 9/11/2013 9/11/2013 9/11/2013 Analyst: EG 9/12/2013 Analyst: Js 9/11/2013 4:30:00 Pf 9/11/2013 4:30:00 Pf 9/11/2013 4:30:00 Pf 9/11/2013 4:30:00 Pf
Cadmium Chromium Lead Selenium Silver MERCURY - SW7 Mercury EPH TARGET AN Naphthalene 2-Methylnaphthale Acenaphthene	Prep Method: ALYTES - MADEF Prep Method:	45.5 221 ND ND (SW7471B) 0.578 P EPH (eph_Spr) ND ND ND	5.59 5.59 5.59 5.59 0.0965 Prep D 0.116 0.116 0.116 0.116	mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry ate: 9/12/201 mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry mg/Kg-dry	1 1 1 1 3 5:07:02 PM 1 3 11:26:33 AM 1 1 1	9/11/2013 9/11/2013 9/11/2013 9/11/2013 Analyst: EC 9/12/2013 Analyst: Js 9/11/2013 4:30:00 Pf 9/11/2013 4:30:00 Pf

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 25-Sep-13

CLIENT:

Kurz Environmental

Client Sample ID: P3 TP1 2-4'

Lab Order:

1309044

Tag Number:

Project:

090413

Collection Date: 9/4/2013

Lab ID:

1309044-007A

Date Received: 9/6/2013

Matrix: SOIL

Analyses Result RL Qual Units DF Date Analyzed **EPH TARGET ANALYTES - MADEP EPH** Analyst: Jsi

Prep Method	d: (eph_Spr)	Prep	Date: 9/9/2013	11:26:33 AN	Л
Fluoranthene	0.848	0.116	mg/Kg-dry	1	9/11/2013 4:30:00 PM
Pyrene	0.492	0.116	mg/Kg-dry	1	9/11/2013 4:30:00 PM
Benzo(a)Anthracene	0.221	0.116	mg/Kg-dry	1	9/11/2013 4:30:00 PM
Chrysene	0.328	0.116	mg/Kg-dry	1	9/11/2013 4:30:00 PM
Benzo(b)Fluoranthene	0.223	0.116	mg/Kg-dry	1	9/11/2013 4:30:00 PM
Benzo(k)Fluoranthene	ND	0.116	mg/Kg-dry	1	9/11/2013 4:30:00 PM
Benzo(a)Pyrene	ND	0.116	mg/Kg-dry	1	9/11/2013 4:30:00 PM
Indeno(1,2,3-cd)Pyrene	ND	0.116	mg/Kg-dry	1	9/11/2013 4:30:00 PM
Dibenz(a,h)Anthracene	ND	0.116	mg/Kg-dry	1	9/11/2013 4:30:00 PM
Benzo(g,h,i)Perylene	ND	0.116	mg/Kg-dry	1	9/11/2013 4:30:00 PM
Total PAH Target Concentration	2.72	0.116	mg/Kg-dry	1	9/11/2013 4:30:00 PM
Surr: 2,2-Difluorobiphenyl	85.1	40-140	%REC	1	9/11/2013 4:30:00 PM
Surr: 2-Fluorobiphenyl	59.0	40-140	%REC	1	9/11/2013 4:30:00 PM

Qualifiers:

Analyte detected in the associated Method Blank

BRL Below Reporting Limit

E Value above quantitation range Η Holding times for preparation or analysis exceeded

J Analyte detected below quantitation limits ND Not Detected at the Reporting Limit

RL Reporting Limit

Reported Date: 25-Sep-13

CLIENT:

Kurz Environmental

Client Sample ID: P3 TP1 2-4'

Lab Order:

1309044

Tag Number:

Project:

090413

Collection Date: 9/4/2013

Lab ID:

1309044-007B

Date Received: 9/6/2013

Matrix: SOIL

Analyses	Result	RL Q	DF	Date Analyzed		
VPH - MADEP VPH	·				Analyst: ZC	
Prep Method:		Prep				
Unadjusted C5-C8 Aliphatic HC	ND	11.6	mg/Kg-dry	1	9/10/2013 3:25:00 AM	
Unadjusted C9-C12 Aliphatic HC	ND	11.6	mg/Kg-dry	1	9/10/2013 3:25:00 AM	
Methyl Tert-Butyl Ether	ND	0.116	mg/Kg-dry	1	9/10/2013 3:25:00 AM	
Benzene	ND	0.116	mg/Kg-dry	1	9/10/2013 3:25:00 AM	
Toluene	ND	0.116	mg/Kg-dry	1	9/10/2013 3:25:00 AM	
Ethylbenzene	ND	0.116	mg/Kg-dry	1	9/10/2013 3:25:00 AM	
m,p-Xylene	ND	0.116	mg/Kg-dry	1	9/10/2013 3:25:00 AM	
o-Xylene	ND	0.116	mg/Kg-dry	1	9/10/2013 3:25:00 AM	
Naphthalene	ND	0.116	mg/Kg-dry	1	9/10/2013 3:25:00 AM	
C9-C10 Aromatic Hydrocarbons	ND	11.6	mg/Kg-dry	1	9/10/2013 3:25:00 AM	
Adjusted C5-C8 Aliphatic HC	ND	11.6	mg/Kg-dry	1	9/10/2013 3:25:00 AM	
Adjusted C9-C12 Aliphatic HC	ND	11.6	mg/Kg-dry	1	9/10/2013 3:25:00 AM	
Surr: 2,5-Dibromotoluene FID	86.8	70-130	%REC	1	9/10/2013 3:25:00 AM	
Surr: 2,5-Dibromotoluene PID	94.7	70-130	%REC	1	9/10/2013 3:25:00 AM	

Qualifiers:

Analyte detected in the associated Method Blank В

Value above quantitation range

Analyte detected below quantitation limits

RL Reporting Limit

BRL Below Reporting Limit

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 25-Sep-13

CLIENT:

Kurz Environmental

Client Sample ID: P3 TP4

Lab Order:

1309044

Tag Number:

Project:

090413

Collection Date: 9/4/2013

Lab ID:

1309044-008A

Date Received: 9/6/2013

Matrix: SOIL

Analyses	Result	RL Q	ual Units	DF	Date Analyzed		
EPH RANGES - MADEP EPH					Analyst: KG		
Prep Method:	(eph_Spr)	Prep	Date: 9/9/2013	11:26:33 AM			
Adjusted C11-C22 Aromatics	19.5	15.8	mg/Kg-dry	1	9/11/2013		
C09-C18 Aliphatics	ND	15.8	mg/Kg-dry	1	9/11/2013		
C19-C36 Aliphatics	ND	15.8	mg/Kg-dry	1	9/11/2013		
Unadjusted C11-C22 Aromatics	19.5	15.8	mg/Kg-dry	1	9/11/2013		
Surr: 1-Chlorooctadecane	79.9	40-140	%REC	1	9/11/2013		
Surr: o-Terphenyl	78.0	40-140	%REC	1	9/11/2013		

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method:	(eph_Spr)	Prep	Date: 9/9/2013	3 11:26:33 AN	Ī
Naphthalene	ND	0.105	mg/Kg-dry	1	9/11/2013 5:03:00 PM
2-Methylnaphthalene	ND	0.105	mg/Kg-dry	1	9/11/2013 5:03:00 PM
Acenaphthene	ND	0.105	mg/Kg-dry	1	9/11/2013 5:03:00 PM
Phenanthrene	ND	0.105	mg/Kg-dry	1	9/11/2013 5:03:00 PM
Acenaphthylene	ND	0.105	mg/Kg-dry	1	9/11/2013 5:03:00 PM
Fluorene	ND	0.105	mg/Kg-dry	1	9/11/2013 5:03:00 PM
Anthracene	ND	0.105	mg/Kg-dry	1	9/11/2013 5:03:00 PM
Fluoranthene	ND	0.105	mg/Kg-dry	1	9/11/2013 5:03:00 PM
Pyrene	ND	0.105	mg/Kg-dry	1	9/11/2013 5:03:00 PM
Benzo(a)Anthracene	ND	0.105	mg/Kg-dry	1	9/11/2013 5:03:00 PM
Chrysene	ND	0.105	mg/Kg-dry	1	9/11/2013 5:03:00 PM
Benzo(b)Fluoranthene	ND	0.105	mg/Kg-dry	1	9/11/2013 5:03:00 PM
Benzo(k)Fluoranthene	ND	0.105	mg/Kg-dry	1	9/11/2013 5:03:00 PM
Benzo(a)Pyrene	ND	0.105	mg/Kg-dry	1	9/11/2013 5:03:00 PM
Indeno(1,2,3-cd)Pyrene	ND	0.105	mg/Kg-dry	1	9/11/2013 5:03:00 PM
Dibenz(a,h)Anthracene	ND	0.105	mg/Kg-dry	1	9/11/2013 5:03:00 PM
Benzo(g,h,i)Perylene	ND	0.105	mg/Kg-dry	1	9/11/2013 5:03:00 PM
Total PAH Target Concentration	ND	0.105	mg/Kg-dry	1	9/11/2013 5:03:00 PM
Surr: 2,2-Difluorobiphenyl	102	40-140	%REC	1	9/11/2013 5:03:00 PM
Surr: 2-Fluorobiphenyl	64.0	40-140	%REC	1	9/11/2013 5:03:00 PM

Qualifiers:

B Analyte detected in the associated Method Blank

BRL Below Reporting Limit

E Value above quantitation range

H Holding times for preparation or analysis exceeded

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

RL Reporting Limit

Reported Date: 25-Sep-13

CLIENT: Lab Order: Kurz Environmental

1309044

Client Sample ID: P3 TP4

Tag Number:

Project:

090413

Collection Date: 9/4/2013

Lab ID:

1309044-008B

Date Received: 9/6/2013

Matrix: SOIL

Analyses	Result	Result RL Qual Units			Date Analyzed		
VPH - MADEP VPH					Analyst: ZC		
Prep Method:		Prep					
Unadjusted C5-C8 Aliphatic HC	ND	10.5	mg/Kg-dry	1	9/10/2013 4:27:00 AM		
Unadjusted C9-C12 Aliphatic HC	ND	10.5	mg/Kg-dry	1	9/10/2013 4:27:00 AM		
Methyl Tert-Butyl Ether	ND	0.105	mg/Kg-dry	1	9/10/2013 4:27:00 AM		
Benzene	ND	0.105	mg/Kg-dry	1	9/10/2013 4:27:00 AM		
Toluene	ND	0.105	mg/Kg-dry	1	9/10/2013 4:27:00 AM		
Ethylbenzene	ND	0.105	mg/Kg-dry	1	9/10/2013 4:27:00 AM		
m,p-Xylene	ND	0.105	mg/Kg-dry	1	9/10/2013 4:27:00 AM		
o-Xylene	3.99	0.105	mg/Kg-dry	1	9/10/2013 4:27:00 AM		
Naphthalene	ND	0.105	mg/Kg-dry	1	9/10/2013 4:27:00 AM		
C9-C10 Aromatic Hydrocarbons	ND	10.5	mg/Kg-dry	1	9/10/2013 4:27:00 AM		
Adjusted C5-C8 Aliphatic HC	ND	10.5	mg/Kg-dry	1	9/10/2013 4:27:00 AM		
Adjusted C9-C12 Aliphatic HC	ND	10.5	mg/Kg-dry	1	9/10/2013 4:27:00 AM		
Surr: 2,5-Dibromotoluene FID	87.4	70-130	%REC	1	9/10/2013 4:27:00 AM		
Surr: 2,5-Dibromotoluene PID	101	70-130	%REC	1	9/10/2013 4:27:00 AM		

Qualifiers:

Analyte detected in the associated Method Blank В

E Value above quantitation range

Analyte detected below quantitation limits

Reporting Limit RL

BRL Below Reporting Limit

Holding times for preparation or analysis exceeded Η

ND Not Detected at the Reporting Limit

Reported Date: 25-Sep-13

CLIENT:	Kurz Environmer	ntal	(Client Sample	ID: P4 TP3	
Lab Order:	1309044			Tag Numl	ber:	
Project:	090413			Collection D	ate: 9/4/201	3
Lab ID:	1309044-009A	Date Received:	9/6/2013	Mat	rix: SOIL	
Analyses		Result	RL Qual	Units	DF	Date Analyzed
EPH RANGES - M	IADEP EPH					Analyst: KG
	Prep Method:	(eph_Spr)	Prep Da	nte: 9/9/2013	3 11:26:33 AM	
Adjusted C11-C22	Aromatics	25.4	19.2	mg/Kg-dry	1	9/11/2013
C09-C18 Aliphatics	3	ND	19.2	mg/Kg-dry	1	9/11/2013
C19-C36 Aliphatics	3	ND	19.2	mg/Kg-dry	1	9/11/2013
Unadjusted C11-C	22 Aromatics	25.4	19.2	mg/Kg-dry	1	9/11/2013
Surr: 1-Chlorooc	tadecane	81.8	40-140	%REC	1	9/11/2013
Surr: o-Terpheny	yl	70.2	40-140	%REC	1	9/11/2013
TOTAL METALS E	BY ICP - SW6010	С				Analyst: QS
	Prep Method:	(SW3050B)	Prep Da	ite: 9/10/201	13 10:29:50 Aľ	VI
Arsenic		10.9	6.20	mg/Kg-dry	1	9/11/2013
Barium		28.2	6.20	20 mg/Kg-dry		9/11/2013
Cadmium		ND	1.24	mg/Kg-dry	1	9/11/2013
Chromium		9.18	6.20	mg/Kg-dry	1	9/11/2013
Lead		15.7	6.20	mg/Kg-dry	1	9/11/2013
Selenium		ND	6.20	mg/Kg-dry		9/11/2013
Silver		ND	6.20	mg/Kg-dry	1	9/11/2013
MERCURY - SW74	471B					Analyst: EC
	Prep Method:	(SW7471B)	Prep Da	ite: 9/12/201	13 5:07:02 PM	
Mercury		ND	0.106	mg/Kg-dry	1	9/12/2013
EPH TARGET AN	ALVIES MADES	EDU				Analyst: Ini
EPH TARGET AN						Analyst: Jsi
	Prep Method:	(eph_Spr)	Prep Da	te: 9/9/2013	3 11:26:33 AM	
Naphthalene		ND	0.128	mg/Kg-dry 1		9/11/2013 5:35:00 PM
2-Methylnaphthaler	ne	ND	0.128	mg/Kg-dry	1	9/11/2013 5:35:00 PM
Acenaphthene		ND	0.128	mg/Kg-dry	1	9/11/2013 5:35:00 PM
Phenanthrene		ND	0.128	mg/Kg-dry	1	9/11/2013 5:35:00 PM
A		ND	0.400		a a	0/44/0040 5:05:00 DM

Qualifiers:

Fluorene

Anthracene

Acenaphthylene

B Analyte detected in the associated Method Blank

ND

ND

ND

- E Value above quantitation range
- J Analyte detected below quantitation limits
- RL Reporting Limit

BRL Below Reporting Limit

mg/Kg-dry

mg/Kg-dry

mg/Kg-dry

H Holding times for preparation or analysis exceeded

9/11/2013 5:35:00 PM

9/11/2013 5:35:00 PM

9/11/2013 5:35:00 PM

1

1

1

- ND Not Detected at the Reporting Limit
- S Spike Recovery outside recovery limits

0.128

0.128

0.128

Reported Date: 25-Sep-13

CLIENT:

Kurz Environmental

Lab Order: Project:

1309044

1309044-009A

090413

Date Received: 9/6/2013

Client Sample ID: P4 TP3

Tag Number:

Collection Date: 9/4/2013

Analyses Result	RL Qı	ual Units	DF	Date Analyzed
				Z det Talling Zee
EPH TARGET ANALYTES - MADEP EPH				Analyst: Jsi
Prep Method: (eph_Spr)	Prep	Date: 9/9/2013	11:26:33 AM	
Fluoranthene ND	0.128	mg/Kg-dry	1	9/11/2013 5:35:00 PM
Pyrene ND	0.128	mg/Kg-dry	1	9/11/2013 5:35:00 PM
Benzo(a)Anthracene ND	0.128	mg/Kg-dry	1	9/11/2013 5:35:00 PM
Chrysene ND	0.128	mg/Kg-dry	1	9/11/2013 5:35:00 PM
Benzo(b)Fluoranthene ND	0.128	mg/Kg-dry	1	9/11/2013 5:35:00 PM
Benzo(k)Fluoranthene ND	0.128	mg/Kg-dry	1	9/11/2013 5:35:00 PM
Benzo(a)Pyrene ND	0.128	mg/Kg-dry	1	9/11/2013 5:35:00 PM
Indeno(1,2,3-cd)Pyrene ND	0.128	mg/Kg-dry	1	9/11/2013 5:35:00 PM
Dibenz(a,h)Anthracene ND	0.128	mg/Kg-dry	1	9/11/2013 5:35:00 PM
Benzo(g,h,i)Perylene ND	0.128	mg/Kg-dry	1	9/11/2013 5:35:00 PM
Total PAH Target Concentration ND	0.128	mg/Kg-dry	1	9/11/2013 5:35:00 PM
Surr: 2,2-Difluorobiphenyl 102	40-140	%REC	1	9/11/2013 5:35:00 PM
Surr: 2-Fluorobiphenyl 61.3	40-140	%REC	1	9/11/2013 5:35:00 PM

Qualifiers:

Analyte detected in the associated Method Blank В

Value above quantitation range Ε

Analyte detected below quantitation limits

RL Reporting Limit

BRL Below Reporting Limit

Holding times for preparation or analysis exceeded Η

ND Not Detected at the Reporting Limit

Reported Date: 25-Sep-13

CLIENT:

Kurz Environmental

Lab Order:

090413

Project: Lab ID: 1309044-009B

1309044

Date Received: 9/6/2013

Client Sample ID: P4 TP3

Tag Number:

Collection Date: 9/4/2013

Matrix: SOIL

Analyses	Result	RL Q	DF	Date Analyzed		
/PH - MADEP VPH					Analyst: ZC	
Prep Method:		Prep				
Unadjusted C5-C8 Aliphatic HC	ND	12.8	mg/Kg-dry	1	9/10/2013 5:04:00 AM	
Unadjusted C9-C12 Aliphatic HC	ND	12.8	mg/Kg-dry	1	9/10/2013 5:04:00 AM	
Methyl Tert-Butyl Ether	ND	0.128	mg/Kg-dry	1	9/10/2013 5:04:00 AM	
Benzene	ND	0.128	mg/Kg-dry	1	9/10/2013 5:04:00 AM	
Toluene	ND	0.128	mg/Kg-dry	1	9/10/2013 5:04:00 AM	
Ethylbenzene	ND	0.128	mg/Kg-dry	1	9/10/2013 5:04:00 AM	
m,p-Xylene	ND	0.128	mg/Kg-dry	1	9/10/2013 5:04:00 AM	
o-Xylene	ND	0.128	mg/Kg-dry	1	9/10/2013 5:04:00 AM	
Naphthalene	ND	0.128	mg/Kg-dry	1	9/10/2013 5:04:00 AM	
C9-C10 Aromatic Hydrocarbons	ND	12.8	mg/Kg-dry	1	9/10/2013 5:04:00 AM	
Adjusted C5-C8 Aliphatic HC	ND	12.8	mg/Kg-dry	1	9/10/2013 5:04:00 AM	
Adjusted C9-C12 Aliphatic HC	ND	12.8	mg/Kg-dry	1	9/10/2013 5:04:00 AM	
Surr: 2,5-Dibromotoluene FID	84.4	70-130	%REC	1	9/10/2013 5:04:00 AM	
Surr: 2,5-Dibromotoluene PID	122	70-130	%REC	1	9/10/2013 5:04:00 AM	

Qualifiers:

В Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

BRL Below Reporting Limit

Holding times for preparation or analysis exceeded H

ND Not Detected at the Reporting Limit

ANALYTICAL QC SUMMARY REPORT

Work Order:

1309044

Kurz Environmental

Project:

CLIENT:

090413

TestCode: 6010C_S

Date: 26-Sep-13

Sample ID:	MBLK-229	10 San	прТуре: МВLК	TestCod	de: 6010C_S	Units: mg/Kg		Prep Date	e: 9/10/2	013	RunNo: 51 8	 356	
Client ID:	ZZZZZ	Ва	atch ID: 22910	TestN	lo: SW6010C	(SW3050B)		Analysis Date: 9/11/2013			SeqNo: 584	1977	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Arsenic			ND	5.00							,	,	
Barium			ND	5.00									
Cadmium			ND	1.00									
Chromium			ND	5.00									
Lead			ND	5.00									
Selenium			ND	5.00									
Silver			ND	5.00								·	<u>-</u>
Sample ID:	: LCS-22910) San	npType: LCS	TestCod	de: 6010C_S	Units: mg/Kg		Prep Dat	e: 9/10/2	013	RunNo: 518	356	
Client ID:	ZZZZZ	Ва	atch ID: 22910	TestN	lo: SW6010C	(SW3050B)		Analysis Dat	e: 9/11/2	013	SeqNo: 584	1975	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Arsenic			122.1	5.00	133.3	0	91.6	80	120				
Barium			65.80	5.00	66.67	0	98.7	80	120				
Cadmium			118.5	1.00	133.3	0	88.9	80	120				
Chromium			119.1	5.00	133.3	0	89.4	80	120				
Lead			120.2	5.00	133.3	0	90.2	80	120				
Selenium			119.3	5.00	133.3	0	89.5	80	120				
Silver			31.20	5.00	33.33	0	93.6	80	120				
Sample ID:	: LCSD-229	10 San	npType: LCSD	TestCo	de: 6010C_S	Units: mg/Kg	Prep Date: 9/10/2013			013	RunNo: 51856		
Client ID:	ZZZZZ	В	atch ID: 22910	Test	No: SW6010C	(SW3050B)		Analysis Dat	e: 9/11/2	013	SeqNo: 584	4976	
Analyte			Result	PQL.	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Arsenic			121.4	5.00	133.3	0	91.1	80	120	122.1	0.548	30	
Barium			65.47	5.00	66.67	0	98.2	80	120	65.8	0.508	30	
Qualifiers:	BRL B	elow Reporting Li	mit			above quantitation ran				Holding times for		nalysis exceed	led
		•	low quantitation limits			etected at the Reportin			R	RPD outside reco	very limits		
	RL R	eporting Limit			S Spike	Recovery outside reco	very limits						

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

Kurz Environmental

Work Order:

1309044

Project:

090413

TestCode: 6010C_S

Sample ID: LCSD-22910 Client ID: ZZZZZ	SampType: LCSD Batch ID: 22910	TestCode: 6010C_S TestNo: SW6010C		Units: mg/Kg (SW3050B)	Prep Date: 9/10/2013 Analysis Date: 9/11/2013				RunNo: 518 SeqNo: 584		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	118.5	1.00	133.3	0	88.9	80	120	118.5	0.0563	30	
Chromium	117.9	5.00	133.3	0	88.5	80	120	119.1	1.01	30	
Lead	120.3	5.00	133.3	0	90.3	80	120	120.2	0.111	30	
Selenium	120.8	5.00	133.3	0	90.6	80	120	119.3	1.22	30	
Silver	31.27	5.00	33.33	0	93.8	80	120	31.2	0.213	30	

Qualifiers: BRL Below Reporting Limit

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

R RPD outside recovery limits

GeoLabs, Inc.

Kurz Environmental

Work Order:

1309044

Project:

090413

TestCode: EPHP_S

Sample ID: MB-22902	SampType: MBLK	TestCode: EPHP_S	Units: mg/Kg		Prep Date:		RunNo: 51808	
Client ID: ZZZZZ	Batch ID: 22902	TestNo: MADEP E	PH_ (eph_Spr)		Analysis Date:	9/9/2013	SeqNo: 584744	
Analyte	Result	PQL SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit RPD Ref Val	%RPD RPDLimit	Qual
Naphthalene	ND	0.100						
2-Methylnaphthalene	0.05600	0.100						J
Acenaphthene	ND	0.100						
Phenanthrene	ND	0.100						
Acenaphthylene	ND	0.100						
Fluorene	ND	0.100						
Anthracene	ND	0.100						
Fluoranthene	ND	0.100						
Pyrene	ND	0.100						
Benzo(a)Anthracene	ND	0.100						
Chrysene	ND	0.100						
Benzo(b)Fluoranthene	ND	0.100						
Benzo(k)Fluoranthene	ND	0.100						
Benzo(a)Pyrene	ND	0.100						
Indeno(1,2,3-cd)Pyrene	ND	0.100						
Dibenz(a,h)Anthracene	ND	0.100						
Benzo(g,h,i)Perylene	ND	0.100						
Total PAH Target Concentration	0.05600	0.100						J
Surr: 2,2-Difluorobiphenyl	2.325	0 2.5	0	93.0	40	140		
Surr: 2-Fluorobiphenyl	1.603	0 2.5	0	64.1	40	140		
Sample ID: mb-22902	SampType: MBLK	TestCode: EPHP_S	Units: mg/Kg		Prep Date:	9/9/2013	RunNo: 51828	
Client ID: ZZZZZ	Batch ID: 22902	TestNo: MADEP I	EPH_ (eph_Spr)		Analysis Date:	9/11/2013	SeqNo: 585173	
Analyte	Result	PQL SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Naphthalene	ND	0.100						
2-Methylnaphthalene	ND	0.100						
Qualifiers: BRL Below Report	ing Limit	E Valu	e above quantitation ran	ge	***************************************	H Holding times for	preparation or analysis exceed	ed
	ted below quantitation limits		Detected at the Reporting					
RL Reporting Lin			Recovery outside recov	_			•	

Kurz Environmental

Work Order:

1309044

Project:

090413

TestCode: EPHP_S

Sample ID: mb-22902	SampType: MBLK	TestCod	e: EPHP_S	Units: mg/Kg		Prep Dat	te: ^{9/9/201}	13	RunNo: 518	328	
Client ID: ZZZZZ	Batch ID: 22902	TestN	o: MADEP EF	PH_ (eph_Spr)		Analysis Dat	te: 9/11/2 0)13	SeqNo: 585	5173	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	ND	0.100									
Phenanthrene	ND	0.100									
Acenaphthylene	ND	0.100									
Fluorene	ND	0.100									
Anthracene	ND	0.100									
Fluoranthene	ND	0.100									
Pyrene	ND	0.100									
Benzo(a)Anthracene	ND	0.100									
Chrysene	ND	0.100									
Benzo(b)Fluoranthene	ND	0.100									
Benzo(k)Fluoranthene	ND	0.100									
Benzo(a)Pyrene	ND	0.100									
Indeno(1,2,3-cd)Pyrene	ND	0.100									
Dibenz(a,h)Anthracene	ND	0.100									
Benzo(g,h,i)Perylene	ND	0.100		•							
Total PAH Target Concentration	ND	0.100									
Surr: 2,2-Difluorobiphenyl	2.487	0	2.5	0	99.5	40	140				
Surr: 2-Fluorobiphenyl	1.615	0	2.5	0	64.6	40	140				
Sample ID: mb-22938	SampType: MBLK	TestCod	e: EPHP_S	Units: mg/Kg		Prep Dat	te: 9/13/2 0)13	RunNo: 519	900	
Client ID: ZZZZZ	Batch ID: 22938	TestN	o: MADEP EI	PH_ (eph_Spr)		Analysis Dat	te: 9/16/2 0)13	SeqNo: 586	8057	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	0.100									
2-Methylnaphthalene	0.06400	0.100									J
Acenaphthene	ND	0.100									
Phenanthrene	ND	0.100									
Qualifiers: BRL Below Report	ting Limit		E Value	above quantitation rang	ıe.		Н	Holding times for	preparation or a	nalysis exceed	led
	eted below quantitation limits			etected at the Reporting				RPD outside recov			
RL Reporting Lir				Recovery outside recov					<i>y</i>		

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Kurz Environmental

Work Order:

1309044

Project:

090413

TestCode: EPHP_S

Sample ID: mb-22938 Client ID: ZZZZZ	SampType: MBLK Batch ID: 22938		le: EPHP_S lo: MADEP E	Units: mg/Kg PH_ (eph_Spr)		•	e: 9/13/2013 e: 9/16/2013	RunNo: 51900 SeqNo: 586057	
Analyte	Result	PQL		SPK Ref Val	%REC	•	HighLimit RPD Ref Val	%RPD RPDLimi	t Qual
Acenaphthylene	ND	0.100							
Fluorene	ND	0.100							
Anthracene	ND	0.100							
Fluoranthene	ND	0.100							
Pyrene	ND	0.100							
Benzo(a)Anthracene	ND	0.100							
Chrysene	ND	0.100							
Benzo(b)Fluoranthene	ND	0.100							
Benzo(k)Fluoranthene	ND	0.100							
Benzo(a)Pyrene	ND	0.100							
Indeno(1,2,3-cd)Pyrene	ND	0.100							
Dibenz(a,h)Anthracene	ND	0.100							
Benzo(g,h,i)Perylene	ND	0.100							
Total PAH Target Concentration	0.06400	0.100							J
Surr: 2,2-Difluorobiphenyl	2.459	0	2.5	0	98.4	40	140		
Surr: 2-Fluorobiphenyl	1.744	0	2.5	0	69.8	40	140		
Sample ID: Ics-22902	SampType: LCS	TestCod	de: EPHP_S	Units: mg/Kg		Prep Dat	e: 9/9/2013	RunNo: 51808	
Client ID: ZZZZZ	Batch ID: 22902	TestN	lo: MADEP E	PH_ (eph_Spr)		Analysis Dat	e: 9/9/2013	SeqNo: 584745	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	%RPD RPDLimi	t Qual
Naphthalene	3.399	0.100	5	0	68.0	40	140		
2-Methylnaphthalene	3.974	0.100	5	0	79.5	40	140		
Acenaphthene	3.761	0.100	5	0	75.2	40	140		
Phenanthrene	4.278	0.100	5	0	85.6	40	140		
Acenaphthylene	3.419	0.100	5	0	68.4	40	140		
Fluorene	4.411	0.100	5	0	88.2	40	140		
Qualifiers: BRL Below Repo	orting Limit		E Value	above quantitation rang	e		H Holding times fo	r preparation or analysis exce	eded
	ected below quantitation limits			etected at the Reporting			R RPD outside reco		
RL Reporting I				Recovery outside recov			10 22 000000 1000		

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Kurz Environmental

Work Order:

1309044

Project:

090413

TestCode: EPHP_S

Sample ID: Ics-22902	SampType: LCS		le: EPHP_S	Units: mg/Kg		•	te: 9/9/201		RunNo: 518		
Client ID: ZZZZZ	Batch ID: 22902	TestN	Io: MADEP EF	PH_ (eph_Spr)		Analysis Dat	te: 9/9/201	3	SeqNo: 584	1745	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Anthracene	4.148	0.100	5	0	83.0	40	140				
Fluoranthene	4.814	0.100	5	0	96.3	40	140				
Pyrene	3.748	0.100	5	0	75.0	40	140				
Benzo(a)Anthracene	4.403	0.100	5	0	88.1	40	140				
Chrysene	4.616	0.100	5	0	92.3	40	140				
Benzo(b)Fluoranthene	3.303	0.100	5	0	66.1	40	140				
Benzo(k)Fluoranthene	3.513	0.100	5	. 0	70.3	40	140				
Benzo(a)Pyrene	3.140	0.100	5	0	62.8	40	140				
Indeno(1,2,3-cd)Pyrene	3.587	0.100	5	0	71.7	40	140				
Dibenz(a,h)Anthracene	3.623	0.100	5	0	72.5	40	140				
Benzo(g,h,i)Perylene	4.026	0.100	5	0	80.5	40	140				
Total PAH Target Concentration	66.16	0.100									
Surr: 2,2-Difluorobiphenyl	2.886	0	2.5	0	115	40	140				
Surr: 2-Fluorobiphenyl	1.790	0	2.5	0	71.6	40	140				
Sample ID: Ics-22938	SampType: LCS	TestCod	de: EPHP_S	Units: mg/Kg		Prep Da	te: 9/13/20)13	RunNo: 51 9	900	
Client ID: ZZZZZ	Batch ID: 22938	TestN	lo: MADEP EF	PH_ (eph_Spr)		Analysis Da	te: 9/16/2 0)13	SeqNo: 586	6058	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	3.094	0.100	5	0	61.9	40	140				
2-Methylnaphthalene	3,546	0.100	5	0	70.9	40	140				
Acenaphthene	3.577	0.100	5	0	71.5	40	140				
Phenanthrene	4.375	0.100	5	0	87.5	40	140				
Acenaphthylene	3.399	0.100	5	0	68.0	40	140				
Fluorene	4.047	0.100	5	0	80.9	40	140				
Anthracene	4.028	0.100	5	0	80.6	40	140				
Fluoranthene	4.348	0.100	5	0	87.0	40	140				
Qualifiers: BRL Below Report	ting Limit		E Value	above quantitation rang	 ge		Н	Holding times for	preparation or a	nalvsis exceed	ied

J Analyte detected below quantitation limits

RL Reporting Limit

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

R RPD outside recovery limits

GeoLabs, Inc.

Kurz Environmental

Work Order:

1309044

Project:

090413

TestCode: EPHP_S

SampType: LCS	TestCod	le: EPHP_S	Units: mg/Kg		Prep Dat	te: 9/13/20	13	RunNo: 519	900	
Batch ID: 22938	TestN	lo: MADEP EF	PH_ (eph_Spr)		Analysis Dat	te: 9/16/20	13	SeqNo: 586	6058	
Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4.315	0.100	5	0	86.3	40	140				
4.671	0.100	5	0	93.4	40	140				
4.724	0.100	5	0	94.5	40	140				
3.849	0.100	5	0	77.0	40	140				
4.018	0.100	5	0	80.4	40	140				
3.357	0.100	5	0	67.1	40	140				
3.328	0.100	5	0	66.6	40	140				
3.310	0.100	5	0	66.2	40	140				
3.594	0.100	5	0	71.9	40	140				
65.58	0.100									
2.633	0	2.5	0	105	40	140				
1.902	0	2.5	0	76.1	40	140				
SampType: LCSD	TestCod	de: EPHP_S	Units: mg/Kg		Prep Da	te: 9/9/201	3	RunNo: 518	308	
Batch ID: 22902	TestN	lo: MADEP EF	PH_ (eph_Spr)		Analysis Da	te: 9/9/201	3	SeqNo: 584	1746	
Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
3.566	0.100	5	0	71.3	40	140				
3.948	0.100	5	0	79.0	40	140				
4.016	0.100	5	0	80.3	40	140				
4.784	0.100	5	0	95.7	40	140				
3.579	0.100	5	0	71.6	40	140				
4.712	0.100	5	0	94.2	40	140				
4.647	0.100	. 5	0	92.9	40	140				
	0.100	5	0	107	40	140				
5.360	0.100	U	•	101						
5.360 4.076	0.100	5	0	81.5	40	140				
-	Result 4.315 4.671 4.724 3.849 4.018 3.357 3.328 3.310 3.594 65.58 2.633 1.902 SampType: LCSD Batch ID: 22902 Result 3.566 3.948 4.016 4.784 3.579 4.712 4.647	Result PQL 4.315 0.100 4.671 0.100 4.724 0.100 3.849 0.100 4.018 0.100 3.357 0.100 3.328 0.100 3.310 0.100 3.594 0.100 2.633 0 1.902 0 SampType: LCSD TestCod Batch ID: 22902 TestN Result PQL 3.566 0.100 3.948 0.100 4.016 0.100 4.784 0.100 4.784 0.100 4.712 0.100 4.647 0.100	Result PQL SPK value 4.315 0.100 5 4.671 0.100 5 4.724 0.100 5 4.018 0.100 5 3.357 0.100 5 3.328 0.100 5 3.310 0.100 5 3.594 0.100 5 65.58 0.100 5 2.633 0 2.5 1.902 0 2.5 Batch ID: 22902 TestCode: EPHP_S Result PQL SPK value 3.566 0.100 5 3.948 0.100 5 4.016 0.100 5 4.784 0.100 5 4.784 0.100 5 4.712 0.100 5 4.647 0.100 5	Batch ID: 22938 TestNo: MADEP EPH_ (eph_Spr) Result PQL SPK value SPK Ref Val 4.315 0.100 5 0 4.671 0.100 5 0 4.724 0.100 5 0 3.849 0.100 5 0 4.018 0.100 5 0 3.357 0.100 5 0 3.328 0.100 5 0 3.310 0.100 5 0 3.594 0.100 5 0 65.58 0.100 5 0 2.633 0 2.5 0 1.902 0 2.5 0 SampType: LCSD TestCode: EPHP_S Units: mg/Kg Batch ID: 22902 TestNo: MADEP EPH_ (eph_Spr) Result PQL SPK value SPK Ref Val 3.566 0.100 5 0 4.016 0.100	Batch ID: 22938 TestNo: MADEP EPH_ (eph_Spr) %REC Result PQL SPK value SPK Ref Val %REC 4.315 0.100 5 0 86.3 4.671 0.100 5 0 93.4 4.724 0.100 5 0 94.5 3.849 0.100 5 0 77.0 4.018 0.100 5 0 67.1 3.357 0.100 5 0 67.1 3.328 0.100 5 0 66.6 3.310 0.100 5 0 71.9 65.58 0.100 5 0 71.9 65.58 0.100 2.5 0 105 1.902 0 2.5 0 76.1 SampType: LCSD TestCode: EPHP_S Units: mg/Kg Batch ID: 22902 TestNo: MADEP EPH_ (eph_Spr) Result PQL SPK value SPK Ref Val %R	Batch ID: 22938 TestNo: MADEP EPH_ (eph_Spr) Analysis Date Result PQL SPK value SPK Ref Val %REC LowLimit 4.315 0.100 5 0 86.3 40 4.671 0.100 5 0 93.4 40 4.724 0.100 5 0 94.5 40 3.849 0.100 5 0 80.4 40 4.018 0.100 5 0 80.4 40 3.357 0.100 5 0 67.1 40 3.328 0.100 5 0 66.6 40 3.310 0.100 5 0 66.2 40 3.594 0.100 5 0 71.9 40 65.58 0.100 2.5 0 76.1 40 1.902 7 TestCode: EPHP_S Units: mg/Kg Prep Da Batch ID: 22902 TestCode: EPHP_S Units	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit 4.315 0.100 5 0 86.3 40 140 4.671 0.100 5 0 93.4 40 140 4.724 0.100 5 0 94.5 40 140 3.849 0.100 5 0 80.4 40 140 4.018 0.100 5 0 80.4 40 140 3.357 0.100 5 0 67.1 40 140 3.328 0.100 5 0 66.6 40 140 3.594 0.100 5 0 66.2 40 140 3.359 0.100 5 0 66.6 40 140 3.594 0.100 5 0 71.9 40 140 4.902 0 2.5 0 105 40 140 1.90	Batch ID: 22938 TestN: MADEP EPH_ (eph_Spr) Analysis Date: 9/16/201 Ref Val Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val 4.315 0.100 5 0 86.3 40 140 40 140 4671 0.100 5 0 93.4 40 140 404 140 4724 0.100 5 0 94.5 40 140 404 140 4018 0.100 5 0 97.0 40 140 404 140 4018 0.100 5 0 67.1 40 140 40 140 40 140 40 140 40 140 40 140 40 140 40 140 40 140 40 140 40 140 40 140 40 140 40 140 40 140 40 140 40 140 40 140 40 140 4	Batch ID: 22938 TestNo: MADEP EPH_ (eph_Spr) Analysis Date: 9/16/2013 SeqNo: 586 Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD 4.315 0.100 5 0 86.3 40 140 4.671 0.100 5 0 93.4 40 140 4.724 0.100 5 0 93.4 40 140 4.724 0.100 5 0 94.5 40 140 4.018 0.100 5 0 77.0 40 140 4.018 0.100 5 0 67.1 40 140 4.014 3.357 0.100 5 0 66.6 40 140 4.014 4.014 4.014 4.014 4.014 4.016 65.58 0.100 5 0 76.1 40 140 4.014 4.014 4.016 140 4.016 140 4.016 7.01 40 140<	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit 4.315 0.100 5 0 86.3 40 140 FPD Ref Val %RPD %RPD

Qualifiers:

BRL Below Reporting Limit

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

R RPD outside recovery limits

GeoLabs, Inc.

Kurz Environmental

Work Order:

1309044

Project:

090413

TestCode: EPHP_S

Sample ID: LCS2-22902	SampType: LCSD	TestCoo	le: EPHP_S	Units: mg/Kg		Prep Dat	te: 9/9/201 :	3	RunNo: 518	808	
Client ID: ZZZZZ	Batch ID: 22902	TestN	lo: MADEP EI	PH_ (eph_Spr)		Analysis Dat	te: 9/9/201 :	3	SeqNo: 584	1746	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chrysene	5.144	0.100	5	0	103	40	140				
Benzo(b)Fluoranthene	3.638	0.100	5	0	72.8	40	140				
Benzo(k)Fluoranthene	3.880	0.100	5	0	77.6	40	140				
Benzo(a)Pyrene	3.452	0.100	5	0	69.0	40	140				
Indeno(1,2,3-cd)Pyrene	4.008	0.100	5	0	80.2	40	140				
Dibenz(a,h)Anthracene	3.927	0.100	5	0	78.5	40	140				
Benzo(g,h,i)Perylene	4.376	0.100	5	0	87.5	40	140				
Total PAH Target Concentration	71.96	0.100									
Surr: 2,2-Difluorobiphenyl	2.669	0	2.5	0	107	40	140				
Surr: 2-Fluorobiphenyl	1.722	0	2.5	0	68.9	40	140				
Sample ID: LCS-2 22938	SampType: LCSD	TestCod	de: EPHP_S	Units: mg/Kg		Prep Da	te: 9/13/20	13	RunNo: 51 !	900	
Client ID: ZZZZZ	Batch ID: 22938	TestN	lo: MADEP E	PH_ (eph_Spr)		Analysis Da	te: 9/16/20	13	SeqNo: 58	6059	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	3.448	0.100	5	0	69.0	40	140				
2-Methylnaphthalene	3.896	0.100	5	0	77.9	40	140				
Acenaphthene	3.953	0.100	5	0	79.1	40	140				
Phenanthrene	4.704	0.100	5	0	94.1	40	140				
Acenaphthylene	3.796	0.100	5	0	75.9	40	140				
Fluorene	4.607	0.100	5	0	92.1	40	140				
Anthracene	4.313	0.100	5	0	86.3	40	140				
Fluoranthene	4.662	0.100	5	0	93.2	40	140				
Pyrene	4.652	0.100	5	0	93.0	40	140				
Benzo(a)Anthracene	5.025	0.100	5	0	100	40	140				
Chrysene	5.010	0.100	5	0	100	40	140				
Benzo(b)Fluoranthene	4.103	0.100	5	0	82.1	40	140				
			T 77.1				Mark Marketon	II.Idia - tima - for			

Qualifiers:

BRL Below Reporting Limit

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

Not Detected at the Reporting Limit

Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

RPD outside recovery limits

Kurz Environmental

Work Order:

1309044

Project:

090413

TestCode: EPHP_S

Sample ID: LCS-2 22938	SampType: LCSD	TestCode: EPHP_S Units: mg/Kg				Prep Da	te: 9/13/20	13	RunNo: 519	900	
Client ID: ZZZZZ	Batch ID: 22938	TestN	lo: MADEP E	PH_ (eph_Spr)		Analysis Da	te: 9/16/20	13	SeqNo: 586	6059	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzo(k)Fluoranthene	4.203	0.100	5	0	84.1	40	140				
Benzo(a)Pyrene	3.653	0.100	5	0	73.1	40	140				
Indeno(1,2,3-cd)Pyrene	3.723	0.100	5	0	74.5	40	140				
Dibenz(a,h)Anthracene	3.671	0.100	5	0	73.4	40	140				
Benzo(g,h,i)Perylene	3.959	0.100	5	0	79.2	40	140				
Total PAH Target Concentration	71.38	0.100									
Surr: 2,2-Difluorobiphenyl	2.654	0	2.5	0	106	40	140				
Surr: 2-Fluorobiphenyl	1.883	0	2.5	0	75.3	40	140				

Qualifiers:

BRL Below Reporting Limit

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

RPD outside recovery limits

Kurz Environmental

Work Order:

1309044

RL Reporting Limit

Project:

090413

TestCode: epht_s

Sample ID: MB-22902	SampType: mblk		le: epht_s	Units: mg/Kg		•	e: 9/9/201		RunNo: 518		
Client ID: ZZZZZ	Batch ID: 22902	TestN	lo: MADEP EF	PH (eph_Spr)		Analysis Date	e: 9/9/201	3	SeqNo: 584	940	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Adjusted C11-C22 Aromatics	ND	15.0									
C09-C18 Aliphatics	ND	15.0									
C19-C36 Aliphatics	ND	15.0									
Unadjusted C11-C22 Aromatics	ND	15.0									
Surr: 1-Chlorooctadecane	5.057	0	10	0	50.6	40	140				
Surr: o-Terphenyl	6.429	0	10	0	64.3	40	140				
Sample ID: MB-22938	SampType: mblk	TestCod	de: epht_s	Units: mg/Kg		Prep Dat	e: 9/13/20	13	RunNo: 518	99	
Client ID: ZZZZZ	Batch ID: 22938	TestN	lo: MADEP EI	PH (eph_Spr)		Analysis Dat	e: 9/16/20	13	SeqNo: 585	756	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Adjusted C11-C22 Aromatics	ND	15.0									
C09-C18 Aliphatics	ND	15.0									
C19-C36 Aliphatics	ND	15.0									
Unadjusted C11-C22 Aromatics	ND	15.0									
Surr: 1-Chlorooctadecane	6.534	0	10	.0	65.3	40	140				
Surr: o-Terphenyl	7.078	0	10	0	70.8	40	140				
Sample ID: LCS-22902	SampType: Lcs	TestCo	de: epht_s	Units: mg/Kg		Prep Dat	e: 9/9/201	3	RunNo: 518	312	
Client ID: ZZZZZ	Batch ID: 22902	Testi	No: MADEP E	PH (eph_Spr)		Analysis Dat	e: 9/9/201	3	SeqNo: 584	1941	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
C09-C18 Aliphatics	6.761	15.0	10	0	67.6	40	140		···		J
C19-C36 Aliphatics	12.89	15.0	10	0	129	40	140				J
Unadjusted C11-C22 Aromatics	9.545	15.0	10	0	95.4	40	140				J
Surr: 1-Chlorooctadecane	9.260	0	10	0	92.6	40	140				
Surr: o-Terphenyl	8.250	0	10	0	82.5	40	140				
	w					· · · · · · · · · · · · · · · · · · ·					
Qualifiers: BRL Below Repor	rting Limit		E Value	above quantitation ran	ge		H	Holding times for	preparation or a	nalysis exceed	led

GeoLabs, Inc.

S Spike Recovery outside recovery limits

Project:

Kurz Environmental

Work Order:

1309044

•

090413 TestCode: epht_s

Sample ID: LCS-22938	SampType: Lcs	TestCod	le: epht_s	Units: mg/Kg		Prep Date	: 9/13/20 ⁻	13	RunNo: 518	99	
Client ID: ZZZZZ	Batch ID: 22938	TestN	lo: MADEP EPI	H (eph_Spr)		Analysis Date	: 9/16/20 ⁻	13	SeqNo: 585	757	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C09-C18 Aliphatics	7.259	15.0	10	0	72.6	40	140				J
C19-C36 Aliphatics	9.836	15.0	10	0	98.4	40	140				J
Unadjusted C11-C22 Aromatics	7.458	15.0	10	0	74.6	40	140				J
Surr: 1-Chlorooctadecane	9.154	0	10	0	91.5	40	140				
Surr: o-Terphenyl	8.457	0	10	0	84.6	40	140				
Sample ID: LCS2-22902	SampType: Lcsd	TestCod	de: epht_s	Units: mg/Kg		Prep Date	e: 9/9/201	3	RunNo: 51 8	312	
Client ID: ZZZZZ	Batch ID: 22902	TestN	lo: MADEP EP	H (eph_Spr)		Analysis Date	9/9/201	3	SeqNo: 584	1942	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
C09-C18 Aliphatics	6.895	15.0	10	0	69.0	40	140	6.761	0	25	J
C19-C36 Aliphatics	11.42	15.0	10	0	114	40	140	12.89	0	25	J
Unadjusted C11-C22 Aromatics	11.65	15.0	10	0	116	40	140	9.545	0	25	J
Surr: 1-Chlorooctadecane	8.626	0	10	0	86.3	40	140	0	0		
Surr: o-Terphenyl	10.36	0	10	0	104	40	140	0	0	0	
Sample ID: LCS-2 22938	SampType: Lcsd	TestCod	de: epht_s	Units: mg/Kg		Prep Date	e: 9/13/20	13	RunNo: 51 8	399	
Client ID: ZZZZZ	Batch ID: 22938	Test	lo: MADEP EP	H (eph_Spr)		Analysis Date	e: 9/16/20	13	SeqNo: 58	5758	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
C09-C18 Aliphatics	8.083	15.0	10	0	80.8	40	140	7.259	0	25	J
C19-C36 Aliphatics	10.12	15.0	10	0	101	40	140	9.836	0	25	J
Unadjusted C11-C22 Aromatics	8.229	15.0	10	0	82.3	40	140	7.458	0	25	J
Surr: 1-Chlorooctadecane	9.734	0	10	0	97.3	40	140	0	0		
Surr: o-Terphenyl	8.050	0	10	0	80.5	40	140	0	0	0	

Qualifiers:

BRL Below Reporting Limit

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

- H Holding times for preparation or analysis exceeded
- R RPD outside recovery limits

GeoLabs, Inc.

Kurz Environmental

Work Order:

1309044

Project:

090413

TestCode: hg_7471b_s

O	OT	T-(0-1-1	
Sample ID: MB-22935	SampType: MBLK	TestCode: hg_7471b_s Units: mg/Kg Prep Date: 9/12/2013	RunNo: 51880
Client ID: ZZZZZ	Batch ID: 22935	TestNo: SW 7471B (SW7471B) Analysis Date: 9/12/2013	SeqNo: 585321
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref	Val %RPD RPDLimit Qual
Mercury	ND	0.0830	
Sample ID: LCS-22935	SampType: LCS	TestCode: hg_7471b_s Units: mg/Kg Prep Date: 9/12/2013	RunNo: 51880
Client ID: ZZZZZ	Batch ID: 22935	TestNo: SW 7471B (SW7471B) Analysis Date: 9/12/2013	SeqNo: 585322
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref	Val %RPD RPDLimit Qual
Mercury	0.8950	0.0830 0.833 0 107 80 120	
Sample ID: LCSD-22935	SampType: LCSD	TestCode: hg_7471b_s Units: mg/Kg Prep Date: 9/12/2013	RunNo: 51880
Client ID: ZZZZZ	Batch ID: 22935	TestNo: SW 7471B (SW7471B) Analysis Date: 9/12/2013	SeqNo: 585339
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref	Val %RPD RPDLimit Qual
Mercury	0.8650	0.0830	

Qualifiers:

BRL Below Reporting Limit

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

RPD outside recovery limits

Kurz Environmental

Work Order:

1309044

Project:

090413

RL Reporting Limit

TestCode: VPH_S2

Sample ID: MBLK Client ID: ZZZZZ	SampType: Batch ID:			de: VPH_S2 lo: VPH	Units: mg/Kg		Prep Dat Analysis Dat		13	RunNo: 518 SegNo: 585		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC			RPD Ref Val	%RPD	RPDLimit	Qual
Unadjusted C5-C8 Aliphatic HC		ND	10.0									
Unadjusted C9-C12 Aliphatic HC		ND	10.0									
Methyl Tert-Butyl Ether		ND	0.100									
Benzene		ND	0.100	•								
Toluene		ND	0.100									
Ethylbenzene		ND	0.100									
m,p-Xylene		ND	0.100									
o-Xylene		ND	0.100									
Naphthalene		ND	0.100									
C9-C10 Aromatic Hydrocarbons		ND	10.0									
Adjusted C5-C8 Aliphatic HC		ND	10.0									
Adjusted C9-C12 Aliphatic HC		ND	10.0									
Surr: 2,5-Dibromotoluene FID		89.37	0	100	0	89.4	70	130				
Surr: 2,5-Dibromotoluene PID		89.78	0	100	0	89.8	70	130				
Sample ID: LCS	SampType:	LCS	TestCo	de: VPH_S2	Units: mg/Kg		Prep Dat	e:		RunNo: 518	364	
Client ID: ZZZZZ	Batch ID:	R51864	Testi	No: VPH			Analysis Dat	e: 9/10/20	13	SeqNo: 585	8008	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene		102.2	0.100	100	0	102	70	130				
2,2,4-Trimethylpentane		81.90	0.100	100	0	81.9	70	130				
2-Methylpentane		93.61	0.100	100	0	93.6	70	130				
n-Butylcyclohexane		85.05	0.100	100	0	85.0	70	130				
n-Decane		82.85	0.100	100	0	82.8	70	130				
n-Nonane		85.15	0.100	100	0	85.2	30	130				
		114.8	0.100	100	0	115	70	130				
n-Pentane												
		218.0	10.0	300	0	72.7	70	130				
n-Pentane	ting Limit				0 above quantitation ran		70		Holding times for	preparation or a	nalysis exceed	ded

GeoLabs, Inc.

S Spike Recovery outside recovery limits

Kurz Environmental

Work Order:

1309044

Project:

090413

TestCode: VPH_S2

Sample ID: LCS	SampType: LCS	TestCo	de: VPH_S2	Units: mg/Kg		Prep Da	te:		RunNo: 518	864	
Client ID: ZZZZZ	Batch ID: R51864	Test	No: VPH			Analysis Da	te: 9/10/20	013	SeqNo: 588	5008	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Unadjusted C9-C12 Aliphatic HC	223.6	10.0	300	0	74.5	70	130				
Methyl Tert-Butyl Ether	98.07	0.100	100	0	98.1	70	130				
Benzene	82.73	0.100	100	0	82.7	70	130				
Toluene	95.50	0.100	100	0	95.5	70	130				
Ethylbenzene	90.91	0.100	100	0	90.9	70	130				
m,p-Xylene	160.3	0.100	200	0	80.2	70	130				
o-Xylene	101.2	0.100	100	0	101	70	130				
Naphthalene	111.2	0.100	100	0	111	70	130				
C9-C10 Aromatic Hydrocarbons	87.38	10.0	100	0	87.4	70	130				
Surr: 2,5-Dibromotoluene FID	120.4	0	100	0	120	70	130				
Surr: 2,5-Dibromotoluene PID	109.6	0	100	0	110	70	130				
Sample ID: LCSD	SampType: LCSD	TestCo	de: VPH_S2	Units: mg/Kg		Prep Dat	te:		RunNo: 518	364	
Sample ID: LCSD Client ID: ZZZZZ	SampType: LCSD Batch ID: R51864		de: VPH_S2 No: VPH	Units: mg/Kg		Prep Da Analysis Da)13	RunNo: 518 SeqNo: 588		
•				Units: mg/Kg	%REC	•	te: 9/10/20	013 RPD Ref Val			Qual
Client ID: ZZZZZ	Batch ID: R51864	Test	lo: VPH			Analysis Da	te: 9/10/20		SeqNo: 588	5009	Qual
Client ID: ZZZZZ Analyte	Batch ID: R51864 Result	Testi PQL	No: VPH SPK value	SPK Ref Val	%REC	Analysis Da	te: 9/10/20	RPD Ref Val	SeqNo: 588	5009 RPDLimit	Qual
Client ID: ZZZZZ Analyte 1,2,4-Trimethylbenzene	Batch ID: R51864 Result 109.3	Testi PQL 0.100	SPK value	SPK Ref Val	%REC	Analysis Dar LowLimit	te: 9/10/20 HighLimit 130	RPD Ref Val	SeqNo: 588 %RPD 6.64	RPDLimit 25	Qual
Client ID: ZZZZZ Analyte 1,2,4-Trimethylbenzene 2,2,4-Trimethylpentane	Result 109.3 87.52	PQL 0.100 0.100	SPK value	SPK Ref Val	%REC 109 87.5	Analysis Dar LowLimit 70 70	te: 9/10/20 HighLimit 130 130	RPD Ref Val 102.2 81.9	SeqNo: 588 %RPD 6.64 6.63	5009 RPDLimit 25 25	Qual
Client ID: ZZZZZ Analyte 1,2,4-Trimethylbenzene 2,2,4-Trimethylpentane 2-Methylpentane	Batch ID: R51864 Result 109.3 87.52 96.74	PQL 0.100 0.100 0.100	SPK value 100 100	SPK Ref Val 0 0 0	%REC 109 87.5 96.7	Analysis Dar LowLimit 70 70 70	HighLimit 130 130	RPD Ref Val 102.2 81.9 93.61	SeqNo: 588 %RPD 6.64 6.63 3.29	RPDLimit 25 25 25 25	· ·
Client ID: ZZZZZ Analyte 1,2,4-Trimethylbenzene 2,2,4-Trimethylpentane 2-Methylpentane n-Butylcyclohexane	Result 109.3 87.52 96.74 112.7	PQL 0.100 0.100 0.100 0.100 0.100	SPK value 100 100 100 100	SPK Ref Val 0 0 0 0 0	%REC 109 87.5 96.7 113	Analysis Date LowLimit 70 70 70 70	HighLimit 130 130 130 130	RPD Ref Val 102.2 81.9 93.61 85.05	SeqNo: 588 %RPD 6.64 6.63 3.29 27.9	RPDLimit 25 25 25 25 25	
Client ID: ZZZZZ Analyte 1,2,4-Trimethylbenzene 2,2,4-Trimethylpentane 2-Methylpentane n-Butylcyclohexane n-Decane	Result 109.3 87.52 96.74 112.7 84.99	PQL 0.100 0.100 0.100 0.100 0.100 0.100	SPK value 100 100 100 100 100	SPK Ref Val	%REC 109 87.5 96.7 113 85.0	Analysis Date LowLimit 70 70 70 70 70	HighLimit 130 130 130 130 130	RPD Ref Val 102.2 81.9 93.61 85.05 82.85	SeqNo: 588 %RPD 6.64 6.63 3.29 27.9 2.55	25 25 25 25 25 25 25	
Client ID: ZZZZZ Analyte 1,2,4-Trimethylbenzene 2,2,4-Trimethylpentane 2-Methylpentane n-Butylcyclohexane n-Decane n-Nonane	Batch ID: R51864 Result 109.3 87.52 96.74 112.7 84.99 88.43	PQL 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100	SPK value 100 100 100 100 100 100 100	SPK Ref Val	%REC 109 87.5 96.7 113 85.0 88.4	Analysis Date	HighLimit 130 130 130 130 130 130 130	RPD Ref Val 102.2 81.9 93.61 85.05 82.85 85.15	SeqNo: 588 %RPD 6.64 6.63 3.29 27.9 2.55 3.78	RPDLimit 25 25 25 25 25 25 25 25	· ·
Client ID: ZZZZZ Analyte 1,2,4-Trimethylbenzene 2,2,4-Trimethylpentane 2-Methylpentane n-Butylcyclohexane n-Decane n-Nonane n-Pentane	Batch ID: R51864 Result 109.3 87.52 96.74 112.7 84.99 88.43 118.6	PQL 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100	SPK value 100 100 100 100 100 100 100 100 100	SPK Ref Val	%REC 109 87.5 96.7 113 85.0 88.4 119	Analysis Date	HighLimit 130 130 130 130 130 130 130 130 130	RPD Ref Val 102.2 81.9 93.61 85.05 82.85 85.15 114.8	SeqNo: 588 %RPD 6.64 6.63 3.29 27.9 2.55 3.78 3.21	25 25 25 25 25 25 25 25 25 25	· ·
Analyte 1,2,4-Trimethylbenzene 2,2,4-Trimethylpentane 2-Methylpentane n-Butylcyclohexane n-Decane n-Nonane n-Pentane Unadjusted C5-C8 Aliphatic HC	Result 109.3 87.52 96.74 112.7 84.99 88.43 118.6 227.0	PQL 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 10.0	SPK value 100 100 100 100 100 100 100 300	SPK Ref Val	%REC 109 87.5 96.7 113 85.0 88.4 119 75.7	Analysis Date	HighLimit 130 130 130 130 130 130 130 130 130 13	RPD Ref Val 102.2 81.9 93.61 85.05 82.85 85.15 114.8 218	SeqNo: 588 %RPD 6.64 6.63 3.29 27.9 2.55 3.78 3.21 4.01	25 25 25 25 25 25 25 25 25 25 25	· ·

Qualifiers:

BRL Below Reporting Limit

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

R RPD outside recovery limits

Kurz Environmental

Work Order:

1309044

Project:

090413

TestCode: VPH_S2

Sample ID: LCSD Client ID: ZZZZZ	SampType: LCSD Batch ID: R51864		de: VPH_S2 No: VPH	Units: mg/Kg	Prep Date: Analysis Date: 9/10/2013			RunNo: 51864 SeqNo: 585009			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	103.6	0.100	100	0	104	70	130	95.5	8.18	25	
Ethylbenzene	95.62	0.100	100	0	95.6	70	130	90.91	5.05	25	
m,p-Xylene	197.0	0.100	200	0	98.5	70	130	160.3	20.5	25	
o-Xylene	98.77	0.100	100	0	98.8	70	130	101.2	2.45	25	
Naphthalene	98.07	0.100	100	0	98.1	70	130	111.2	12.5	25	
C9-C10 Aromatic Hydrocarbons	87.73	10.0	100	0	87.7	70	130	87.38	0.400	25	
Surr: 2,5-Dibromotoluene FID	109.4	0	100	0	109	70	130	0	0	0	
Surr: 2,5-Dibromotoluene PID	111.4	0	100	0	111	70	130	0	0	0	

Qualifiers:

BRL Below Reporting Limit

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

R RPD outside recovery limits

GeoLabs, Inc.

Thursday, September 04, 2014



GeoLabs, Inc. 45 Johnson Lane Braintree MA 02184 Tele: 781 848 7844

Fax: 781 848 7811

Peter Cook IC Environmental Management, Inc. 25 Tia Place Franklin, MA 02038

TEL: 508-498-8236 FAX: 508-541-7443

Project:

1401A

Location:

Order No.: 1408255

Dear Peter Cook:

GeoLabs, Inc. received 9 sample(s) on 8/26/2014 for the analyses presented in the following report.

The laboratory results in this report relate only to samples submitted.

All data for associated QC met method or laboratory specifications, except when noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely.

David Mick

Laboratory Director

For current certifications, please visit our website at www.geolabs.com

Certifications:

CT (PH-0148) - MA (M-MA015) - NH (2508) - RI (LA000252)

Date: 04-Sep-14

CLIENT:

IC Environmental Management, Inc.

Project:

1401A

Lab Order:

1408255

CASE NARRATIVE

Physical Condition of Samples

The project was received by the laboratory in satisfactory condition. The sample(s) were received undamaged, in appropriate containers with the correct preservation.

Project Documentation

The project was accompanied by satisfactory Chain of Custody documentation.

Analysis of Sample(s)

All extractable samples were extracted and analyzed and any Volatile samples were analyzed within method specified holding times and according to GeoLabs documented Standard Operating Procedure. No analytical anomalies or non-conformances were noted by the laboratory during the processing of these samples.

SIGNATURE

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 09/04/14

IC Environmental Management, Inc.

Project:

1401A

Lab Order:

1408255

CASE NARRATIVE

EPH Methods

Method for Ranges: MADEP EPH 04-1.1 Method for Target Analytes: 8270 GC/MS

Carbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

Adjusted C11-C22 Aromatic Hydrocarbons exclude concentrations of Target PAH Analytes

CERTIFICATION:

Were all QA/QC procedures REQUIRED by the EPH Method followed? YES

Were all performance/acceptance standards achieved? YES

Were any significant modifications made to the EPH method? NO

viel Allis

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 09/04/14

Reported Date: 04-Sep-14

CLIENT: IC Environmental Management, Inc. Client Sample ID: 820141

Lab Order: 1408255 Tag Number:

Project: 1401A Collection Date: 8/20/2014 8:00:00 AM

Lab ID: 1408255-001A Date Received: 8/26/2014 Matrix: SOIL

Analyses Result RL Qual Units DF Date Analyzed

TOTAL METALS BY ICP - SW6010C

Analyst: QS

	Prep Method:	(SW3050B)	Pre	p Date:	8/26/20	14 3:57:38 PM	i	
Antimony		ND	5.06	ma/h	Kg-dry	1	8/26/2014	
Arsenic		ND	5,06	_	Kg-dry	1	8/26/2014	
Barium		18.4	5.06		(g-dry	1	8/26/2014	
Beryllium		ND	1.52	-	(g-dry	1	8/26/2014	
Cadmium		ND	1.01	_	(g-dry	1	8/26/2014	
Chromium		ND	5.06	_	(g-dry	î	8/26/2014	
Lead		19.8	5.06	_	g-drv	1	8/26/2014	
Nickel		ND	5.06	_	g-dry	1	8/26/2014	
Selenium		ND	5.06	_	g-dry	1	8/26/2014	
Silver		ND	5.06	-	a-dry	1	8/26/2014	
Thallium		ND	1.52	mg/K		1	8/26/2014	
Vanadium		6.28	5.06	mg/K	- ,	1	8/26/2014	
Zinc		68.6	5.06	mg/K	_ /	1	8/26/2014	

MERCURY - SW7471B

Analyst: EC

	Prep Method:	(SW7471B)	Prep	Date: 8/28/201	4 3:41:40 F	PM2
Mercury		0.160	0.0874	mg/Kg-dry	1	8/28/2014

Qualifiers:

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

CLIENT:

Chromium

Lead

Nickel

Silver

Zinc

Thallium

Vanadium

Selenium

Reported Date: 04-Sep-14

8/26/2014

8/26/2014

8/26/2014

8/26/2014

8/26/2014

8/26/2014

8/26/2014

Analyst: EC

1

1

1

1

1

1

IC Environmental Management, Inc. Client Sample 1D: 820142 Lab Order: 1408255 Tag Number: Project: 1401A Collection Date: 8/20/2014 8:20:00 AM 1408255-002A Lab ID: Date Received: 8/26/2014 Matrix: SOIL Analyses Result RL Qual Units DF **Date Analyzed TOTAL METALS BY ICP - SW6010C** Analyst: QS Prep Method: (SW3050B) Prep Date: 8/26/2014 3:57:38 PM Antimony ND 5.73 mg/Kg-dry 1 8/26/2014 Arsenic ND 5.73 mg/Kg-dry 1 8/26/2014 Barium 46.1 5.73 mg/Kg-dry 1 8/26/2014 Beryilium ND 1.72 mg/Kg-dry 1 8/26/2014 Cadmium ND 1.15 mg/Kg-dry 1 8/26/2014

5.73

5.73

5.73

5.73

5.73

1.72

5.73

mg/Kg-dry

mg/Kg-dry

mg/Kg-dry

mg/Kg-dry

mg/Kg-dry

mg/Kg-dry

mg/Kg-dry

5.73 mg/Kg-dry 1 8/26/2014 MERCURY - SW7471B

	Prep Me	thod:	(SW7471	B)	Prep	Date:	8/28/201	4 3:41:40	PM
A Annexum		****							
Mercury				ND	0.0976	mg/l	Kg-dry	1	8/28/2014

17.9

115

19.5

ND

ND

ND

11.3

115

Qualifiers:

В Analyte detected in the associated Method Blank

Ε Value above quantitation range

Analyte detected below quantitation limits

RL Reporting Limit

BRL Below Reporting Limit

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Spike Recovery outside recovery limits

Reported Date: 04-Sep-14

. CLIENT: IC Environmental Management, Inc. Client Sample ID: 820144 Lab Order: 1408255 Tag Number: Project: 1401A Collection Date: 8/20/2014 9:05:00 AM 1408255-003A Date Received: 8/26/2014 Matrix: SOIL Analyses Result RL Qual Units DF Date Analyzed TOTAL METALS BY ICP - SW6010C Analyst: QS Prep Method: (SW3050B) Prep Date: 8/26/2014 3:57:38 PM Antimony ND 5.13 mg/Kg-dry 1 8/26/2014 Arsenic ND 5.13 mg/Kg-dry 1 8/26/2014 Barium 23.1 5.13 mg/Kg-dry 8/26/2014 Beryllium ND 1.54 mg/Kg-dry 1 8/26/2014 Cadmium ND 1.03 mg/Kg-dry 1 8/26/2014 Chromium 13.7 5.13 mg/Kg-dry 8/26/2014 Lead 24.5 5.13 mg/Kg-dry 1 8/26/2014 Nickel 23.3 5.13 mg/Kg-dry 8/26/2014 Selenium ND 5.13 mg/Kg-dry 8/26/2014 Silver ND 5.13 mg/Kg-dry 1 Thallium 8/26/2014 ND 1.54 mg/Kg-dry 1 8/26/2014 Vanadium 13.9 5.13 mg/Kg-dry 1 8/26/2014 Zinc 44.5 5.13 mg/Kg-dry 1 8/26/2014 **MERCURY - SW7471B** Analyst: EC

8 8	Prep Method:	(SW7471B)	Prep	Date: 8/28/20	14 3:41:40 PI	W
Mercury		ND	0.0902	mg/Kg-dry	1	8/28/2014

Qualifiers:

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

Reported Date: 04-Sep-14

CLIENT:

IC Environmental Management, Inc.

Client Sample ID: 820145

Lab Order:

1408255

Tag Number:

Project:

1401A

Collection Date: 8/20/2014 9:30:00 AM

Lab ID:

1408255-004A

Date Received: 8/26/2014

Matrix: SOIL

Analyses

Result

RL Qual Units

DF

Date Analyzed

TOTAL METALS BY ICP - SW6010C

Analyst: QS

	Prep Method:	(SW3050B)	Pre	Date:	8/26/201	4 3:57:38 PM	
Antimony		ND	5.28	mg/k	(g-dry	1	8/26/2014
Arsenic		ND	5.28	-	(g-dry	1	8/26/2014
Barium		28.5	5.28	-	(g-dry	1	8/26/2014
Beryllium		ND	1.59	_	(g-dry	1	8/26/2014
Cadmium		ND	1.06	mg/K	(p-dry	1	8/26/2014
Chromium		8.10	5.28	mg/K	g-dry	1	8/26/2014
Lead		30.6	5.28	-	g-dry	1	8/26/2014
Nickel		22.7	5.28	_	g-dry	1	8/26/2014
Selenium		ND	5.28	mg/K	- ,	1	8/26/2014
Silver		ND	5.28	mg/K	- ,	1	8/26/2014
Thallium		ND	1.59	mg/K	- ,	1	8/26/2014
Vanadium		9.58	5.28	mg/K	• •	1	8/26/2014
Zinc		37.7	5.28	mg/K			8/26/2014

MERCURY - SW7471B

Analyst: EC

	(Prep I	Date: 8/28/2014	3:41:40 F	PM
	 		8.5 8		
Mercury	ND	0.0883	mg/Kg-dry	1	8/28/2014

Qualifiers:

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

ANALYTICAL REPORT Reported Date: 04-Sep-14 CLIENT: IC Environmental Management, Inc. Client Sample ID: 8201410 Lab Order: 1408255 Tag Number: Project: 1401A Collection Date: 8/20/2014 11:15:00 AM Lab ID: 1408255-005A Date Received: 8/26/2014 Matrix: SOIL Analyses Result RL Qual Units DF Date Analyzed EPH RANGES - MADEP EPH Analyst: KG Prep Method: (eph_Spr) Prep Date: 9/2/2014 8:44:05 AM 1925 Adjusted C11-C22 Aromatics ND 17.0 .300 mg/Kg-dry 1 C09-C18 Aliphatics 9/3/2014 ND 17.0 mg/Kg-dry 1 C19-C36 Aliphatics 9/3/2014 21.9 17.0 mg/Kg-dry 1 Unadjusted C11-C22 Aromatics 9/3/2014 ND 17.0 mg/Kg-dry 1 9/3/2014 Surr: 1-Chlorooctadecane 57.8 40-140 %REC 1 9/3/2014 Surr: o-Terphenyl 79.8 40-140 %REC 9/3/2014 TOTAL METALS BY ICP - SW6010C Analyst: QS Prep Method: (SW3050B) Prep Date: 8/26/2014 3:57:38 PM Antimony ND 5.64 mg/Kg-dry 8/26/2014 Arsenic ND 5.64 mg/Kg-dry 1 8/26/2014 Barium 53.4 5.64 mg/Kg-dry 1 8/26/2014 Beryllium ND 1.69 mg/Kg-dry -1 8/26/2014 Cadmium 5.34 1.13 mg/Kg-dry 1 8/26/2014 Chromium 21.0 5,64 mg/Kg-dry 1 8/26/2014 Lead 118 5.64 mg/Kg-dry 1 8/26/2014 Nickel 9.33 5.64 mg/Kg-dry 1 8/26/2014 Selenium ND 5.64 mg/Kg-dry 1 8/26/2014 Silver ND 5.64 mg/Kg-dry 1 8/26/2014 Thallium ND 1.69 mg/Kg-dry 1 8/26/2014 Vanadium 16.3 5.64 mg/Kg-dry 8/26/2014 Zinc 239 5.64 mg/Kg-dry 8/26/2014 MERCURY - SW7471B Analyst: EC Prep Method: (SW7471B) Prep Date: 8/28/2014 3:41:40 PM Mercury 0.286 0.0943 mg/Kg-dry 1 8/28/2014 EPH TARGET ANALYTES - MADEP EPH Analyst: ZYZ Prep Method: 9/2/2014 8:44:05 AM Prep Date:

GeoLabs, Inc. 45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

0.114

mg/Kg-dry

BRL Below Reporting Limit

ND Not Detected at the Reporting Limit

Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

ND

B Analyte detected in the associated Method Blank

Analyte detected below quantitation limits

E Value above quantitation range

RL Reporting Limit

Naphthalene

Qualifiers:

9/2/2014 4:54:00 PM

Reported Date: 04-Sep-14

CLIENT:

IC Environmental Management, Inc.

Client Sample ID: 8201410

Lab Order:

1408255

Tag Number:

Project:

1401A

Collection Date: 8/20/2014 11:15:00 AM

Lab ID:

1408255-005A

Date Received: 8/26/2014

Matrix: SOIL

Analyses

Result

RL Qual Units

Date Analyzed

EPH TARGET ANALYTES - MADEP EPH

Analy	yst:	ZYZ

2-Methylnaphthalene ND 0.114 mg/Kg-dry 1 9/2/2014 4:54:00 PM Acenaphthene ND 0.144 mg/Kg-dry 1 9/2/2014 4:54:00 PM	1
Approphibanc	
Acenaphthene ND 0.114 mg/Kg-dry 1 9/2/2014 4:54:00 PM	
Phenanthrene 19 1999 0.519 0.114 mg/Kg-dry 1 9/2/2014 4:54:00 PM	1
Acenaphthylene S S S 2 ND 0.114 mg/Kg-dry 1 9/2/2014 4:54:00 PM	ı
Fluorene ND 0.114 mg/Kg-dry 1 9/2/2014 4:54:00 PM	Į
Anthracene ND 0.114 mg/Kg-dry 1 9/2/2014 4:54:00 PM	l
Fluoranthene (200 0.512 0.114 mg/Kg-dry 1 9/2/2014 4:54:00 PM	
Pyrene 0.432 0.114 mg/Kg-dry 1 9/2/2014 4:54:00 PM	1
Benzo(a)Anthracene 4 10 0.216 0.114 mg/Kg-dry 1 9/2/2014 4:54:00 PM	
Chrysene 20 400 0.293 0.114 mg/Kg-dry 1 9/2/2014 4:54:00 PM	
Benzo(b)Fluoranthene 7 40 0.190 0.114 mg/Kg-dry 1 9/2/2014 4:54:00 PM	
Benzo(k)Fluoranthene ND 0.114 mg/Kg-dry 1 9/2/2014 4:54:00 PM	
Benzo(a)Pyrene ND 0.114 mg/Kg-dry 1 9/2/2014 4:54:00 PM	
Indeno(1,2,3-cd)Pyrene ND 0.114 mg/Kg-dry 1 9/2/2014 4:54:00 PM	
Dibenz(a,h)Anthracene ND 0.114 mg/Kg-dry 1 9/2/2014 4:54:00 PM	
Benzo(g,h,i)Perylene ND 0.114 mg/Kg-dry 1 9/2/2014 4:54:00 PM	
Total PAH Target Concentration 2.16 0.114 mg/Kg-dry 1 9/2/2014 4:54:00 PM	
Surr: 2,2-Difluorobiphenyl 75.0 40-140 %REC 1 9/2/2014 4:54:00 PM	
Surr: 2-Fluorobiphenyl 49.5 40-140 %REC 1 9/2/2014 4:54:00 PM	

Qualifiers:

B Analyte detected in the associated Method Blank

Value above quantitation range

Analyte detected below quantitation limits

RL Reporting Limit

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

Reported Date: 04-Sep-14

CLIENT: IC Environmental Management, Inc. Client Sample ID: 8201412 Lab Order: 1408255 Tag Number: Project: 1401A Collection Date: 8/20/2014 1:00:00 PM 1408255-006A Date Received: 8/26/2014 Matrix: SOIL Analyses Result RL Qual Units ĎF **Date Analyzed** TOTAL METALS BY ICP - SW6010C Analyst: QS Prep Method: (SW3050B) Prep Date: 8/26/2014 3:57:38 PM Antimony ND 5.04 mg/Kg-dry 8/26/2014 Arsenic ND 5.04 mg/Kg-dry 1 8/26/2014 Barium 18.9 5.04 mg/Kg-dry 1 8/26/2014 Beryllium ND 1.51 mg/Kg-dry 1 8/26/2014 Cadmium ND 1.01 mg/Kg-dry 1 8/26/2014 Chromium 5.78 5.04 mg/Kg-dry 8/26/2014 Lead ND 5.04 mg/Kg-dry 1 8/26/2014 Nickel 8.87 5.04 mg/Kg-dry 1 8/26/2014 Selenium ND 5.04 mg/Kg-dry 8/26/2014 Silver ND 5,04 mg/Kg-dry 1 8/26/2014 Thallium ND 1.51 mg/Kg-dry 1 8/26/2014 Vanadium 6.99 5.04 mg/Kg-dry 8/26/2014

5.04

mg/Kg-dry

MERCURY - SW7471B

Zinc

Analyst: EC

8/26/2014

×		 Prep Method:		Prep	Date:	8/28/2014	3:41:40 PM	
Me	rcury		ND	0.0865	mg/K	g-dry	1	8/28/2014

20.2

Qualifiers:

Analyte detected in the associated Method Blank В

Value above quantitation range

Analyte detected below quantitation limits

RL Reporting Limit

BRL Below Reporting Limit

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Spike Recovery outside recovery limits

Reported Date: 04-Sep-14

CLIENT: IC Environmental Management, Inc. Client Sample ID: 8201414

Lab Order: 1408255 Tag Number:

Project: 1401A Collection Date: 8/20/2014 1:55:00 PM

Lab ID: 1408255-007A Date Received: 8/26/2014 Matrix: SOIL

Analyses Result RL Qual Units DF Date Analyzed

TOTAL METALS BY ICP - SW6010C

Analyst: QS

	Prep Method:	(SW3050B)	•	Date: 8/26/201	4 3:57:38	PM
Antimony	2 22 23 1 4 221 4	ND	5.13	mg/Kg-dry	1	8/26/2014
Arsenic		ND	5.13	mg/Kg-dry	1	8/26/2014
Barium		19.8	5.13	mg/Kg-dry	1	8/26/2014
8eryllium		ND	1.54	mg/Kg-dry	1	8/26/2014
Cadmium		ND	1.03	rng/Kg-dry	1	8/26/2014
Chromium		5.95	5.13	mg/Kg-dry	1	8/26/2014
Lead		ND	5.13	mg/Kg-dry	1	8/26/2014
Nickel		12.4	5.13	mg/Kg-dry	1	8/26/2014
Selenium		ND	5.13	mg/Kg-dry	1	8/26/2014
Silver		ND	5.13	mg/Kg-dry	1	8/26/2014
Thallium		ND	1.54	mg/Kg-dry	1	8/26/2014
Vanadium		6.77	5.13	mg/Kg-dry	1	8/26/2014
Zinc		26.2	5.13	mg/Kg-dry	1	8/26/2014

MERCURY - SW7471B

Analyst: EC

	Prep Method:	(SW7471B)	Prep	Date: 8/28/2014	3:41:40	PM
Mercury		ND	0.0874	mg/Kg-dry	1	8/28/2014

Qualifiers:

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

Reported Date: 04-Sep-14

CLIENT: IC Environmental Management, Inc. Client Sample ID: 8201415

Lab Order: 1408255 Tag Number:

Project: 1401A Collection Date: 8/20/2014 2:20:00 PM

Lab ID: 1408255-008A Date Received: 8/26/2014 Matrix: SOIL

Analyses Result RL Qual Units DF Date Analyzed

TOTAL METALS BY ICP - SW6010C

Analyst: QS

	Prep Method: (SW3050B)	Prep	Date: 8/26/20	14 3:57:38	PM
Antimony	ND	5.11	mg/Kg-dry	1	8/26/2014
Arsenic	ND	5.11	mg/Kg-dry	1	8/26/2014
Barium	24.8	5.11	mg/Kg-dry	1	8/26/2014
Beryllium	ND	1.53	mg/Kg-dry	1	8/26/2014
Cadmium	ND	1.02	mg/Kg-dry	1	8/26/2014
Chromium	10.5	5.11	mg/Kg-dry	1	8/26/2014
Lead	10.1	5.11	mg/Kg-dry	1	8/26/2014
Nickel	22.2	5.11	mg/Kg-dry	1	8/26/2014
Selenium	ND	5.11	mg/Kg-dry	1	8/26/2014
Silver	ND	5.11	mg/Kg-dry	1	8/26/2014
Thallium	ND	1,53	mg/Kg-dry	1	8/26/2014
Vanadium	10.3	5.11	mg/Kg-dry	1	8/26/2014
Zinc	36.6	5.11	mg/Kg-dry	1	8/26/2014

MERCURY - SW7471B Analyst: EC

		Prep Meth	od: (SW7471	B)	Prep	Date: 8/28/2014	3:41:40 P	M
T	- 50							
Mercury				ND	0.0883	mg/Kg-dry	1	8/28/2014

Qualifiers:

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

Reported Date: 04-Sep-14

CLIENT: IC Environmental Management, Inc.

Lab Order: 1408255

Tag Number:

Project: 1401A

Collection Date: 8/20/2014 2:45:00 PM

Lab ID: 1408255-009A

Date Received: 8/26/2014

Matrix: SOIL

Analyses Result RL Qual Units DF Date Analyzed

TOTAL METALS BY ICP - SW6010C

Analyst: QS

Prep Meti	nod: (SW3050B)		Date: 8	/26/2014 3:57:38 PI	M
Antimony	ND	5.57	mg/Kg-	dry 1	8/26/2014
Arsenic	ND	5.57	mg/Kg-c		8/26/2014
Barium	29.6	5.57	mg/Kg-c	•	8/26/2014
Beryllium	ND	1.67	mg/Kg-c	-	8/26/2014
Cadmium	ND	1.11	mg/Kg-c		8/26/2014
Chromium	9.43	5.57	mg/Kg-c		8/26/2014
Lead	24.6	5.57	mg/Kg-d	*	8/26/2014
Nickel	8.62	5.57	mg/Kg-d	•	8/26/2014
Selenium	ND	5.57	mg/Kg-d	•	8/26/2014
Silver	ND	5.57	mg/Kg-d	*	8/26/2014
Thallium	ND	1.67	mg/Kg-d		8/26/2014
Vanadium	13.6	5.57	mg/Kg-d		8/26/2014
Zinc	48.5	5.57	rng/Kg-d	*	8/26/2014

MERCURY - SW7471B

Analyst: EC

	Prep Method:	(SW7471B)	Prep Date:	8/28/2014 3	:41:40 PM	
Mercury		ND	0.0943 m	ig/Kg-dry	1	8/28/2014

Qualifiers:

B Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

RL Reporting Limit

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

ANALYTICAL QC SUMMARY REPORT

Date: 04-Sep-14

CLIENT:

IC Environmental Management, Inc.

Work Order: Project:

1408255 1401A

TestCode: 6010C_S

Antimony ND 5.00 Arsenic ND 5.00 Barlum ND 5.00 Barlum ND 5.00 Barlum ND 1.50 Cadmium ND 1.50 Cadmium ND 5.00 Cadmium 125.9 5.00 133.3 0 94.7 80 120 Cadmium 125.9 5.00 133.3 0 94.5 80 120 Cadmium 125.7 5.00 133.3 0 94.5 80 120 Cadmium 127.7 5.00 133.3 0 95.8 80 120 Cadmium 127.7 5.00	Sample ID: MBLK-24611 Client ID: ZZZZZ	SampType: MBLK Batch ID: 24611		de: 6010C_S No: SW6010C	Units: mg/Kg (SW3050B)		Prep Date Analysis Date			RunNo:		
Antimony ND 5.00 Antimony ND 5.00 Barlum ND 5.00 Barlum ND 1.50 Cadmium ND 1.50 Cadmium ND 1.00 Chromium ND 5.00 Lead ND 5.00 Selenium ND 5.00 Selenium ND 5.00 Selenium ND 5.00 Silver ND 5.00 Silver ND 5.00 Silver ND 5.00 Silver ND 5.00 Cilent ID: 22222 Batch ID: 24611 TestNo: SW6010C (SW3050B) Analysis Date: 8/26/2014 SeqNo: 623048 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Que Antimony Antimony 126.3 5.00 133.3 0 94.7 80 120 Barium 125.9 5.00 133.3 0 95.9 80 120 Barium 125.9 5.00 133.3 0 94.5 80 120 Barium 125.7 5.00 133.3 0 94.5 80 120 Chromium 127.7 5.00 133.3 0 95.8 80 120 Chromium 127.7 5.00 133.3 0 95.8 80 120 Chromium 127.7 5.00 133.3 0 96.8 80 120 Chromium 127.7 5.00 133.3 0 95.8 80 120 Chromium 127.7 5.00 133.3 0 95.9 94.3 80 120 Chromium 127.7 5.00 133.3 0 95.9 94.3 80 120 Chromium 127.7 5.00 133.3 0 95.9 94.3 80 120 Chromium 127.7 5.00 133.3 0 95.9 94.3 80 120 Chromium 127.7 5.00 133.3 0 95.9 94.3 80 120 Chromium 127.7 5.00 133.3 0 95.9 94.3 80 120	Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit !	HighLimit	RPD Ref Val	%RP	D RPOLiv	ni) Oua
Bartum	•	ND	5.00								- Ni DE	- Qua
Servilium		ND	5.00									
Cadmium ND 1.00 Chromium ND 5.00 Lead ND 5.00 Nickel ND 5.00 Selenium ND 5.00 Selver ND 5.00 Silver ND 5.00 Sample ID: LCS-24611 SampType: LCS TestCode: 6010C_S Units: mg/Kg Prep Date: 8/26/2014 RunNo: 55774 Client ID: ZZZZZ Batch ID: 24611 TestNo: SW6010C (SW3050B) Analysis Date: 8/26/2014 SeqNo: 623048 Analyte Result PQL SPK value SPK Ref Val Rec LowLimit HighLimit RPD Ref Val Rep Rep Rep Republication of the sequence of the sequ		ND	5.00									
Cadmium ND 1.00 Chromium ND 5.00 Lead ND 5.00 Nickel ND 5.00 Selenium ND 5.00 Selenium ND 5.00 Selenium ND 5.00 Selenium ND 5.00 Silver ND 5.00 Thallium ND 1.50 Vanadium ND 5.00 Zinc ND 5.00 Zinc ND 5.00 Zinc ND 5.00 Sample ID: LCS-24611 SampType: LCS TestCode: 6010C_S Units: mg/Kg Prep Date: 8/26/2014 RunNo: 55774 Client ID: ZZZZZ Batch ID: 24611 TestNo: SW6010C (SW3050B) Analysis Date: 8/26/2014 SeqNo: 623048 Analyte Result PQL SPK value SPK Ref Val Rec LowLimit HighLimit RPD Ref Val Rep Rep Rep Repolition Que Antimony 126.3 5.00 133.3 0 94.7 80 120 Arsenic 127.9 5.00 133.3 0 94.5 80 120 Barryllium 133.7 1.50 133.3 0 94.5 80 120 Barryllium 124.5 1.00 133.3 0 93.4 80 120 Cadmium 124.5 1.00 133.3 0 93.4 80 120 Chromium 127.7 5.00 133.3 0 94.3 80 120	-	ND	1.50									
Chromium	Cadmium	ND										
Lead	Chromium											
Nickel ND 5.00 Selenium ND 5.00 Selenium ND 5.00 Thallium ND 1.50 Vanadium ND 5.00 Zinc ND 5.00 Zinc ND 5.00 Sample ID: LCS-24611 SampType: LCS TestCode: 6010C_S Units: mg/Kg Prep Date: 8/28/2014 RunNo: 55774 Client ID: ZZZZZ Batch ID: 24611 TestNo: \$W6010C (\$W3050B) Analysis Date: 8/28/2014 SeqNo: 623048 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Quantimony 126.3 5.00 133.3 0 94.7 80 120 Antimony 127.9 5.00 133.3 0 95.9 80 120 Barium 125.9 5.00 133.3 0 94.5 80 120 Beryllium 133.7 1.50 133.3 0 94.5 80 120 Cadmium 124.5 1.00 133.3 0 93.4 80 120 Cadmium 124.5 1.00 133.3 0 95.8 80 120 Cadmium 127.7 5.00 133.3 0 95.8 80 120 Chromium 127.7 5.00 133.3 0 94.3 80 120	Lead											
Selenium		ND										
Silver	Selenium											
Thailium	Silver											
Vanadium	Thallium											
ND	Vanadium	ND										
Client ID: ZZZZZ Batch ID: 24611 TestNo: SW6010C (SW3050B) Analysis Date: 8/26/2014 SeqNo: 623048 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Que Antimony 126.3 5.00 133.3 0 94.7 80 120 Arsenic 127.9 5.00 133.3 0 95.9 80 120 Barium 125.9 5.00 133.3 0 94.5 80 120 Beryllium 133.7 1.50 133.3 0 100 80 120 Cadmium 124.5 1.00 133.3 0 93.4 80 120 Chromium 127.7 5.00 133.3 0 95.8 80 120 Lead 125.7 5.00 133.3 0 95.8 80 120 Lead 125.7 5.00 133.3 0 94.3 80 120 Nickel	Zinc											
Client ID: ZZZZZ Batch ID: 24611 TestNo: SW6010C (SW3050B) Analysis Date: 8/26/2014 SeqNo: 6/23048 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Quarter Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Quarter Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Quarter Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Quarter Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Quarter Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Quarter Result PQL SPK value SPK Ref Val %REC LowLimit RPD Ref Val %RPD Re	Sample ID: 1 CD 04644											
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Quarterior 126.3 5.00 133.3 0 94.7 80 120 Arsenic 127.9 5.00 133.3 0 95.9 80 120 Barium 125.9 5.00 133.3 0 94.5 80 120 Beryllium 133.7 1.50 133.3 0 100 80 120 Cadmium 124.5 1.00 133.3 0 93.4 80 120 Chromium 127.7 5.00 133.3 0 95.8 80 120 Lead 125.7 5.00 133.3 0 94.3 80 120 Nickel 137.2 5.00 133.3 0 94.3 80 120	Cample 10. LC3-24611	SampType: LCS	TestCo	de: 6010C_S	Units: ma/Ka		Pren Date:	9226126	044	Do No.		
Antimony 126.3 5.00 133.3 0 94.7 80 120 Arsenic 127.9 5.00 133.3 0 95.9 80 120 Barium 125.9 5.00 133.3 0 94.5 80 120 Beryllium 133.7 1.50 133.3 0 100 80 120 Cadmium 124.5 1.00 133.3 0 93.4 80 120 Chromium 127.7 5.00 133.3 0 95.8 80 120 Chromium 127.7 5.00 133.3 0 95.8 80 120 Lead 125.7 5.00 133.3 0 94.3 80 120 Nickel 137.3 5.00 133.3 0 94.3 80 120												
Antimony 126.3 5.00 133.3 0 94.7 80 120 Arsenic 127.9 5.00 133.3 0 95.9 80 120 Barium 125.9 5.00 133.3 0 94.5 80 120 Beryllium 133.7 1.50 133.3 0 100 80 120 Cadmium 124.5 1.00 133.3 0 93.4 80 120 Chromium 127.7 5.00 133.3 0 95.8 80 120 Lead 125.7 5.00 133.3 0 95.8 80 120 Nickel 137.3 5.00 133.3 0 94.3 80 120	Client ID: ZZZZZ											
Arsenic 127.9 5.00 133.3 0 95.9 80 120 Barium 125.9 5.00 133.3 0 94.5 80 120 Beryllium 133.7 1.50 133.3 0 100 80 120 Cadmium 124.5 1.00 133.3 0 93.4 80 120 Chromium 127.7 5.00 133.3 0 95.8 80 120 Lead 125.7 5.00 133.3 0 94.3 80 120 Lickel 127.2 5.00 133.3 0 94.3 80 120	Client ID: ZZZZZ	Batch ID: 24611	Testi	lo: SW6010C	(SW3050B)		Analysis Date:	8/26/20	014	SeqNo: 6	23048	if Ousi
125.9 5.00 133.3 0 94.5 80 120	Client ID: ZZZZZ Analyte Antimony	Batch ID: 24611 Result	Testl PQL	lo: SW6010C SPK value	(SW3050B) SPK Ref Val	%REC	Analysis Date:	8/26/20	014	SeqNo: 6	23048	it Qual
Seryllium	Client ID: ZZZZZ Analyte Antimony Arsenic	Batch ID: 24611 Result 126.3	PQL 5.00	lo: SW6010C SPK value 133.3	(SW3050B) SPK Ref Val 0	%REC 94.7	Analysis Date: LowLimit 1-80	8/26/2 0 fighLimit 120	014	SeqNo: 6	23048	it Qual
Cadmium 124.5 1.00 133.3 0 93.4 80 120 120 127.7 5.00 133.3 0 95.8 80 120 120 125.7 5.00 133.3 0 94.3 80 120 120 125.7 5.00 133.3 0 94.3 80 120 120 125.7 5.00 120.0 120	Analyte Antimony Arsenic Barium	Batch ID: 24611 Result 126.3 127.9	PQL 5.00 5.00	No: SW6010C SPK value 133.3 133.3	(SW3050B) SPK Ref Val 0 0	%REC 94.7 95.9	Analysis Date: LowLimit 1-80 80	8/26/20 fighLimit 120 120	014	SeqNo: 6	23048	it Qual
Chromium 127.7 5.00 133.3 0 95.8 80 120 ead 125.7 5.00 133.3 0 94.3 80 120	Analyte Analyte Antimony Arsenic Barium Beryllium	Result 126.3 127.9 125.9	PQL 5.00 5.00 5.00	SPK value 133.3 133.3 133.3	(SW3050B) SPK Ref Val 0 0 0	%REC 94.7 95.9 94.5	Analysis Date: LowLimit 1-80 80 80 80	8/26/20 fighLimit 120 120 120	014	SeqNo: 6	23048	it Qual
.ead 125.7 5.00 133.3 0 94.3 80 120	Analyte Antimony Arsenic Beryllium Cadmium	Result 126.3 127.9 125.9 133.7	PQL 5.00 5.00 5.00 1.50	SPK value 133.3 133.3 133.3 133.3	(SW3050B) SPK Ref Val 0 0 0 0	%REC 94.7 95.9 94.5 100	Analysis Date: LowLimit Handle Hand	8/26/20 fighLimit 120 120 120 120	014	SeqNo: 6	23048	it Qual
vickel 127.2 5.00 400.0	Analyte Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium	Result 126.3 127.9 125.9 133.7 124.5	PQL 5.00 5.00 5.00 1.50 1.00	SPK value 133.3 133.3 133.3 133.3 133.3	(SW3050B) SPK Ref Val 0 0 0 0 0	94.7 95.9 94.5 100 93.4	Analysis Date: LowLimit + 80 80 80 80 80 80 80	8/26/20 fighLimit 120 120 120 120 120	014	SeqNo: 6	23048	it Qual
	Analyte Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium Lead	Result 126.3 127.9 125.9 133.7 124.5 127.7	PQL 5.00 5.00 5.00 1.50 1.00 5.00	SPK value 133.3 133.3 133.3 133.3 133.3 133.3 133.3	(SW3050B) SPK Ref Val 0 0 0 0 0 0	%REC 94.7 95.9 94.5 100 93.4 95.8	Analysis Date: LowLimit 1	8/26/20 fighLimit 120 120 120 120 120 120	014	SeqNo: 6	23048	it Qual
	Client ID: ZZZZZ Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium ead	Result 126.3 127.9 125.9 133.7 124.5 127.7 125.7	FQL 5.00 5.00 5.00 1.50 1.00 5.00 5.00 5.00	lo: SW6010C SPK value 133.3 133.3 133.3 133.3 133.3 133.3 133.3	(SW3050B) SPK Ref Val 0 0 0 0 0 0 0 0	94.7 95.9 94.5 100 93.4 95.8 94.3 95.4	Analysis Date: LowLimit 1	8/26/20 flighLimit 120 120 120 120 120 120 120	014	SeqNo: 6	23048 D. RPDLim	

RL Reporting Limit

S Spike Recovery outside recovery limits

RPD outside recovery limits

IC Environmental Management, Inc.

Work Order:

1408255

Project:

1401A

TestCode: 6010C_S

								estecte.	POTOC 2		
Sample ID: LCS-24611	SampType: LCS	TestCo	de: 6010C_S	Units: mg/Kg		Prep Date	8/26/201	14	RunNo: 5		==
Client ID: 22777	Batch ID: 24611	Testi	No: SW6010C	(SW3050B)		Analysis Date			SeqNo: 6		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit I	-lighLimit	RPD Ref Val	%RPD	I	
Selenium	123.4	5.00	133.3	0	92.6	80			701XF-L	RPDLimit	Qua
Silver	31.93	5.00	33.33	0	95.8	80	120				
Fhallium	122.8	1.50	133.3	0	92.1	80	120				
Vanadium 	138.1	5.00	133.3	0	104	80	120				
Zinc	128.8	5.00	133.3	3.933	93.7	80	120 120				
Sample ID: LCSD-24611	SampType: LCSD	TestCoo	de: 6010C_S	Units: mg/Kg		Prep Date:		A	Davids, in		_
Client ID: ZZZZZ	Batch ID: 24611	TestN	io: SW6010C	(SW3050B)					RunNo: 55		
Analyte	.					Analysis Date:	0/20/201	4	SeqNo: 62	3049	
	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit F	lighLimit I	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	123.1	5.00	133.3	0	92,3	80	120			- ar arctaring	Qual
Arsenic	124,8	5.00	133.3	0	93.6	80	120	126.3	2.57	30	
Barium	124,9	5.00	133.3	0	93.7	80	120	127.9	2.43	30	
Seryllium	130.9	1.50	133.3	0	98.2	80	120	125.9	0.851	30	
admium	119.8	1.00	133.3	0	89.9	80	120	133.7	2.09	30	
Chromium	123.8	5.00	133.3	0	92.9	80	120	124.5	3.87	30	
ead	122.3	5.00	133.3	0	91.8	80	120	127.7	3.08	30	
lickel	122.8	5.00	133.3	0	92.1	80	120	125.7	2.74	30	
Selenium	120.5	5.00	133.3	0	90.4	80	120	127.2	3.52	30	
ilver	30.73	5.00	33.33	0	92.2	80	120	123.4	2.35	30	
hallium	120.9	1.50	133.3	0	90.7	80	120	31.93	3.83	30	
anadium	134.2	5.00	133.3	0	101	80	120	122.8	1.59	30	
inc	124.5	5.00	133.3	2.020				138.1	2.84	30	
	124.0	3.00	133.3	3.933	90.4	80	120	128.8	3.42	30	

Qualifiers:

BRL Below Reporting Limit

Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

Holding times for preparation or analysis exceeded

RPD outside recovery limits

IC Environmental Management, Inc.

Work Order:

1408255

Project: 1401A

Sample ID: mb-24629 Client ID: ZZZZZ	SampType: mblk Batch ID: 24629		ode: EPHP_S tNo: MADEP	Units: mg/K(EPH_ (eph_Spr)	9		te: 9/2/2014 te: 9/2/2014	RunNo: 5584 SeqNo: 6236	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC				
Naphthalene	ND	0.100			701120	- FOME IIII	HighLimit RPD Ref Va	al %RPD	RPDLimit Qual
2-Methylnaphthalene	ND	0.100							
Acenaphthene	ND	0.100							
Phenanthrene	ND	0.100							
Acenaphthylene	ND	0.100							
Fluorene	ND	0.100							
Anthracene	ND	0.100							
Fluoranthene	ND	0.100							
Pyrene	ND	0.100							
Benzo(a)Anthracene	ND								
Chrysene	ND	0.100							
Benzo(b)Fluoranthene		0.100							
Benzo(k)Fluoranthene	ND	0.100							
Benzo(a)Pyrene	ND	0.100							
Indeno(1,2,3-cd)Pyrene	ND	0.100							
Dibenz(a,h)Anthracene	ND	0.100							
Benzo(g,h,l)Perylene	ND	0.100							
Total PAH Target Concentration	ND	0.100							
Surr: 2,2-Difluorobiphenyl	ND	0.100							
Surr: 2-Fluorobiphenyl	1.578	0	2.5	0	63.1	40			
	1.694	0	2.5	0	67.8	40 40	140 140		
Sample ID: Ics-24629	SampType: Ics	TestCod	e: EPHP_S	11-2-	_				
Client ID: ZZZZZ	Batch ID: 24629			Units: mg/Kg		Prep Date:	9/2/2014	RunNo: 55845	
	Daton 15. 24023	Iestin	O: MADEP EP	H_ (eph_Spr)		Analysis Date:	9/2/2014	SeqNo: 623630	
unalyte	Result	PQL	SPK value	SPK Ref Val	%REC		lighLimit RPD Ref Val		
laphthalene -Methylnaphthalene	3.078	0.100	5	0	61.6			%RPD RF	PDLimit Qual
мошумаришане	2.700	0.100	5	0		40	140		
			•	J	54.0	40	140		
Qualifiers: BRL Below Reporting	g Limit		E Value al	house					
J Analyte detected	d below quantitation limits		MD Nate	bove quantitation range ected at the Reporting	Ĉ.		H Holding times for	r preparation or analys	is exceeded
			ND Not Det	ecied at the Reporting	Limit		R RPD outside reco	or entarys	19 EVECEU6G

IC Environmental Management, Inc.

Work Order:

1408255

Project:

1401A

TestCode: EPHP_S

Sample ID: Ics-24629	SampType: ics	TestCo	de: EPHP_S	Units: mg/Kg		Prep Date	e: 9/2/20 1	14	RunNo: 5!	59 <i>AE</i>	
Client ID: ZZZZZ	Batch ID: 24629	Test	No: MADEP EP	H_ (eph_Spr)		Analysis Date			SeqNo: 62		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC			RPD Ref Val			
Acenaphthene	3.696	0.100	5					RFD Ref Val	%RPD	RPDLimit	Qua
Phenanthrene	4.306	0.100	5	0	73.9	40	140				
Acenaphthylene	3.446	0.100	5	0	86.1	40	140				
Fluorene	3.789	0.100	5	0	68.9	40	140				
Anthracene	4.051	0.100	5	0	75.8	40	140				
luoranthene	4.799	0.100	5	0	81.0	40	140				
Pyrene Pyrene	4.750	0.100	5	0	96.0	40	140				
Benzo(a)Anthracene	5.385	0.100	5 5	0	95.0	40	140				
Chrysene	5.343	0.100	5	0	108	40	140				
Benzo(b)Fluoranthene	4.825	0.100	-	0	107	40	140				
Benzo(k)Fluoranthene	5.303	0.100	5	0	96.5	40	140				
Benzo(a)Pyrene	4.250	0.100	5	0	106	40	140				
ndeno(1,2,3-cd)Pyrene	4.247	0.100	5	0	85.0	40	140				
Dibenz(a,h)Anthracene	4.714	0.100	5	0	84.9	40	140				
Benzo(g,h,i)Perylene	3.952	0.100	5	0	94.3	40	140				
Surr: 2,2-Difluorobiphenyl	1.777	0.100	5	0	79.0	40	140				
Surr: 2-Fluorobiphenyl	1.912	_	2.5	0	71.1	40	140				
	1,312	0	2.5	0	76.5	40	140				
ample ID: Ics2-24629	SampType: Icsd	TestCod	le: EPHP_S	Units: mg/Kg		Prep Date	9/2/201	4	RunNo: 558	946	
Client ID: ZZZZZ	Batch ID: 24629	TestN	io: MADEP EPH	l_ (eph_Spr)		Analysis Date	9/2/201	4	SeqNo: 62:		
Analyte	Result	PQL	SPK value S	SPK Ref Val	%REC			RPD Ref Val			
laphthalene	2.934	0.100	5	0					%RPD	RPDLimit	Qual
-Methylnaphthalene	2.545	0.100	5	0	58.7	40	140	3.078	4.79	25	
cenaphthene	3.574	0.100	5	_	50.9	40	140	2.7	5.91	25	
henanthrene	4.095	0.100	5	0	71.5	40	140	3.696	3.36	25	
cenaphthylene	3.337	0.100	5	0	81.9	40	140	4.306	5.02	25	
	w.ww!	0.100	5	· 0	66.7	40	140	3.446	3.2 <mark>1</mark>	25	
Qualifiers: BRL Below Repo	rting Limit	***,	E Value abo	ove quantitation range							
	ected below quantitation limits			we quantitation range			н н	olding times for p	reparation of a	nalysis exceede	d

J Analyte detected below quantitation limits

RL Reporting Limit

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

R RPD outside recovery limits

IC Environmental Management, Inc.

Work Order:

1408255

Project:

1401A

TestCode: EPHP_S

Sample ID: Ics2-24629	SampType: Icsd	TestCo	de: EPHP_S	Units: mg/Kg		Prep Da	te: 9/2/201	4	RunNo: 658	45	
Cilent ID: ZZZZZ	Batch ID: 24629	Testi	No: MADEP EF	PH_ (eph_Spr)		Analysis Da	te: 9/2/201	4	SeqNo: 623		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
=luorene	3.665	0.100	5	0	73.3	40	140	3.789	2 22		
Anthracene	4.041	0.100	5	0	80.8	40	140	4.051	3.33	25	
luoranthene	4.550	0.100	5	0	91.0	40	140	4.799	0.247	25	
² yrene	4.637	0.100	5	0	92.7	40	140	4.75	5.33	25	
Benzo(a)Anthracene	5.076	0.100	5	0	102	40	140		2.41	25	
Chrysene	5.165	0.100	5	0	103	40	140	5.385	5.91	25	
ienzo(b)Fluoranthene	4.588	0.100	5	0	91.8	40	140	5.343	3.39	25	
Benzo(k)Fluoranthene	4.915	0.100	5	0	98.3	40	140	4.825	5.04	25	
lenzo(a)Pyrene	4.291	0.100	5	0	85.8	40		5.303	7.59	25	
ndeno(1,2,3-cd)Pyrene	4.418	0.100	5	0	88.4	40	140	4.25	0.960	25	
Dibenz(a,h)Anthracene	4.927	0.100	5	0	98.5		140	4.247	3.95	25	
Senzo(g,h,i)Perylene	4.387	0.100	5	0	96.5 87.7	40	140	4.714	4.42	25	
Surr. 2,2-Difluorobiphenyl	1,628	0.100	2.5	0		40	140	3.952	10.4	25	
Surr: 2-Fluorobiphenyl	1.806	0	2.5	-	65.1	40	140	0	0	0	
	1.000	U	2.5	0	72.2	40	140	0	0	0	

Qualifiers:

BRL Below Reporting Limit

Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

Holding times for preparation or analysis exceeded

R RPD outside recovery limits

CLIENT: IC Environmental Management, Inc.

Work Order: 1408255 Project: 1401A

TestCode: epht_s

Sample ID: MB-24629	SampType: mblk	Tauto						TestCode:			
Client ID: ZZZZZ			ode: epht_s	Units: mg/Kg	f	Prep Da	te: 9/2/20	14	RunNo: 5	SRAA	===
	Batch ID: 24629	Test	No: MADEP E	PH (eph_Spr)		Analysis Da	te: 9/2/20 ⁻	14	SeqNo: 62		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC					23045	
Adjusted C11-C22 Aromatics	ND ND	15.0		- Tritor adi	76REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimi	t Qual
C09-C18 Aliphatics	ND	15.0									
C19-C36 Aliphatics	ND	15.0									
Unadjusted C11-C22 Aromatics	ND	15.0									
Surr: 1-Chlorooctadecane	7.072	15.0									
Surr: o-Terphenyl	9.749	0	10	0	70.7	40	140				
Committee to the committee of the commit			10	0	97.5	40	140				
Sample ID: LCS-24629	SampType: Lcs	TestCo	de: epht_s	Units: mg/Kg		Prep Dat	0.00000				
Client ID: ZZZZZ	Batch ID: 24629	TestN	io: MADEP E						RunNo: 55	844	
Analyte				(obu_obt)		Analysis Dat	e: 9/2/201	4	SeqNo: 62	3646	
C09-C18 Aliphatics	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	
C19-C36 Aliphatics	ND	15.0	10	0	72.0	40			701413	IN-DEMINE	Qual
Unadjusted C11-C22 Aromatics	ND	15.0	10	0	101	40	140				
Surr: 1-Chlorooctadecane	ND	15.0	10	0	96.2	40	140				
Surr: o-Terphenyl	8.745	0	10	0	87.4	40	140				
	10.98	0	10	0	110	40	140 140				
Sample ID: LCS2-24629	SampType: Lcsd	TestCod	e: epht_s	I Inite: manufic							
Client ID: ZZZZZ	Batch ID: 24629		_	Units: mg/Kg		Prep Date	9/2/2014	ı	RunNo: 558	344	
Analyte		1 62114	: MADEP EF	PH (eph_Spr)		Analysis Date	e: 9/2/2014	,	SeqNo: 623	647	
	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	Highl imit	RPD Ref Val			
209-C18 Aliphatics	ND	15.0	10	0	60.2				%RPD	RPDLimit	Qual
219-C36 Aliphatics	ND	15.0	10	0	60.3 91.9	40	140	7.202	0	25	
Inadjusted C11-C22 Aromatics	ND	15.0	10	0		40	140	10.15	0	25	
Surr. 1-Chlorooctadecane	8.624	0	10	0	85.0	40	140	9.618	O	25	
Surr: o-Terphenyl	9.815	0	10	0	86.2	40	140	0	o		
				0	98.2	40	140	0	0	0	
ualifiers: BRL Below Reporting	ag I imit										
- Troporti	d below quantitation limits		E Value al	ove quantitation range	:		H Ho	olding times for	argnaration r		
RL Reporting Limi	- orion drammation limits		ND Not Det	ected at the Reporting	Limit		R RF	D outside recov	preparation or an	alysis exceede	ed
reporting Clini	t.		S Snike R	ecovery outside recove			12 1/1	~ chronde tecoh	cry iimits		

IC Environmental Management, Inc.

Work Order:

1408255

Project:

1401A

TestCode: hg_7471b_s

Sample ID: MB-24626	SampType: MBLK	TestCode: hg_7471b_s Units: mg/Kg	Prep Date: 8/28/2014	RunNo: 55809
Client ID: ZZZZZ	Batch ID: 24626	TestNo: SW 7471B (SW7471B)	Analysis Date: 8/28/2014	SeqNo: 623401
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Mercury	ND	0.0830		
Sample ID: LCS-24626	SampType: LCS	TestCode: hg_7471b_s Units: mg/Kg	Prep Date: 8/28/2014	RunNo: 55809
Client ID: ZZZZZ	Batch ID: 24626	TestNo: SW 7471B (SW7471B)	Analysis Date: 8/28/2014	SeqNo: 623402
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Mercury	0,8900	0.0830 0.833 0	107 80 120	

Qualifiers: BRL Below Reporting Limit

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

Holding times for preparation or analysis exceeded

R RPD outside recovery limits

~	
GeoLabs, Inc.	

GEOLADS, Inc. Environmental Laboratories 45 Johnson Lane, Braintree, MA 02184 p 781.848.7844 • f 781.848.7811 www.geolabs.com

	Sample	Handling:	circle	choice
	Filtration		one	
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408255	
Special Instructions	

PAGE OF

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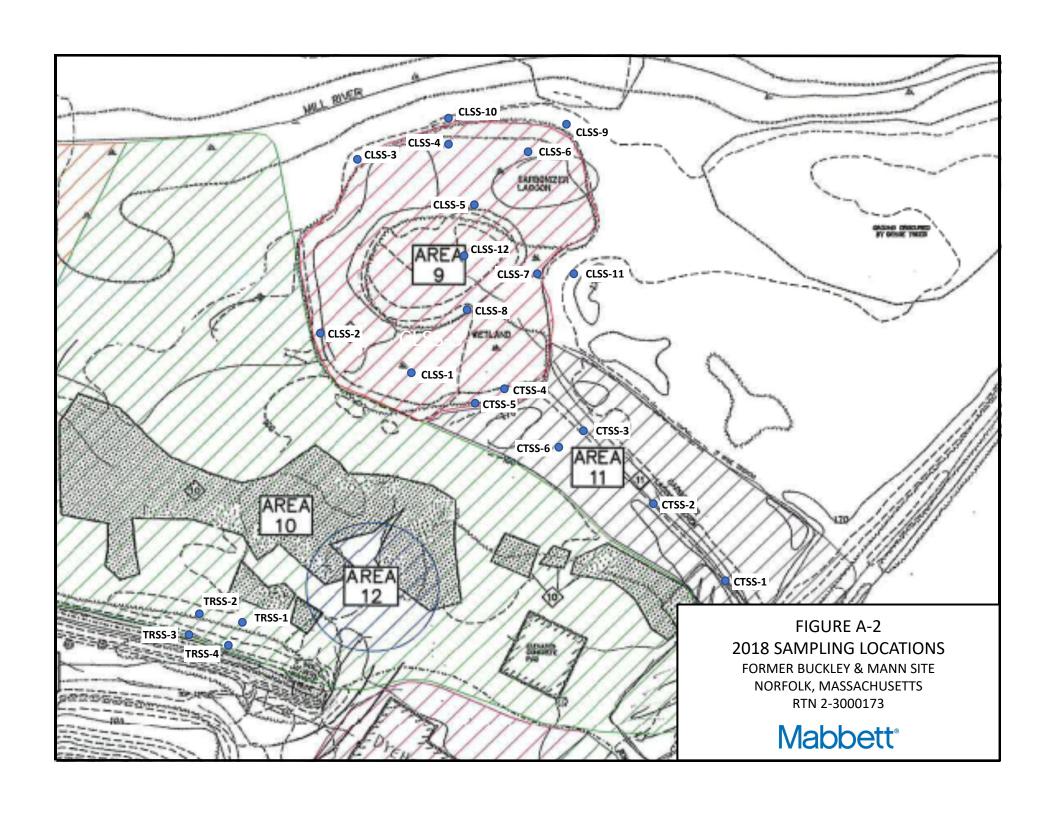


Table A-3
2018 Carbonizer Trench, Carbonizer Lagoon, and Tail Race Analytical Results
Former Buckley & Mann Site
Norfolk, Massachusetts

SITE AREA									CARBONIZ	ER TRENCH						
LOCATION			CTSS-1	CTSS-2	CTSS-3	CTSS-3 1-2	CTSS-3 2-3	CTSS-4		CTSS-4 2-3	CTSS-5 0-1	CTSS-5 1-2	CTSS-5 2-3	CTSS-6 0-1	CTSS-6 1-2	CTSS-6 2-3
SAMPLING DATE			3/12/18	3/12/18	3/12/18	4/20/18	4/20/18	3/12/18	4/20/18	4/20/18	4/20/18	4/20/18	4/20/18	4/20/18	4/20/18	4/20/18
SAMPLE DEPTH (FT BGS)			0-1	0-1	0-1	1-2	2-3	0-1	1-2	2-3	0-1	1-2	2-3	0-1	1-2	2-3
MCP METHOD 1 STANDARDS	S-1/GW-1	S-1/GW-3														
Metals (mg/kg)	,	,														
Antimony	20	20	1.97 U	1.17 U	3.03	1.22 U	1.32 U	1.39 U	1.27 U	1.11 U	4.59	12.9	1.28 U	1.11 U	1.16 U	1.45 U
Arsenic	20	20	6.15	4.93	9.50	1.22 U	1.32 U	7.44	1.27 U	1.11 U	3.75	8.16	2.27	1.11 U	1.16 U	1.45 U
Barium	1000	1000	55.1	17.5	30.4	20.5	31.1	48.5	15.7	16.0	22.9	48.4	21.3	12.7	14.2	27.0
Beryllium	90	90	0.99 U	0.58 U	0.97 U	0.61 U	0.66 U	0.69 U	0.63 U	0.56 U	0.69 U	0.73 U	0.64 U	0.56 U	0.58 U	0.72 U
Cadmium	70	70	5.17	3.92	7.75	1.67	1.94	6.91	0.87	0.90	0.69 U	0.73 U	1.28	0.58	0.82	1.04
Chromium (III)	1000	1000	23.5	49.6	256	10.9	27.6	96.1	31.2	17.2	165	454	40.7	4.70	3.08	42.0
Chromium (VI)	100	100	3 U	2 U	3 U			6.00			15.0	8.0 U				
Lead	200	200	52.1	59.2	971	15.2	35.0	380	14.6	15.7	257	676	42.8	4.59	4.19	47.1
Mercury	20	20	0.252	0.515	1.08	0.085 U	0.079 U	0.49	0.069 U	0.066 U	1.12	1.43	0.084 U	0.070 U	0.076 U	0.211
Nickel	600	600	38.2	5.82	8.53	13.0	12.5	21.6	12.3	36.1	3.42	65.0	12.8	2.50	6.28	4.02
Selenium	400	400	1.97 U	1.17 U	1.93 U	1.22 U	1.32 U	1.39 U	1.27 U	1.11 U	1.38 U	1.46 U	1.28 U	1.11 U	1.16 U	1.45 U
Silver	100	100	0.99 U	0.58 U	0.97 U	0.61 U	0.66 U	0.69 U	0.63 U	0.56 U	1.07	5.69	0.64 U	0.56 U	0.58 U	0.72 U
Thallium	8	8	0.397 U	0.235 U	0.389 U	0.247 U	0.266 U	0.28 U	0.256 U	0.224 U	0.277 U	0.294 U	0.259 U	0.224 U	0.233 U	0.292 U
Vanadium	400	400	21.9	27.4	29.4	11.7	10.3	15.5	9.38	9.11	17.1	10.0	17.6	7.38	6.32	17.0
Zinc	1000	1000	190	31.8	64.3	102	80.7	184	38.0	39.7	17.8	20.2	69.2	11.1	17.1	20.6
Extractable Petroleum Hydrocarbons (mg/kg)																
C11-C22 Aromatics			46.3 U		38.7 U		17.7			14.7 U	161			14.9 U		
C11-C22 Aromatics, Adjusted	1000	1000	46.3 U		38.7 U		17.7			14.7 U	161			14.9 U		
C9-C18 Aliphatics	1000	1000	46.3 U		38.7 U		17.7 U			14.7 U	17.2 U			14.9 U		
C19-C36 Aliphatics	3000	3000	46.3 U		64.9		45.2			14.7 U	594			14.9 U		
2-Methylnaphthalene	0.7	300	1.15 U		1.16		0.44 U			0.36 U	0.43 U			0.37 U		
Acenaphthene	4	1000	1.15 U		0.96 U		0.44 U			0.36 U	0.43 U			0.37 U		
Acenaphthylene	1	10	1.15 U		0.96 U		0.44 U			0.36 U	0.43 U			0.37 U		
Anthracene	1000	1000	1.15 U		1.11		0.44 U			0.36 U	0.43 U			0.37 U		
Benzo(a)anthracene	7	7	1.15 U		0.96 U		0.44 U			0.36 U	0.43 U			0.37 U		
Benzo(a)pyrene	2	2	1.15 U		0.96 U		0.44 U			0.36 U	0.43 U			0.37 U		
Benzo(b)fluoranthene	7	7	1.15 U		0.96 U		0.44 U			0.36 U	0.43 U			0.37 U		
Benzo(ghi)perylene	1000	1000	1.15 U		0.96 U		0.44 U			0.36 U	0.43 U			0.37 U		
Benzo(k)fluoranthene	70	70	1.15 U		0.96 U		0.44 U			0.36 U	0.43 U			0.37 U		
Chrysene	70	70	1.15 U		0.96 U		0.44 U			0.36 U	0.43 U			0.37 U		
Dibenzo(a,h)anthracene	0.7	0.7	1.15 U		0.96 U		0.44 U			0.36 U	0.43 U			0.37 U		
Fluoranthene	1000	1000	1.15 U		0.96 U		0.44 U			0.36 U	0.43 U			0.37 U		
Fluorene	1000	1000	1.15 U		0.96 U		0.44 U			0.36 U	0.43 U			0.37 U		
Indeno(1,2,3-cd)Pyrene	7	7	1.15 U		0.96 U		0.44 U			0.36 U	0.43 U			0.37 U		
Naphthalene	4	500	1.15 U		0.96 U		0.44 U			0.36 U	0.43 U			0.37 U		
Phenanthrene	10	500	1.15 U		0.96 U		0.44 U			0.36 U	0.43 U			0.37 U		
Pyrene	1000	1000	1.15 U		0.96 U		0.44 U			0.36 U	0.43 U			0.37 U		

Notes:

- 1. mg/kg = milligrams per kilogram
- 2. bold type = detected constituents
- 3. shaded cells = MCP standard exceeded
- 4. U = not detected above laboratory limits
- 5. --- = sample not analyzed for this constituent
- 6. Where no Cr6+ data is available, all chromium assumed to be Cr3+

Table A-3
2018 Carbonizer Trench, Carbonizer Lagoon, and Tail Race Analytical Results
Former Buckley & Mann Site
Norfolk, Massachusetts

SITE AREA								CARI	BONIZER LAG	OON					
LOCATION			CLSS-1	CLSS-2	CLSS-3	CLSS-4	CLSS-5	CLSS-5	CLSS-5	CLSS-6	CLSS-6	CLSS-6	CLSS-7	CLSS-7	CLSS-7
SAMPLING DATE			3/12/18	3/12/18	3/12/18	3/12/18	3/12/18	4/20/18	4/20/18	3/12/18	4/20/18	4/20/18	3/12/18	4/20/18	4/20/18
SAMPLE DEPTH (FT BGS)			0-1	0-1	0-1	0-1	0-1	1-2	2-3	0-1	1-2	2-3	0-1	1-2	2-3
MCP METHOD 1 STANDARDS		S-1/GW-3	V -	<u> </u>						<u> </u>			<u> </u>		
Metals (mg/kg)	<u> </u>	0 2,011 0													
Antimony	20	20	1.54	6.19	1.97	13.7	33.9	16.1	1.80 U	39.1	1.20 U	1.06 U	8.99	1.31 U	1.32 U
Arsenic	20	20	6.23	4.94	4.41	1.62 U	4.48	14.1	2.88	17.9	1.20 U	1.06 U	5.37	1.37	1.32 U
Barium	1000	1000	60.2	82.6	60.6	11.2	103	389	111	155	62	18.4	61.8	30.6	18.6
Beryllium	90	90	0.44 U	0.68 U	0.58 U		1.42 U	1.26 U	0.90 U	1.55 U	0.60 U	0.53 U	1.56 U		0.66 U
Cadmium	70	70	8.67	8.94	3.93	0.81 U	2.23	8.97	2.68	86.4	1.67	0.91	2.60	1.94	1.21
Chromium (III)	1000	1000	134	361	144	196	1440	599	76.2	1780	35.4	11.3	399	41.5	44.6
Chromium (VI)	100	100	2 U	2 U	2 U		11	5.0 U		11			4.0 U		
Lead	200	200	410	745	283	413	1880	2100	208	1900	16.3	7.66	762	45.0	57.4
Mercury	20	20	0.983	2.34	1.16 U		8.85	4.41	0.917	7.14	0.179	0.045 U	2.06	0.093 U	0.072 U
Nickel	600	600	28.2	32.0	11.5	3.22	11.8	25.0	20.1	72.3	12.1	10.1	8.95	15.4	8.99
Selenium	400	400	0.88 U	1.37 U	1.16 U		2.83 U	2.52 U	1.80 U	3.11 U	1.20 U	1.06 U	3.11 U		1.32 U
Silver	100	100	0.44 U	0.68 U	0.58 U		35.5	5.51	0.90 U	53.6	0.60 U	0.53 U	5.74	0.65 U	0.66 U
Thallium	8	8	0.178 U	0.276 U	0.233 U		0.571 U	0.509 U	0.363 U	0.626 U	0.241 U	0.213 U	0.627 U		0.267 U
Vanadium	400	400	25.9	18.8	13.2	9.53	23.7	35.2	14.1	57.4	28.8	12.8	24.4	27.5	21.9
Zinc	1000	1000	219	181	135	43.4	140	466	571	4850	150	82.7	67.9	92.2	45.9
Extractable Petroleum Hydrocarbons (mg/kg)			_	_					_						
C11-C22 Aromatics			38.4						97.8		45.8	15.1 U			17.1 U
C11-C22 Aromatics, Adjusted	1000	1000	38.4						97.8		45.8	15.1 U			17.1 U
C9-C18 Aliphatics	1000	1000	23.1 U						23.5 U		17.2 U	15.1 U			17.1 U
C19-C36 Aliphatics	3000	3000	149						235		192	40.1			28.2
2-Methylnaphthalene	0.7	300	0.57 U						0.58 U		0.43 U	0.37 U			0.42 U
Acenaphthene	4	1000	0.57 U						0.58 U		0.43 U	0.37 U			0.42 U
Acenaphthylene	1	10	0.57 U						0.58 U		0.43 U	0.37 U			0.42 U
Anthracene	1000	1000	0.57 U						0.58 U		0.43 U	0.37 U			0.42 U
Benzo(a)anthracene	7	7	0.57 U						0.58 U		0.43 U	0.37 U			0.42 U
Benzo(a)pyrene	2	2	0.57 U						0.58 U		0.43 U	0.37 U			0.42 U
Benzo(b)fluoranthene	7	7	0.57 U						0.58 U		0.43 U	0.37 U			0.42 U
Benzo(ghi)perylene	1000	1000	0.57 U						0.58 U		0.43 U	0.37 U			0.42 U
Benzo(k)fluoranthene	70	70	0.57 U						0.58 U		0.43 U	0.37 U			0.42 U
Chrysene	70	70	0.57 U						0.58 U		0.43 U				0.42 U
Dibenzo(a,h)anthracene	0.7	0.7	0.57 U						0.58 U		0.43 U				0.42 U
Fluoranthene	1000	1000	0.57 U						0.58 U		0.43 U				0.42 U
Fluorene	1000	1000	0.57 U						0.58 U		0.43 U				0.42 U
Indeno(1,2,3-cd)Pyrene	7	7	0.57 U						0.58 U		0.43 U				0.42 U
Naphthalene	4	500	0.57 U						0.58 U		0.43 U	0.37 U			0.42 U
Phenanthrene	10	500	0.57 U						0.58 U		0.43 U	0.37 U			0.42 U
Pyrene	1000	1000	0.57 U						0.58 U		0.43 U				0.42 U

Notes:

- 1. mg/kg = milligrams per kilogram
- 2. bold type = detected constituents
- 3. shaded cells = MCP standard exceeded
- 4. U = not detected above laboratory limits
- 5. --- = sample not analyzed for this constituent
- 6. Where no Cr6+ data is available, all chromium assumed to be Cr3+

Table A-3
2018 Carbonizer Trench, Carbonizer Lagoon, and Tail Race Analytical Results
Former Buckley & Mann Site
Norfolk, Massachusetts

SITE AREA	I							CVBI	ONIZER LAG	OON					
LOCATION			CLSS-8	CLSS-9	CLSS-9	CLSS-9	CLSS-10	CLSS-10	CLSS-10	CLSS-11	CLSS-11	CLSS-11	CLSS-12	CLSS-12	CLSS-12
SAMPLING DATE			3/12/18	4/20/18	4/20/18	4/20/18	4/20/18	4/20/18	4/20/18	4/20/18	4/20/18	4/20/18	4/20/18	4/20/18	4/20/18
SAMPLE DEPTH (FT BGS)			0-1	0-1	1-2	2-3	0-1	1-2	2-3	0-1	1-2	2-3	0-1	1-2	2-3
MCP METHOD 1 STANDARDS		S-1/GW-3	<u> </u>	<u> </u>			<u> </u>			<u> </u>			<u> </u>		
Metals (mg/kg)	<u> </u>	0 2,011 0													
Antimony	20	20	8.47	41.6	23.7	26.4	35.6	2.41 U	2.33 U	7.06	1.24 U	1.28 U	48.6	41.3	1.36 U
Arsenic	20	20	3.84 U	10.3	3.67	5.44	9.45	6.50	2.33 U	7.39	1.24 U	1.28 U	12.9	10.8	2.24
Barium	1000	1000	56.2	33.1	49.1	90.1	180	249	92.8	11.6	15.0	15.4	40.1	262	32.3
Beryllium	90	90	1.92 U	1.43 U	1.36 U	1.71 U	1.63 U	1.20 U	1.16 U	0.98 U	0.62 U	0.64 U	1.36 U	1.38 U	0.68 U
Cadmium	70	70	3.62	1.43 U	3.76	4.13	2.78	2.42	1.16 U	0.98 U	1.50	1.52	1.36 U		2.13
Chromium (III)	1000	1000	446	1420	672	550	1040	88.7	32.3	207	49.4	23.5	1780	1290	61.3
Chromium (VI)	100	100	6.0 U	9.0	7.0	66	67			79			14	18	
Lead	200	200	901	444	153	1120	1020	160	20.0	378	95.9	17.5	281	464	194
Mercury	20	20	1.07	3.62	2.59	6.15	5.31	0.292	0.144 U	0.574	0.090 U	0.082 U	5.14	5.86	0.171
Nickel	600	600	11.9	5.35	17.3	21.0	8.79	20.4	19.3	1.89	5.22	8.70	8.52	17.1	11.8
Selenium	400	400	3.84 U	3.50	2.72 U	3.41 U	3.26 U	2.41 U	2.33 U	1.96 U	1.24 U	1.28 U	4.23	2.76 U	1.36 U
Silver	100	100	13.5	21.4	7.20	9.76	14.3	1.20 U	1.16 U	0.98 U	0.62 U	0.64 U	23.0	24.8	0.68 U
Thallium	8	8	0.773 U	0.576 U	0.548 U	0.688 U	0.657	0.485 U	0.469 U	0.395 U	0.251 U	0.258 U	0.547 U	0.557 U	0.363
Vanadium	400	400	25.6	151	104	28.1	79.6	20.8	12.0	45.3	24.6	21.6	126	82.6	23.0
Zinc	1000	1000	60.0	20.8	414	414	160	290	120	8.0	23.3	24.9	28.2	34.0	21.7
Extractable Petroleum Hydrocarbons (mg/kg)															
C11-C22 Aromatics				497		1400	458		50.5			16.6 U			
C11-C22 Aromatics, Adjusted	1000	1000		497		1400	458		50.5			16.6 U			
C9-C18 Aliphatics	1000	1000		33.7 U		131	43.3 U		28.1 U			16.6 U			
C19-C36 Aliphatics	3000	3000		1800		5410	1670		101			16.6 U			
2-Methylnaphthalene	0.7	300		0.84 U		1.15 U	1.07 U		0.70 U			0.41 U			
Acenaphthene	4	1000		0.84 U		1.15 U	1.07 U		0.70 U			0.41 U			
Acenaphthylene	1	10		0.84 U		1.15 U	1.07 U		0.70 U			0.41 U			
Anthracene	1000	1000		0.84 U		1.15 U	1.07 U		0.70 U			0.41 U			
Benzo(a)anthracene	7	7		0.84 U		1.15 U	1.07 U		0.70 U			0.41 U			
Benzo(a)pyrene	2	2		0.84 U		1.15 U	1.07 U		0.70 U			0.41 U			
Benzo(b)fluoranthene	7	7		0.84 U		1.15 U	1.07 U		0.70 U			0.41 U			
Benzo(ghi)perylene	1000	1000		0.84 U		1.15 U	1.07 U		0.70 U			0.41 U			
Benzo(k)fluoranthene	70	70		0.84 U		1.15 U	1.07 U		0.70 U			0.41 U			
Chrysene	70	70		0.84 U		1.15 U	1.07 U		0.70 U			0.41 U			
Dibenzo(a,h)anthracene	0.7	0.7		0.84 U		1.15 U	1.07 U		0.70 U			0.41 U			
Fluoranthene	1000	1000		0.84 U		1.15 U	1.07 U		0.70 U			0.41 U			
Fluorene	1000	1000		0.84 U		1.15 U	1.07 U		0.70 U			0.41 U			
Indeno(1,2,3-cd)Pyrene	7	7		0.84 U		1.15 U	1.07 U		0.70 U			0.41 U			
Naphthalene	4	500		0.84 U		1.15 U	1.07 U		0.70 U			0.41 U			
Phenanthrene	10	500		0.84 U		1.15 U	1.07 U		0.70 U			0.41 U			
Pyrene	1000	1000		0.84 U		1.15 U	1.07 U		0.70 U			0.41 U			

Notes

- 1. mg/kg = milligrams per kilogram
- 2. bold type = detected constituents
- 3. shaded cells = MCP standard exceeded
- 4. U = not detected above laboratory limits
- 5. --- = sample not analyzed for this constituent
- 6. Where no Cr6+ data is available, all chromium assumed to be Cr3+

Table A-3
2018 Carbonizer Trench, Carbonizer Lagoon, and Tail Race Analytical Results
Former Buckley & Mann Site
Norfolk, Massachusetts

SITE AREA			TAIL RACE				
LOCATION			TRSS-1	TRSS-2	TRSS-3	TRSS-4	
SAMPLING DATE			3/12/18	3/12/18	3/12/18	3/12/18	
SAMPLE DEPTH (FT BGS)			0-1	0-1	0-1	0-1	
MCP METHOD 1 STANDARDS	S-1/GW-1	S-1/GW-3					
Metals (mg/kg)							
Antimony	20	20	0.77 U	1.51	1.02 U	0.89 U	
Arsenic	20	20	4.83	3.99	3.97	3.70	
Barium	1000	1000	30.4	55.7	55.1	40.7	
Beryllium	90	90	0.39	0.48 U	0.51 U	0.44 U	
Cadmium	70	70	2.66	2.78	6.05	3.43	
Chromium (III)	1000	1000	29.1	28.0	15.5	18.9	
Chromium (VI)	100	100	1.0 U	1.0 U	2.0 U	1.0 U	
Lead	200	200	30.6	110	16.7	14.4	
Mercury	20	20	0.082 U	0.487	0.108 U	0.087 U	
Nickel	600	600	32.5	37.2	29.7	10.7	
Selenium	400	400	0.77 U	0.96 U	1.02 U	0.89 U	
Silver	100	100	0.39 U	0.48 U	0.51 U	0.44 U	
Thallium	8	8	0.156 U	0.194 U	0.205 U	0.179 U	
Vanadium	400	400	20.2	24.2	17.2	18.0	
Zinc	1000	1000	50.5	56.2	45.6	61.7	
Extractable Petroleum Hydrocarbons (mg/kg)							
C11-C22 Aromatics			15.7 U			18.0 U	
C11-C22 Aromatics, Adjusted	1000	1000	15.7 U			18.0 U	
C9-C18 Aliphatics	1000	1000	15.7 U			18.0 U	
C19-C36 Aliphatics	3000	3000	15.7 U			18.0 U	
2-Methylnaphthalene	0.7	300	0.39 U			0.45 U	
Acenaphthene	4	1000	0.39 U			0.45 U	
Acenaphthylene	1	10	0.39 U			0.45 U	
Anthracene	1000	1000	0.39 U			0.45 U	
Benzo(a)anthracene	7	7	0.39 U			0.45 U	
Benzo(a)pyrene	2	2	0.39 U			0.45 U	
Benzo(b)fluoranthene	7	7	0.39 U			0.45 U	
Benzo(ghi)perylene	1000	1000	0.39 U			0.45 U	
Benzo(k)fluoranthene	70	70	0.39 U			0.45 U	
Chrysene	70	70	0.39 U			0.45 U	
Dibenzo(a,h)anthracene	0.7	0.7	0.39 U			0.45 U	
Fluoranthene	1000	1000	0.39 U			0.45 U	
Fluorene	1000	1000	0.39 U			0.45 U	
Indeno(1,2,3-cd)Pyrene	7	7	0.39 U			0.45 U	
Naphthalene	4	500	0.39 U			0.45 U	
Phenanthrene	10	500	0.39 U			0.45 U	
Pyrene	1000	1000	0.39 U			0.45 U	

Notes:

- 1. mg/kg = milligrams per kilogram
- 2. bold type = detected constituents
- 3. shaded cells = MCP standard exceeded
- 4. U = not detected above laboratory limits
- 5. --- = sample not analyzed for this constituent
- 6. Where no Cr6+ data is available, all chromium assumed to be Cr3+



REPORT OF ANALYTICAL RESULTS

NETLAB Work Order Number: 8C15039 Client Project: 1630 - Buckley Mann Site

Report Date: 22-March-2018

Prepared for:

Rob Berger Capital Environmental 46 Washburn Street Northborough, MA 01532

> Richard Warila, Laboratory Director New England Testing Laboratory, Inc. 59 Greenhill Street West Warwick, RI 02893 rich.warila@newenglandtesting.com

Case Number: 8C15039

Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
8C15039-01	CTSS-1 0-1'	Soil	03/12/2018	03/15/2018
8C15039-02	CTSS-2 0-1'	Soil	03/12/2018	03/15/2018
8C15039-03	CTSS-3 0-1'	Soil	03/12/2018	03/15/2018
8C15039-04	CTSS-4 0-1'	Soil	03/12/2018	03/15/2018
8C15039-05	CLSS-1 0-1'	Soil	03/12/2018	03/15/2018
8C15039-06	CLSS-2 0-1'	Soil	03/12/2018	03/15/2018
8C15039-07	CLSS-3 0-1'	Soil	03/12/2018	03/15/2018
8C15039-08	CLSS-4 0-1'	Soil	03/12/2018	03/15/2018
8C15039-09	CLSS-5 0-1'	Soil	03/12/2018	03/15/2018
8C15039-10	CLSS-6 0-1'	Soil	03/12/2018	03/15/2018
8C15039-11	CLSS-7 0-1'	Soil	03/12/2018	03/15/2018
8C15039-12	CLSS-8 0-1'	Soil	03/12/2018	03/15/2018
8C15039-13	TRSS-1 0-1'	Soil	03/12/2018	03/15/2018
8C15039-14	TRSS-2 0-1'	Soil	03/12/2018	03/15/2018
8C15039-15	TRSS-3 0-1'	Soil	03/12/2018	03/15/2018
8C15039-16	TRSS-4 0-1'	Soil	03/12/2018	03/15/2018

Case Number: 8C15039

Request for Analysis

CLSS-1 0-1'

Analysis	Method
% Solids	Gravimetric
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C
MADEP EPH	MADEP EPH
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-2 0-1'

Analysis	Method
% Solids	Gravimetric
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C

Case Number: 8C15039

Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-3 0-1'

Analysis	Method
% Solids	Gravimetric
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-4 0-1'

Analysis	Method
% Solids	Gravimetric
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C

Case Number: 8C15039

Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-5 0-1'

0200-3 0-1	
Analysis	Method
% Solids	Gravimetric
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-6 0-1'

Analysis	Method
% Solids	Gravimetric
Antimony	EPA 6010C
Arsenic	EPA 6010C

Case Number: 8C15039

Barium EPA 6010C Beryllium **EPA 6010C** EPA 6010C Cadmium **EPA 6010C** Chromium **Hexavalent Chromium** SM3500-Cr-B Lead **EPA 6010C** Mercury EPA 7471B Nickel **EPA 6010C** Selenium EPA 6010C **EPA 6010C** Silver Thallium EPA 7010 **Trivalent Chromium** Calculation Vanadium **EPA 6010C** Zinc **EPA 6010C**

CLSS-7 0-1'

Analysis Method % Solids Gravimetric Antimony **EPA 6010C EPA 6010C** Arsenic Barium **EPA 6010C** Beryllium **EPA 6010C** EPA 6010C Cadmium Chromium **EPA 6010C Hexavalent Chromium** SM3500-Cr-B Lead **EPA 6010C** Mercury EPA 7471B Nickel **EPA 6010C** Selenium **EPA 6010C** Silver **EPA 6010C** EPA 7010 Thallium **Trivalent Chromium** Calculation EPA 6010C Vanadium Zinc **EPA 6010C**

CLSS-8 0-1'

Analysis Method

Case Number: 8C15039

% Solids	Gravimetric
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

CTSS-1 0-1'

Analysis	Method
% Solids	Gravimetric
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C
MADEP EPH	MADEP EPH
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C

Case Number: 8C15039

Zinc EPA 6010C

CTSS-2 0-1'

Analysis	Method
% Solids	Gravimetric
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

CTSS-3 0-1'

Analysis	Method
% Solids	Gravimetric
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C
MADEP EPH	MADEP EPH
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C

Case Number: 8C15039

Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

CTSS-4 0-1'

Analysis	Method
% Solids	Gravimetric
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

TRSS-1 0-1'

Analysis	Method
% Solids	Gravimetric
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C

Case Number: 8C15039

MADEP EPH	MADEP EPH
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

TRSS-2 0-1'

Analysis	Method
% Solids	Gravimetric
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

TRSS-3 0-1'

Analysis	Method
% Solids	Gravimetric
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C

Case Number: 8C15039

Cadmium EPA 6010C Chromium EPA 6010C **Hexavalent Chromium** SM3500-Cr-B Lead EPA 6010C Mercury EPA 7471B Nickel EPA 6010C Selenium EPA 6010C Silver EPA 6010C Thallium EPA 7010 **Trivalent Chromium** Calculation Vanadium EPA 6010C EPA 6010C Zinc

TRSS-4 0-1'

Analysis	Method
% Solids	Gravimetric
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C
MADEP EPH	MADEP EPH
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

Case Number: 8C15039

Case Narrative

Sample Receipt

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

EPH

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

Metals

All analyses were performed according to NETLAB's documented Standard Operating Procedures, within all required holding times, and with appropriate quality control measures. All QC was within laboratory established acceptance criteria. The samples were received, processed, and reported with no anomalies.

Case Number: 8C15039

Sample: CTSS-1 0-1' 8C15039-01 ()

			Reporting		Date Prepared	Date Analyzed	
Analyte	Result	Qual	Limit	Units			
otal Metals							
Antimony	ND		1.97	mg/kg	03/16/18	03/19/18	
Arsenic	6.15		1.97	mg/kg	03/16/18	03/19/18	
Barium	55.1		0.99	mg/kg	03/16/18	03/19/18	
Beryllium	ND		0.99	mg/kg	03/16/18	03/19/18	
Cadmium	5.17		0.99	mg/kg	03/16/18	03/16/18	
Chromium	23.5		0.99	mg/kg	03/16/18	03/16/18	
Lead	52.1		0.99	mg/kg	03/16/18	03/16/18	
Mercury	0.252		0.224	mg/kg	03/20/18	03/20/18	
Nickel	38.2		0.99	mg/kg	03/16/18	03/16/18	
Selenium	ND		1.97	mg/kg	03/16/18	03/16/18	
Silver	ND		0.99	mg/kg	03/16/18	03/19/18	
Thallium	ND		0.397	mg/kg	03/16/18	03/19/18	
Vanadium	21.9		0.99	mg/kg	03/16/18	03/16/18	
Zinc	190		4.0	mg/kg	03/16/18	03/16/18	

Case Number: 8C15039

Sample: CTSS-2 0-1' 8C15039-02 ()

			Reporting		Date Prepared	Date Analyzed
Analyte	Result	Qual	Limit	Units		
otal Metals						
Antimony	ND		1.17	mg/kg	03/16/18	03/19/18
Arsenic	4.93		1.17	mg/kg	03/16/18	03/19/18
Barium	17.5		0.58	mg/kg	03/16/18	03/19/18
Beryllium	ND		0.58	mg/kg	03/16/18	03/19/18
Cadmium	3.92		0.58	mg/kg	03/16/18	03/16/18
Chromium	49.6		0.58	mg/kg	03/16/18	03/16/18
Lead	59.2		0.58	mg/kg	03/16/18	03/16/18
Mercury	0.515		0.124	mg/kg	03/20/18	03/20/18
Nickel	5.82		0.58	mg/kg	03/16/18	03/16/18
Selenium	ND		1.17	mg/kg	03/16/18	03/16/18
Silver	ND		0.58	mg/kg	03/16/18	03/19/18
Thallium	ND		0.235	mg/kg	03/16/18	03/19/18
Vanadium	27.4		0.58	mg/kg	03/16/18	03/16/18
Zinc	31.8		2.4	mg/kg	03/16/18	03/16/18

Case Number: 8C15039

Sample: CTSS-3 0-1' 8C15039-03 ()

			Reporting		Date Prepared	Date Analyzed
Analyte	Result	Qual Limit		Units		
otal Metals						
Antimony	3.03		1.93	mg/kg	03/16/18	03/19/18
Arsenic	9.50		1.93	mg/kg	03/16/18	03/19/18
Barium	30.4		0.97	mg/kg	03/16/18	03/19/18
Beryllium	ND		0.97	mg/kg	03/16/18	03/19/18
Cadmium	7.75		0.97	mg/kg	03/16/18	03/16/18
Chromium	256		0.97	mg/kg	03/16/18	03/16/18
Lead	971		0.97	mg/kg	03/16/18	03/16/18
Mercury	1.08		0.189	mg/kg	03/20/18	03/20/18
Nickel	8.53		0.97	mg/kg	03/16/18	03/16/18
Selenium	ND		1.93	mg/kg	03/16/18	03/16/18
Silver	ND		0.97	mg/kg	03/16/18	03/19/18
Thallium	ND		0.389	mg/kg	03/16/18	03/19/18
Vanadium	29.4		0.97	mg/kg	03/16/18	03/19/18
Zinc	64.3		3.9	mg/kg	03/16/18	03/16/18

Case Number: 8C15039

Sample: CTSS-4 0-1' 8C15039-04 ()

			Reporting		Date Prepared	Date Analyzed
Analyte	Result	Qual	Limit	Units		
otal Metals						
Antimony	ND		1.39	mg/kg	03/16/18	03/19/18
Arsenic	7.44		1.39	mg/kg	03/16/18	03/19/18
Barium	48.5		0.69	mg/kg	03/16/18	03/19/18
Beryllium	ND		0.69	mg/kg	03/16/18	03/19/18
Cadmium	6.91		0.69	mg/kg	03/16/18	03/16/18
Chromium	96.1		0.69	mg/kg	03/16/18	03/16/18
Lead	380		0.69	mg/kg	03/16/18	03/16/18
Mercury	0.490		0.146	mg/kg	03/20/18	03/20/18
Nickel	21.6		0.69	mg/kg	03/16/18	03/16/18
Selenium	ND		1.39	mg/kg	03/16/18	03/16/18
Silver	ND		0.69	mg/kg	03/16/18	03/19/18
Thallium	ND		0.280	mg/kg	03/16/18	03/19/18
Vanadium	15.5		0.69	mg/kg	03/16/18	03/19/18
Zinc	184		2.8	mg/kg	03/16/18	03/16/18

Case Number: 8C15039

Sample: CLSS-1 0-1' 8C15039-05 ()

			Reporting		Date Prepared	Date Analyzed
Analyte	Result	Qual	Limit	Units		
otal Metals						
Antimony	1.54		0.88	mg/kg	03/16/18	03/19/18
Arsenic	6.23		0.88	mg/kg	03/16/18	03/19/18
Barium	60.2		0.44	mg/kg	03/16/18	03/19/18
Beryllium	ND		0.44	mg/kg	03/16/18	03/19/18
Cadmium	8.67		0.44	mg/kg	03/16/18	03/16/18
Chromium	134		0.44	mg/kg	03/16/18	03/16/18
Lead	410		0.44	mg/kg	03/16/18	03/16/18
Mercury	0.983		0.112	mg/kg	03/20/18	03/20/18
Nickel	28.2		0.44	mg/kg	03/16/18	03/16/18
Selenium	ND		0.88	mg/kg	03/16/18	03/16/18
Silver	ND		0.44	mg/kg	03/16/18	03/19/18
Thallium	ND		0.178	mg/kg	03/16/18	03/19/18
Vanadium	25.9		0.44	mg/kg	03/16/18	03/19/18
Zinc	219		1.8	mg/kg	03/16/18	03/16/18

Case Number: 8C15039

Sample: CLSS-2 0-1' 8C15039-06 ()

			Reporting		Date Prepared	Date Analyzed
Analyte	Result	Qual	Limit	Units		
otal Metals						
Antimony	6.19		1.37	mg/kg	03/16/18	03/19/18
Arsenic	4.94		1.37	mg/kg	03/16/18	03/19/18
Barium	82.6		0.68	mg/kg	03/16/18	03/19/18
Beryllium	ND		0.68	mg/kg	03/16/18	03/19/18
Cadmium	8.94		0.68	mg/kg	03/16/18	03/16/18
Chromium	361		0.68	mg/kg	03/16/18	03/16/18
Lead	745		0.68	mg/kg	03/16/18	03/16/18
Mercury	2.34		1.47	mg/kg	03/20/18	03/20/18
Nickel	32.0		0.68	mg/kg	03/16/18	03/16/18
Selenium	ND		1.37	mg/kg	03/16/18	03/16/18
Silver	ND		0.68	mg/kg	03/16/18	03/19/18
Thallium	ND		0.276	mg/kg	03/16/18	03/19/18
Vanadium	18.8		0.68	mg/kg	03/16/18	03/19/18
Zinc	181		2.8	mg/kg	03/16/18	03/16/18

Case Number: 8C15039

Sample: CLSS-3 0-1' 8C15039-07 ()

			Reporting		Date Prepared	Date Analyzed
Analyte	Result	Qual	Limit	Units		
otal Metals						
Antimony	1.97		1.16	mg/kg	03/16/18	03/19/18
Arsenic	4.41		1.16	mg/kg	03/16/18	03/19/18
Barium	60.6		0.58	mg/kg	03/16/18	03/19/18
Beryllium	ND		0.58	mg/kg	03/16/18	03/19/18
Cadmium	3.93		0.58	mg/kg	03/16/18	03/16/18
Chromium	144		0.58	mg/kg	03/16/18	03/16/18
Lead	283		0.58	mg/kg	03/16/18	03/16/18
Mercury	ND		1.16	mg/kg	03/20/18	03/20/18
Nickel	11.5		0.58	mg/kg	03/16/18	03/16/18
Selenium	ND		1.16	mg/kg	03/16/18	03/16/18
Silver	ND		0.58	mg/kg	03/16/18	03/19/18
Thallium	ND		0.233	mg/kg	03/16/18	03/19/18
Vanadium	13.2		0.58	mg/kg	03/16/18	03/19/18
Zinc	135		2.3	mg/kg	03/16/18	03/16/18

Case Number: 8C15039

Sample: CLSS-4 0-1' 8C15039-08 ()

			Reporting		Date Prepared	Date Analyzed
Analyte	Result	Qual	Limit	Units		
otal Metals						
Antimony	13.7		1.62	mg/kg	03/16/18	03/19/18
Arsenic	ND		1.62	mg/kg	03/16/18	03/19/18
Barium	11.2		0.81	mg/kg	03/16/18	03/19/18
Beryllium	ND		0.81	mg/kg	03/16/18	03/19/18
Cadmium	ND		0.81	mg/kg	03/16/18	03/16/18
Chromium	196		0.81	mg/kg	03/16/18	03/16/18
Lead	413		0.81	mg/kg	03/16/18	03/16/18
Mercury	1.11		0.213	mg/kg	03/20/18	03/20/18
Nickel	3.22		0.81	mg/kg	03/16/18	03/16/18
Selenium	ND		1.62	mg/kg	03/16/18	03/16/18
Silver	5.55		0.81	mg/kg	03/16/18	03/19/18
Thallium	ND		0.326	mg/kg	03/16/18	03/19/18
Vanadium	9.53		0.81	mg/kg	03/16/18	03/19/18
Zinc	43.4		3.3	mg/kg	03/16/18	03/16/18

Case Number: 8C15039

Sample: CLSS-5 0-1' 8C15039-09 ()

			Reporting		Date Prepared	Date Analyzed
Analyte	Result	Qual	Limit	Units		
otal Metals						
Antimony	33.9		2.83	mg/kg	03/16/18	03/19/18
Arsenic	4.48		2.83	mg/kg	03/16/18	03/19/18
Barium	103		1.42	mg/kg	03/16/18	03/19/18
Beryllium	ND		1.42	mg/kg	03/16/18	03/19/18
Cadmium	2.23		1.42	mg/kg	03/16/18	03/16/18
Chromium	1440		1.42	mg/kg	03/16/18	03/16/18
Lead	1880		1.42	mg/kg	03/16/18	03/16/18
Mercury	8.85		2.62	mg/kg	03/20/18	03/20/18
Nickel	11.8		1.42	mg/kg	03/16/18	03/16/18
Selenium	ND		2.83	mg/kg	03/16/18	03/16/18
Silver	35.5		1.42	mg/kg	03/16/18	03/19/18
Thallium	ND		0.571	mg/kg	03/16/18	03/19/18
Vanadium	23.7		1.42	mg/kg	03/16/18	03/19/18
Zinc	140		5.7	mg/kg	03/16/18	03/16/18

Case Number: 8C15039

Sample: CLSS-6 0-1' 8C15039-10 ()

			Reporting		Date Prepared	Date Analyzed
Analyte	Result	Qual	Limit	Units		
otal Metals						
Antimony	39.1		3.11	mg/kg	03/16/18	03/19/18
Arsenic	17.9		3.11	mg/kg	03/16/18	03/19/18
Barium	155		1.55	mg/kg	03/16/18	03/19/18
Beryllium	ND		1.55	mg/kg	03/16/18	03/19/18
Cadmium	86.4		1.55	mg/kg	03/16/18	03/16/18
Chromium	1780		1.55	mg/kg	03/16/18	03/16/18
Lead	1900		1.55	mg/kg	03/16/18	03/16/18
Mercury	7.14		3.08	mg/kg	03/20/18	03/20/18
Nickel	72.3		1.55	mg/kg	03/16/18	03/16/18
Selenium	ND		3.11	mg/kg	03/16/18	03/16/18
Silver	53.6		1.55	mg/kg	03/16/18	03/19/18
Thallium	ND		0.626	mg/kg	03/16/18	03/19/18
Vanadium	57.4		1.55	mg/kg	03/16/18	03/19/18
Zinc	4850		6.3	mg/kg	03/16/18	03/16/18

Case Number: 8C15039

Sample: CLSS-7 0-1' 8C15039-11 ()

			Reporting		Date Prepared	Date Analyzed
Analyte	Result	Qual	Limit	Units		
otal Metals						
Antimony	8.99		3.11	mg/kg	03/16/18	03/19/18
Arsenic	5.37		3.11	mg/kg	03/16/18	03/19/18
Barium	61.8		1.56	mg/kg	03/16/18	03/19/18
Beryllium	ND		1.56	mg/kg	03/16/18	03/19/18
Cadmium	2.60		1.56	mg/kg	03/16/18	03/16/18
Chromium	399		1.56	mg/kg	03/16/18	03/16/18
Lead	762		1.56	mg/kg	03/16/18	03/16/18
Mercury	2.06		0.311	mg/kg	03/20/18	03/20/18
Nickel	8.95		1.56	mg/kg	03/16/18	03/16/18
Selenium	ND		3.11	mg/kg	03/16/18	03/16/18
Silver	5.74		1.56	mg/kg	03/16/18	03/19/18
Thallium	ND		0.627	mg/kg	03/16/18	03/19/18
Vanadium	24.4		1.56	mg/kg	03/16/18	03/19/18
Zinc	67.9		6.3	mg/kg	03/16/18	03/16/18

Case Number: 8C15039

Sample: CLSS-8 0-1' 8C15039-12 ()

			Reporting		Date Prepared	Date Analyzed
Analyte	Result	Qual	Limit	Units		
otal Metals						
Antimony	8.47		3.84	mg/kg	03/16/18	03/19/18
Arsenic	ND		3.84	mg/kg	03/16/18	03/19/18
Barium	56.2		1.92	mg/kg	03/16/18	03/19/18
Beryllium	ND		1.92	mg/kg	03/16/18	03/19/18
Cadmium	3.62		1.92	mg/kg	03/16/18	03/16/18
Chromium	446		1.92	mg/kg	03/16/18	03/16/18
Lead	901		1.92	mg/kg	03/16/18	03/16/18
Mercury	1.07		0.403	mg/kg	03/20/18	03/20/18
Nickel	11.9		1.92	mg/kg	03/16/18	03/16/18
Selenium	ND		3.84	mg/kg	03/16/18	03/16/18
Silver	13.5		1.92	mg/kg	03/16/18	03/19/18
Thallium	ND		0.773	mg/kg	03/16/18	03/19/18
Vanadium	25.6		1.92	mg/kg	03/16/18	03/19/18
Zinc	60.0		7.7	mg/kg	03/16/18	03/16/18

Case Number: 8C15039

Sample: TRSS-1 0-1' 8C15039-13 ()

			Reporting		Date Prepared	Date Analyzed
Analyte	Result	Qual	Limit	Units		
otal Metals						
Antimony	ND		0.77	mg/kg	03/16/18	03/19/18
Arsenic	4.83		0.77	mg/kg	03/16/18	03/19/18
Barium	30.4		0.39	mg/kg	03/16/18	03/19/18
Beryllium	0.39		0.39	mg/kg	03/16/18	03/19/18
Cadmium	2.66		0.39	mg/kg	03/16/18	03/16/18
Chromium	29.1		0.39	mg/kg	03/16/18	03/16/18
Lead	30.6		0.39	mg/kg	03/16/18	03/16/18
Mercury	ND		0.082	mg/kg	03/20/18	03/20/18
Nickel	32.5		0.39	mg/kg	03/16/18	03/16/18
Selenium	ND		0.77	mg/kg	03/16/18	03/16/18
Silver	ND		0.39	mg/kg	03/16/18	03/19/18
Thallium	ND		0.156	mg/kg	03/16/18	03/19/18
Vanadium	20.2		0.39	mg/kg	03/16/18	03/19/18
Zinc	50.5		1.6	mg/kg	03/16/18	03/16/18

Case Number: 8C15039

Sample: TRSS-2 0-1' 8C15039-14 ()

			Reporting		Date Prepared	Date Analyzed
Analyte	Result	Qual	Limit	Units		
otal Metals						
Antimony	1.51		0.96	mg/kg	03/16/18	03/19/18
Arsenic	3.99		0.96	mg/kg	03/16/18	03/19/18
Barium	55.7		0.48	mg/kg	03/16/18	03/19/18
Beryllium	ND		0.48	mg/kg	03/16/18	03/19/18
Cadmium	2.78		0.48	mg/kg	03/16/18	03/16/18
Chromium	28.0		0.48	mg/kg	03/16/18	03/16/18
Lead	110		0.48	mg/kg	03/16/18	03/16/18
Mercury	0.487		0.103	mg/kg	03/20/18	03/20/18
Nickel	37.2		0.48	mg/kg	03/16/18	03/16/18
Selenium	ND		0.96	mg/kg	03/16/18	03/16/18
Silver	ND		0.48	mg/kg	03/16/18	03/19/18
Thallium	ND		0.194	mg/kg	03/16/18	03/19/18
Vanadium	24.2		0.48	mg/kg	03/16/18	03/19/18
Zinc	56.2		1.9	mg/kg	03/16/18	03/16/18

Case Number: 8C15039

Sample: TRSS-3 0-1' 8C15039-15 ()

			Reporting		Date Prepared	Date Analyzed
Analyte	Result	Qual	Limit	Units		
otal Metals						
Antimony	ND		1.02	mg/kg	03/16/18	03/19/18
Arsenic	3.97		1.02	mg/kg	03/16/18	03/19/18
Barium	55.1		0.51	mg/kg	03/16/18	03/19/18
Beryllium	ND		0.51	mg/kg	03/16/18	03/19/18
Cadmium	6.05		0.51	mg/kg	03/16/18	03/16/18
Chromium	15.5		0.51	mg/kg	03/16/18	03/16/18
Lead	16.7		0.51	mg/kg	03/16/18	03/16/18
Mercury	ND		0.108	mg/kg	03/20/18	03/20/18
Nickel	29.7		0.51	mg/kg	03/16/18	03/16/18
Selenium	ND		1.02	mg/kg	03/16/18	03/16/18
Silver	ND		0.51	mg/kg	03/16/18	03/19/18
Thallium	ND		0.205	mg/kg	03/16/18	03/19/18
Vanadium	17.2		0.51	mg/kg	03/16/18	03/19/18
Zinc	45.6		2.1	mg/kg	03/16/18	03/16/18

Case Number: 8C15039

Sample: TRSS-4 0-1' 8C15039-16 ()

		Reporting			Date Prepared	Date Analyzed
Analyte	Result	Qual	Limit	Units		
otal Metals						
Antimony	ND		0.89	mg/kg	03/16/18	03/19/18
Arsenic	3.70		0.89	mg/kg	03/16/18	03/19/18
Barium	40.7		0.44	mg/kg	03/16/18	03/19/18
Beryllium	ND		0.44	mg/kg	03/16/18	03/19/18
Cadmium	3.43		0.44	mg/kg	03/16/18	03/16/18
Chromium	18.9		0.44	mg/kg	03/16/18	03/16/18
Lead	14.4		0.44	mg/kg	03/16/18	03/16/18
Mercury	ND		0.087	mg/kg	03/20/18	03/20/18
Nickel	10.7		0.44	mg/kg	03/16/18	03/16/18
Selenium	ND		0.89	mg/kg	03/16/18	03/16/18
Silver	ND		0.44	mg/kg	03/16/18	03/19/18
Thallium	ND		0.179	mg/kg	03/16/18	03/19/18
Vanadium	18.0		0.44	mg/kg	03/16/18	03/19/18
Zinc	61.7		1.8	mg/kg	03/16/18	03/16/18

Case Number: 8C15039

Sample: CTSS-1 0-1' 8C15039-01 ()

			Reporting		Date Prepared	Date Analyzed
Analyte	Result	Qual	Limit	Units		
Calculation						
Trivalent Chromium	23.5		0.985	mg/kg	03/21/18	03/21/18
General Chemistry						
Hexavalent chromium	ND		3	mg/kg	03/21/18	03/21/18

Case Number: 8C15039

Sample: CTSS-2 0-1' 8C15039-02 ()

			Reporting		Date Prepared	Date Analyzed
Analyte	Result	Qual	Limit	Units		
Calculation						
Trivalent Chromium	49.6		0.584	mg/kg	03/21/18	03/21/18
General Chemistry						
Hexavalent chromium	ND		2	mg/kg	03/21/18	03/21/18

Case Number: 8C15039

Sample: CTSS-3 0-1' 8C15039-03 ()

			Reporting		Date Prepared	Date Analyzed
Analyte	Result	Qual	Limit	Units		
Calculation						
Trivalent Chromium	256		0.966	mg/kg	03/21/18	03/21/18
General Chemistry						
Hexavalent chromium	ND		3	mg/kg	03/21/18	03/21/18

Case Number: 8C15039

Sample: CTSS-4 0-1' 8C15039-04 ()

			Date Prepared	Date Analyzed		
Analyte	Result	Qual	Limit	Units		
Calculation						
Trivalent Chromium	90.1		0.695	mg/kg	03/21/18	03/21/18

Case Number: 8C15039

Sample: CLSS-1 0-1' 8C15039-05 ()

		Reporting			Date Prepared	Date Analyzed
Analyte	Result	Qual	Limit	Units		
Calculation						
Trivalent Chromium	134		0.442	mg/kg	03/21/18	03/21/18
General Chemistry						
Hexavalent chromium	ND		2	mg/kg	03/21/18	03/21/18

Case Number: 8C15039

Sample: CLSS-2 0-1' 8C15039-06 ()

			Reporting	Date Prepared	Date Analyzed	
Analyte	Result	Qual	Limit	Units		
Calculation						
Trivalent Chromium	361		0.685	mg/kg	03/21/18	03/21/18
General Chemistry						
Hexavalent chromium	ND		2	mg/kg	03/21/18	03/21/18

Case Number: 8C15039

Sample: CLSS-3 0-1' 8C15039-07 ()

		Reporting				Date Analyzed
Analyte	Result	Qual	Limit	Units		
Calculation						
Trivalent Chromium	144		0.578	mg/kg	03/21/18	03/21/18
General Chemistry						
Hexavalent chromium	ND		2	mg/kg	03/21/18	03/21/18

Case Number: 8C15039

Sample: CLSS-4 0-1' 8C15039-08 ()

			Date Prepared	Date Analyzed		
Analyte	Result	Qual Limit		Units		
Calculation						
Trivalent Chromium	181		0.809	mg/kg	03/21/18	03/21/18
	181		0.809	mg/kg	03/21/18	03/21
eneral Chemistry						
Hexavalent chromium	15		3	mg/kg	03/21/18	03/21/18

Case Number: 8C15039

Sample: CLSS-5 0-1' 8C15039-09 ()

			Date Prepared	Date Analyzed		
Analyte	Result	Qual Limit		Units		
Calculation						
Trivalent Chromium	1429		1.42	mg/kg	03/21/18	03/21/18
General Chemistry						
Hexavalent chromium	11		4	mg/kg	03/21/18	03/21/18

Case Number: 8C15039

Sample: CLSS-6 0-1' 8C15039-10 ()

			Reporting	Date Prepared	Date Analyzed	
Analyte	Result	Qual	Limit	Units		
Calculation						
Trivalent Chromium	1769		1.55	mg/kg	03/21/18	03/21/18
General Chemistry						
Hexavalent chromium	11		4	mg/kg	03/21/18	03/21/18

Case Number: 8C15039

Sample: CLSS-7 0-1' 8C15039-11 ()

		Reporting				Date Analyzed
Analyte	Result	Qual	Limit	Units		
Calculation						
Trivalent Chromium	399		1.56	mg/kg	03/21/18	03/21/18
General Chemistry						
Hexavalent chromium	ND		4	mg/kg	03/21/18	03/21/18

Case Number: 8C15039

Sample: CLSS-8 0-1' 8C15039-12 ()

		Reporting				Date Analyzed
Analyte	Result	Qual	Limit	Units		
Calculation						
Trivalent Chromium	446		1.92	mg/kg	03/21/18	03/21/18
General Chemistry						
Hexavalent chromium	ND		6	mg/kg	03/21/18	03/21/18

Case Number: 8C15039

Sample: TRSS-1 0-1' 8C15039-13 ()

			Reporting	Date Prepared	Date Analyzed	
Analyte	Result	Qual	Limit			
Calculation						
Trivalent Chromium	29.1		0.387	mg/kg	03/21/18	03/21/18
General Chemistry						
Hexavalent chromium	ND		1	mg/kg	03/21/18	03/21/18

Case Number: 8C15039

Sample: TRSS-2 0-1' 8C15039-14 ()

		Reporting				Date Analyzed
Analyte	Result	Qual	Limit	Units		
Calculation						
Trivalent Chromium	28.0		0.482	mg/kg	03/21/18	03/21/18
General Chemistry						
Hexavalent chromium	ND		1	mg/kg	03/21/18	03/21/18

Case Number: 8C15039

Sample: TRSS-3 0-1' 8C15039-15 ()

		Reporting				Date Analyzed
Analyte	Result	Qual	Limit	Units		
Calculation						
Trivalent Chromium	15.5		0.510	mg/kg	03/21/18	03/21/18
General Chemistry						
Hexavalent chromium	ND		2	mg/kg	03/21/18	03/21/18

Case Number: 8C15039

Sample: TRSS-4 0-1' 8C15039-16 ()

			Date Prepared	Date Analyzed		
Analyte	Result	Qual	Limit	Units		
Calculation						
Trivalent Chromium	18.9		0.443	mg/kg	03/21/18	03/21/18
General Chemistry						
Hexavalent chromium	ND		1	mg/kg	03/21/18	03/21/18

RESULTS: EXTRACTABLE PETROLEUM HYDROCARBONS

Results for EPH analysis are presented in the following section. Each page is electronically signed.

SAMPLE INFORMATION

Matrix	☐ Aqueous ☒ Soil ☐ Sediment ☐ Other:
Containers	Satisfactory □ Broken □ Leaking:
Aqueous Preservatives	\square N/A \square pH \leq 2 \square pH>2 Comment:
Temperature	⊠ Received on Ice ⊠ Received at 4 ± 2 °C □ Other: °C
Extraction Method	Water: N/A Soil/Sediment: 3546

EPH ANALYTICAL RESULTS

Method for R	anges: MADEP EPH 04-1.1		Client ID	Method	CTSS-1	CTSS-3	CLSS-1	TRSS-1
				Blank	0-1	0-1	0-1	0-1
Method for T	arget Analytes:		Lab ID	B8C0564	8C15039	8C15039	8C15039	8C15039
				-BLK1	-01	-03	-05	-13
EPH Surroga	te Standards:	Date	Collected	NA	3/12/18	3/12/18	3/12/18	3/12/18
Aliphatic: Ch	loro-octadecane	Date	Received	NA	3/15/18	3/15/18	3/15/18	3/15/18
Aromatic: o-7	Terphenyl	Dat	e Thawed	NA	NA	NA	NA	NA
		Date	Extracted	3/16/18	3/16/18	3/16/18	3/16/18	3/16/18
EPH Fraction	nation Surrogates:	Date	Analyzed	3/19/18	3/20/18	3/19/18	3/19/18	3/19/18
(1) 2-Flu	orobiphenyl	Time	Analyzed	13:31	12.11	16:25	15:34	15:59
				13:14	13:11	16:02	15:14	15:38
(2) 2-Bro	omonaphthalene	Diluti	on Factor	1X	1X	1X	1X	1X
		%	Moisture	NA	71.3	66.0	43.1	18.9
		(soil/	sediment)	INA	71.3	00.0	43.1	10.9
RANGE/TAR	RGET ANALYTE	RL	Units					
Unadjusted C	Jnadjusted C11-C22 Aromatics ¹		mg/kg	<13.3	<46.3	<38.7	38.4	<15.7
	Naphthalene	0.33	mg/kg	< 0.33	<1.15	< 0.96	< 0.57	< 0.39
Diesel PAH	2-Methylnaphthalene	0.33	mg/kg	< 0.33	<1.15	1.16	< 0.57	< 0.39
Analytes	Phenanthrene	0.33	mg/kg	< 0.33	<1.15	< 0.96	< 0.57	< 0.39
	Acenaphthene	0.33	mg/kg	< 0.33	<1.15	< 0.96	< 0.57	< 0.39
	Acenaphthylene	0.33	mg/kg	< 0.33	<1.15	< 0.96	< 0.57	< 0.39
	Fluorene	0.33	mg/kg	< 0.33	<1.15	< 0.96	< 0.57	< 0.39
	Anthracene	0.33	mg/kg	< 0.33	<1.15	1.11	< 0.57	< 0.39
	Fluoranthene	0.33	mg/kg	< 0.33	<1.15	< 0.96	< 0.57	< 0.39
Other	Pyrene	0.33	mg/kg	< 0.33	<1.15	< 0.96	< 0.57	< 0.39
Target PAH	Benzo(a)anthracene	0.33	mg/kg	< 0.33	<1.15	< 0.96	< 0.57	< 0.39
Analytes	Chrysene	0.33	mg/kg	< 0.33	<1.15	< 0.96	< 0.57	< 0.39
	Benzo(b)fluoranthene	0.33	mg/kg	< 0.33	<1.15	< 0.96	< 0.57	< 0.39
	Benzo(k)fluoranthene	0.33	mg/kg	< 0.33	<1.15	< 0.96	< 0.57	< 0.39
	Benzo(a)pyrene	0.33	mg/kg	< 0.33	<1.15	< 0.96	< 0.57	< 0.39
	Indeno(1,2,3-cd)pyrene	0.33	mg/kg	< 0.33	<1.15	< 0.96	< 0.57	< 0.39
	Dibenzo(a,h)anthracene	0.33	mg/kg	< 0.33	<1.15	< 0.96	< 0.57	<0.39
	Benzo(g,h,i)perylene	0.33	mg/kg	< 0.33	<1.15	< 0.96	< 0.57	< 0.39
	atic Hydrocarbons ¹	13.3	mg/kg	<13.3	<46.3	<38.7	<23.1	<15.7
	hatic Hydrocarbons ¹	13.3	mg/kg	<13.3	<46.3	64.9	149	<15.7
	matic Hydrocarbons ^{1,2}	13.3	mg/kg	<13.3	<46.3	<38.7	38.4	<15.7
Aliphatic Sur	rogate % Recovery			57	58	42	41	60
Aromatic Sur	rogate % Recovery			70	80	47	55	80
Sample Surro	gate Acceptance Range			40-140%	40-140%	40-140%	40-140%	40-140%
Fractionation	Surrogate (1) % Recovery			98	91	107	110	109
Fractionation	Surrogate (2) % Recovery			104	89	110	119	114
Fractionation	Surrogate Acceptance Range			40-140%	40-140%	40-140%	40-140%	40-140%
	Danga data aveluda area counts of any su	magata(a)	and/au intau	al atandanda a	lutina in that	*****		

¹Hydrocarbon Range data exclude area counts of any surrogate(s) and/or internal standards eluting in that range

MADEP-EPH-04-1 April 04

 $^{^2}$ $C_{11}\text{-}C_{22}$ Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

SAMPLE INFORMATION

Matrix	□ Aqueous ⊠ Soil □ Sediment □ Other:
Containers	⊠ Satisfactory □ Broken □ Leaking:
Aqueous Preservatives	\square N/A \square pH \leq 2 \square pH>2 Comment:
Temperature	⊠ Received on Ice ⊠ Received at 4 ± 2 °C □ Other: °C
Extraction Method	Water: N/A Soil/Sediment: 3546

EPH ANALYTICAL RESULTS

	ANALYTICAL RESULTS					
Method for R	anges: MADEP EPH 04-1.1		Client ID	TRSS-4		
				0-1		
Method for T	arget Analytes:		Lab ID	8C15039-		
				16		
EPH Surroga			Collected	3/12/18		
_	loro-octadecane		Received	3/15/18		
Aromatic: o-7	Гегрhenyl		e Thawed	NA		
		Date	Extracted	3/16/18		
	CPH Fractionation Surrogates:			3/20/18		
(1) 2-Flu	orobiphenyl	Time	Analyzed	13:35		
			on Factor	13:36		
(2) 2-Bro	(2) 2-Bromonaphthalene			1X		
			Moisture	27.9		
			sediment)	27.5		
	RGET ANALYTE	RL	Units			
Unadjusted C	C11-C22 Aromatics ¹	13.3	mg/kg	<18.0		
	Naphthalene	0.33	mg/kg	< 0.45		
Diesel PAH	2-Methylnaphthalene	0.33	mg/kg	< 0.45		
Analytes	Phenanthrene	0.33	mg/kg	< 0.45		
	Acenaphthene	0.33	mg/kg	< 0.45		
	Acenaphthylene	0.33	mg/kg	< 0.45		
	Fluorene	0.33	mg/kg	< 0.45		
	Anthracene	0.33	mg/kg	< 0.45		
	Fluoranthene	0.33	mg/kg	< 0.45		
Other	Pyrene	0.33	mg/kg	< 0.45		
Target PAH	Benzo(a)anthracene	0.33	mg/kg	< 0.45		
Analytes	Chrysene	0.33	mg/kg	< 0.45		
	Benzo(b)fluoranthene	0.33	mg/kg	< 0.45		
	Benzo(k)fluoranthene	0.33	mg/kg	< 0.45		
	Benzo(a)pyrene	0.33	mg/kg	< 0.45		
	Indeno(1,2,3-cd)pyrene	0.33	mg/kg	< 0.45		
	Dibenzo(a,h)anthracene	0.33	mg/kg	< 0.45		
	Benzo(g,h,i)perylene	0.33	mg/kg	< 0.45		
C9-C18 Aliph	atic Hydrocarbons ¹	13.3	mg/kg	<18.0		
	hatic Hydrocarbons ¹	13.3	mg/kg	<18.0		
	matic Hydrocarbons ^{1,2}	13.3	mg/kg	<18.0		
	rogate % Recovery			56		
_	romatic Surrogate % Recovery			78		
	ample Surrogate Acceptance Range			40-140%		
	actionation Surrogate (1) % Recovery			92		
	Surrogate (2) % Recovery			94		
	Surrogate Acceptance Range			40-140%		
1			<u> </u>		l .	

¹Hydrocarbon Range data exclude area counts of any surrogate(s) and/or internal standards eluting in that range

 $^2\,C_{11}\text{-}C_{22}$ Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

MADEP-EPH-04-1 April 04

spike.txt Spike Recovery and RPD Summary Report - SOIL

Method : K:\GC-M\METHODS\ALI-QNT.M (Chemstation Integrator)

Title

Last Update : Thu Mar 08 13:13:22 2018

Response via : Initial Calibration

Non-Spiked Sample: M031902.D

Spike Spike

Sample Duplicate Sample

File ID: M031903.D | M031904.D |
Sample: B8C0564-BS1 @HX-S | B8C0564-BSD1 @HX-S |
Acq Time: 19 Mar 2018 13:38 | 19 Mar 2018 14:02

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC RPD	Limits % Rec
Nonane	0.0	40	16	17	40	43	 7	25	30-140
Decane	0.0	40	21	22	52	54	4	25	40-140
Dodecane	0.0	40	23	24	58	61	6	25	40-140
Tetradecane	0.0	40	23	24	58	61	4	25	40-140
Hexadecane	0.0	40	26	26	64	65	2	25	40-140
Octadecane	0.0	40	30	29	75	74	2	25	40-140
Nonadecane	0.0	40	30	30	75	74	2	25	40-140
Eicosane	0.0	40	31	30	77	75	2	25	40-140
Docosane	0.0	40	31	30	78	75	3	25	40-140
Tetracosane	0.0	40	31	30	77	74	4	25	40-140
Hexacosane	0.0	40	31	30	78	75	4	25	40-140
Octacosane	0.0	40	31	30	79	75	4	25	40-140
Triacontane	0.0	40	31	29	77	74	5	25	40-140
Hexatriacontane	0.0	40	28	25	70	61	14	25	40-140

- Fails Limit Check

ALI-QNT.M Mon Mar 19 14:28:40 2018

spike.txt Spike Recovery and RPD Summary Report - SOIL

: K:\GC-K\METHODS\AROQT.M (Chemstation Integrator) Method

Title

Last Update : Fri Mar 16 11:21:12 2018

Response via: Initial Calibration

Non-Spiked Sample: K031902.D

Spike Spike

Sample Duplicate Sample

File ID : K031903.D Sample : B8C0564-BS1 Acq Time: 19 Mar 2018 13:57 | K031904.D | B8C0564-BSD1

| 19 Mar 2018 14:22

Sample Spike Spike Dup Spike Dup RPD QC Limits Compound Conc Added Res Res %Rec %Rec RPD % Rec | 0.0 | 40 | 31 | 29 | 78 | 73 | 7 | 25 | 40-140| Napthalene 2-Methyl Napthalene | 0.0 | 40 | 31 | 29 | 78 | 73 | 7 | 25 | 40-140| Acenaphthylene | 0.0 | 40 | 33 | 31 | 82 | 76 | 7 | 25 | 40-140| Acenaphthene 0.0 | 40 | 32 | 29 | 79 | 73 | 7 | 25 | 40-140 | Phenanthrene | 0.0 | 40 | 36 | 33 | 90 | 83 | 8 | 25 | 40-140 |

Anthracene | 0.0 | 40 | 34 | 33 | 84 | 82 | 3 | 25 | 40-140 |

Fluoranthene | 0.0 | 40 | 34 | 31 | 85 | 78 | 9 | 25 | 40-140 |

Pyrene | 0.0 | 40 | 34 | 32 | 96 | 70 | 0 | 0 | | 0.0 | 40 | 32 | 30 | 81 | 75 | 8 | 25 | 40-140| Benzo (a) Anthracene | 0.0 | 40 | 37 | 34 | 92 | 84 | 9 | 25 | 40-140 | 0.0 | 40 | 34 | 31 | 84 | 78 | 7 | 25 | 40-140 | Chrysene Benzo (b) Flouranthe 0.0 | 40 | 34 | 31 | 84 | 78 | 7 | 25 | 40-140 | Benzo(k)Flouranthene | 0.0 | 40 | 36 | 34 | 89 | 84 | 6 | 25 | 40-140 | | 0.0 | 40 | 33 | 31 | 83 | 77 | 8 | 25 | 40-140| Benzo(a)Pyrene Indeno(1,2,3)Pyrene | 0.0 | 40 | 35 | 31 | 87 | 78 | 11 | 25 | 40-140| Dibenzo(ah)Anthracen | 0.0 | 40 | 35 | 33 | 87 | 84 | 4 | 25 | 40-140 | Benzo(g,h,i)Perylene | 0.0 | 40 | 34 | 31 | 85 | 78 | 8 | 25 | 40-140 |

- Fails Limit Check

AROQT.M Tue Mar 20 13:55:42 2018

Case Number: 8C15039

Quality Control

General Chemistry

Analyte	Result Qual	Reporting Limit Units	•	urce esult %REC	%REC Limits	RPD	RPD Limit
Batch: B8C0745 - Hexavalent Cl	hrome						
Blank (B8C0745-BLK1)			Prepared & Analy	vzed: 03/21/18			
Hexavalent chromium	ND	1 mg/kg					
Blank (B8C0745-BLK2)			Prepared & Analy	yzed: 03/21/18			
Hexavalent chromium	ND	1 mg/kg					
Blank (B8C0745-BLK3)			Prepared & Analy	yzed: 03/21/18			
Hexavalent chromium	ND	1 mg/kg					
LCS (B8C0745-BS1)			Prepared & Analy	yzed: 03/21/18			
Hexavalent chromium	19	1 mg/kg	20.0	94.0	90-110		
LCS (B8C0745-BS2)			Prepared & Analy	yzed: 03/21/18			
Hexavalent chromium	19	1 mg/kg	20.0	94.8	90-110		
LCS (B8C0745-BS3)			Prepared & Analy	yzed: 03/21/18			
Hexavalent chromium	19	1 mg/kg	20.0	97.2	90-110		
Duplicate (B8C0745-DUP1)	Source: 8	BC15039-01	Prepared & Analy	yzed: 03/21/18			
Hexavalent chromium	ND	³ mg/kg dry		ND			20
Matrix Spike (B8C0745-MS1)	Source: 8	BC15039-01	Prepared & Analy	yzed: 03/21/18			
Hexavalent chromium	38	³ mg/kg dry		ND 55.2	80-120		

Case Number: 8C15039

Quality Control (Continued)

Total Metals

Analyte	Result Qual	Reporting Limit		Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8C0581 - Metals D	igostion Soils								
	iyestidii Solis			Droparadi 02/1	6/19 Analyzos	1. 02/10/10			
Blank (B8C0581-BLK1)	ND	0.122		Prepareu: 03/1	16/18 Analyzed	1: 03/19/16			
Thallium Selenium	ND ND	0.133 m							
	ND ND	0.66 m							
Chromium	ND ND		ıg/kg						
Arsenic	ND	0.66 m							
Cadmium	ND	0.33 m							
Barium	ND		ıg/kg						
Beryllium	ND	0.33 m							
Antimony	ND	0.66 m							
Silver	ND	0.33 m							
Lead	ND	0.33 m							
Vanadium	ND	0.33 m							
Nickel	ND	0.33 m	-						
Zinc	ND	1.3 m	ıg/kg						
LCS (B8C0581-BS1)				Prepared 8	& Analyzed: 03	/16/18			
Vanadium	70.3	0.33 m	ıg/kg	66.7		105	85-115		
Arsenic	13.3	0.66 m	ıg/kg	13.3		99.9	85-115		
Cadmium	60.1	0.33 m	ıg/kg	66.7		90.1	85-115		
Lead	67.3	0.33 m	g/kg	66.7		101	85-115		
Selenium	12.3	0.66 m	g/kg	13.3		92.1	85-115		
Nickel	60.3		ıg/kg	66.7		90.5	85-112		
Silver	25.8	0.33 m	ıg/kg	26.7		96.7	85-115		
Antimony	66.1	0.66 m		66.7		99.2	85-115		
Barium	64.4	0.33 m		66.7		96.5	85-115		
Zinc	67.2	1.3 m		66.7		101	85-115		
Beryllium	14.2	0.33 m		13.3		106	85-115		
Chromium	69.7	0.33 m	-	66.7		105	85-115		

Case Number: 8C15039

Quality Control (Continued)

Total Metals (Continued)

Analyte	Result Qual	Reportii Lin	-	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8C0581 - Metals Digestio	on Soils (Continu	ed)							
LCS (B8C0581-BS2)			Pr	epared: 03/1	16/18 Analyze	d: 03/19/18			
Thallium	18.6		ug/l	20.0		93.1	85-115		
Matrix Spike (B8C0581-MS1)	Source:	8C15027-01	Pr	epared: 03/1	16/18 Analyze	d: 03/19/18			
Silver	34.1	0.49	mg/kg dry	39.7		85.8	70-130		
Zinc	112	2.0	mg/kg dry	99.2	32.6	80.0	70-130		
Vanadium	90.6	0.49	mg/kg dry	99.2		91.3	70-130		
Arsenic	23.7	0.98	mg/kg dry	19.8		119	70-130		
Nickel	88.2	0.49	mg/kg dry	99.2		88.9	70-130		
Barium	136	0.49	mg/kg dry	99.2		137	70-130		
Beryllium	20.0	0.49	mg/kg dry	19.8		101	70-130		
Antimony	86.7	0.98	mg/kg dry	99.2		87.4	70-130		
Cadmium	79.6	0.49	mg/kg dry	99.2		80.2	70-130		
Lead	81.1	0.49	mg/kg dry	99.2		81.7	70-130		
Matrix Spike Dup (B8C0581-MSD1)	Source:	8C15027-01	Pr	epared: 03/1	16/18 Analyze				
Nickel	86.9	0.49	mg/kg dry	98.5		88.2	70-130	1.58	200
Vanadium	92.4	0.49	mg/kg dry	98.5		93.8	70-130	1.99	200
Zinc	115	2.0	mg/kg dry	98.5	32.6	83.4	70-130	2.43	200
Lead	45.6	0.49	mg/kg dry	98.5		46.2	70-130	56.1	200
Beryllium	18.0	0.49	mg/kg dry	19.7		91.1	70-130	10.9	200
Silver	34.1	0.49	mg/kg dry	39.4		86.4	70-130	0.0248	200
Arsenic	23.1	0.98	mg/kg dry	19.7		117	70-130	2.44	200
Antimony	69.9	0.98	mg/kg dry	98.5		70.9	70-130	21.4	200
Barium	104		mg/kg dry	98.5		106	70-130	26.1	200
Cadmium	82.9	0.49	mg/kg dry	98.5		84.1	70-130	4.05	200

Batch: B8C0658 - Metals Digestion Soils

 Blank (B8C0658-BLK1)
 ND
 0.071 mg/kg

Prepared & Analyzed: 03/20/18

Case Number: 8C15039

Quality Control (Continued)

Total Metals (Continued)

Analyte	Result Qual	Reporting Limit Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8C0658 - Metals Diges	stion Soils (Continue	ed)						
LCS (B8C0658-BS1)			Prepared 8	& Analyzed: 03	3/20/18			
Mercury	0.999	ug/l	1.00		99.9	93-114		
Matrix Spike (B8C0658-MS1)	Source: 8	C15040-01	Prepared 8	& Analyzed: 03	3/20/18			
Mercury	0.901	ug/l	1.00	0.040	86.1	80-120		

Case Number: 8C15039

Notes and Definitions

<u>Item</u>	Definition
Wet	Sample results reported on a wet weight basis.
ND	Analyte NOT DETECTED at or above the reporting limit.



New England Testing Laboratory

59 Greenhill Street West Warwick, RI 02893

1-888-863-8522

Chain of Custody Record

Project No.	Project Na	me/	Loca	tion:		1			1	T	1			Test	**			
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New England Testing Laboratory 59 Greenhill Street

West Warwick, RI 02893

1-888-863-8522

Chain of Custody Record

Project No.	Project Na BUC】	ame/	Loca	ition: Ma	nn	Sit	e.										Te	sts'	**		_	
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Date	Time	Comp	Grab		Sam	ple I.I) .	Aqueous	Soli	Other	Containers		Total	EPH.								
3/12/18	315 P		X	TR	<i>5</i> 5-	1	0-11	Ĺ	X	Ŭ	16/185 ·	ICE	X	X								
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Page 56 of 57

MassDEP Analytical Protocol Certification Form						
Laboratory Name: New England Testing Laboratory, Inc. Project #: 1630						
Project Location: Buckley and Mann RTN:						
	Form pro C15039	vides certification	ons for the followin	g data set: list Lab	ooratory Sample ID	Number(s):
Matrio	es: 🗆 Gi	oundwater/Surfac	ce Water Soil/Sed	diment Drinking	Water ☐ Air ☐ Oth	ner:
CAM	Protoco	(check all that a	apply below):			
8260 ' CAM		7470/7471 Hg CAM III B ⊠	MassDEP VPH (GC/PID/FID) CAM IV A □	8082 PCB CAM V A □	9014 Total Cyanide/PAC CAM VI A □	6860 Perchlorate CAM VIII B □
	SVOC	7010 Metals CAM III C ⊠	MassDEP VPH (GC/MS) CAM IV C □	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A □
	Metals Ⅲ A 区	6020 Metals CAM III D	MassDEP EPH CAM IV B ⊠	8151 Herbicides CAM V C □	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B □
A	\ffirmativ	e Responses to	Questions A throug	gh F are required t	for "Presumptive Ce	ertainty" status
A	Custody,	properly preserv			cribed on the Chain-c ld or laboratory, ar	
В	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? ☑ Yes ☐ No			ed ⊠ Yes □ No		
С	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? ☑ Yes ☐ No					
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? □ Ves □ No					
E	VPH, EPH, APH, and TO-15 only a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? □ Yes □ No			nt		
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? ☑ Yes ☐ No					
Res	ponses	to Questions G,	H and I below are re	equired for "Presu	mptive Certainty" s	tatus
G	Were the protocol(or below all CAM repor	ting limits specified in	the selected CAM	⊠ Yes □ No ¹
			ve "Presumptive Certain s described in 310 CMR		ecessarily meet the data SC-07-350.	usability and
Н	Were all	QC performance st	andards specified in th	ne CAM protocol(s) ac	chieved?	⊠ Yes □ No ¹
I	Were res	sults reported for the	e complete analyte list	specified in the select	ted CAM protocol(s)?	
¹ All negative responses must be addressed in an attached laboratory narrative.						
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.						
Signature: Balance Position: Laboratory Director						
Print	ed Name	Richard Warila		— Date:_3	3/22/2018	



REPORT OF ANALYTICAL RESULTS

NETLAB Work Order Number: 8D23023 Client Project: 1630 - Buckley Mann Site

Report Date: 08-May-2018

Prepared for:

Rob Berger Capital Environmental 46 Washburn Street Northborough, MA 01532

> Richard Warila, Laboratory Director New England Testing Laboratory, Inc. 59 Greenhill Street West Warwick, RI 02893 rich.warila@newenglandtesting.com

NETLAB Case Number: 8D23023

Samples Submitted:

The samples listed below were submitted to New England Testing Laboratory on 04/23/18. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provided to us by the client which are indicated on the custody record. The case number for this sample submission is 8D23023. Custody records are included in this report.

Lab ID	Sample	Matrix	Date Sampled	Date Received
8D23023-01	CTSS-3 1-2	Soil	04/20/2018	04/23/2018
8D23023-02	CTSS-3 2-3	Soil	04/20/2018	04/23/2018
8D23023-03	CTSS-6 0-1	Soil	04/20/2018	04/23/2018
8D23023-04	CTSS-6 1-2	Soil	04/20/2018	04/23/2018
8D23023-05	CTSS-6 2-3	Soil	04/20/2018	04/23/2018
8D23023-06	CTSS-4 1-2	Soil	04/20/2018	04/23/2018
8D23023-07	CTSS-4 2-3	Soil	04/20/2018	04/23/2018
8D23023-08	CTSS-5 0-1	Soil	04/20/2018	04/23/2018
8D23023-09	CTSS-5 1-2	Soil	04/20/2018	04/23/2018
8D23023-10	CTSS-5 2-3	Soil	04/20/2018	04/23/2018
8D23023-11	CLSS-7 1-2	Soil	04/20/2018	04/23/2018
8D23023-12	CLSS-7 2-3	Soil	04/20/2018	04/23/2018
8D23023-13	CLSS-11 0-1	Soil	04/20/2018	04/23/2018
8D23023-14	CLSS-11 1-2	Soil	04/20/2018	04/23/2018
8D23023-15	CLSS-11 2-3	Soil	04/20/2018	04/23/2018
8D23023-16	CLSS-12 0-1	Soil	04/20/2018	04/23/2018
8D23023-17	CLSS-12 1-2	Soil	04/20/2018	04/23/2018
8D23023-18	CLSS-12 2-3	Soil	04/20/2018	04/23/2018
8D23023-19	CLSS-5 1-2	Soil	04/20/2018	04/23/2018
8D23023-20	CLSS-5 2-3	Soil	04/20/2018	04/23/2018
8D23023-21	CLSS-6 1-2	Soil	04/20/2018	04/23/2018
8D23023-22	CLSS-6 2-3	Soil	04/20/2018	04/23/2018
8D23023-23	CLSS-9 0-1	Soil	04/20/2018	04/23/2018
8D23023-24	CLSS-9 1-2	Soil	04/20/2018	04/23/2018
8D23023-25	CLSS-9 2-3	Soil	04/20/2018	04/23/2018
8D23023-26	CLSS-10 0-1	Soil	04/20/2018	04/23/2018
8D23023-27	CLSS-10 1-2	Soil	04/20/2018	04/23/2018
8D23023-28	CLSS-10 2-3	Soil	04/20/2018	04/23/2018

Request for Analysis

At the client's request, the analyses presented in the following table were performed on the samples submitted.

CLSS-10 0-1 (Lab Number: 8D23023-26)

<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C
MADEP EPH	MADEP EPH
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-10 1-2 (Lab Number: 8D23023-27)

<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-10 2-3 (Lab Number: 8D23023-28)

<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Lead	EPA 6010C
MADEP EPH	MADEP EPH
Mercury	EPA 7471B

CLSS-10 2-3 (Lab Number: 8D23023-28) (continued)

<u>Analysis</u>	<u>Method</u>
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-11 0-1 (Lab Number: 8D23023-13)

<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-11 1-2 (Lab Number: 8D23023-14)

<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-11 2-3 (Lab Number: 8D23023-15)

<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Lead	EPA 6010C
MADEP EPH	MADEP EPH
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-12 0-1 (Lab Number: 8D23023-16)

<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-12 1-2 (Lab Number: 8D23023-17)

<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-12 2-3 (Lab Number: 8D23023-18)

<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-5 1-2 (Lab Number: 8D23023-19)

<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-5 2-3 (Lab Number: 8D23023-20)

<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Lead	EPA 6010C
MADEP EPH	MADEP EPH
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-6 1-2 (Lab Number: 8D23023-21)

<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Lead	EPA 6010C
MADEP EPH	MADEP EPH
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-6 2-3 (Lab Number: 8D23023-22)

Method
EPA 6010C
MADEP EPH
EPA 7471B
EPA 6010C
EPA 6010C
EPA 6010C
EPA 7010
EPA 6010C
EPA 6010C

CLSS-7 1-2 (Lab Number: 8D23023-11)

•	
<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-7 2-3 (Lab Number: 8D23023-12)

<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Lead	EPA 6010C
MADEP EPH	MADEP EPH
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-9 0-1 (Lab Number: 8D23023-23)

CL33-3 0-1 (Lab Number: 0D23023-23)	
<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C
MADEP EPH	MADEP EPH
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-9 1-2 (Lab Number: 8D23023-24)

<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

CLSS-9 2-3 (Lab Number: 8D23023-25)

<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C
MADEP EPH	MADEP EPH
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

CTSS-3 1-2 (Lab Number: 8D23023-01)

<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Vanadium	EPA 6010C
Zinc	EPA 6010C

CTSS-3 2-3 (Lab Number: 8D23023-02)

<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Lead	EPA 6010C
MADEP EPH	MADEP EPH
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Vanadium	EPA 6010C
Zinc	EPA 6010C

CTSS-4 1-2 (Lab Number: 8D23023-06)

Analysis	Method
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Vanadium	EPA 6010C
Zinc	EPA 6010C

CTSS-4 2-3 (Lab Number: 8D23023-07)

Analysis	Method
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Lead	EPA 6010C
MADEP EPH	MADEP EPH
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Vanadium	EPA 6010C
Zinc	EPA 6010C

CTSS-5 0-1 (Lab Number: 8D23023-08)

Antimony EPA 6010C Arsenic EPA 6010C Barium EPA 6010C Beryllium EPA 6010C Cadmium EPA 6010C Chromium EPA 6010C Hexavalent Chromium SM3500-Cr-1 Lead EPA 6010C MADEP EPH MADEP EPH Mercury EPA 7471B Nickel EPA 6010C Selenium EPA 6010C Silver EPA 6010C Thallium EPA 7010 Trivalent Chromium Calculation Vanadium EPA 6010C Zinc EPA 6010C	<u>Analysis</u>	<u>Method</u>
Barium EPA 6010C Beryllium EPA 6010C Cadmium EPA 6010C Chromium EPA 6010C Hexavalent Chromium SM3500-Cr-I Lead EPA 6010C MADEP EPH MADEP EPH Mercury EPA 7471B Nickel EPA 6010C Selenium EPA 6010C Silver EPA 6010C Thallium EPA 7010 Trivalent Chromium Calculation Vanadium EPA 6010C	Antimony	EPA 6010C
Beryllium EPA 6010C Cadmium EPA 6010C Chromium EPA 6010C Hexavalent Chromium SM3500-Cr-I Lead EPA 6010C MADEP EPH MADEP EPH Mercury EPA 7471B Nickel EPA 6010C Selenium EPA 6010C Silver EPA 6010C Thallium EPA 7010 Trivalent Chromium Calculation Vanadium EPA 6010C	Arsenic	EPA 6010C
Cadmium EPA 6010C Chromium EPA 6010C Hexavalent Chromium SM3500-Cr-I Lead EPA 6010C MADEP EPH MADEP EPH Mercury EPA 7471B Nickel EPA 6010C Selenium EPA 6010C Silver EPA 6010C Thallium EPA 7010 Trivalent Chromium Calculation Vanadium EPA 6010C	Barium	EPA 6010C
Chromium EPA 6010C Hexavalent Chromium SM3500-Cr-I Lead EPA 6010C MADEP EPH MADEP EPH Mercury EPA 7471B Nickel EPA 6010C Selenium EPA 6010C Silver EPA 6010C Thallium EPA 7010 Trivalent Chromium Calculation Vanadium EPA 6010C	Beryllium	EPA 6010C
Hexavalent Chromium Lead EPA 6010C MADEP EPH Mercury MADEP EPH Nickel EPA 6010C Selenium EPA 6010C Silver EPA 6010C Thallium EPA 6010C Trivalent Chromium Calculation Vanadium SM3500-Cr-lead EPA 6010C EPA 6010C EPA 6010C Calculation EPA 6010C	Cadmium	EPA 6010C
LeadEPA 6010CMADEP EPHMADEP EPHMercuryEPA 7471BNickelEPA 6010CSeleniumEPA 6010CSilverEPA 6010CThalliumEPA 7010Trivalent ChromiumCalculationVanadiumEPA 6010C	Chromium	EPA 6010C
MADEP EPH Mercury EPA 7471B Nickel EPA 6010C Selenium EPA 6010C Silver EPA 6010C Thallium EPA 7010 Trivalent Chromium Calculation Vanadium MADEP EPH MADEP EPH MADEP EPH MADEP EPH MADEP EPH MADEP EPH EPA 7010 EPA 6010C EPA 6010C	Hexavalent Chromium	SM3500-Cr-B
Mercury EPA 7471B Nickel EPA 6010C Selenium EPA 6010C Silver EPA 6010C Thallium EPA 7010 Trivalent Chromium Calculation Vanadium EPA 6010C	Lead	EPA 6010C
Nickel EPA 6010C Selenium EPA 6010C Silver EPA 6010C Thallium EPA 7010 Trivalent Chromium Calculation Vanadium EPA 6010C	MADEP EPH	MADEP EPH
Selenium EPA 6010C Silver EPA 6010C Thallium EPA 7010 Trivalent Chromium Calculation Vanadium EPA 6010C	Mercury	EPA 7471B
Silver EPA 6010C Thallium EPA 7010 Trivalent Chromium Calculation Vanadium EPA 6010C	Nickel	EPA 6010C
Thallium EPA 7010 Trivalent Chromium Calculation Vanadium EPA 6010C	Selenium	EPA 6010C
Trivalent Chromium Calculation Vanadium EPA 6010C	Silver	EPA 6010C
Vanadium EPA 6010C	Thallium	EPA 7010
	Trivalent Chromium	Calculation
Zinc EPA 6010C	Vanadium	EPA 6010C
	Zinc	EPA 6010C

CTSS-5 1-2 (Lab Number: 8D23023-09)

<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Hexavalent Chromium	SM3500-Cr-B
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Trivalent Chromium	Calculation
Vanadium	EPA 6010C
Zinc	EPA 6010C

CTSS-5 2-3 (Lab Number: 8D23023-10)

<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Vanadium	EPA 6010C
Zinc	EPA 6010C

Request for Analysis (continued)

CTSS-6 0-1 (Lab Number: 8D23023-03)

<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Lead	EPA 6010C
MADEP EPH	MADEP EPH
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Vanadium	EPA 6010C
Zinc	EPA 6010C

CTSS-6 1-2 (Lab Number: 8D23023-04)

Analysis	Method
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Vanadium	EPA 6010C
Zinc	EPA 6010C

CTSS-6 2-3 (Lab Number: 8D23023-05)

-	
<u>Analysis</u>	<u>Method</u>
Antimony	EPA 6010C
Arsenic	EPA 6010C
Barium	EPA 6010C
Beryllium	EPA 6010C
Cadmium	EPA 6010C
Chromium	EPA 6010C
Lead	EPA 6010C
Mercury	EPA 7471B
Nickel	EPA 6010C
Selenium	EPA 6010C
Silver	EPA 6010C
Thallium	EPA 7010
Vanadium	EPA 6010C
Zinc	EPA 6010C

Method References

Method for the Determination of Extractable Petroleum Hydrocarbons, Rev. 1.1, Massachusetts Department of Environmental Protection, 2004

Standard Methods for the Examination of Water and Wastewater, 20th Edition, APHA/ AWWA-WPCF, 1998

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, USEPA

Case Narrative

Sample Receipt

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

EPH

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

Metals

All analyses were performed according to NETLAB's documented Standard Operating Procedures, within all required holding times, and with appropriate quality control measures. All QC was within laboratory established acceptance criteria. The samples were received, processed, and reported with no anomalies.

Due to matrix interference, some values are reported outside of quality control limits for the matrix spikes and matrix spike duplicates.

Wet Chemistry

All samples were analyzed within method specified holding times and according to NETLAB's documented standard operating procedures.

Results: Calculation

Sample: CTSS-5 0-1 Lab Number: 8D23023-08 (Soil)

Reporting								
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed		
Trivalent Chromium	165		0.688	ma/ka	05/03/18	05/03/18		

Results: Calculation

Sample: CTSS-5 1-2 Lab Number: 8D23023-09 (Soil)

Reporting								
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed		
Trivalent Chromium	454		0.729	ma/ka	05/03/18	05/03/18		

Results: Calculation

Sample: CLSS-11 0-1 Lab Number: 8D23023-13 (Soil)

Reporting								
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed		
Trivalent Chromium	207		0.980	ma/ka	05/03/18	05/03/18		

Results: Calculation

Sample: CLSS-12 0-1 Lab Number: 8D23023-16 (Soil)

Reporting								
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed		
Trivalent Chromium	1780		1.36	mg/kg	05/03/18	05/03/18		

Results: Calculation

Sample: CLSS-12 1-2 Lab Number: 8D23023-17 (Soil)

Reporting								
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed		
Trivalent Chromium	1290		1.38	mg/kg	05/07/18	05/07/18		

Results: Calculation

Sample: CLSS-5 1-2 Lab Number: 8D23023-19 (Soil)

Reporting								
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed		
Trivalent Chromium	599		1.26	mg/kg	05/07/18	05/07/18		

Results: Calculation

Sample: CLSS-9 0-1 Lab Number: 8D23023-23 (Soil)

Reporting								
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed		
Trivalent Chromium	1420		1.43	ma/ka	05/07/18	05/07/18		

Results: Calculation

Sample: CLSS-9 1-2 Lab Number: 8D23023-24 (Soil)

Reporting								
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed		
Trivalent Chromium	672		1.36	mg/kg	05/07/18	05/07/18		

Results: Calculation

Sample: CLSS-9 2-3 Lab Number: 8D23023-25 (Soil)

Reporting								
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed		
Trivalent Chromium	550		1.71	mg/kg	05/07/18	05/07/18		

Results: Calculation

Sample: CLSS-10 0-1 Lab Number: 8D23023-26 (Soil)

			Reporting			
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed
Trivalent Chromium	1040		1.63	mg/kg	05/07/18	05/07/18

Results: General Chemistry

Sample: CTSS-5 0-1 Lab Number: 8D23023-08 (Soil)

			Reporting			
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed
Hexavalent chromium	15		7	ma/ka	05/03/18	05/03/18

Results: General Chemistry

Sample: CTSS-5 1-2 Lab Number: 8D23023-09 (Soil)

Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed
Hexavalent chromium	ND		8	ma/ka	05/03/18	05/03/18

Results: General Chemistry

Sample: CLSS-11 0-1 Lab Number: 8D23023-13 (Soil)

			Reporting			
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed
Hexavalent chromium	79		9	ma/ka	05/03/18	05/03/18

Results: General Chemistry

Sample: CLSS-12 0-1 Lab Number: 8D23023-16 (Soil)

			Reporting			
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed
Hexavalent chromium	14		13	mg/kg	05/03/18	05/03/18

Results: General Chemistry

Sample: CLSS-12 1-2 Lab Number: 8D23023-17 (Soil)

			Reporting			
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed
Hexavalent chromium	18		5	mg/kg	05/07/18	05/07/18

Results: General Chemistry

Sample: CLSS-5 1-2 Lab Number: 8D23023-19 (Soil)

			Reporting			
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed
Hexavalent chromium	ND		5	ma/ka	05/07/18	05/07/18

Results: General Chemistry

Sample: CLSS-9 0-1 Lab Number: 8D23023-23 (Soil)

			Reporting			
Analyte	Result	Qual	Limit	Units	Date Prepared Date Ana	Date Analyzed
Hexavalent chromium	9		5	ma/ka	05/07/18	05/07/18

Results: General Chemistry

Sample: CLSS-9 1-2 Lab Number: 8D23023-24 (Soil)

			Reporting			
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed
Hexavalent chromium	7		5	ma/ka	05/07/18	05/07/18

Results: General Chemistry

Sample: CLSS-9 2-3 Lab Number: 8D23023-25 (Soil)

			Reporting			
Analyte	Result	Qual	Limit	Units	Date Prepared Date Ar	Date Analyzed
Hexavalent chromium	66		7	ma/ka	05/07/18	05/07/18

Results: General Chemistry

Sample: CLSS-10 0-1 Lab Number: 8D23023-26 (Soil)

			Reporting			
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed
Hexavalent chromium	67		7	mg/kg	05/07/18	05/07/18

Results: Total Metals

Sample: CTSS-3 1-2 Lab Number: 8D23023-01 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	ND		1.22	mg/kg	04/24/18	04/24/18			
Arsenic	ND		1.22	mg/kg	04/24/18	04/24/18			
Barium	20.5		0.61	mg/kg	04/24/18	04/24/18			
Beryllium	ND		0.61	mg/kg	04/24/18	04/24/18			
Cadmium	1.67		0.61	mg/kg	04/24/18	04/24/18			
Chromium	10.9		0.61	mg/kg	04/24/18	04/24/18			
Lead	15.2		0.61	mg/kg	04/24/18	04/24/18			
Mercury	ND		0.085	mg/kg	04/24/18	04/24/18			
Nickel	13.0		0.61	mg/kg	04/24/18	04/24/18			
Selenium	ND		1.22	mg/kg	04/24/18	04/24/18			
Silver	ND		0.61	mg/kg	04/24/18	04/24/18			
Thallium	ND		0.247	mg/kg	04/24/18	04/25/18			
Vanadium	11.7		0.61	mg/kg	04/24/18	04/24/18			
Zinc	102		2.5	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CTSS-3 2-3 Lab Number: 8D23023-02 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	ND		1.32	mg/kg	04/24/18	04/24/18			
Arsenic	ND		1.32	mg/kg	04/24/18	04/24/18			
Barium	31.1		0.66	mg/kg	04/24/18	04/24/18			
Beryllium	ND		0.66	mg/kg	04/24/18	04/24/18			
Cadmium	1.94		0.66	mg/kg	04/24/18	04/24/18			
Chromium	27.6		0.66	mg/kg	04/24/18	04/24/18			
Lead	35.0		0.66	mg/kg	04/24/18	04/24/18			
Mercury	ND		0.079	mg/kg	04/24/18	04/24/18			
Nickel	12.5		0.66	mg/kg	04/24/18	04/24/18			
Selenium	ND		1.32	mg/kg	04/24/18	04/24/18			
Silver	ND		0.66	mg/kg	04/24/18	04/24/18			
Thallium	ND		0.266	mg/kg	04/24/18	04/25/18			
Vanadium	10.3		0.66	mg/kg	04/24/18	04/24/18			
Zinc	80.7		2.7	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CTSS-6 0-1 Lab Number: 8D23023-03 (Soil)

Reporting								
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed		
Antimony	ND		1.11	mg/kg	04/24/18	04/24/18		
Arsenic	ND		1.11	mg/kg	04/24/18	04/24/18		
Barium	12.7		0.56	mg/kg	04/24/18	04/24/18		
Beryllium	ND		0.56	mg/kg	04/24/18	04/24/18		
Cadmium	0.58		0.56	mg/kg	04/24/18	04/24/18		
Chromium	4.70		0.56	mg/kg	04/24/18	04/24/18		
Lead	4.59		0.56	mg/kg	04/24/18	04/24/18		
Mercury	ND		0.070	mg/kg	04/24/18	04/24/18		
Nickel	2.50		0.56	mg/kg	04/24/18	04/24/18		
Selenium	ND		1.11	mg/kg	04/24/18	04/24/18		
Silver	ND		0.56	mg/kg	04/24/18	04/24/18		
Thallium	ND		0.224	mg/kg	04/24/18	04/25/18		
Vanadium	7.38		0.56	mg/kg	04/24/18	04/24/18		
Zinc	11.1		2.2	mg/kg	04/24/18	04/24/18		

Results: Total Metals

Sample: CTSS-6 1-2 Lab Number: 8D23023-04 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	ND		1.16	mg/kg	04/24/18	04/24/18			
Arsenic	ND		1.16	mg/kg	04/24/18	04/24/18			
Barium	14.2		0.58	mg/kg	04/24/18	04/24/18			
Beryllium	ND		0.58	mg/kg	04/24/18	04/24/18			
Cadmium	0.82		0.58	mg/kg	04/24/18	04/24/18			
Chromium	3.08		0.58	mg/kg	04/24/18	04/24/18			
Lead	4.19		0.58	mg/kg	04/24/18	04/24/18			
Mercury	ND		0.076	mg/kg	04/24/18	04/24/18			
Nickel	6.28		0.58	mg/kg	04/24/18	04/24/18			
Selenium	ND		1.16	mg/kg	04/24/18	04/24/18			
Silver	ND		0.58	mg/kg	04/24/18	04/24/18			
Thallium	ND		0.233	mg/kg	04/24/18	04/25/18			
Vanadium	6.32		0.58	mg/kg	04/24/18	04/24/18			
Zinc	17.1		2.3	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CTSS-6 2-3 Lab Number: 8D23023-05 (Soil)

Reporting								
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed		
Antimony	ND		1.45	mg/kg	04/24/18	04/24/18		
Arsenic	ND		1.45	mg/kg	04/24/18	04/24/18		
Barium	27.0		0.72	mg/kg	04/24/18	04/24/18		
Beryllium	ND		0.72	mg/kg	04/24/18	04/24/18		
Cadmium	1.04		0.72	mg/kg	04/24/18	04/24/18		
Chromium	42.0		0.72	mg/kg	04/24/18	04/24/18		
Lead	47.1		0.72	mg/kg	04/24/18	04/24/18		
Mercury	0.211		0.088	mg/kg	04/24/18	04/24/18		
Nickel	4.02		0.72	mg/kg	04/24/18	04/24/18		
Selenium	ND		1.45	mg/kg	04/24/18	04/24/18		
Silver	ND		0.72	mg/kg	04/24/18	04/24/18		
Thallium	ND		0.292	mg/kg	04/24/18	04/25/18		
Vanadium	17.0		0.72	mg/kg	04/24/18	04/24/18		
Zinc	20.6		2.9	mg/kg	04/24/18	04/24/18		

Results: Total Metals

Sample: CTSS-4 1-2 Lab Number: 8D23023-06 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	ND		1.27	mg/kg	04/24/18	04/24/18			
Arsenic	ND		1.27	mg/kg	04/24/18	04/24/18			
Barium	15.7		0.63	mg/kg	04/24/18	04/24/18			
Beryllium	ND		0.63	mg/kg	04/24/18	04/24/18			
Cadmium	0.87		0.63	mg/kg	04/24/18	04/24/18			
Chromium	31.2		0.63	mg/kg	04/24/18	04/24/18			
Lead	14.6		0.63	mg/kg	04/24/18	04/24/18			
Mercury	ND		0.069	mg/kg	04/24/18	04/24/18			
Nickel	12.3		0.63	mg/kg	04/24/18	04/24/18			
Selenium	ND		1.27	mg/kg	04/24/18	04/24/18			
Silver	ND		0.63	mg/kg	04/24/18	04/24/18			
Thallium	ND		0.256	mg/kg	04/24/18	04/25/18			
Vanadium	9.38		0.63	mg/kg	04/24/18	04/24/18			
Zinc	38.0		2.6	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CTSS-4 2-3 Lab Number: 8D23023-07 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	ND		1.11	mg/kg	04/24/18	04/24/18			
Arsenic	ND		1.11	mg/kg	04/24/18	04/24/18			
Barium	16.0		0.56	mg/kg	04/24/18	04/24/18			
Beryllium	ND		0.56	mg/kg	04/24/18	04/24/18			
Cadmium	0.90		0.56	mg/kg	04/24/18	04/24/18			
Chromium	17.2		0.56	mg/kg	04/24/18	04/24/18			
Lead	15.7		0.56	mg/kg	04/24/18	04/24/18			
Mercury	ND		0.066	mg/kg	04/24/18	04/24/18			
Nickel	36.1		0.56	mg/kg	04/24/18	04/24/18			
Selenium	ND		1.11	mg/kg	04/24/18	04/24/18			
Silver	ND		0.56	mg/kg	04/24/18	04/24/18			
Thallium	ND		0.224	mg/kg	04/24/18	04/25/18			
Vanadium	9.11		0.56	mg/kg	04/24/18	04/24/18			
Zinc	39.7		2.2	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CTSS-5 0-1 Lab Number: 8D23023-08 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	4.59		1.38	mg/kg	04/24/18	04/24/18			
Arsenic	3.75		1.38	mg/kg	04/24/18	04/24/18			
Barium	22.9		0.69	mg/kg	04/24/18	04/24/18			
Beryllium	ND		0.69	mg/kg	04/24/18	04/24/18			
Cadmium	ND		0.69	mg/kg	04/24/18	04/24/18			
Chromium	180		0.69	mg/kg	04/24/18	04/24/18			
Lead	257		0.69	mg/kg	04/24/18	04/24/18			
Mercury	1.12		0.497	mg/kg	04/24/18	04/24/18			
Nickel	3.42		0.69	mg/kg	04/24/18	04/24/18			
Selenium	ND		1.38	mg/kg	04/24/18	04/24/18			
Silver	1.07		0.69	mg/kg	04/24/18	04/24/18			
Thallium	ND		0.277	mg/kg	04/24/18	04/25/18			
Vanadium	17.1		0.69	mg/kg	04/24/18	04/24/18			
Zinc	17.8		2.8	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CTSS-5 1-2 Lab Number: 8D23023-09 (Soil)

			Reporting			
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed
Antimony	12.9		1.46	mg/kg	04/24/18	04/24/18
Arsenic	8.16		1.46	mg/kg	04/24/18	04/24/18
Barium	48.4		0.73	mg/kg	04/24/18	04/24/18
Beryllium	ND		0.73	mg/kg	04/24/18	04/24/18
Cadmium	ND		0.73	mg/kg	04/24/18	04/24/18
Chromium	454		0.73	mg/kg	04/24/18	04/24/18
Lead	676		0.73	mg/kg	04/24/18	04/24/18
Mercury	1.43		0.526	mg/kg	04/24/18	04/24/18
Nickel	65.0		0.73	mg/kg	04/24/18	04/24/18
Selenium	ND		1.46	mg/kg	04/24/18	04/24/18
Silver	5.69		0.73	mg/kg	04/24/18	04/24/18
Thallium	ND		0.294	mg/kg	04/24/18	04/25/18
Vanadium	10.0		0.73	mg/kg	04/24/18	04/24/18
Zinc	20.2		2.9	mg/kg	04/24/18	04/24/18

Results: Total Metals

Sample: CTSS-5 2-3 Lab Number: 8D23023-10 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	ND		1.28	mg/kg	04/24/18	04/24/18			
Arsenic	2.27		1.28	mg/kg	04/24/18	04/24/18			
Barium	21.3		0.64	mg/kg	04/24/18	04/24/18			
Beryllium	ND		0.64	mg/kg	04/24/18	04/24/18			
Cadmium	1.28		0.64	mg/kg	04/24/18	04/24/18			
Chromium	40.7		0.64	mg/kg	04/24/18	04/24/18			
Lead	42.8		0.64	mg/kg	04/24/18	04/24/18			
Mercury	ND		0.084	mg/kg	04/24/18	04/24/18			
Nickel	12.8		0.64	mg/kg	04/24/18	04/24/18			
Selenium	ND		1.28	mg/kg	04/24/18	04/24/18			
Silver	ND		0.64	mg/kg	04/24/18	04/24/18			
Thallium	ND		0.259	mg/kg	04/24/18	04/25/18			
Vanadium	17.6		0.64	mg/kg	04/24/18	04/24/18			
Zinc	69.2		2.6	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CLSS-7 1-2 Lab Number: 8D23023-11 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	ND		1.31	mg/kg	04/24/18	04/24/18			
Arsenic	1.37		1.31	mg/kg	04/24/18	04/24/18			
Barium	30.6		0.65	mg/kg	04/24/18	04/24/18			
Beryllium	ND		0.65	mg/kg	04/24/18	04/24/18			
Cadmium	1.94		0.65	mg/kg	04/24/18	04/24/18			
Chromium	41.5		0.65	mg/kg	04/24/18	04/24/18			
Lead	45.0		0.65	mg/kg	04/24/18	04/24/18			
Mercury	ND		0.093	mg/kg	04/24/18	04/24/18			
Nickel	15.4		0.65	mg/kg	04/24/18	04/24/18			
Selenium	ND		1.31	mg/kg	04/24/18	04/24/18			
Silver	ND		0.65	mg/kg	04/24/18	04/24/18			
Thallium	ND		0.263	mg/kg	04/24/18	04/25/18			
Vanadium	27.5		0.65	mg/kg	04/24/18	04/24/18			
Zinc	92.2		2.6	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CLSS-7 2-3 Lab Number: 8D23023-12 (Soil)

Reporting								
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed		
Antimony	ND		1.32	mg/kg	04/24/18	04/24/18		
Arsenic	ND		1.32	mg/kg	04/24/18	04/24/18		
Barium	18.6		0.66	mg/kg	04/24/18	04/24/18		
Beryllium	ND		0.66	mg/kg	04/24/18	04/24/18		
Cadmium	1.21		0.66	mg/kg	04/24/18	04/24/18		
Chromium	44.6		0.66	mg/kg	04/24/18	04/24/18		
Lead	57.4		0.66	mg/kg	04/24/18	04/24/18		
Mercury	ND		0.072	mg/kg	04/24/18	04/24/18		
Nickel	8.99		0.66	mg/kg	04/24/18	04/24/18		
Selenium	ND		1.32	mg/kg	04/24/18	04/24/18		
Silver	ND		0.66	mg/kg	04/24/18	04/24/18		
Thallium	ND		0.267	mg/kg	04/24/18	04/25/18		
Vanadium	21.9		0.66	mg/kg	04/24/18	04/24/18		
Zinc	45.9		2.7	mg/kg	04/24/18	04/24/18		

Results: Total Metals

Sample: CLSS-11 0-1 Lab Number: 8D23023-13 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	7.06		1.96	mg/kg	04/24/18	04/24/18			
Arsenic	7.39		1.96	mg/kg	04/24/18	04/24/18			
Barium	11.6		0.98	mg/kg	04/24/18	04/24/18			
Beryllium	ND		0.98	mg/kg	04/24/18	04/24/18			
Cadmium	ND		0.98	mg/kg	04/24/18	04/24/18			
Chromium	286		0.98	mg/kg	04/24/18	04/24/18			
Lead	378		0.98	mg/kg	04/24/18	04/24/18			
Mercury	0.574		0.519	mg/kg	04/24/18	04/24/18			
Nickel	1.89		0.98	mg/kg	04/24/18	04/24/18			
Selenium	ND		1.96	mg/kg	04/24/18	04/24/18			
Silver	ND		0.98	mg/kg	04/24/18	04/24/18			
Thallium	ND		0.395	mg/kg	04/24/18	04/25/18			
Vanadium	45.3		0.98	mg/kg	04/24/18	04/24/18			
Zinc	8.0		4.0	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CLSS-11 1-2 Lab Number: 8D23023-14 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	ND		1.24	mg/kg	04/24/18	04/24/18			
Arsenic	ND		1.24	mg/kg	04/24/18	04/24/18			
Barium	15.0		0.62	mg/kg	04/24/18	04/24/18			
Beryllium	ND		0.62	mg/kg	04/24/18	04/24/18			
Cadmium	1.50		0.62	mg/kg	04/24/18	04/24/18			
Chromium	49.4		0.62	mg/kg	04/24/18	04/24/18			
Lead	95.9		0.62	mg/kg	04/24/18	04/24/18			
Mercury	ND		0.090	mg/kg	04/24/18	04/24/18			
Nickel	5.22		0.62	mg/kg	04/24/18	04/24/18			
Selenium	ND		1.24	mg/kg	04/24/18	04/24/18			
Silver	ND		0.62	mg/kg	04/24/18	04/24/18			
Thallium	ND		0.251	mg/kg	04/24/18	04/25/18			
Vanadium	24.6		0.62	mg/kg	04/24/18	04/24/18			
Zinc	23.3		2.5	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CLSS-11 2-3 Lab Number: 8D23023-15 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	ND		1.28	mg/kg	04/24/18	04/24/18			
Arsenic	ND		1.28	mg/kg	04/24/18	04/24/18			
Barium	15.4		0.64	mg/kg	04/24/18	04/24/18			
Beryllium	ND		0.64	mg/kg	04/24/18	04/24/18			
Cadmium	1.52		0.64	mg/kg	04/24/18	04/24/18			
Chromium	23.5		0.64	mg/kg	04/24/18	04/24/18			
Lead	17.5		0.64	mg/kg	04/24/18	04/24/18			
Mercury	ND		0.082	mg/kg	04/24/18	04/24/18			
Nickel	8.70		0.64	mg/kg	04/24/18	04/24/18			
Selenium	ND		1.28	mg/kg	04/24/18	04/24/18			
Silver	ND		0.64	mg/kg	04/24/18	04/24/18			
Thallium	ND		0.258	mg/kg	04/24/18	04/25/18			
Vanadium	21.6		0.64	mg/kg	04/24/18	04/24/18			
Zinc	24.9		2.6	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CLSS-12 0-1 Lab Number: 8D23023-16 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	48.6		2.71	mg/kg	04/24/18	04/24/18			
Arsenic	12.9		2.71	mg/kg	04/24/18	04/24/18			
Barium	40.1		1.36	mg/kg	04/24/18	04/24/18			
Beryllium	ND		1.36	mg/kg	04/24/18	04/24/18			
Cadmium	ND		1.36	mg/kg	04/24/18	04/24/18			
Chromium	1800		1.36	mg/kg	04/24/18	04/24/18			
Lead	281		1.36	mg/kg	04/24/18	04/24/18			
Mercury	5.14		1.43	mg/kg	04/24/18	04/24/18			
Nickel	8.52		1.36	mg/kg	04/24/18	04/24/18			
Selenium	4.23		2.71	mg/kg	04/24/18	04/24/18			
Silver	23.0		1.36	mg/kg	04/24/18	04/24/18			
Thallium	ND		0.547	mg/kg	04/24/18	04/25/18			
Vanadium	126		1.36	mg/kg	04/24/18	04/24/18			
Zinc	28.2		5.5	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CLSS-12 1-2 Lab Number: 8D23023-17 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	41.3		2.76	mg/kg	04/24/18	04/24/18			
Arsenic	10.8		2.76	mg/kg	04/24/18	04/24/18			
Barium	262		1.38	mg/kg	04/24/18	04/24/18			
Beryllium	ND		1.38	mg/kg	04/24/18	04/24/18			
Cadmium	ND		1.38	mg/kg	04/24/18	04/24/18			
Chromium	1310		1.38	mg/kg	04/24/18	04/24/18			
Lead	464		1.38	mg/kg	04/24/18	04/24/18			
Mercury	5.86		1.70	mg/kg	04/24/18	04/24/18			
Nickel	17.1		1.38	mg/kg	04/24/18	04/24/18			
Selenium	ND		2.76	mg/kg	04/24/18	04/24/18			
Silver	24.8		1.38	mg/kg	04/24/18	04/24/18			
Thallium	ND		0.557	mg/kg	04/24/18	04/25/18			
Vanadium	82.6		1.38	mg/kg	04/24/18	04/24/18			
Zinc	34.0		5.6	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CLSS-12 2-3 Lab Number: 8D23023-18 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	ND		1.36	mg/kg	04/24/18	04/24/18			
Arsenic	2.24		1.36	mg/kg	04/24/18	04/24/18			
Barium	32.3		0.68	mg/kg	04/24/18	04/24/18			
Beryllium	ND		0.68	mg/kg	04/24/18	04/24/18			
Cadmium	2.13		0.68	mg/kg	04/24/18	04/24/18			
Chromium	61.3		0.68	mg/kg	04/24/18	04/24/18			
Lead	194		0.68	mg/kg	04/24/18	04/24/18			
Mercury	0.171		0.098	mg/kg	04/24/18	04/24/18			
Nickel	11.8		0.68	mg/kg	04/24/18	04/24/18			
Selenium	ND		1.36	mg/kg	04/24/18	04/24/18			
Silver	ND		0.68	mg/kg	04/24/18	04/24/18			
Thallium	0.363		0.274	mg/kg	04/24/18	04/25/18			
Vanadium	23.0		0.68	mg/kg	04/24/18	04/24/18			
Zinc	21.7		2.7	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CLSS-5 1-2 Lab Number: 8D23023-19 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	16.1		2.52	mg/kg	04/24/18	04/24/18			
Arsenic	14.1		2.52	mg/kg	04/24/18	04/24/18			
Barium	389		1.26	mg/kg	04/24/18	04/24/18			
Beryllium	ND		1.26	mg/kg	04/24/18	04/24/18			
Cadmium	8.97		1.26	mg/kg	04/24/18	04/24/18			
Chromium	599		1.26	mg/kg	04/24/18	04/24/18			
Lead	2100		1.26	mg/kg	04/24/18	04/24/18			
Mercury	4.41		0.787	mg/kg	04/24/18	04/24/18			
Nickel	25.0		1.26	mg/kg	04/24/18	04/24/18			
Selenium	ND		2.52	mg/kg	04/24/18	04/24/18			
Silver	5.51		1.26	mg/kg	04/24/18	04/24/18			
Thallium	ND		0.509	mg/kg	04/24/18	04/25/18			
Vanadium	35.2		1.26	mg/kg	04/24/18	04/24/18			
Zinc	466		5.1	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CLSS-5 2-3 Lab Number: 8D23023-20 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	ND		1.80	mg/kg	04/24/18	04/24/18			
Arsenic	2.88		1.80	mg/kg	04/24/18	04/24/18			
Barium	111		0.90	mg/kg	04/24/18	04/24/18			
Beryllium	ND		0.90	mg/kg	04/24/18	04/24/18			
Cadmium	2.68		0.90	mg/kg	04/24/18	04/24/18			
Chromium	76.2		0.90	mg/kg	04/24/18	04/24/18			
Lead	208		0.90	mg/kg	04/24/18	04/24/18			
Mercury	0.917		0.298	mg/kg	04/24/18	04/24/18			
Nickel	20.1		0.90	mg/kg	04/24/18	04/24/18			
Selenium	ND		1.80	mg/kg	04/24/18	04/24/18			
Silver	ND		0.90	mg/kg	04/24/18	04/24/18			
Thallium	ND		0.363	mg/kg	04/24/18	04/25/18			
Vanadium	14.1		0.90	mg/kg	04/24/18	04/24/18			
Zinc	571		3.6	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CLSS-6 1-2 Lab Number: 8D23023-21 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	ND		1.20	mg/kg	04/24/18	04/24/18			
Arsenic	ND		1.20	mg/kg	04/24/18	04/24/18			
Barium	62.0		0.60	mg/kg	04/24/18	04/24/18			
Beryllium	ND		0.60	mg/kg	04/24/18	04/24/18			
Cadmium	1.67		0.60	mg/kg	04/24/18	04/24/18			
Chromium	35.4		0.60	mg/kg	04/24/18	04/24/18			
Lead	16.3		0.60	mg/kg	04/24/18	04/24/18			
Mercury	0.179		0.087	mg/kg	04/24/18	04/24/18			
Nickel	12.1		0.60	mg/kg	04/24/18	04/24/18			
Selenium	ND		1.20	mg/kg	04/24/18	04/24/18			
Silver	ND		0.60	mg/kg	04/24/18	04/24/18			
Thallium	ND		0.241	mg/kg	04/24/18	04/25/18			
Vanadium	28.8		0.60	mg/kg	04/24/18	04/24/18			
Zinc	150		2.4	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CLSS-6 2-3 Lab Number: 8D23023-22 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	ND		1.06	mg/kg	04/24/18	04/24/18			
Arsenic	ND		1.06	mg/kg	04/24/18	04/24/18			
Barium	18.4		0.53	mg/kg	04/24/18	04/24/18			
Beryllium	ND		0.53	mg/kg	04/24/18	04/24/18			
Cadmium	0.91		0.53	mg/kg	04/24/18	04/24/18			
Chromium	11.3		0.53	mg/kg	04/24/18	04/24/18			
Lead	7.66		0.53	mg/kg	04/24/18	04/24/18			
Mercury	ND		0.045	mg/kg	04/24/18	04/24/18			
Nickel	10.1		0.53	mg/kg	04/24/18	04/24/18			
Selenium	ND		1.06	mg/kg	04/24/18	04/24/18			
Silver	ND		0.53	mg/kg	04/24/18	04/24/18			
Thallium	ND		0.213	mg/kg	04/24/18	04/25/18			
Vanadium	12.8		0.53	mg/kg	04/24/18	04/24/18			
Zinc	82.7		2.1	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CLSS-9 0-1 Lab Number: 8D23023-23 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	41.6		2.86	mg/kg	04/24/18	04/24/18			
Arsenic	10.3		2.86	mg/kg	04/24/18	04/24/18			
Barium	33.1		1.43	mg/kg	04/24/18	04/24/18			
Beryllium	ND		1.43	mg/kg	04/24/18	04/24/18			
Cadmium	ND		1.43	mg/kg	04/24/18	04/24/18			
Chromium	1430		1.43	mg/kg	04/24/18	04/24/18			
Lead	444		1.43	mg/kg	04/24/18	04/24/18			
Mercury	3.62		0.956	mg/kg	04/24/18	04/24/18			
Nickel	5.35		1.43	mg/kg	04/24/18	04/24/18			
Selenium	3.50		2.86	mg/kg	04/24/18	04/24/18			
Silver	21.4		1.43	mg/kg	04/24/18	04/24/18			
Thallium	ND		0.576	mg/kg	04/24/18	04/25/18			
Vanadium	151		1.43	mg/kg	04/24/18	04/24/18			
Zinc	20.8		5.8	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CLSS-9 1-2 Lab Number: 8D23023-24 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	23.7		2.72	mg/kg	04/24/18	04/24/18			
Arsenic	3.67		2.72	mg/kg	04/24/18	04/24/18			
Barium	49.1		1.36	mg/kg	04/24/18	04/24/18			
Beryllium	ND		1.36	mg/kg	04/24/18	04/24/18			
Cadmium	3.76		1.36	mg/kg	04/24/18	04/24/18			
Chromium	679		1.36	mg/kg	04/24/18	04/24/18			
Lead	153		1.36	mg/kg	04/24/18	04/24/18			
Mercury	2.59		0.708	mg/kg	04/24/18	04/24/18			
Nickel	17.3		1.36	mg/kg	04/24/18	04/24/18			
Selenium	ND		2.72	mg/kg	04/24/18	04/24/18			
Silver	7.20		1.36	mg/kg	04/24/18	04/24/18			
Thallium	ND		0.548	mg/kg	04/24/18	04/25/18			
Vanadium	104		1.36	mg/kg	04/24/18	04/24/18			
Zinc	414		5.5	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CLSS-9 2-3 Lab Number: 8D23023-25 (Soil)

Reporting									
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed			
Antimony	26.4		3.41	mg/kg	04/24/18	04/24/18			
Arsenic	5.44		3.41	mg/kg	04/24/18	04/24/18			
Barium	90.1		1.71	mg/kg	04/24/18	04/24/18			
Beryllium	ND		1.71	mg/kg	04/24/18	04/24/18			
Cadmium	4.13		1.71	mg/kg	04/24/18	04/24/18			
Chromium	616		1.71	mg/kg	04/24/18	04/24/18			
Lead	1120		1.71	mg/kg	04/24/18	04/24/18			
Mercury	6.15		1.16	mg/kg	04/24/18	04/24/18			
Nickel	21.0		1.71	mg/kg	04/24/18	04/24/18			
Selenium	ND		3.41	mg/kg	04/24/18	04/24/18			
Silver	9.76		1.71	mg/kg	04/24/18	04/24/18			
Thallium	ND		0.688	mg/kg	04/24/18	04/25/18			
Vanadium	28.1		1.71	mg/kg	04/24/18	04/24/18			
Zinc	414		6.9	mg/kg	04/24/18	04/24/18			

Results: Total Metals

Sample: CLSS-10 0-1 Lab Number: 8D23023-26 (Soil)

Reporting						
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed
Antimony	35.6		3.26	mg/kg	04/24/18	04/24/18
Arsenic	9.45		3.26	mg/kg	04/24/18	04/24/18
Barium	180		1.63	mg/kg	04/24/18	04/24/18
Beryllium	ND		1.63	mg/kg	04/24/18	04/24/18
Cadmium	2.78		1.63	mg/kg	04/24/18	04/24/18
Chromium	1110		1.63	mg/kg	04/24/18	04/24/18
Lead	1020		1.63	mg/kg	04/24/18	04/24/18
Mercury	5.31		1.15	mg/kg	04/24/18	04/24/18
Nickel	8.79		1.63	mg/kg	04/24/18	04/24/18
Selenium	ND		3.26	mg/kg	04/24/18	04/24/18
Silver	14.3		1.63	mg/kg	04/24/18	04/24/18
Thallium	ND		0.657	mg/kg	04/24/18	04/25/18
Vanadium	79.6		1.63	mg/kg	04/24/18	04/24/18
Zinc	160		6.6	mg/kg	04/24/18	04/24/18

Results: Total Metals

Sample: CLSS-10 1-2 Lab Number: 8D23023-27 (Soil)

Reporting						
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed
Antimony	ND		2.41	mg/kg	04/24/18	04/24/18
Arsenic	6.50		2.41	mg/kg	04/24/18	04/24/18
Barium	249		1.20	mg/kg	04/24/18	04/24/18
Beryllium	ND		1.20	mg/kg	04/24/18	04/24/18
Cadmium	2.42		1.20	mg/kg	04/24/18	04/24/18
Chromium	88.7		1.20	mg/kg	04/24/18	04/24/18
Lead	160		1.20	mg/kg	04/24/18	04/24/18
Mercury	0.292		0.142	mg/kg	04/24/18	04/24/18
Nickel	20.4		1.20	mg/kg	04/24/18	04/24/18
Selenium	ND		2.41	mg/kg	04/24/18	04/24/18
Silver	ND		1.20	mg/kg	04/24/18	04/24/18
Thallium	ND		0.485	mg/kg	04/24/18	04/25/18
Vanadium	20.8		1.20	mg/kg	04/24/18	04/24/18
Zinc	290		4.9	mg/kg	04/24/18	04/24/18

Results: Total Metals

Sample: CLSS-10 2-3 Lab Number: 8D23023-28 (Soil)

Reporting						
Analyte	Result	Qual	Limit	Units	Date Prepared	Date Analyzed
Antimony	ND		2.33	mg/kg	04/24/18	04/24/18
Arsenic	ND		2.33	mg/kg	04/24/18	04/24/18
Barium	92.8		1.16	mg/kg	04/24/18	04/24/18
Beryllium	ND		1.16	mg/kg	04/24/18	04/24/18
Cadmium	ND		1.16	mg/kg	04/24/18	04/24/18
Chromium	32.3		1.16	mg/kg	04/24/18	04/24/18
Lead	20.0		1.16	mg/kg	04/24/18	04/24/18
Mercury	ND		0.144	mg/kg	04/24/18	04/24/18
Nickel	19.3		1.16	mg/kg	04/24/18	04/24/18
Selenium	ND		2.33	mg/kg	04/24/18	04/24/18
Silver	ND		1.16	mg/kg	04/24/18	04/24/18
Thallium	ND		0.469	mg/kg	04/24/18	04/25/18
Vanadium	12.0		1.16	mg/kg	04/24/18	04/24/18
Zinc	120		4.7	mg/kg	04/24/18	04/24/18

Extractable Petroleum Hydrocarbons Sample: CTSS-3 2-3 (8D23023-02)

SAMPLE INFORMATION

Matrix	Soil	
Containers	Satisfactory	
Aqueous Preservatives	NA NA	
Temperature	Received on Ice Received at: 4+/-2 C°	
Extraction Method	EPA Method 3546	

EPH ANALYTICAL RES	JOL 13				Г	
Method for Ranges: MADE	P EPH 4-1.1	Client ID			CTSS-3 2-3	
Method for Target Analytes	s: MADEP EPH 4-1.1	Lab ID			8D23023-02	
EPH Surrogate Standards:			Dai	te Collected	04/20/18	
Aliphatic: Chlorooctadecane			Da	te Received	04/23/18	
Aromatic: o-Terphenyl			D	ate Thawed	NA	
			Dat	e Extracted	04/25/18	
EPH Fractionation Surrogat (1) 2-Fluorobiphenyl	ces:		Perce	ent Moisture	28.80	
(2) 2-Bromonaphthalene						
RANGE/TARGET ANALY	TE	Dilution	RL	Units	Result	Analyzed
Unadjusted C11-C22 Arc	omatic Hydrocarbons [1]	1X	17.7	mg/kg	17.7	04/27/18 17:45
	Naphthalene	1X	0.44	mg/kg	<0.44	04/27/18 17:45
Diesel PAH	2-Methylnaphthalene	1X	0.44	mg/kg	<0.44	04/27/18 17:45
Analytes	Phenanthrene	1X	0.44	mg/kg	<0.44	04/27/18 17:45
	Acenaphthene	1X	0.44	mg/kg	<0.44	04/27/18 17:45
	Acenaphthylene	1X	0.44	mg/kg	<0.44	04/27/18 17:45
	Fluorene	1X	0.44	mg/kg	<0.44	04/27/18 17:45
	Anthracene	1X	0.44	mg/kg	<0.44	04/27/18 17:45
	Fluoranthene	1X	0.44	mg/kg	<0.44	04/27/18 17:45
	Pyrene	1X	0.44	mg/kg	<0.44	04/27/18 17:45
	Benzo(a)anthracene	1X	0.44	mg/kg	<0.44	04/27/18 17:45
Other	Chrysene	1X	0.44	mg/kg	<0.44	04/27/18 17:45
Target PAH	Benzo(b)fluoranthene	1X	0.44	mg/kg	<0.44	04/27/18 17:45
Analytes	Benzo(k)fluoranthene	1X	0.44	mg/kg	<0.44	04/27/18 17:45
·	Benzo(a)pyrene	1X	0.44	mg/kg	<0.44	04/27/18 17:45
	Indeno(1,2,3-cd)pyrene	1X	0.44	mg/kg	<0.44	04/27/18 17:45
	Dibenz(a,h)anthracene	1X	0.44	mg/kg	<0.44	04/27/18 17:45
	Benzo(g,h,i)perylene	1X	0.44	mg/kg	<0.44	04/27/18 17:45
C9-C18 Aliphatic Hydroc		1X	17.7	mg/kg	<17.7	04/27/18 14:06
C19-C36 Aliphatic Hydro		1X	17.7	mg/kg	45.2	04/27/18 14:06
C11-C22 Aromatic Hydrocarbons [1,2]		1X	17.7	mg/kg	17.7	04/27/18 17:45
Chlorooctadecane (Sam				%	61.9	04/27/18 14:06
o-Terphenyl (Sample Surrogate)				%	79.9	04/27/18 17:45
2-Fluorobiphenyl (Fracti	onation Surrogate)			%	95.4	04/27/18 17:45
2-Bromonaphthalene (F	ractionation Surrogate)			%	91.1	04/27/18 17:45
Surrogate Acceptance Range	e [3]				40 - 140%	

^[1] Hydrocarbon range data excludes area counts of any surrogate(s) and/or internal standards eluting in that range.

^[2] C11-C22 Aromatic Hydrocarbons excludes the concentration of Target PAH Analytes.

^[3] See the case narrative in cases where a dash (-) is entered in the surrogate recovery block.

Extractable Petroleum Hydrocarbons Sample: CTSS-6 0-1 (8D23023-03)

SAMPLE INFORMATION

Matrix	Soil	
Containers	Satisfactory	
Aqueous Preservatives	NA NA	
Temperature	Received on Ice Received at: 4+/-2 C°	
Extraction Method	EPA Method 3546	

EPH ANALYTICAL RES					T	
Method for Ranges: MADEP	EPH 4-1.1	Client ID			CTSS-6 0-1	
Method for Target Analytes	: MADEP EPH 4-1.1	Lab ID			8D23023-03	
EPH Surrogate Standards:			Dai	te Collected	04/20/18	
Aliphatic: Chlorooctadecane			Da	te Received	04/23/18	
Aromatic: o-Terphenyl			D	ate Thawed	NA	
			Dat	e Extracted	04/25/18	
EPH Fractionation Surrogate (1) 2-Fluorobiphenyl	es:		Perce	ent Moisture	11.50	
(2) 2-Bromonaphthalene						
RANGE/TARGET ANALYT	Έ	Dilution	RL	Units	Result	Analyzed
Unadjusted C11-C22 Aro	matic Hydrocarbons [1]	1X	14.9	mg/kg	<14.9	04/27/18 19:01
·	Naphthalene	1X	0.37	mg/kg	<0.37	04/27/18 19:01
Diesel PAH	2-Methylnaphthalene	1X	0.37	mg/kg	<0.37	04/27/18 19:01
Analytes	Phenanthrene	1X	0.37	mg/kg	<0.37	04/27/18 19:01
·	Acenaphthene	1X	0.37	mg/kg	<0.37	04/27/18 19:01
	Acenaphthylene	1X	0.37	mg/kg	<0.37	04/27/18 19:01
	Fluorene	1X	0.37	mg/kg	<0.37	04/27/18 19:01
	Anthracene	1X	0.37	mg/kg	<0.37	04/27/18 19:01
	Fluoranthene	1X	0.37	mg/kg	<0.37	04/27/18 19:01
	Pyrene	1X	0.37	mg/kg	<0.37	04/27/18 19:01
	Benzo(a)anthracene	1X	0.37	mg/kg	<0.37	04/27/18 19:01
Other	Chrysene	1X	0.37	mg/kg	<0.37	04/27/18 19:01
Target PAH	Benzo(b)fluoranthene	1X	0.37	mg/kg	<0.37	04/27/18 19:01
Analytes	Benzo(k)fluoranthene	1X	0.37	mg/kg	<0.37	04/27/18 19:01
·	Benzo(a)pyrene	1X	0.37	mg/kg	<0.37	04/27/18 19:01
	Indeno(1,2,3-cd)pyrene	1X	0.37	mg/kg	<0.37	04/27/18 19:01
	Dibenz(a,h)anthracene	1X	0.37	mg/kg	<0.37	04/27/18 19:01
	Benzo(g,h,i)perylene	1X	0.37	mg/kg	<0.37	04/27/18 19:01
C9-C18 Aliphatic Hydroca		1X	14.9	mg/kg	<14.9	04/27/18 15:46
C19-C36 Aliphatic Hydrocarbons [1]		1X	14.9	mg/kg	<14.9	04/27/18 15:46
C11-C22 Aromatic Hydrocarbons [1,2]		1X	14.9	mg/kg	<14.9	04/27/18 19:01
Chlorooctadecane (Sample Surrogate)				%	61.1	04/27/18 15:46
o-Terphenyl (Sample Surrogate)				%	71.0	04/27/18 19:01
2-Fluorobiphenyl (Fraction	onation Surrogate)			%	90.3	04/27/18 19:01
2-Bromonaphthalene (Fr	actionation Surrogate)			%	81.8	04/27/18 19:01
Surrogate Acceptance Range	[3]				40 - 140%	

^[1] Hydrocarbon range data excludes area counts of any surrogate(s) and/or internal standards eluting in that range.

^[2] C11-C22 Aromatic Hydrocarbons excludes the concentration of Target PAH Analytes.

^[3] See the case narrative in cases where a dash (-) is entered in the surrogate recovery block.

Extractable Petroleum Hydrocarbons Sample: CTSS-4 2-3 (8D23023-07)

SAMPLE INFORMATION

Matrix	Soil	
Containers	Satisfactory	
Aqueous Preservatives	NA NA	
Temperature	Received on Ice Received at: 4+/-2 C°	
Extraction Method	EPA Method 3546	

EPH ANALYTICAL RES	30213				T	
Method for Ranges: MADE	P EPH 4-1.1	Client ID			CTSS-4 2-3	
Method for Target Analytes	s: MADEP EPH 4-1.1	Lab ID			8D23023-07	
EPH Surrogate Standards:			Da	te Collected	04/20/18	
Aliphatic: Chlorooctadecane			Da	te Received	04/23/18	
Aromatic: o-Terphenyl			D	ate Thawed	NA	
			Dat	e Extracted	04/25/18	
EPH Fractionation Surrogat (1) 2-Fluorobiphenyl	ces:		Perce	nt Moisture	10.70	
(2) 2-Bromonaphthalene						
RANGE/TARGET ANALY	TE	Dilution	RL	Units	Result	Analyzed
Unadjusted C11-C22 Arc	omatic Hydrocarbons [1]	1X	14.7	mg/kg	<14.7	04/27/18 19:27
•	Naphthalene	1X	0.36	mg/kg	<0.36	04/27/18 19:27
Diesel PAH	2-Methylnaphthalene	1X	0.36	mg/kg	<0.36	04/27/18 19:27
Analytes	Phenanthrene	1X	0.36	mg/kg	<0.36	04/27/18 19:27
·	Acenaphthene	1X	0.36	mg/kg	<0.36	04/27/18 19:27
	Acenaphthylene	1X	0.36	mg/kg	<0.36	04/27/18 19:27
	Fluorene	1X	0.36	mg/kg	<0.36	04/27/18 19:27
	Anthracene	1X	0.36	mg/kg	<0.36	04/27/18 19:27
	Fluoranthene	1X	0.36	mg/kg	<0.36	04/27/18 19:27
	Pyrene	1X	0.36	mg/kg	<0.36	04/27/18 19:27
	Benzo(a)anthracene	1X	0.36	mg/kg	<0.36	04/27/18 19:27
Other	Chrysene	1X	0.36	mg/kg	<0.36	04/27/18 19:27
Target PAH	Benzo(b)fluoranthene	1X	0.36	mg/kg	<0.36	04/27/18 19:27
Analytes	Benzo(k)fluoranthene	1X	0.36	mg/kg	<0.36	04/27/18 19:27
•	Benzo(a)pyrene	1X	0.36	mg/kg	<0.36	04/27/18 19:27
	Indeno(1,2,3-cd)pyrene	1X	0.36	mg/kg	<0.36	04/27/18 19:27
	Dibenz(a,h)anthracene	1X	0.36	mg/kg	<0.36	04/27/18 19:27
	Benzo(g,h,i)perylene	1X	0.36	mg/kg	<0.36	04/27/18 19:27
C9-C18 Aliphatic Hydrod		1X	14.7	mg/kg	<14.7	04/27/18 16:10
C19-C36 Aliphatic Hydrocarbons [1]		1X	14.7	mg/kg	<14.7	04/27/18 16:10
C11-C22 Aromatic Hydrocarbons [1,2]		1X	14.7	mg/kg	<14.7	04/27/18 19:27
Chlorooctadecane (Sample Surrogate)				%	61.3	04/27/18 16:10
o-Terphenyl (Sample Surrogate)				%	76.9	04/27/18 19:27
2-Fluorobiphenyl (Fracti	onation Surrogate)			%	96.9	04/27/18 19:27
2-Bromonaphthalene (F	ractionation Surrogate)			%	89.8	04/27/18 19:27
Surrogate Acceptance Range	e [3]				40 - 140%	

^[1] Hydrocarbon range data excludes area counts of any surrogate(s) and/or internal standards eluting in that range.

^[2] C11-C22 Aromatic Hydrocarbons excludes the concentration of Target PAH Analytes.

^[3] See the case narrative in cases where a dash (-) is entered in the surrogate recovery block.

Extractable Petroleum Hydrocarbons Sample: CTSS-5 0-1 (8D23023-08)

SAMPLE INFORMATION

Matrix	Soil
Containers	Satisfactory
Aqueous Preservatives	NA NA
Temperature	Received on Ice Received at: 4+/-2 C°
Extraction Method	EPA Method 3546

Method for Ranges: MADEP		Client ID			CTSS-5 0-1	
Method for Target Analytes:				Lab ID	8D23023-08	
EPH Surrogate Standards:	· · · · · · · · · · · · · · · · · · ·	Date Collected			04/20/18	
Aliphatic: Chlorooctadecane			Da	te Received	04/23/18	
Aromatic: o-Terphenyl			Da	ate Thawed	NA	
			Dat	e Extracted	04/25/18	
EPH Fractionation Surrogate	s:		Perce	ent Moisture	31.50	
(1) 2-Fluorobiphenyl(2) 2-Bromonaphthalene						
RANGE/TARGET ANALYT		Dilution	RL	Units	Result	Analyzed
Unadjusted C11-C22 Aron		1X	17.2	mg/kg	161	04/27/18 22:08
	Naphthalene	1X	0.43	mg/kg	<0.43	04/27/18 22:08
Diesel PAH	2-Methylnaphthalene	1X	0.43	mg/kg	<0.43	04/27/18 22:08
Analytes	Phenanthrene	1X	0.43	mg/kg	<0.43	04/27/18 22:08
·	Acenaphthene	1X	0.43	mg/kg	<0.43	04/27/18 22:08
	Acenaphthylene	1X	0.43	mg/kg	<0.43	04/27/18 22:08
	Fluorene	1X	0.43	mg/kg	<0.43	04/27/18 22:08
	Anthracene	1X	0.43	mg/kg	<0.43	04/27/18 22:08
	Fluoranthene	1X	0.43	mg/kg	<0.43	04/27/18 22:08
	Pyrene	1X	0.43	mg/kg	<0.43	04/27/18 22:08
	Benzo(a)anthracene	1X	0.43	mg/kg	<0.43	04/27/18 22:08
Other	Chrysene	1X	0.43	mg/kg	<0.43	04/27/18 22:08
Target PAH	Benzo(b)fluoranthene	1X	0.43	mg/kg	<0.43	04/27/18 22:08
Analytes	Benzo(k)fluoranthene	1X	0.43	mg/kg	<0.43	04/27/18 22:08
•	Benzo(a)pyrene	1X	0.43	mg/kg	<0.43	04/27/18 22:08
	Indeno(1,2,3-cd)pyrene	1X	0.43	mg/kg	<0.43	04/27/18 22:08
	Dibenz(a,h)anthracene	1X	0.43	mg/kg	<0.43	04/27/18 22:08
	Benzo(q,h,i)perylene	1X	0.43	mg/kg	<0.43	04/27/18 22:08
C9-C18 Aliphatic Hydroca	1 (37 7 7)	1X	17.2	mg/kg	<17.2	04/27/18 18:42
C19-C36 Aliphatic Hydroc		1X	17.2	mg/kg	594	04/27/18 18:42
C11-C22 Aromatic Hydrocarbons [1,2]		1X	17.2	mg/kg	161	04/27/18 22:08
Chlorooctadecane (Samp	le Surrogate)			%	43.3	04/27/18 18:42
o-Terphenyl (Sample Surrogate)				%	66.5	04/27/18 22:08
2-Fluorobiphenyl (Fractio	nation Surrogate)			%	88.6	04/27/18 22:08
2-Bromonaphthalene (Fra	actionation Surrogate)			%	94.3	04/27/18 22:08
Surrogate Acceptance Range	[3]				40 - 140%	

^[1] Hydrocarbon range data excludes area counts of any surrogate(s) and/or internal standards eluting in that range.

^[2] C11-C22 Aromatic Hydrocarbons excludes the concentration of Target PAH Analytes.

^[3] See the case narrative in cases where a dash (-) is entered in the surrogate recovery block.

Extractable Petroleum Hydrocarbons Sample: CLSS-7 2-3 (8D23023-12)

SAMPLE INFORMATION

Matrix	Soil	
Containers	Satisfactory	
Aqueous Preservatives	NA NA	
Temperature	Received on Ice Received at: 4+/-2 C°	
Extraction Method	EPA Method 3546	

EPH ANALYTICAL RES	30213				T	
Method for Ranges: MADEP EPH 4-1.1		Client ID			CLSS-7 2-3	
Method for Target Analytes: MADEP EPH 4-1.1		Lab ID		8D23023-12		
EPH Surrogate Standards:			Da	te Collected	04/20/18	
Aliphatic: Chlorooctadecane			Da	te Received	04/23/18	
Aromatic: o-Terphenyl			D	ate Thawed	NA	
			Dat	e Extracted	04/25/18	
EPH Fractionation Surrogat (1) 2-Fluorobiphenyl	ces:		Perce	nt Moisture	25.50	
(2) 2-Bromonaphthalene						
RANGE/TARGET ANALY	TE	Dilution	RL	Units	Result	Analyzed
Unadjusted C11-C22 Arc	omatic Hydrocarbons [1]	1X	17.1	mg/kg	<17.1	04/27/18 15:52
	Naphthalene	1X	0.42	mg/kg	<0.42	04/27/18 15:52
Diesel PAH	2-Methylnaphthalene	1X	0.42	mg/kg	<0.42	04/27/18 15:52
Analytes	Phenanthrene	1X	0.42	mg/kg	<0.42	04/27/18 15:52
·	Acenaphthene	1X	0.42	mg/kg	<0.42	04/27/18 15:52
	Acenaphthylene	1X	0.42	mg/kg	<0.42	04/27/18 15:52
	Fluorene	1X	0.42	mg/kg	<0.42	04/27/18 15:52
	Anthracene	1X	0.42	mg/kg	<0.42	04/27/18 15:52
	Fluoranthene	1X	0.42	mg/kg	<0.42	04/27/18 15:52
	Pyrene	1X	0.42	mg/kg	<0.42	04/27/18 15:52
	Benzo(a)anthracene	1X	0.42	mg/kg	<0.42	04/27/18 15:52
Other	Chrysene	1X	0.42	mg/kg	<0.42	04/27/18 15:52
Target PAH	Benzo(b)fluoranthene	1X	0.42	mg/kg	<0.42	04/27/18 15:52
Analytes	Benzo(k)fluoranthene	1X	0.42	mg/kg	<0.42	04/27/18 15:52
·	Benzo(a)pyrene	1X	0.42	mg/kg	<0.42	04/27/18 15:52
	Indeno(1,2,3-cd)pyrene	1X	0.42	mg/kg	<0.42	04/27/18 15:52
	Dibenz(a,h)anthracene	1X	0.42	mg/kg	<0.42	04/27/18 15:52
	Benzo(g,h,i)perylene	1X	0.42	mg/kg	<0.42	04/27/18 15:52
C9-C18 Aliphatic Hydrod		1X	17.1	mg/kg	<17.1	04/27/18 13:18
C19-C36 Aliphatic Hydro		1X	17.1	mg/kg	28.2	04/27/18 13:18
C11-C22 Aromatic Hydro		1X	17.1	mg/kg	<17.1	04/27/18 15:52
Chlorooctadecane (Sam				%	55.7	04/27/18 13:18
o-Terphenyl (Sample Su	ırrogate)			%	75.3	04/27/18 15:52
2-Fluorobiphenyl (Fracti	onation Surrogate)			%	100	04/27/18 15:52
2-Bromonaphthalene (Fractionation Surrogate)				%	101	04/27/18 15:52
Surrogate Acceptance Range	e [3]				40 - 140%	

^[1] Hydrocarbon range data excludes area counts of any surrogate(s) and/or internal standards eluting in that range.

^[2] C11-C22 Aromatic Hydrocarbons excludes the concentration of Target PAH Analytes.

^[3] See the case narrative in cases where a dash (-) is entered in the surrogate recovery block.

Extractable Petroleum Hydrocarbons Sample: CLSS-11 2-3 (8D23023-15)

SAMPLE INFORMATION

Matrix	Soil	
Containers	Satisfactory	
Aqueous Preservatives	NA NA	
Temperature	Received on Ice Received at: 4+/-2 C°	
Extraction Method	EPA Method 3546	

Method for Ranges: MADEP EPH 4-1.1		Client ID			CLSS-11 2-3	
Method for Target Analytes: MADEP EPH 4-1.1		Lab ID		8D23023-15		
EPH Surrogate Standards:			Dai	te Collected	04/20/18	
Aliphatic: Chlorooctadecane			Da	te Received	04/23/18	
Aromatic: o-Terphenyl			D	ate Thawed	NA	
			Dat	e Extracted	04/25/18	
EPH Fractionation Surroga	ates:		Perce	nt Moisture	23.70	
(1) 2-Fluorobiphenyl(2) 2-Bromonaphthalene						
RANGE/TARGET ANAL	YTE	Dilution	RL	Units	Result	Analyzed
· · · · · · · · · · · · · · · · · · ·	romatic Hydrocarbons [1]	1X	16.6	mg/kg	<16.6	04/27/18 19:52
j	Naphthalene	1X	0.41	mg/kg	<0.41	04/27/18 19:52
Diesel PAH	2-Methylnaphthalene	1X	0.41	mg/kg	<0.41	04/27/18 19:52
Analytes	Phenanthrene	1X	0.41	mg/kg	<0.41	04/27/18 19:52
·	Acenaphthene	1X	0.41	mg/kg	<0.41	04/27/18 19:52
	Acenaphthylene	1X	0.41	mg/kg	<0.41	04/27/18 19:52
	Fluorene	1X	0.41	mg/kg	<0.41	04/27/18 19:52
	Anthracene	1X	0.41	mg/kg	<0.41	04/27/18 19:52
	Fluoranthene	1X	0.41	mg/kg	<0.41	04/27/18 19:52
	Pyrene	1X	0.41	mg/kg	<0.41	04/27/18 19:52
	Benzo(a)anthracene	1X	0.41	mg/kg	<0.41	04/27/18 19:52
Other	Chrysene	1X	0.41	mg/kg	<0.41	04/27/18 19:52
Target PAH	Benzo(b)fluoranthene	1X	0.41	mg/kg	<0.41	04/27/18 19:52
Analytes	Benzo(k)fluoranthene	1X	0.41	mg/kg	<0.41	04/27/18 19:52
,,	Benzo(a)pyrene	1X	0.41	mg/kg	<0.41	04/27/18 19:52
	Indeno(1,2,3-cd)pyrene	1X	0.41	mg/kg	<0.41	04/27/18 19:52
	Dibenz(a,h)anthracene	1X	0.41	mg/kg	<0.41	04/27/18 19:52
	Benzo(q,h,i)perylene	1X	0.41	mg/kg	<0.41	04/27/18 19:52
C9-C18 Aliphatic Hydro	(3, 7, 7, 7	1X	16.6	mg/kg	<16.6	04/27/18 16:34
C9-C18 Aliphatic Hydrocarbons [1] C19-C36 Aliphatic Hydrocarbons [1]		1X	16.6	mg/kg	<16.6	04/27/18 16:34
C11-C22 Aromatic Hydrocarbons [1,2]		1X	16.6	mg/kg	<16.6	04/27/18 19:52
Chlorooctadecane (Sample Surrogate)		1/1	10.0	%	57.2	04/27/18 16:34
o-Terphenyl (Sample S				%	77.7	04/27/18 19:52
2-Fluorobiphenyl (Frac				%	102	04/27/18 19:52
2-Bromonaphthalene (Fractionation Surrogate)				%	101	04/27/18 19:52
Surrogate Acceptance Range	, , , , , , , , , , , , , , , ,			70	40 - 140%	†

^[1] Hydrocarbon range data excludes area counts of any surrogate(s) and/or internal standards eluting in that range.

 $[\]hbox{\hbox{$[2]$ C11-C22 Aromatic Hydrocarbons excludes the concentration of Target PAH Analytes.}} \\$

^[3] See the case narrative in cases where a dash (-) is entered in the surrogate recovery block.

Extractable Petroleum Hydrocarbons Sample: CLSS-5 2-3 (8D23023-20)

SAMPLE INFORMATION

Matrix	Soil
Containers	Satisfactory
Aqueous Preservatives	NA NA
Temperature	Received on Ice Received at: 4+/-2 C°
Extraction Method	EPA Method 3546

Mothod for Pangos: MADED I	ED∐ //_1 1			Client ID	CLSS-5 2-3	
Method for Ranges: MADEP & Method for Target Analytes:		Lab ID			8D23023-20	
-	MADER EPH 4-1.1	Date Collected		04/20/18		
Aliphatic: Chlorooctadecane	EPH Surrogate Standards:			te Received	04/23/18	
Aromatic: o-Terphenyl				ate Thawed	NA	
				e Extracted	04/25/18	
EPH Fractionation Surrogates	S:			nt Moisture	44.90	
(1) 2-Fluorobiphenyl						
(2) 2-Bromonaphthalene		B11 111			Danult	A
RANGE/TARGET ANALYTE		Dilution	RL	Units	Result	Analyzed
Unadjusted C11-C22 Aron	i	1X	23.5	mg/kg "	97.8	04/27/18 18:36
	Naphthalene	1X	0.58	mg/kg	<0.58	04/27/18 18:36
Diesel PAH	2-Methylnaphthalene	1X	0.58	mg/kg	<0.58	04/27/18 18:36
Analytes	Phenanthrene	1X	0.58	mg/kg	<0.58	04/27/18 18:36
	Acenaphthene	1X	0.58	mg/kg	<0.58	04/27/18 18:36
	Acenaphthylene	1X	0.58	mg/kg	<0.58	04/27/18 18:36
	Fluorene	1X	0.58	mg/kg	<0.58	04/27/18 18:36
	Anthracene	1X	0.58	mg/kg	<0.58	04/27/18 18:36
	Fluoranthene	1X	0.58	mg/kg	<0.58	04/27/18 18:36
	Pyrene	1X	0.58	mg/kg	<0.58	04/27/18 18:36
	Benzo(a)anthracene	1X	0.58	mg/kg	<0.58	04/27/18 18:36
Other	Chrysene	1X	0.58	mg/kg	<0.58	04/27/18 18:36
Target PAH	Benzo(b)fluoranthene	1X	0.58	mg/kg	<0.58	04/27/18 18:36
Analytes	Benzo(k)fluoranthene	1X	0.58	mg/kg	<0.58	04/27/18 18:36
	Benzo(a)pyrene	1X	0.58	mg/kg	<0.58	04/27/18 18:36
	Indeno(1,2,3-cd)pyrene	1X	0.58	mg/kg	<0.58	04/27/18 18:36
	Dibenz(a,h)anthracene	1X	0.58	mg/kg	<0.58	04/27/18 18:36
	Benzo(g,h,i)perylene	1X	0.58	mg/kg	<0.58	04/27/18 18:36
C9-C18 Aliphatic Hydrocar	bons [1]	1X	23.5	mg/kg	<23.5	04/27/18 15:22
C19-C36 Aliphatic Hydroca	arbons [1]	1X	23.5	mg/kg	235	04/27/18 15:22
C11-C22 Aromatic Hydrocarbons [1,2]		1X	23.5	mg/kg	97.8	04/27/18 18:36
Chlorooctadecane (Sample	Chlorooctadecane (Sample Surrogate)			%	56.6	04/27/18 15:22
o-Terphenyl (Sample Surrogate)				%	81.6	04/27/18 18:36
2-Fluorobiphenyl (Fractionation Surrogate)				%	98.0	04/27/18 18:36
2-Bromonaphthalene (Fractionation Surrogate)				%	95.2	04/27/18 18:36
Surrogate Acceptance Range [[3]				40 - 140%	

^[1] Hydrocarbon range data excludes area counts of any surrogate(s) and/or internal standards eluting in that range.

^[2] C11-C22 Aromatic Hydrocarbons excludes the concentration of Target PAH Analytes.

^[3] See the case narrative in cases where a dash (-) is entered in the surrogate recovery block.

Extractable Petroleum Hydrocarbons Sample: CLSS-6 1-2 (8D23023-21)

SAMPLE INFORMATION

Matrix	Soil
Containers	Satisfactory
Aqueous Preservatives	NA NA
Temperature	Received on Ice Received at: 4+/-2 C°
Extraction Method	EPA Method 3546

Method for Ranges: MADEP				Client ID	CLSS-6 1-2	
Method for Target Analytes:		Lab ID			8D23023-21	
EPH Surrogate Standards:		Date Collected		04/20/18		
Aliphatic: Chlorooctadecane			Da	te Received	04/23/18	
Aromatic: o-Terphenyl			Da	ate Thawed	NA	
			Dat	e Extracted	04/25/18	
EPH Fractionation Surrogates	5:		Perce	nt Moisture	26.00	
(1) 2-Fluorobiphenyl(2) 2-Bromonaphthalene						
RANGE/TARGET ANALYTI	=	Dilution	RL	Units	Result	Analyzed
Unadjusted C11-C22 Aron	natic Hydrocarbons [1]	1X	17.2	mg/kg	45.8	04/27/18 18:10
	Naphthalene	1X	0.43	mg/kg	<0.43	04/27/18 18:10
Diesel PAH	2-Methylnaphthalene	1X	0.43	mg/kg	<0.43	04/27/18 18:10
Analytes	Phenanthrene	1X	0.43	mg/kg	<0.43	04/27/18 18:10
	Acenaphthene	1X	0.43	mg/kg	<0.43	04/27/18 18:10
	Acenaphthylene	1X	0.43	mg/kg	<0.43	04/27/18 18:10
	Fluorene	1X	0.43	mg/kg	<0.43	04/27/18 18:10
	Anthracene	1X	0.43	mg/kg	<0.43	04/27/18 18:10
	Fluoranthene	1X	0.43	mg/kg	<0.43	04/27/18 18:10
	Pyrene	1X	0.43	mg/kg	<0.43	04/27/18 18:10
	Benzo(a)anthracene	1X	0.43	mg/kg	<0.43	04/27/18 18:10
Other	Chrysene	1X	0.43	mg/kg	<0.43	04/27/18 18:10
Target PAH	Benzo(b)fluoranthene	1X	0.43	mg/kg	<0.43	04/27/18 18:10
Analytes	Benzo(k)fluoranthene	1X	0.43	mg/kg	<0.43	04/27/18 18:10
	Benzo(a)pyrene	1X	0.43	mg/kg	<0.43	04/27/18 18:10
	Indeno(1,2,3-cd)pyrene	1X	0.43	mg/kg	<0.43	04/27/18 18:10
	Dibenz(a,h)anthracene	1X	0.43	mg/kg	<0.43	04/27/18 18:10
	Benzo(g,h,i)perylene	1X	0.43	mg/kg	<0.43	04/27/18 18:10
C9-C18 Aliphatic Hydroca	rbons [1]	1X	17.2	mg/kg	<17.2	04/27/18 14:30
C19-C36 Aliphatic Hydroc		1X	17.2	mg/kg	192	04/27/18 14:30
C11-C22 Aromatic Hydroc	arbons [1,2]	1X	17.2	mg/kg	45.8	04/27/18 18:10
Chlorooctadecane (Sampl	e Surrogate)			%	51.6	04/27/18 14:30
o-Terphenyl (Sample Surr	rogate)			%	80.3	04/27/18 18:10
2-Fluorobiphenyl (Fraction	nation Surrogate)			%	97.4	04/27/18 18:10
2-Bromonaphthalene (Fra	ctionation Surrogate)			%	95.2	04/27/18 18:10
Surrogate Acceptance Range	[3]				40 - 140%	

^[1] Hydrocarbon range data excludes area counts of any surrogate(s) and/or internal standards eluting in that range.

^[2] C11-C22 Aromatic Hydrocarbons excludes the concentration of Target PAH Analytes.

^[3] See the case narrative in cases where a dash (-) is entered in the surrogate recovery block.

Extractable Petroleum Hydrocarbons Sample: CLSS-6 2-3 (8D23023-22)

SAMPLE INFORMATION

Matrix	Soil
Containers	Satisfactory
Aqueous Preservatives	NA NA
Temperature	Received on Ice Received at: 4+/-2 C°
Extraction Method	EPA Method 3546

EPH ANALYTICAL RES	30L13				T	
Method for Ranges: MADE	P EPH 4-1.1	Client ID			CLSS-6 2-3	
Method for Target Analytes: MADEP EPH 4-1.1		Lab ID		8D23023-22		
EPH Surrogate Standards:			Da	te Collected	04/20/18	
Aliphatic: Chlorooctadecane			Da	te Received	04/23/18	
Aromatic: o-Terphenyl			D	ate Thawed	NA	
			Dat	e Extracted	04/25/18	
EPH Fractionation Surrogat (1) 2-Fluorobiphenyl	es:		Perce	nt Moisture	19.30	
(2) 2-Bromonaphthalene						
RANGE/TARGET ANALY	TE	Dilution	RL	Units	Result	Analyzed
Unadjusted C11-C22 Arc	omatic Hydrocarbons [1]	1X	15.1	mg/kg	<15.1	04/27/18 15:26
•	Naphthalene	1X	0.37	mg/kg	<0.37	04/27/18 15:26
Diesel PAH	2-Methylnaphthalene	1X	0.37	mg/kg	<0.37	04/27/18 15:26
Analytes	Phenanthrene	1X	0.37	mg/kg	<0.37	04/27/18 15:26
·	Acenaphthene	1X	0.37	mg/kg	<0.37	04/27/18 15:26
	Acenaphthylene	1X	0.37	mg/kg	<0.37	04/27/18 15:26
	Fluorene	1X	0.37	mg/kg	<0.37	04/27/18 15:26
	Anthracene	1X	0.37	mg/kg	<0.37	04/27/18 15:26
	Fluoranthene	1X	0.37	mg/kg	<0.37	04/27/18 15:26
	Pyrene	1X	0.37	mg/kg	<0.37	04/27/18 15:26
	Benzo(a)anthracene	1X	0.37	mg/kg	<0.37	04/27/18 15:26
Other	Chrysene	1X	0.37	mg/kg	<0.37	04/27/18 15:26
Target PAH	Benzo(b)fluoranthene	1X	0.37	mg/kg	<0.37	04/27/18 15:26
Analytes	Benzo(k)fluoranthene	1X	0.37	mg/kg	<0.37	04/27/18 15:26
·	Benzo(a)pyrene	1X	0.37	mg/kg	<0.37	04/27/18 15:26
	Indeno(1,2,3-cd)pyrene	1X	0.37	mg/kg	<0.37	04/27/18 15:26
	Dibenz(a,h)anthracene	1X	0.37	mg/kg	<0.37	04/27/18 15:26
	Benzo(g,h,i)perylene	1X	0.37	mg/kg	<0.37	04/27/18 15:26
C9-C18 Aliphatic Hydroc		1X	15.1	mg/kg	<15.1	04/27/18 12:54
C19-C36 Aliphatic Hydro		1X	15.1	mg/kg	40.1	04/27/18 12:54
C11-C22 Aromatic Hydro		1X	15.1	mg/kg	<15.1	04/27/18 15:26
Chlorooctadecane (Sam	ple Surrogate)			%	55.4	04/27/18 12:54
o-Terphenyl (Sample Su	rrogate)			%	73.1	04/27/18 15:26
2-Fluorobiphenyl (Fracti	onation Surrogate)			%	97.6	04/27/18 15:26
2-Bromonaphthalene (Fractionation Surrogate)				%	97.2	04/27/18 15:26
Surrogate Acceptance Range	e [3]				40 - 140%	

^[1] Hydrocarbon range data excludes area counts of any surrogate(s) and/or internal standards eluting in that range.

^[2] C11-C22 Aromatic Hydrocarbons excludes the concentration of Target PAH Analytes.

^[3] See the case narrative in cases where a dash (-) is entered in the surrogate recovery block.

Extractable Petroleum Hydrocarbons Sample: CLSS-9 0-1 (8D23023-23)

SAMPLE INFORMATION

Matrix	Soil
Containers	Satisfactory
Aqueous Preservatives	NA NA
Temperature	Received on Ice Received at: 4+/-2 C°
Extraction Method	EPA Method 3546

Mothod for Pangos: MADED E	EDL /-1 1			Client ID	CLSS-9 0-1	
Method for Ranges: MADEP E Method for Target Analytes:		Lab ID			8D23023-23	
-	MADER ERN 4-1.1	Date Collected		04/20/18		
Aliphatic: Chlorooctadecane	EPH Surrogate Standards:			te Received	04/23/18	
Aromatic: o-Terphenyl				ate Thawed	NA	
				e Extracted	04/25/18	
EPH Fractionation Surrogates	::		Perce	ent Moisture	63.60	
(1) 2-Fluorobiphenyl (2) 2-Bromonaphthalene						
	-	Dilution	RL	Units	Result	Analyzed
RANGE/TARGET ANALYTE						04/27/18 21:34
Unadjusted C11-C22 Arom	, <u> </u>	1X	33.7	mg/kg	497	04/27/18 21:34
Diagol DALI	Naphthalene	1X	0.84	mg/kg	<0.84	· ' '
Diesel PAH	2-Methylnaphthalene	1X	0.84	mg/kg	<0.84	04/27/18 21:34
Analytes	Phenanthrene	1X	0.84	mg/kg 	<0.84	04/27/18 21:34
	Acenaphthene	1X	0.84	mg/kg 	<0.84	04/27/18 21:34
	Acenaphthylene	1X	0.84	mg/kg 	<0.84	04/27/18 21:34
	Fluorene	1X	0.84	mg/kg	<0.84	04/27/18 21:34
	Anthracene	1X	0.84	mg/kg	<0.84	04/27/18 21:34
	Fluoranthene	1X	0.84	mg/kg	<0.84	04/27/18 21:34
	Pyrene	1X	0.84	mg/kg	<0.84	04/27/18 21:34
	Benzo(a)anthracene	1X	0.84	mg/kg	<0.84	04/27/18 21:34
Other	Chrysene	1X	0.84	mg/kg	<0.84	04/27/18 21:34
Target PAH	Benzo(b)fluoranthene	1X	0.84	mg/kg	<0.84	04/27/18 21:34
Analytes	Benzo(k)fluoranthene	1X	0.84	mg/kg	<0.84	04/27/18 21:34
	Benzo(a)pyrene	1X	0.84	mg/kg	<0.84	04/27/18 21:34
	Indeno(1,2,3-cd)pyrene	1X	0.84	mg/kg	<0.84	04/27/18 21:34
	Dibenz(a,h)anthracene	1X	0.84	mg/kg	<0.84	04/27/18 21:34
	Benzo(g,h,i)perylene	1X	0.84	mg/kg	<0.84	04/27/18 21:34
C9-C18 Aliphatic Hydrocar	bons [1]	1X	33.7	mg/kg	<33.7	04/27/18 18:11
C19-C36 Aliphatic Hydroca	arbons [1]	1X	33.7	mg/kg	1800	04/27/18 18:11
C11-C22 Aromatic Hydroca	arbons [1,2]	1X	33.7	mg/kg	497	04/27/18 21:34
Chlorooctadecane (Sample	e Surrogate)			%	45.6	04/27/18 18:11
o-Terphenyl (Sample Surrogate)				%	73.2	04/27/18 21:34
2-Fluorobiphenyl (Fractionation Surrogate)				%	94.8	04/27/18 21:34
2-Bromonaphthalene (Fractionation Surrogate)				%	98.7	04/27/18 21:34
Surrogate Acceptance Range [[3]				40 - 140%	

^[1] Hydrocarbon range data excludes area counts of any surrogate(s) and/or internal standards eluting in that range.

^[2] C11-C22 Aromatic Hydrocarbons excludes the concentration of Target PAH Analytes.

^[3] See the case narrative in cases where a dash (-) is entered in the surrogate recovery block.

Extractable Petroleum Hydrocarbons Sample: CLSS-9 2-3 (8D23023-25)

SAMPLE INFORMATION

Matrix	Soil
Containers	Satisfactory
Aqueous Preservatives	NA NA
Temperature	Received on Ice Received at: 4+/-2 C°
Extraction Method	EPA Method 3546

EPH ANALT ITCAL RESC)L13					
Method for Ranges: MADEP I	EPH 4-1.1			Client ID	CLSS-9 2-3	
Method for Target Analytes:	MADEP EPH 4-1.1			Lab ID	8D23023-25	
EPH Surrogate Standards:			Dai	te Collected	04/20/18	
Aliphatic: Chlorooctadecane			Da	te Received	04/23/18	
Aromatic: o-Terphenyl			D	ate Thawed	NA	
			Dat	e Extracted	04/25/18	
EPH Fractionation Surrogates (1) 2-Fluorobiphenyl	5:		Perce	nt Moisture	72.30	
(2) 2-Bromonaphthalene						
RANGE/TARGET ANALYTI		Dilution	RL	Units	Result	Analyzed
Unadjusted C11-C22 Aron	natic Hydrocarbons [1]	1X	46.3	mg/kg	1400	04/27/18 21:09
	Naphthalene	1X	1.15	mg/kg	<1.15	04/27/18 21:09
Diesel PAH	2-Methylnaphthalene	1X	1.15	mg/kg	<1.15	04/27/18 21:09
Analytes	Phenanthrene	1X	1.15	mg/kg	<1.15	04/27/18 21:09
	Acenaphthene	1X	1.15	mg/kg	<1.15	04/27/18 21:09
	Acenaphthylene	1X	1.15	mg/kg	<1.15	04/27/18 21:09
	Fluorene	1X	1.15	mg/kg	<1.15	04/27/18 21:09
	Anthracene	1X	1.15	mg/kg	<1.15	04/27/18 21:09
	Fluoranthene	1X	1.15	mg/kg	<1.15	04/27/18 21:09
	Pyrene	1X	1.15	mg/kg	<1.15	04/27/18 21:09
	Benzo(a)anthracene	1X	1.15	mg/kg	<1.15	04/27/18 21:09
Other	Chrysene	1X	1.15	mg/kg	<1.15	04/27/18 21:09
Target PAH	Benzo(b)fluoranthene	1X	1.15	mg/kg	<1.15	04/27/18 21:09
Analytes	Benzo(k)fluoranthene	1X	1.15	mg/kg	<1.15	04/27/18 21:09
•	Benzo(a)pyrene	1X	1.15	mg/kg	<1.15	04/27/18 21:09
	Indeno(1,2,3-cd)pyrene	1X	1.15	mg/kg	<1.15	04/27/18 21:09
	Dibenz(a,h)anthracene	1X	1.15	mg/kg	<1.15	04/27/18 21:09
	Benzo(g,h,i)perylene	1X	1.15	mg/kg	<1.15	04/27/18 21:09
C9-C18 Aliphatic Hydrocai		1X	46.3	mg/kg	131	04/27/18 17:47
C19-C36 Aliphatic Hydroca		1X	46.3	mg/kg	5410	04/27/18 17:47
C11-C22 Aromatic Hydroc	arbons [1,2]	1X	46.3	mg/kg	1400	04/27/18 21:09
Chlorooctadecane (Sample	e Surrogate)			%	58.3	04/27/18 17:47
o-Terphenyl (Sample Surr	ogate)			%	77.6	04/27/18 21:09
2-Fluorobiphenyl (Fraction	nation Surrogate)			%	104	04/27/18 21:09
2-Bromonaphthalene (Fra	ctionation Surrogate)			%	98.4	04/27/18 21:09
Surrogate Acceptance Range	[3]				40 - 140%	

^[1] Hydrocarbon range data excludes area counts of any surrogate(s) and/or internal standards eluting in that range.

^[2] C11-C22 Aromatic Hydrocarbons excludes the concentration of Target PAH Analytes.

^[3] See the case narrative in cases where a dash (-) is entered in the surrogate recovery block.

Extractable Petroleum Hydrocarbons Sample: CLSS-10 0-1 (8D23023-26)

SAMPLE INFORMATION

Matrix	Soil
Containers	Satisfactory
Aqueous Preservatives	NA NA
Temperature	Received on Ice Received at: 4+/-2 C°
Extraction Method	EPA Method 3546

EPH ANALYTICAL RES						
Method for Ranges: MADEP	EPH 4-1.1			Client ID	CLSS-10 0-1	
Method for Target Analytes	: MADEP EPH 4-1.1			Lab ID	8D23023-26	
EPH Surrogate Standards:			Dai	te Collected	04/20/18	
Aliphatic: Chlorooctadecane			Da	te Received	04/23/18	
Aromatic: o-Terphenyl			D	ate Thawed	NA	
			Dat	e Extracted	04/25/18	
EPH Fractionation Surrogate (1) 2-Fluorobiphenyl	es:		Perce	nt Moisture	70.50	
(2) 2-Bromonaphthalene						
RANGE/TARGET ANALY	ΓE	Dilution	RL	Units	Result	Analyzed
Unadjusted C11-C22 Arc	matic Hydrocarbons [1]	1X	43.3	mg/kg	458	04/27/18 22:41
·	Naphthalene	1X	1.07	mg/kg	<1.07	04/27/18 22:41
Diesel PAH	2-Methylnaphthalene	1X	1.07	mg/kg	<1.07	04/27/18 22:41
Analytes	Phenanthrene	1X	1.07	mg/kg	<1.07	04/27/18 22:41
·	Acenaphthene	1X	1.07	mg/kg	<1.07	04/27/18 22:41
	Acenaphthylene	1X	1.07	mg/kg	<1.07	04/27/18 22:41
	Fluorene	1X	1.07	mg/kg	<1.07	04/27/18 22:41
	Anthracene	1X	1.07	mg/kg	<1.07	04/27/18 22:41
	Fluoranthene	1X	1.07	mg/kg	<1.07	04/27/18 22:41
	Pyrene	1X	1.07	mg/kg	<1.07	04/27/18 22:41
	Benzo(a)anthracene	1X	1.07	mg/kg	<1.07	04/27/18 22:41
Other	Chrysene	1X	1.07	mg/kg	<1.07	04/27/18 22:41
Target PAH	Benzo(b)fluoranthene	1X	1.07	mg/kg	<1.07	04/27/18 22:41
Analytes	Benzo(k)fluoranthene	1X	1.07	mg/kg	<1.07	04/27/18 22:41
·	Benzo(a)pyrene	1X	1.07	mg/kg	<1.07	04/27/18 22:41
	Indeno(1,2,3-cd)pyrene	1X	1.07	mg/kg	<1.07	04/27/18 22:41
	Dibenz(a,h)anthracene	1X	1.07	mg/kg	<1.07	04/27/18 22:41
	Benzo(g,h,i)perylene	1X	1.07	mg/kg	<1.07	04/27/18 22:41
C9-C18 Aliphatic Hydroc		1X	43.3	mg/kg	<43.3	04/27/18 19:13
C19-C36 Aliphatic Hydro		1X	43.3	mg/kg	1670	04/27/18 19:13
C11-C22 Aromatic Hydro		1X	43.3	mg/kg	458	04/27/18 22:41
Chlorooctadecane (Samp	ole Surrogate)			%	53.7	04/27/18 19:13
o-Terphenyl (Sample Su	rrogate)			%	88.8	04/27/18 22:41
2-Fluorobiphenyl (Fraction	onation Surrogate)			%	92.9	04/27/18 22:41
2-Bromonaphthalene (Fr	actionation Surrogate)			%	91.3	04/27/18 22:41
Surrogate Acceptance Range	:[3]				40 - 140%	

^[1] Hydrocarbon range data excludes area counts of any surrogate(s) and/or internal standards eluting in that range.

^[2] C11-C22 Aromatic Hydrocarbons excludes the concentration of Target PAH Analytes.

^[3] See the case narrative in cases where a dash (-) is entered in the surrogate recovery block.

Extractable Petroleum Hydrocarbons Sample: CLSS-10 2-3 (8D23023-28)

SAMPLE INFORMATION

Matrix	Soil
Containers	Satisfactory
Aqueous Preservatives	NA NA
Temperature	Received on Ice Received at: 4+/-2 C°
Extraction Method	EPA Method 3546

Method for Ranges: MADI	EP EPH 4-1.1			Client ID	CLSS-10 2-3	
Method for Target Analyte	es: MADEP EPH 4-1.1			Lab ID	8D23023-28	
EPH Surrogate Standards	•		Da	te Collected	04/20/18	
Aliphatic: Chlorooctadecane			Da	te Received	04/23/18	
Aromatic: o-Terphenyl			D	ate Thawed	NA	
			Dat	e Extracted	04/25/18	
EPH Fractionation Surroga	ates:		Perce	nt Moisture	55.20	
(1) 2-Fluorobiphenyl(2) 2-Bromonaphthalene						
RANGE/TARGET ANAL	YTE	Dilution	RL	Units	Result	Analyzed
•	romatic Hydrocarbons [1]	1X	28.1	mg/kg	50.5	04/27/18 16:20
	Naphthalene	1X	0.70	mg/kg	<0.70	04/27/18 16:20
Diesel PAH	2-Methylnaphthalene	1X	0.70	mg/kg	<0.70	04/27/18 16:20
Analytes	Phenanthrene	1X	0.70	mg/kg	<0.70	04/27/18 16:20
,	Acenaphthene	1X	0.70	mg/kg	<0.70	04/27/18 16:20
	Acenaphthylene	1X	0.70	mg/kg	<0.70	04/27/18 16:20
	Fluorene	1X	0.70	mg/kg	<0.70	04/27/18 16:20
Anthracene		1X	0.70	mg/kg	<0.70	04/27/18 16:20
	Fluoranthene	1X	0.70	mg/kg	<0.70	04/27/18 16:20
	Pyrene	1X	0.70	mg/kg	<0.70	04/27/18 16:20
	Benzo(a)anthracene	1X	0.70	mg/kg	<0.70	04/27/18 16:20
Other	Chrysene	1X	0.70	mg/kg	<0.70	04/27/18 16:20
Target PAH	Benzo(b)fluoranthene	1X	0.70	mg/kg	<0.70	04/27/18 16:20
Analytes	Benzo(k)fluoranthene	1X	0.70	mg/kg	<0.70	04/27/18 16:20
Analytes	Benzo(a)pyrene	1X	0.70	mg/kg	<0.70	04/27/18 16:20
	Indeno(1,2,3-cd)pyrene	1X	0.70	mg/kg		04/27/18 16:20
	Dibenz(a,h)anthracene				<0.70	04/27/18 16:20
	.,,,	1X 1X	0.70 0.70	mg/kg mg/kg	<0.70 <0.70	04/27/18 16:20
C9-C18 Aliphatic Hydro	Benzo(g,h,i)perylene	1X	28.1	mg/kg	<28.1	04/27/18 13:42
C19-C36 Aliphatic Hydro		1X	28.1	mg/kg	<28.1 101	04/27/18 13:42
C19-C36 Aliphatic Hyd		1X	28.1	mg/kg	50.5	04/27/18 16:20
Chlorooctadecane (Sar		17	20.1	%	54.6	04/27/18 13:42
o-Terphenyl (Sample S				%	78.1	04/27/18 16:20
2-Fluorobiphenyl (Frac				%	99.2	04/27/18 16:20
. , , ,	Fractionation Surrogate)			%	96.8	04/27/18 16:20
Surrogate Acceptance Ran	<u> </u>			,,,	40 - 140%	<u> </u>

^[1] Hydrocarbon range data excludes area counts of any surrogate(s) and/or internal standards eluting in that range.

^[2] C11-C22 Aromatic Hydrocarbons excludes the concentration of Target PAH Analytes.

^[3] See the case narrative in cases where a dash (-) is entered in the surrogate recovery block.

Quality Control

General Chemistry

Limit			Source		%REC		RPD
	Units	Level	Result	%REC	Limits	RPD	Limit
		Prepared &	Analyzed: 05	5/03/18			
1	mg/kg						
		Prepared &	Analyzed: 05	5/03/18			
1	mg/kg						
		Prepared &	Analyzed: 05	5/03/18			
1	mg/kg	20.0		99.6	90-110		
		Prepared &	Analyzed: 05	5/03/18			
1	mg/kg	20.0		93.8	90-110		
23023-08		Prepared &	Analyzed: 05	5/03/18			
7	mg/kg dry		15			16.1	20
23023-08		Prepared &	Analyzed: 05	5/03/18			
7	mg/kg dry	29.4	15	289	80-120		
		Droparad 9	Analyzadi OF	107/10			
1	ma/ka	Prepareu o	Analyzeu: 05	0/07/10			
1,	mg/kg						
		Prepared &	Analyzed: 05	5/07/18			
1	mg/kg						
		Prepared &	Analyzed: 05	5/07/18			
1	mg/kg	20.0	-	90.4	90-110		
	1 1	 7 mg/kg dry 1 mg/kg 1 mg/kg 	7 mg/kg dry 29.4 Prepared & Prep	7 mg/kg dry 29.4 15 Prepared & Analyzed: 05 1 mg/kg Prepared & Analyzed: 05 1 mg/kg Prepared & Analyzed: 05	7 mg/kg dry 29.4 15 289 Prepared & Analyzed: 05/07/18 1 mg/kg Prepared & Analyzed: 05/07/18 1 mg/kg Prepared & Analyzed: 05/07/18	7 mg/kg dry 29.4 15 289 80-120 Prepared & Analyzed: 05/07/18 1 mg/kg Prepared & Analyzed: 05/07/18 1 mg/kg Prepared & Analyzed: 05/07/18	7 mg/kg dry 29.4 15 289 80-120 Prepared & Analyzed: 05/07/18 1 mg/kg Prepared & Analyzed: 05/07/18 1 mg/kg Prepared & Analyzed: 05/07/18

			•	y Control ntinued)						
General Chemistry (Continued)	1									
Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8E0314 - Hexavalent	Chrome (Con	tinued))							
LCS (B8E0314-BS2)	•	-			Prepared 8	& Analyzed: 0	5/07/18			
Hexavalent chromium	19		1	mg/kg	20.0		93.0	90-110		
Hexavalent chromium Duplicate (B8E0314-DUP1)		iource: 8	1 BD23023-17	mg/kg		& Analyzed: 0		90-110		
		Source: 8		mg/kg mg/kg dry		& Analyzed: 0		90-110	66.6	20
Duplicate (B8E0314-DUP1)	S		BD23023-17		Prepared 8	,	5/07/18	90-110	66.6	20

				Control						
Total Metals										
	D #	01	Reporting	11.9.	Spike	Source	0/ 050	%REC	222	RPD
Analyte	Result	Qual	Limit	Units	Level	Result	%REC	Limits	RPD	Limit
Batch: B8D0881 - Metals Di	gestion Soils									
Blank (B8D0881-BLK1)					Prepared	& Analyzed: 0	4/24/18			
Nickel	ND		0.50	mg/kg						
Beryllium	ND		0.50	mg/kg						
Cadmium	ND		0.50	mg/kg						
Selenium	ND		0.99	mg/kg						
Vanadium	ND		0.50	mg/kg						
Barium	ND		0.50	mg/kg						
Lead	ND		0.50	mg/kg						
Chromium	ND		0.50	mg/kg						
Arsenic	ND		0.99	mg/kg						
Zinc	ND		2.0	mg/kg						
Antimony	ND		0.99	mg/kg						
Silver	ND		0.50	mg/kg						
Thallium	ND		0.200	mg/kg						
LCS (B8D0881-BS1)					Prepared	& Analyzed: 0	4/24/18			
Lead	93.3		0.50	mg/kg	100		93.3	85-115		
Antimony	96.4		0.99	mg/kg	100		96.4	85-115		
Cadmium	95.4		0.50	mg/kg	100		95.4	85-115		
Arsenic	19.3		0.99	mg/kg	20.0		96.5	85-115		
Nickel	94.1		0.50	mg/kg	100		94.1	85-112		
Chromium	99.8		0.50	mg/kg	100		99.8	85-115		
Beryllium	20.6		0.50	mg/kg	20.0		103	85-115		
Selenium	18.0		0.99	mg/kg	20.0		90.0	85-115		
Barium	102		0.50	mg/kg	100		102	85-115		
Vanadium	103		0.50	mg/kg	100		103	85-115		
Zinc	94.7		2.0	mg/kg	100		94.7	85-115		
Silver	39.8		0.50	mg/kg	40.0		99.4	85-115		

				y Control tinued)						
Total Metals (Continued)										
Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8D0881 - Metals Digestio	on Soils (C	Continue	ed)							
LCS (B8D0881-BS2)	-		-	Pre	pared: 04/2	24/18 Analyze	ed: 04/25/18			
Thallium	1.96		0.200	mg/kg	2.00	•	98.1	85-115		
Matrix Spike (B8D0881-MS1)		Source: 8	D23023-01		Prepared	& Analyzed: 0	4/24/18			
Selenium	14.8		1.10	mg/kg dry	22.2	, ND	66.7	70-130		
Antimony	83.1		1.10	mg/kg dry	111	ND	74.9	70-130		
Lead	137		0.55	mg/kg dry	111	15.2	110	70-130		
Zinc	261		2.2	mg/kg dry	111	102	143	70-130		
Vanadium	126		0.55	mg/kg dry	111	11.7	103	70-130		
Cadmium	107		0.55	mg/kg dry	111	1.67	95.0	70-130		
Nickel	123		0.55	mg/kg dry	111	13.0	99.4	70-130		
Chromium	124		0.55	mg/kg dry	111	10.9	102	70-130		
Silver	44.9		0.55	mg/kg dry	44.4	ND	101	70-130		
Beryllium	22.5		0.55	mg/kg dry	22.2	ND	102	70-130		
Arsenic	21.8		1.10	mg/kg dry	22.2	ND	98.2	70-130		
Barium	134		0.55	mg/kg dry	111	20.5	103	70-130		
Matrix Spike (B8D0881-MS2)		Source: 8	D23023-15	Pre	pared: 04/2	24/18 Analyze	ed: 04/25/18			
Thallium	0.731		0.258	mg/kg dry	2.58	ND	28.3	70-130		
Matrix Spike Dup (B8D0881-MSD1)	9	Source: 8	D23023-01		Prepared	& Analyzed: 0	4/24/18			
Silver	38.7		0.55	mg/kg dry	44.4	ND	87.1	70-130	15.1	200
Arsenic	21.3		1.10	mg/kg dry	22.2	ND	95.8	70-130	2.45	20
Vanadium	119		0.55	mg/kg dry	111	11.7	96.9	70-130	5.85	20
Cadmium	104		0.55	mg/kg dry	111	1.67	91.9	70-130	3.19	20
Beryllium	22.5		0.55	mg/kg dry	22.2	ND	101	70-130	0.335	20
Lead	113		0.55	mg/kg dry	111	15.2	87.8	70-130	19.5	20
Selenium	16.0		1.10	mg/kg dry	22.2	ND	72.0	70-130	7.72	200
Zinc	192		2.2	mg/kg dry	111	102	80.7	70-130	30.5	200
Antimony	87.5		1.10	mg/kg dry	111	ND	78.9	70-130	5.22	200
Chromium	116		0.55	mg/kg dry	111	10.9	94.4	70-130	7.21	200
Nickel	114		0.55	mg/kg dry	111	13.0	91.5	70-130	7.34	200
Barium	124		0.55	mg/kg dry	111	20.5	93.7	70-130	7.77	20

				y Control tinued)						
Total Metals (Continued)										
Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8D0881 - Metals Digestic	on Soils (C	Continue	ed)							
Matrix Spike Dup (B8D0881-MSD2)	-		D23023-15	Pre	epared: 04/2	24/18 Analyze	ed: 04/25/18			
Thallium	0.461		0.265	mg/kg dry	2.66	ND	17.4	70-130	45.2	20
Batch: B8D0911 - Metals Digestic	on Soils									
Blank (B8D0911-BLK1)	JII JUIIS				Prepared	& Analyzed: 0	4/24/18			
Barium	ND		0.50	mg/kg		,200. 0	, = -, ==			
Nickel	ND		0.50	mg/kg						
Vanadium	ND		0.50	mg/kg						
Antimony	ND		0.99	mg/kg						
Silver	ND		0.50	mg/kg						
Cadmium	ND		0.50	mg/kg						
Lead	ND		0.50	mg/kg						
Beryllium	ND		0.50	mg/kg						
Chromium	ND		0.50	mg/kg						
Zinc	ND		2.0	mg/kg						
Arsenic	ND		0.99	mg/kg						
Selenium	ND		0.99	mg/kg						
LCS (B8D0911-BS1)					Prepared	& Analyzed: 0	4/24/18			
Selenium	17.3		0.99	mg/kg	20.0		86.4	85-115		
Vanadium	96.5		0.50	mg/kg	100		96.5	85-115		
Antimony	90.6		0.99	mg/kg	100		90.6	85-115		
Lead	88.8		0.50	mg/kg	100		88.8	85-115		
Chromium	95.1		0.50	mg/kg	100		95.1	85-115		
Beryllium	19.0		0.50	mg/kg	20.0		95.2	85-115		
Barium	96.0		0.50	mg/kg	100		96.0	85-115		
Arsenic	18.2		0.99	mg/kg	20.0		91.1	85-115		
Silver	40.9		0.50	mg/kg	40.0		102	85-115		
Cadmium	91.0		0.50	mg/kg	100		91.0	85-115		
Nickel	89.7		0.50	mg/kg	100		89.7	85-112		
Zinc	89.4		2.0	mg/kg	100		89.4	85-115		

Quality Control (Continued) **Total Metals (Continued)** %RFC RPD Reporting Spike Source Result Qual Limit Units Result %REC Limits RPD Limit Analyte Level Batch: B8D0911 - Metals Digestion Soils (Continued) Matrix Spike (B8D0911-MS1) Source: 8D23023-16 Prepared & Analyzed: 04/24/18 Selenium 43.1 2.53 mg/kg dry 51.1 4.23 76.1 70-130 Nickel 217 1.26 mg/kg dry 8.52 81.8 70-130 Lead 561 1.26 mg/kg dry 255 281 110 70-130 255 Chromium 1560 1.26 mg/kg dry 1800 NR 70-130 Antimony 205 2.53 mg/kg dry 255 48.6 61.2 70-130 Cadmium 209 1.26 mg/kg dry 255 ND 82.0 70-130 Beryllium 44.8 1.26 mg/kg dry 51.1 ND 87.7 70-130 Barium 255 1.26 mg/kg dry 255 40.1 84.0 70-130 Arsenic 50.8 2.53 mg/kg dry 51.1 12.9 74.1 70-130 mg/kg dry Vanadium 308 1.26 255 126 71.2 70-130 Silver 87.3 1.26 102 23.0 63.0 70-130 mg/kg dry 225 28.2 77.0 Zinc 5.1 mg/kg dry 255 70-130 Matrix Spike (B8D0911-MS2) Source: 8D23023-28 Prepared: 04/24/18 Analyzed: 04/25/18 Thallium 1.52 0.424 mg/kg dry 4.26 ND 70-130 Prepared & Analyzed: 04/24/18 Matrix Spike Dup (B8D0911-MSD1) Source: 8D23023-16 Beryllium 48.9 ND 92.0 70-130 8.70 200 mg/kg dry 87.1 23.0 0.264 200 Silver 1.31 106 60.4 70-130 mg/kg dry 232 1.31 8.52 84.1 6.38 200 Nickel 265 70-130 mg/kg dry 1250 265 1800 70-130 22.3 200 Chromium 1.31 mg/kg dry NR Antimony 204 2.63 265 48.6 58.7 70-130 0.354 200 mg/kg dry

1.31

2.63

5.3

1.31

1.31

1.31

2.63

mg/kg dry

265

53.1

265

265

265

265

53.1

ND

4.23

28.2

281

126

40.1

12.9

84.7

78.3

83.2

142

76.8

98.9

79.5

70-130

70-130

70-130

70-130

70-130

70-130

70-130

7.09

6.04

10.2

15.8

6.91

17.2

8.21

200

200

200

200

200

200

200

225

45.8

249

657

330

303

55.2

Cadmium

Selenium

Vanadium

Barium

Arsenic

Zinc

Lead

			-	y Control tinued)						
Total Metals (Continued)										
Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8D0911 - Metals Digesti	on Soils (C	ontinu	ed)							
Matrix Spike Dup (B8D0911-MSD2)	5	Source: 8	BD23023-28	Pre	pared: 04/2	24/18 Analyze	ed: 04/25/18			
Thallium	0.862		0.404	mg/kg dry	4.05	ND	21.3	70-130	55.1	20
Batch: B8D0942 - Metals Digesti	on Soils									
Blank (B8D0942-BLK1)					Prepared	& Analyzed: 04	4/24/18			
Mercury	ND		0.071	mg/kg	•	,				
LCS (B8D0942-BS1)					Prepared	& Analyzed: 04	4/24/18			
Mercury	0.983			ug/l	1.00	•	98.3	93-114		
Matrix Spike (B8D0942-MS2)	5	Source: 8	BD23023-10		Prepared	& Analyzed: 04	4/24/18			
Mercury	1.11			ug/l	1.00	0.362	74.6	80-120		
Patchi PPD0042 - Motale Digosti	on Soils									
Blank (BSD0043 BLV1)	<i>טוו</i>				Dropared	P. Analyzodi O.	1/2//10			
Blank (B8D0943-BLK1) Mercury	ND		0.071	mg/kg	rieparea	& Analyzed: 04	+/ 24/ 18			
LCS (B8D0943-BS1)					Dropared	& Analyzed: 04	1/2//18			
Mercury	0.983			ug/l	1.00	x Allalyzeu. U	98.3	93-114		

Quality Control (Continued)

Extractable Petroleum Hydrocarbons (MADEP-EPH)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8D0949 - EPA 3546										
Blank (B8D0949-BLK1)				Pro	epared: 04/2	5/18 Analyze	d: 04/27/18			
Unadjusted C11-C22 Aromatic	ND		13.3	mg/kg		., , .	, , .			
Hydrocarbons										
Naphthalene	ND		0.33	mg/kg						
2-Methylnaphthalene	ND		0.33	mg/kg						
Phenanthrene	ND		0.33	mg/kg						
Acenaphthene	ND		0.33	mg/kg						
Acenaphthylene	ND		0.33	mg/kg						
Fluorene	ND		0.33	mg/kg						
Anthracene	ND		0.33	mg/kg						
Fluoranthene	ND		0.33	mg/kg						
Pyrene	ND		0.33	mg/kg						
Benzo(a)anthracene	ND		0.33	mg/kg						
Chrysene	ND		0.33	mg/kg						
Benzo(b)fluoranthene	ND		0.33	mg/kg						
Benzo(k)fluoranthene	ND		0.33	mg/kg						
Benzo(a)pyrene	ND		0.33	mg/kg						
Indeno(1,2,3-cd)pyrene	ND		0.33	mg/kg						
Dibenz(a,h)anthracene	ND		0.33	mg/kg						
Benzo(g,h,i)perylene	ND		0.33	mg/kg						
C9-C18 Aliphatic Hydrocarbons	ND		13.3	mg/kg						
C19-C36 Aliphatic Hydrocarbons	ND		13.3	mg/kg						
C11-C22 Aromatic Hydrocarbons	ND		13.3	mg/kg						
Surrogate: Chlorooctadecane			4.67	mg/kg	8.33		56.0	40-140		
Surrogate: o-Terphenyl			5.58	mg/kg	8.33		66.9	40-140		
Surrogate: 2-Fluorobiphenyl			2.05	mg/kg	3.33		61.4	40-140		
Surrogate: 2-Bromonaphthalene			2.07	mg/kg	3.33		62.2	40-140		
LCS (B8D0949-BS1)				Pr	epared: 04/2	5/18 Analyze	d: 04/27/18			
Naphthalene	1.99		0.33	mg/kg	2.67	-,,	74.7	40-140		
2-Methylnaphthalene	1.94		0.33	mg/kg	2.67		72.7	40-140		
Phenanthrene	2.18		0.33	mg/kg	2.67		81.6	40-140		
Acenaphthene	2.10		0.33	mg/kg	2.67		78.6	40-140		
Acenaphthylene	2.06		0.33	mg/kg	2.67		77.4	40-140		
Fluorene	1.94		0.33	mg/kg	2.67		72.9	40-140		
Anthracene	2.40		0.33	mg/kg	2.67		90.0	40-140		
Fluoranthene	2.13		0.33	mg/kg	2.67		80.0	40-140		
Pyrene	2.13		0.33	mg/kg	2.67		86.2	40-140		
Benzo(a)anthracene	2.18		0.33	mg/kg	2.67		81.8	40-140		
Chrysene	2.10		0.33	mg/kg	2.67		86.2	40-140		
Benzo(b)fluoranthene	2.30		0.33	mg/kg	2.67		85.2	40-140		
Benzo(k)fluoranthene	1.64		0.33		2.67		61.6	40-140		
Benzo(a)pyrene	2.12		0.33	mg/kg	2.67		79.6	40-140		
	1.56		0.33	mg/kg			79.6 58.5	40-140		
Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene				mg/kg	2.67		58.5 69.3			
	1.85		0.33	mg/kg	2.67			40-140		
Benzo(g,h,i)perylene	2.12		0.33	mg/kg	2.67		79.6	40-140		
Nonane	1.14		0.33	mg/kg	2.67		42.8	30-140		
Decane	1.52		0.33	mg/kg	2.67		57.1	40-140		
Dodecane	1.48		0.33	mg/kg	2.67		55.6	40-140		
Tetradecane	1.50		0.33	mg/kg	2.67		56.3	40-140		
Hexadecane	1.67		0.33	mg/kg	2.67		62.7	40-140		
Octadecane	2.04		0.33	mg/kg	2.67		76.3	40-140		
Nonadecane	1.97		0.33	mg/kg	2.67		73.8	40-140		
Eicosane	2.17		0.33	mg/kg	2.67		81.4	40-140		
Docosane	2.18		0.33	mg/kg	2.67		81.7	40-140		

Quality Control (Continued)

Extractable Petroleum Hydrocarbons (MADEP-EPH) (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8D0949 - EPA 3546 (Continued)									
LCS (B8D0949-BS1)	•			Pr	epared: 04/2	25/18 Analyze	d: 04/27/18			
Tetracosane	2.09		0.33	mg/kg	2.67		78.3	40-140		
Hexacosane	2.13		0.33	mg/kg	2.67		79.8	40-140		
Octacosane	2.15		0.33	mg/kg	2.67		80.5	40-140		
Triacontane	2.11		0.33	mg/kg	2.67		79.1	40-140		
Hexatriacontane	1.92		0.33	mg/kg	2.67		72.2	40-140		
Surrogate: Chlorooctadecane			5.60	mg/kg	8.33		67.2	40-140		
Surrogate: o-Terphenyl			6.62	mg/kg	8.33		79.5	40-140		
Surrogate: 2-Fluorobiphenyl			3.20	mg/kg	3.33		96.0	40-140		
Surrogate: 2-Bromonaphthalene			3.20	mg/kg	3.33		96.0	40-140		
I CS Dun (P9D0040-PSD1)				Dr	enared: 04/2	25/18 Analyze	d: 04/27/18			
LCS Dup (B8D0949-BSD1) Naphthalene	1.94		0.33	mg/kg	2.67	.5/10 AllalyZe	72.8	40-140	2.51	25
2-Methylnaphthalene	1.88		0.33	mg/kg	2.67		72.6 70.5	40-140	3.07	25
Phenanthrene	2.00		0.33	mg/kg	2.67		70.5 75.0	40-140	8.33	25
Acenaphthene	2.01		0.33	mg/kg	2.67		75.5	40-140	4.09	25
Acenaphthylene	1.98		0.33		2.67		74.3	40-140	4.09	25
Fluorene	1.82		0.33	mg/kg	2.67		68.4	40-140	6.41	25
Anthracene	2.24		0.33	mg/kg	2.67		84.0	40-140	6.90	25
Fluoranthene	1.98		0.33	mg/kg	2.67		74.2	40-140	7.55	25
	2.12			mg/kg	2.67		74.2 79.5	40-140	8.06	25
Pyrene Benzo(a)anthracene	2.12		0.33 0.33	mg/kg	2.67		79.5 75.5	40-140	8.04	
	2.01		0.33	mg/kg	2.67		75.5 81.6	40-140 40-140	5.60	25 25
Chrysene Benzo(b)fluoranthene	1.90		0.33	mg/kg	2.67		71.1	40-140	18.1	25
* *				mg/kg				40-140		
Benzo(k)fluoranthene	1.97		0.33	mg/kg	2.67		73.8		18.0	25
Benzo(a)pyrene	2.01		0.33	mg/kg	2.67		75.2	40-140	5.65	25
Indeno(1,2,3-cd)pyrene	1.92		0.33	mg/kg	2.67		71.9	40-140	20.6	25
Dibenz(a,h)anthracene	2.02		0.33	mg/kg	2.67		75.7	40-140	8.97	25
Benzo(g,h,i)perylene	2.05		0.33	mg/kg	2.67		76.8	40-140	3.64	25
Nonane	1.26		0.33	mg/kg	2.67		47.3	30-140	9.98	25
Decane	1.68		0.33	mg/kg	2.67		63.1	40-140	10.1	25
Dodecane Takes de sous	1.64		0.33	mg/kg	2.67		61.6	40-140	10.2	25
Tetradecane	1.63		0.33	mg/kg	2.67		61.0	40-140	8.01	25
Hexadecane	1.71		0.33	mg/kg	2.67		64.0	40-140	2.05	25
Octadecane	1.99		0.33	mg/kg	2.67		74.5	40-140	2.35	25
Nonadecane	1.92		0.33	mg/kg	2.67		72.0	40-140	2.47	25
Eicosane	2.12		0.33	mg/kg	2.67		79.6	40-140	2.30	25
Docosane	2.17		0.33	mg/kg	2.67		81.2	40-140	0.583	25
Tetracosane	2.11		0.33	mg/kg	2.67		79.2	40-140	1.11	25
Hexacosane	2.13		0.33	mg/kg	2.67		80.0	40-140	0.344	25
Octacosane	2.15		0.33	mg/kg	2.67		80.8	40-140	0.372	25
Triacontane	2.13		0.33	mg/kg	2.67		80.0	40-140	1.16	25
Hexatriacontane	1.85		0.33	mg/kg	2.67		69.4	40-140	3.88	25
Surrogate: Chlorooctadecane			5.29	mg/kg	8.33		63.5	40-140		
Surrogate: o-Terphenyl			6.08	mg/kg	8.33		73.0	40-140		
Surrogate: 2-Fluorobiphenyl			3.09	mg/kg	3.33		92.6	40-140		
Surrogate: 2-Bromonaphthalene			3.06	mg/kg	3.33		91.8	40-140		

Quality Control (Continued)

Extractable Petroleum Hydrocarbons (MADEP-EPH) (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8D0949 - EPA 3546 (-	_		_						
Matrix Spike (B8D0949-MS1)		ource: 8	D23023-03			5/18 Analyze				
Naphthalene	1.68		0.36	mg/kg dry	2.92	ND	57.4	40-140		
2-Methylnaphthalene	1.90		0.36	mg/kg dry	2.92	ND	65.1	40-140		
Phenanthrene	2.14		0.36	mg/kg dry	2.92	ND	73.5	40-140		
Acenaphthene	2.12		0.36	mg/kg dry	2.92	ND	72.7	40-140		
Acenaphthylene	2.02		0.36	mg/kg dry	2.92	ND	69.4	40-140		
Fluorene	1.87		0.36	mg/kg dry	2.92	ND	64.0	40-140		
Anthracene	2.55		0.36	mg/kg dry	2.92	ND	87.4	40-140		
Fluoranthene	2.22		0.36	mg/kg dry	2.92	ND	76.0	40-140		
Pyrene	2.37		0.36	mg/kg dry	2.92	ND	81.0	40-140		
Benzo(a)anthracene	2.21		0.36	mg/kg dry	2.92	ND	75.5	40-140		
Chrysene	2.46		0.36	mg/kg dry	2.92	ND	84.2	40-140		
Benzo(b)fluoranthene	2.36		0.36	mg/kg dry	2.92	ND	80.7	40-140		
Benzo(k)fluoranthene	2.33		0.36	mg/kg dry	2.92	ND	79.8	40-140		
Benzo(a)pyrene	2.01		0.36	mg/kg dry	2.92	ND	68.8	40-140		
Indeno(1,2,3-cd)pyrene	1.69		0.36	mg/kg dry	2.92	ND	57.9	40-140		
Dibenz(a,h)anthracene	2.32		0.36	mg/kg dry	2.92	ND	79.4	40-140		
Benzo(g,h,i)perylene	1.98		0.36	mg/kg dry	2.92	ND	68.0	40-140		
Nonane	1.15		0.36	mg/kg dry	2.92	ND	39.3	30-140		
Decane	1.57		0.36	mg/kg dry	2.92	ND	53.9	40-140		
Dodecane	1.53		0.36	mg/kg dry	2.92	ND	52.4	40-140		
Tetradecane	1.50		0.36	mg/kg dry	2.92	ND	51.5	40-140		
Hexadecane	1.67		0.36	mg/kg dry	2.92	ND	57.3	40-140		
Octadecane	1.99		0.36	mg/kg dry	2.92	ND	68.3	40-140		
Nonadecane	1.97		0.36	mg/kg dry	2.92	ND	67.4	40-140		
Eicosane	2.25		0.36	mg/kg dry	2.92	ND	77.0	40-140		
Docosane	2.28		0.36	mg/kg dry	2.92	ND	78.3	40-140		
Tetracosane	2.23		0.36	mg/kg dry	2.92	ND	76.4	40-140		
Hexacosane	2.24		0.36	mg/kg dry	2.92	ND	76.8	40-140		
Octacosane	2.26		0.36	mg/kg dry	2.92	ND	77.5	40-140		
Triacontane	2.23		0.36	mg/kg dry	2.92	ND	76.5	40-140		
Hexatriacontane	2.05		0.36	mg/kg dry	2.92	ND	70.2	40-140		
Surrogate: Chlorooctadecane			5.17	mg/kg dry	9.12		<i>56.7</i>	40-140		
Surrogate: o-Terphenyl			7.02	mg/kg dry	9.12		76.9	40-140		
Surrogate: 2-Fluorobiphenyl			3.58	mg/kg dry	3.65		98.1	40-140		
Surrogate: 2-Bromonaphthalene			3.50	mg/kg dry	3.65		95.8	40-140		

Quality Control (Continued)

Extractable Petroleum Hydrocarbons (MADEP-EPH) (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPE Limi
atch: B8D0949 - EPA 3546 (Con	tinued)									
Matrix Spike Dup (B8D0949-MSD1)	-	Source: 8	D23023-03	Pre	pared: 04/2	25/18 Analyze	d: 04/27/18			
Naphthalene	1.76		0.36	mg/kg dry	2.93	, ND	60.0	40-140	4.95	25
2-Methylnaphthalene	2.10		0.36	mg/kg dry	2.93	ND	71.5	40-140	9.82	25
Phenanthrene	2.49		0.36	mg/kg dry	2.93	ND	85.0	40-140	15.0	2!
Acenaphthene	2.32		0.36	mg/kg dry	2.93	ND	79.0	40-140	8.72	2!
Acenaphthylene	2.24		0.36	mg/kg dry	2.93	ND	76.4	40-140	10.1	2
Fluorene	2.10		0.36	mg/kg dry	2.93	ND	71.6	40-140	11.8	2
Anthracene	2.74		0.36	mg/kg dry	2.93	ND	93.3	40-140	6.98	2
Fluoranthene	2.57		0.36	mg/kg dry	2.93	ND	87.6	40-140	14.6	2
Pyrene	2.74		0.36	mg/kg dry	2.93	ND	93.5	40-140	14.7	2!
Benzo(a)anthracene	2.54		0.36	mg/kg dry	2.93	ND	86.7	40-140	14.2	2
Chrysene	2.72		0.36	mg/kg dry	2.93	ND	92.7	40-140	10.1	2
Benzo(b)fluoranthene	2.57		0.36	mg/kg dry	2.93	ND	87.6	40-140	8.59	2
Benzo(k)fluoranthene	2.79		0.36	mg/kg dry	2.93	ND	95.2	40-140	18.1	2
Benzo(a)pyrene	2.30		0.36	mg/kg dry	2.93	ND	78.6	40-140	13.7	2
Indeno(1,2,3-cd)pyrene	1.40		0.36	mg/kg dry	2.93	ND	47.9	40-140	18.4	2
Dibenz(a,h)anthracene	2.75		0.36	mg/kg dry	2.93	ND	93.9	40-140	17.3	2
Benzo(g,h,i)perylene	2.48		0.36	mg/kg dry	2.93	ND	84.6	40-140	22.3	2
Nonane	1.22		0.36	mg/kg dry	2.93	ND	41.7	30-140	6.34	2
Decane	1.76		0.36	mg/kg dry	2.93	ND	60.1	40-140	11.4	2
Dodecane	1.80		0.36	mg/kg dry	2.93	ND	61.2	40-140	16.0	2
Tetradecane	1.82		0.36	mg/kg dry	2.93	ND	62.0	40-140	18.9	2
Hexadecane	2.05		0.36	mg/kg dry	2.93	ND	69.8	40-140	20.1	2
Octadecane	2.47		0.36	mg/kg dry	2.93	ND	84.1	40-140	21.3	2
Nonadecane	2.41		0.36	mg/kg dry	2.93	ND	82.3	40-140	20.4	2
Eicosane	2.75		0.36	mg/kg dry	2.93	ND	93.6	40-140	20.0	2
Docosane	2.55		0.36	mg/kg dry	2.93	ND	87.0	40-140	11.1	2
Tetracosane	2.64		0.36	mg/kg dry	2.93	ND	90.0	40-140	16.8	2
Hexacosane	2.67		0.36	mg/kg dry	2.93	ND	91.2	40-140	17.6	2
Octacosane	2.70		0.36	mg/kg dry	2.93	ND	92.2	40-140	17.8	2
Triacontane	2.64		0.36	mg/kg dry	2.93	ND	90.2	40-140	16.9	2
Hexatriacontane	2.33		0.36	mg/kg dry	2.93	ND	79.6	40-140	13.0	2
Surrogate: Chlorooctadecane			6.67	mg/kg dry	9.16		72.8	40-140		
Surrogate: o-Terphenyl			7.78	mg/kg dry	9.16		84.9	40-140		
Surrogate: 2-Fluorobiphenyl			3.86	mg/kg dry	3.67		105	40-140		
Surrogate: 2-Bromonaphthalene			3.81	mg/kg dry	3.67		104	40-140		

Notes and Definitions

Item	<u>Definition</u>
Wet	Sample results reported on a wet weight basis.
ND	Analyte NOT DETECTED at or above the reporting limit.



New England Testing Laboratory

59 Greenhill Street West Warwick, RI 02893

1-888-863-8522

Chain of Custody Record

Project No.	Project Na	me/L	oca	tion: 17 Lawrence st	Γ	•		,						Tes	sts**		
Client: CAO	tal E,	2777.6	W.	mental, LLC		latri	ĸ		a)		ds			T			
Report To:	Rob B	era	es	<u> </u>					aţi	7	poro		ļ				
Invoice To:	Rob Ba	enge 11	<u>E</u> N	VIro, LLC	SI			No. of Containers	Preservative	Metals	IJ	-				; ;	
Date	Time	Comp	Grab	Sample I.D.	Aqueous	Soil	Other			T. Me	EPH						
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	930 A	x		CT 55-3 21-31		X		1 •	10E	×	×			\top	\neg	1-	
4,20,18	938A	Х		CTSS-6 0-1'		X			105	×	X						
4.20.18	945A	X		CTSS-6 1-2'		X		1 .	105	X							
4.20.18	955A	X		CTSS-6 2-3!		X		•	ICE	X							
4,20.18	10°0 A	X		CTSS-4 1'-2'	Ш	×		1 .	ICE	X					_		
4.20,18	1010A	X	_	CTSS-4 21-31	Ш	X	_	•	105	X						-	
4.20:18	1015 A	X		CTS5-5 0-11	Ш	X		-1	ICE		X			\perp			
4.20:18	102°A	X	_	CT SS-5 1'-2'	Ш	X			ICE	X				_			
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	11 35 A	X		CL 55-11 0-1'	-	X			ICE	X					-		
	1145 A	X	-	Received By:	Data	メ Time		- 1 P	ICE	X	2121	l nstruc	4!				
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				g tests: Radiologicals, Radon, TO	OC, /	\sbe	stos	, UCMRs, Per	chlorate,								
Bromate, Bro	nide, Sieve	, Sain	none	ella, Carbamates				•		Turr	narou	nd Ti	me (E	Busin	ess D	ays]: {	Days

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Pg 1 of 2

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New England Testing Laboratory 59 Greenhill Street

West Warwick, RI 02893

1-888-863-8522

Chain of Custody Record

Project No. Pr	roject Na	me/Loc	ation: 17 Lawrences	†									Test	s**		
Client: CAPT	talEr		mmental, LLC		Vlatri	x				14		T		T		
IReport To: 71	S (A)	<u> Beng</u>		_				ativ	크	curacto	0					
Invoice To: C	10 B	3618	nvico, LLC				No. of	Preservative	Ye	- X						
Date Ti	me	Comp Grab	Sample I.D.	Aqueous	Soil	Other	Containers	<u> </u>	T. Metal	EPH W						
4.20.18 /	155	X	CLSS-1(21-3'		X		1 •	ICE	X	X			\top	1 -		
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4.30.18	O	X	CLSS-12 1-2'		X		1 •	105	X							
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		192	1 50U	12	15											
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Neu		4/23		4.2)3·13	/										
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**Net/ab Subcont	tracts the	following	g tests: Radiologicals, Radon, 1	roc, /	Asbe	stos	, UCMRs, Perc	hlórate,								
Bromate, Bromid	e, Sieve,	Salmon	ella, Carbamates						Turr	aroun	d Tim	ne [Bu	usines	s Day	s]: 5 l	Days

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New England Testing Laboratory 59 Greenhill Street

59 Greenhill Street West Warwick, RI 02893

1-888-863-8522

Chain of Custody Record

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Report To:	Rob B	wa.	us		_						aţį	Ξ	న	٠, (
	Rob B	engl									Preservative	1	-	1						
invoice To:	Cabiti	31 6	~	VIro, LL		ر ا				o. of ainers	ğ	F	3						ı	
Date	Time	Comp	Grab	Samp	e I.D.	Aqueous	lios,	Other	Com	an 101 5	_	T. Metals	EPH	HLX						
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4.20.18	955A	X	_	CTSS-6	8-3		<u> </u>		1		ICE	X		·						
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**Nedab Subo	ontracts the	e follor	wing	tests: Radiolog	cals, Radon, TO	C, A	Asbe	stos	, UCM	Rs, Per	chlorate,									
Bromate, Bro	nide, Sieve	, Salm	none	ella, Carbamates								Tun	narou	ind T	ime [Busir	ness [Days]:	5 Days	5 I

Hex/Tri Chrome added per Rob 5/1 8d

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New England Testing Laboratory

59 Greenhill Street West Warwick, RI 02893

Chain of Custody Record 1-888-863-8522 Project Name/Logation: 17 Lawrencest Buckley + Mann Norfolk, MA Tests** Matrix Preservative ROB BENGE CAO, FAL ENVICO, LLC Invoice To: C No. of Containers Aqueous EPH Comp Soil Sample I.D. Time X 1155 X ICE 0-1 ICE X 105 X ICE ×× ICE × ICE × 105 21-3 ICE 0-1 × 7-2 × KE 1 × 4.20.18 220 P Received By: 21-21 10.E Date/Time Laboratory Remarks: Sampled By: Special Instructions: 4/23 105 Date///me Relinquished By: Date/Time Received By: 4.23.18 1430 Temp. Received: · 3・ **Net ab Subcontracts the following tests: Fadiologicals, Radon, TOC, Asbestos, UCMRs, Perchlorate, Bromate, Bromide, Sieve, Salmonella, Carbamates Turnaround Time [Business Days]: 5 Days

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		Ma	assDEP Analytica	l Protocol Certifi	cation Form							
Labo	ratory Na	ame: New England	d Testing Laboratory	, Inc.	Project #:							
Proje	ect Location	on: Norfolk, MA			RTN:							
	Form pro D23023	ovides certification	ons for the followin	g data set: list Lab	oratory Sample ID N	lumber(s):						
Matrio	ces: 🗆 Gi	roundwater/Surfac	ce Water ⊠ Soil/Se	diment Drinking	Water ☐ Air ☐ Oth	er:						
CAM	Protoco	(check all that a	apply below):									
8260 CAM		7470/7471 Hg CAM III B ⊠	MassDEP VPH (GC/PID/FID) CAM IV A □	8082 PCB CAM V A □	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B □						
	SVOC II B 🗆	7010 Metals CAM III C ⊠	MassDEP VPH (GC/MS) CAM IV C □	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A □						
	Metals III A ⊠	6020 Metals CAM III D	MassDEP EPH CAM IV B ⊠	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B □						
A	Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status											
A	Were all samples received in a condition consistent with those described on the Chain-of-											
В		e analytical method tocol(s) followed?	d(s) and all associated	d QC requirements s	pecified in the selected	d ⊠ Yes □ No						
С			e actions and analyticated for all identified perfe		specified in the selected n-conformances?	d ⊠ Yes □ No						
D		Assurance and C			specified in CAM VII A ition and Reporting o							
E	a. VPH, modificat	tion(s)? (Refer to th		for a list of significant		ıt ⊠ Yes □ No						
F					conformances identified Questions A through E)?							
Res	sponses	to Questions G,	H and I below are re	equired for "Presu	mptive Certainty" st	atus						
G	Were the protocol(or below all CAM repor	ting limits specified in	the selected CAM	⊠ Yes □ No ¹						
			ve "Presumptive Certails s described in 310 CMR		cessarily meet the data of SC-07-350.	usability and						
Н	Were all	QC performance s	andards specified in th	ne CAM protocol(s) ac	chieved?	⊠ Yes □ No ¹						
I	Were res	sults reported for the	e complete analyte list	specified in the select	ted CAM protocol(s)?	⊠ Yes □ No ¹						
¹ All r	negative re	esponses must be	addressed in an attac	ched laboratory narra	ative.							
respoi	, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.											
Sign	ature: 😥			Positio	n: <u>Laboratory Director</u>							
Print	ted Name	Richard Warila		— Date:	5/8/2018							

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EXHIBIT B

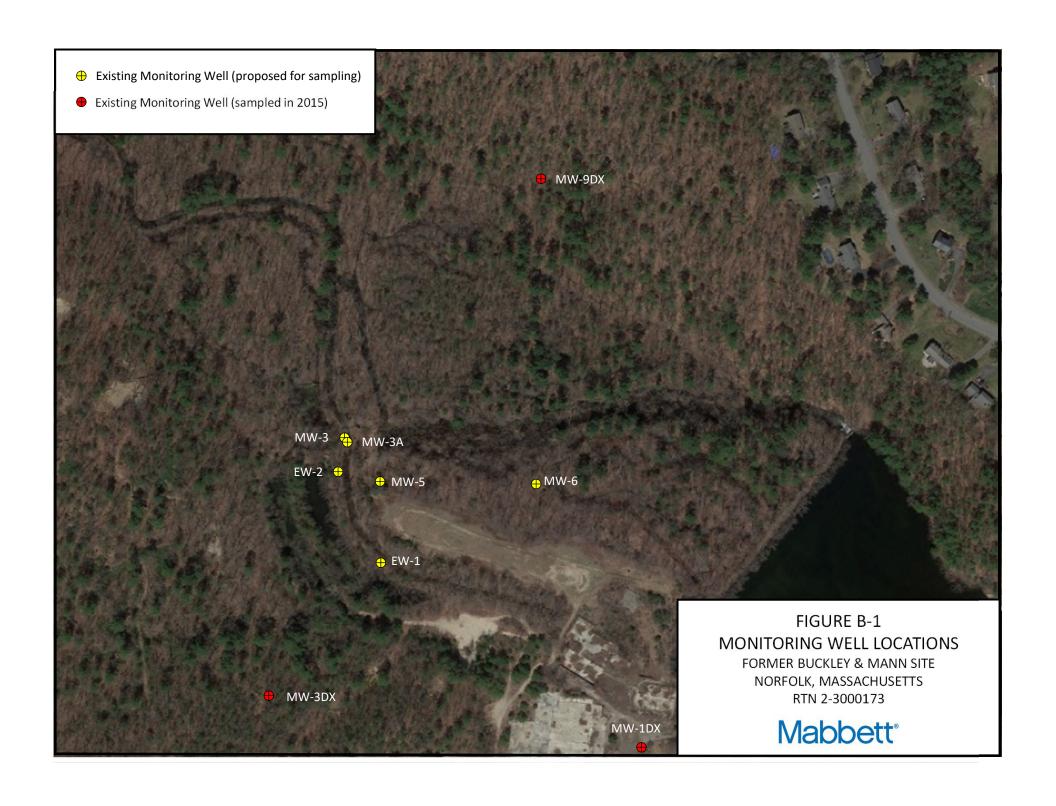


Table B-1
2014 Groundwater Analytical Results
Former Buckley and Mann Site
Norfolk, Massachusetts
Page 1 of 3

LOCATION			EW-1	EW-2	MW-3	MW-3A	MW-5	MW-6
SAMPLING DATE			6/26/2014	6/19/2014	6/26/2014	6/19/2014	6/19/2014	6/19/2014
MCP METHOD 1 STANDARDS	GW-1	GW-3						
Total/Unfiltered Metals (mg/L)								
Arsenic	0.01	0.9	NA	0.001 U	0.031	0.001 U	0.00172	0.0174
Barium	2	50	NA	0.014	0.115	0.077	0.348	0.220
Cadmium	0.005	0.004	NA	0.010 U				
Chromium	0.1	0.3	NA	0.010 U	0.048	0.010 U	0.017	0.088
Lead	0.015	0.01	NA	0.010 U	0.010 U	0.010 U	0.010 U	0.039
Selenium	0.05	0.1	NA	0.010 U	0.010 U	0.010 U	0.026	0.020
Silver	0.1	0.007	NA	0.010 U				
Mercury	0.002	0.02	NA	0.0002 U	0.0002 U	0.0002 U	0.000353	0.000533
Volatile Organic Compounds (ug/L)								
1,1,1,2-Tetrachloroethane	5	50000	2.00 U					
1,1,1-Trichloroethane	200	20000	2.00 U					
1,1,2,2-Tetrachloroethane	2	50000	2.00 U					
1,1,2-Trichloroethane	5	50000	2.00 U					
1,1-Dichloroethane	70	20000	2.00 U					
1,1-Dichloroethene	7	30000	2.00 U					
1,1-Dichloropropene			2.00 U					
1,2,3-Trichlorobenzene			2.00 U					
1,2,3-Trichloropropane			2.00 U					
1,2,4-Trichlorobenzene	70	50000	2.00 U					
1,2,4-Trimethylbenzene			2.00 U					
1,2-Dibromo-3-Chloropropane			2.00 U					
1,2-Dibromoethane			2.00 U					
1,2-Dichlorobenzene	600	2000	2.00 U					
1,2-Dichloroethane	5	20000	2.00 U					
1,2-Dichloropropane	5	50000	2.00 U					
1,3,5-Trimethylbenzene			2.00 U					
1,3-Dichlorobenzene	100	50000	2.00 U					
1,3-Dichloropropane			2.00 U					
1,4-Dichlorobenzene	5	8000	2.00 U					
1,4-Dioxane	0.3	50000	500 U					
2,2-Dichloropropane			2.00 U					
2-Butanone	4000	50000	10 U					
2-Chlorotoluene			2.00 U					
2-Hexanone			10 U					
2-Methoxy-2-Methylbutane			2.00 U					
4-Chlorotoluene			2.00 U					

Table B-1
2014 Groundwater Analytical Results
Former Buckley and Mann Site
Norfolk, Massachusetts
Page 2 of 3

LOCATION			EW-1	EW-2	MW-3	MW-3A	MW-5	MW-6
SAMPLING DATE			6/26/2014	6/19/2014	6/26/2014	6/19/2014	6/19/2014	6/19/2014
MCP METHOD 1 STANDARDS	GW-1	GW-3						
Volatile Organic Compounds (ug/L)								
4-Isopropyltoluene			2.00 U	2.00 L				
4-Methyl-2-Pentanone			5.00 U	5.00 L				
Acetone	6300	50000	32.7	10 U	10 U	10 U	10 U	10 L
Benzene	5	10000	2.00 U	2.00 L				
Bromobenzene			2.00 U	2.00 L				
Bromochloromethane			2.00 U	2.00 L				
Bromodichloromethane	3	50000	2.00 U	2.00 L				
Bromoform	4	50000	2.00 U	2.00 L				
Bromomethane	10	800	2.00 U	2.00 L				
Carbon Disulfide			2.00 U	2.00 L				
Carbon Tetrachloride	5	5000	2.00 U	2.00 L				
Chlorobenzene	100	1000	2.00 U	2.00 L				
Chloroethane			2.00 U	2.00 L				
Chloroform	70	20000	2.00 U	2.00 L				
Chloromethane			2.00 U	2.00 L				
cis-1,2-Dichloroethene	70	50000	2.00 U	2.00 L				
cis-1,3-Dichloropropene	0.4	200	0.170 U	0.170 L				
Dibromochloromethane	2	50000	2.00 U	2.00 L				
Dibromomethane			2.00 U	2.00 L				
Dichlorodifluoromethane			2.00 U	2.00 L				
Diethyl Ether			2.00 U	2.00 L				
Diisopropyl Ether			2.00 U	2.00 L				
Ethylbenzene	700	5000	2.00 U	2.00 L				
Ethyl-t-Butyl Ether			2.00 U	2.00 L				
Hexachlorobutadiene	0.6	3000	2.00 U	2.00 L				
Isopropylbenzene			2.00 U	2.00 L				
Methy Tert-Butyl Ether	70	50000	2.00 U	2.00 L				
Methylene Chloride			2.00 U	2.00 L				
Naphthalene	140	20000	2.00 U	2.00 L				
n-Butylbenzene			2.00 U	2.00 L				
n-Propylbenzene			2.00 U	2.00 L				
sec-Butylbenzene			2.00 U	2.00 L				
Styrene	100	6000	2.00 U	2.00 L				
t-Butyl Alcohol			2.00 U	2.00 L				
tert-Butylbenzene			2.00 U	2.00 L				
Tetrachloroethene	5	30000	2.00 U	2.00 L				
Tetrahydrofuran			2.00 U	2.00 L				

Table B-1
2014 Groundwater Analytical Results
Former Buckley and Mann Site
Norfolk, Massachusetts
Page 3 of 3

LOCATION			EW-1	EW-2	MW-3	MW-3A	MW-5	MW-6
SAMPLING DATE			6/26/2014	6/19/2014	6/26/2014	6/19/2014	6/19/2014	6/19/2014
MCP METHOD 1 STANDARDS	GW-1	GW-3						
Volatile Organic Compounds (ug/L)								
Toluene	1000	40000	2.00 U					
trans-1,2-Dichloroethene	100	50000	2.00 U					
trans-1,3-Dichloropropene	0.4	200	0.270 U					
Trichloroethene	5	5000	2.00 U					
Trichlorofluoromethane			2.00 U					
Vinyl Chloride	2	50000	2.00 U					
Xylenes, Total	10000	5000	2.00 U					
Extractable Petroleum Hydrocarbons (ug/L)								
C11-C22 Aromatics	200	5000	NA	102 U	100 U	101 U	101 U	101 U
C11-C22 Aromatics, Adjusted	200	5000	NA	102 U	100 U	101 U	101 U	101 U
C9-C18 Aliphatics	700	50000	NA	102 U	100 U	101 U	101 U	101 U
C19-C36 Aliphatics	14000	50000	NA	102 U	100 U	101 U	101 U	101 U
2-Methylnaphthalene	10	20000	NA	1.02 U	1.00 U	1.01 U	1.01 U	1.01 U
Acenaphthene	20	10000	NA	1.02 U	1.00 U	1.01 U	1.01 U	1.01 U
Acenaphthylene	30	40	NA	1.02 U	1.00 U	1.01 U	1.01 U	1.01 U
Anthracene	60	30	NA	1.02 U	1.00 U	1.01 U	1.01 U	1.01 U
Benzo(a)anthracene	1	1000	NA	0.408 U	0.400 U	0.402 U	0.404 U	0.404 U
Benzo(a)pyrene	0.2	500	NA	0.194 U	0.190 U	0.191 U	0.192 U	0.192 U
Benzo(b)fluoranthene	1	400	NA	0.204 U	0.200 U	0.201 U	0.202 U	0.202 U
Benzo(ghi)perylene	50	20	NA	1.02 U	1.00 U	1.01 U	1.01 U	1.01 U
Benzo(k)fluoranthene	1	100	NA	0.204 U	0.200 U	0.201 U	0.202 U	0.202 U
Chrysene	2	70	NA	1.02 U	1.00 U	1.01 U	1.01 U	1.01 U
Dibenzo(a,h)anthracene	0.5	40	NA	0.408 U	0.400 U	0.402 U	0.404 U	0.404 U
Fluoranthene	90	200	NA	1.02 U	1.00 U	1.01 U	1.01 U	1.01 U
Fluorene	30	40	NA	1.02 U	1.00 U	1.01 U	1.01 U	1.01 U
Indeno(1,2,3-cd)Pyrene	0.5	100	NA	0.408 U	0.400 U	0.402 U	0.404 U	0.404 U
Naphthalene	140	20000	NA	1.02 U	1.00 U	1.01 U	1.01 U	1.01 U
Phenanthrene	40	10000	NA	1.02 U	1.00 U	1.01 U	1.01 U	1.01 U
Pyrene	60	20	NA	1.02 U	1.00 U	1.01 U	1.01 U	1.01 U

Notes:

- 1. mg/L = milligrams per liter, ug/L = micrograms per liter
- 2. bold type = detected constituents
- 3. shaded cells = MCP standard exceeded
- 4. U = not detected above laboratory limits
- 5. NA = not analyzed for this constituent

Table B-2
April/June 2015 Groundwater Analytical Results
Former Buckley and Mann Site
Norfolk, Massachusetts
Page 1 of 3

LOCATION			EW-1	EW-2	MW-1DX	MW-3	MW-5	MW-6	WS-3	MW-3DX	MW-9DX
SAMPLING DATE			4/2/2015	4/2/2015	4/2/2015	4/2/2015	4/2/2015	4/2/2015	6/10/2015	6/10/2015	6/10/2015
MCP METHOD 1 STANDARDS	GW-1	GW-3									
Metals (mg/L)											
Antimony	0.006	8	0.006 U	0.006 U	0.006 U						
Arsenic	0.01	0.9	0.0133 U	0.022	0.069	0.020	0.036	0.032	0.017	0.020	0.0133 U
Barium	2	50	0.05 U	0.057	0.05 U						
Beryllium	0.004	0.2	0.001 U	0.001 U	0.001 U						
Cadmium	0.005	0.004	0.004 U	0.004 U	0.004 U						
Chromium	0.1	0.3	0.07 U	0.07 U	0.07 U						
Lead	0.015	0.01	0.01 U	0.01 U	0.01 U						
Nickel	0.1	0.2	0.1 U	0.1 U	0.1 U						
Selenium	0.05	0.1	0.05 U	0.05 U	0.05 U						
Silver	0.1	0.007	0.007 U	0.007 U	0.007 U						
Thallium	0.002	3	0.01 U	0.01 U	0.01 U						
Vanadium	0.03	4	0.03 U	0.03 U	0.03 U						
Zinc	5	0.9	0.312	0.18 U	0.18 U	0.18 U					
Mercury	0.002	0.02	0.0002 U	0.0002 U	0.0002 U						
Volatile Organic Compounds (ug/L)											
1,1,1,2-Tetrachloroethane	5	50000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
1,1,1-Trichloroethane	200	20000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
1,1,2,2-Tetrachloroethane	2	50000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
1,1,2-Trichloroethane	5	50000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
1,1-Dichloroethane	70	20000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
1,1-Dichloroethene	7	30000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
1,1-Dichloropropene			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
1,2,3-Trichlorobenzene			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
1,2,3-Trichloropropane			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
1,2,4-Trichlorobenzene	70	50000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
1,2,4-Trimethylbenzene			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
1,2-Dibromo-3-Chloropropane			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
1,2-Dibromoethane			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
1,2-Dichlorobenzene	600	2000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
1,2-Dichloroethane	5	20000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
1,2-Dichloropropane	5	50000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
1,3,5-Trimethylbenzene			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
1,3-Dichlorobenzene	100	50000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
1,3-Dichloropropane			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
1,4-Dichlorobenzene	5	8000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
1,4-Dioxane	0.3	50000	NA	NA	NA	500 U	NA	500 U	NA	NA	NA

Table B-2
April/June 2015 Groundwater Analytical Results
Former Buckley and Mann Site
Norfolk, Massachusetts
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LOCATION			EW-1	EW-2	MW-1DX	MW-3	MW-5	MW-6	WS-3	MW-3DX	MW-9DX
SAMPLING DATE			4/2/2015	4/2/2015	4/2/2015	4/2/2015	4/2/2015	4/2/2015	6/10/2015	6/10/2015	6/10/2015
MCP METHOD 1 STANDARDS	GW-1	GW-3									
Volatile Organic Compounds (ug/L)											
2,2-Dichloropropane			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
2-Butanone	4000	50000	NA	NA	NA	10 U	NA	10 U	NA	NA	NA
2-Chlorotoluene			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
2-Hexanone			NA	NA	NA	10 U	NA	10 U	NA	NA	NA
2-Methoxy-2-Methylbutane			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
4-Chlorotoluene			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
4-Isopropyltoluene			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
4-Methyl-2-Pentanone			NA	NA	NA	5.00 U	NA	5.00 U	NA	NA	NA
Acetone	6300	50000	NA	NA	NA	10 U	NA	10 U	NA	NA	NA
Benzene	5	10000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Bromobenzene			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Bromochloromethane			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Bromodichloromethane	3	50000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Bromoform	4	50000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Bromomethane	10	800	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Carbon Disulfide			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Carbon Tetrachloride	5	5000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Chlorobenzene	100	1000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Chloroethane			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Chloroform	70	20000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Chloromethane			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
cis-1,2-Dichloroethene	70	50000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
cis-1,3-Dichloropropene	0.4	200	NA	NA	NA	0.170 U	NA	0.170 U	NA	NA	NA
Dibromochloromethane	2	50000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Dibromomethane			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Dichlorodifluoromethane			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Diethyl Ether			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Diisopropyl Ether			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Ethylbenzene	700	5000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Ethyl-t-Butyl Ether			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Hexachlorobutadiene	0.6	3000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Isopropylbenzene			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Methy Tert-Butyl Ether	70	50000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Methylene Chloride			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Naphthalene	140	20000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
n-Butylbenzene			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA

Table B-2
April/June 2015 Groundwater Analytical Results
Former Buckley and Mann Site
Norfolk, Massachusetts
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LOCATION			EW-1	EW-2	MW-1DX	MW-3	MW-5	MW-6	WS-3	MW-3DX	MW-9DX
SAMPLING DATE			4/2/2015	4/2/2015	4/2/2015	4/2/2015	4/2/2015	4/2/2015	6/10/2015	6/10/2015	6/10/2015
MCP METHOD 1 STANDARDS	GW-1	GW-3									
Volatile Organic Compounds (ug/L)											
n-Propylbenzene			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
sec-Butylbenzene			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Styrene	100	6000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
t-Butyl Alcohol			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
tert-Butylbenzene			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Tetrachloroethene	5	30000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Tetrahydrofuran			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Toluene	1000	40000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
trans-1,2-Dichloroethene	100	50000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
trans-1,3-Dichloropropene	0.4	200	NA	NA	NA	0.270 U	NA	0.270 U	NA	NA	NA
Trichloroethene	5	5000	NA	NA	NA	3.02	NA	2.00 U	NA	NA	NA
Trichlorofluoromethane			NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Vinyl Chloride	2	50000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA
Xylenes, Total	10000	5000	NA	NA	NA	2.00 U	NA	2.00 U	NA	NA	NA

Notes:

- 1. mg/kg = milligrams per kilogram
- 2. bold type = detected constituents
- 3. shaded cells = MCP standard exceeded
- 4. U = not detected above laboratory limits
- 5. NA = not analyzed for this constituent

Table B-3
September-October 2015 Groundwater Analytical Results
Former Buckley and Mann Site
Norfolk, Massachusetts

LOCATION			MW-1DX	MW-3DX	MW-5	MW-9DX	WS-3
SAMPLING DATE			9/23/2015	9/23/2015	9/23/2015	9/23/2015	9/23/2015
MCP METHOD 1 STANDARDS	GW-1	GW-3					
Metals (mg/L)							
Arsenic (total - unfiltered)	0.01	0.9	0.002	0.12	0.001 U	0.007	0.001 U
Arsenic (dissolved - filtered)	0.01	0.9	0.001 U				

LOCATION			MW-1DX	MW-1DX	MW-3DX	MW-3DX	MW-5
SAMPLING DATE			10/20/2015	10/20/2015	10/20/2015	10/20/2015	10/20/2015
MCP METHOD 1 STANDARDS	GW-1	GW-3					
Metals (mg/L)							
Arsenic (total - unfiltered)	0.01	0.9	0.001 U	0.004 U	0.001 U	0.004 U	0.001 U
Arsenic (dissolved - filtered)	0.01	0.9	0.001 U	0.004 U	0.001 U	0.004 U	0.001 U

LOCATION			MW-5	MW-9DX	MW-9DX	WS-3	WS-3
SAMPLING DATE			10/20/2015	10/20/2015	10/20/2015	10/20/2015	10/20/2015
MCP METHOD 1 STANDARDS	GW-1	GW-3					
Metals (mg/L)							
Arsenic (total - unfiltered)	0.01	0.9	0.004 U	0.001 U	0.004 U	0.001 U	0.004 U
Arsenic (dissolved - filtered)	0.01	0.9	0.004 U	0.001 U	0.004 U	0.001 U	0.004 U

Notes:

- 1. October samples analyzed by two different laboratories
- 2. mg/L = milligrams per liter
- 3. bold type = detected constituents
- 4. shaded cells = MCP standard exceeded
- 5. U = not detected above laboratory limits
- 6. NA = not analyzed for this constituent

Monday, June 30, 2014

GeoLabs, Inc.

GeoLabs, Inc. 45 Johnson Lane Braintree MA 02184

Tele: 781 848 7844 Fax: 781 848 7811

Steve Kurz

Kurz Environmental P. O. Box 358

Sherborn, MA 01770

TEL: (617) 650-4256

FAX:

Project:

B&M

Location:

Order No.: 1406206

Dear Steve Kurz:

GeoLabs, Inc. received 4 sample(s) on 6/20/2014 for the analyses presented in the following report.

The laboratory results in this report relate only to samples submitted. All data for associated QC met method or laboratory specifications, except where noted in the Case Narrative.

Analytical methods and results meet requirements of 310CMR 40.1056(J) as per MADEP Compendium of Analytical Methods (CAM).

If you have any questions regarding these tests results, please feel free to call.

Sincerely.

David Mick

Laboratory Director

For current certifications, please visit our website at www.geolabs.com

Certifications:

CT (PH-0148) - MA (M-MA015) - NH (2508) - RI (LA000252)

The second second	www.	es MassDE	P'Ana	lytical Protocol Ge	rtification Form	(1) (1) (1) (1)		19-71-0-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-		
Laboratory Na	me: GeoLabs, In			Projec			27.00			
Project Location	on: B&M			RTN:		·		***		
This form prov	This form provides certification for the following data set: 1406206 (001-004)									
Matrices:	⊠ Ground	water/Surface	-		☐ Drinking Water ☐	Air 🗆	Other-waste	ewater		
CAM Protoco	(check all that a	pply below):								
8260 VOC CAM II A 区	7470/7471 Hg CAM III B	MassDEP VPI CAM IV A		8081 Pesicides CAM V B □	7196 Hex Cr CAM VI B		MassDEP A CAM IX A	√PH □		
8270 SVOC CAM II B 🔲	7010 Metals CAM III C ⊠	MassDEP EPI CAM IV B	H 図	8151 Herbicides CAM V C	8330 Explosives CAM VIII A 🖂		TO-15 VOC CAM IX B			
6010 Metals CAM III A ⊠	6020 Metals CAM III D	8082 PCB CAM V A		9014 Total Cyanide/PAC CAM VI A □	6860 Perchlorate CAM VIII B □					
Affirmative Re	esponses to Que	estions A thr	ough F	are required for "Pi	resumptive Certainty'	' status				
Α	Were all samples	received in a c	ondition nperatu	consistent with those d	escribed on the Chain of ory, and prepared/analyz	Custody,		□ No		
В	Were the analytic	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? ☑ Yes ☐ N								
С	Were all required corrective actions and analytical response actions specified in the selected CAM ☑ Yes ☐ No protocol(s) implemented for all identified performance standard non-conformances?									
D	Does the laboratory report comply with all reporting requirements specified in CAM VII A, "Quality									
Е		l, and APH Me	thods o		conducted without signific of significant modification		⊠ Yes	□ No		
	b. APH and TC)-15 Methods o	nly: Wa	s the complete analyte	list reported for each met	hod?	☐ Yes	□ No		
F	evaluated in a	laboratory narr	ative (ir	ncluding all "No" respons	I non-conformances idenl ses to Questions A throug	gh E)	⊠ Yes	□ No		
Responses to	Questions G, H	and I below	are re	quired for "Presump	otive Certainty" status specified in the selected	CANA				
G				protocol(s)?			⊠ Yes	□ No		
<u>Data Us</u>	<u>er Note:</u> Data that representati	achieve "Pres veness requir	sumpti [.] ements	ve Certainty" status m described in 310 CMF	ay not necessarily mee ? 40. 1056 (2) (k) and WS	the data C-07-350	usablility a.).	nd		
Н					CAM protocol(s) achieved		☐ Yes	⊠ No¹		
ľ	Were results re	orted for the c	omplete	e analyte list specified in	the selected CAM protoc	col(s)?	□ Yes	⊠ No ¹		
¹ All negative r				tached laboratory nar						
l, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.										
Signature:	Lawie	Much		Positio	on: Laboratory Direct	or				
Printed Name	: David Mick			Date:	June 30, 2014					

Date: 30-Jun-14

CLIENT:

Kurz Environmental

Project:

B&M

Lab Order: 1406206

CASE NARRATIVE

Physical Condition of Samples

The project was received by the laboratory in satisfactory condition. The sample(s) were received undamaged, in appropriate containers with the correct preservation.

Project Documentation

The project was accompanied by satisfactory Chain of Custody documentation.

Analysis of Sample(s)

All extractable samples were extracted and analyzed and any Volatile samples were analyzed within method specified holding times and according to GeoLabs documented Standard Operating Procedure. The following analytical anomalies or non-conformances were noted by the laboratory during the processing of these samples:

See QC to review spike & RPD % recoveries outside of recovery limits.

Limits for 1,4-Dioxane, EDB, and Hexachlorobutadiene do not meet MCP limits.

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/30/14

GeoLabs, Inc. 45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811 CLIENT:

Kurz Environmental

Project:

B&M

Lab Order:

1406206

CASE NARRATIVE

EPH Methods

Method for Ranges: MADEP EPH 04-1.1 Method for Target Analytes: 8270 GC/MS

Carbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

Adjusted C11-C22 Aromatic Hydrocarbons exclude concentrations of Target PAH Analytes

CERTIFICATION:

Were all QA/QC procedures REQUIRED by the EPH Method followed? YES

Were all performance/acceptance standards achieved? YES

Were any significant modifications made to the EPH method? NO

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/30/14

Reported Date: 30-Jun-14

CLIENT:

Kurz Environmental

Client Sample ID: MW-6

Lab Order:

1406206

Collection Date: 6/19/2014 12:00:00 PM

Project:

B&M

Date Received: 6/20/2014

Lab ID:

1406206-001

Matrix: GROUNDWATER

1

Analyses	Result	RL Qual Units	DF	Date Analyzed
EPH RANGES - MADEP EPH				Analyst: KG

Prep Method	: (eph_Wpr)	Pre	Date:	6/25/2014 9:06:46 AM	
Adjusted C11-C22 Aromatics	ND	101	µg/L	1	6/25/2014
C09-C18 Aliphatics	ND	101	μg/L	1	6/25/2014
C19-C36 Aliphatics	ND	101	μg/L	1	6/25/2014
Unadjusted C11-C22 Aromatics	ND	101	μg/L	1	6/25/2014

44.1

99.5

TOTAL METALS BY ICP - SW6010C

Surr: 1-Chlorooctadecane

Surr: o-Terphenyl

Analyst: QS

6/25/2014

6/25/2014

	Prep Method:	(SW3010A)	Prep	Date:	6/26/2014 1:30:23 PM	
Barium		0.220	0.0100	mg/L	1	6/26/2014
Cadmium	*	ND	0.0100	mg/L	1	6/26/2014
Chromium		0.0880	0.0100	mg/L	1	6/26/2014
Lead		0.0390	0.0100	mg/L	1	6/26/2014
Selenium		0.0200	0.0100	mg/L	1	6/26/2014
Silver		ND	0.0100	mg/L	1	6/26/2014

40-140

40-140

%REC

%REC

TOTAL METALS BY GFAA - 7010

Analyst: QS

	Prep Method:	(SW3020A)	Prep D	ate: 6/	/23/2014 2:34:57 PM		
Arsenic		0.0174	0.00100	mg/L	1	6/23/2014	

TOTAL MERCURY - 7470A

Analyst: EC

	Prep Method:		Prep Da	ate:		
Mercury		0.000533	0.000200	mg/L	1	6/24/2014

EPH TARGET ANALYTES - MADEP EPH

Analyst: ZYZ

		Prep Method:	(eph_Wpr)	Pre	ep Date:	6/25/2014 9:06:46 AM		
Naphthalen	e		ND	1.01	μg/L	1	6/26/2014 7:57:00 AM	
2-Methylnaphthalene			ND	1.01	μg/L	1	6/26/2014 7:57:00 AM	
Acenaphthe	Acenaphthene		ND	1.01	μg/L	1	6/26/2014 7:57:00 AM	
Oualifiers:	В	Analyte detected in th	e associated Method Blank		BRL B	Below Reporting Limit		
C	E	Value above quantitat	ion range		H Holding times for preparation or analysis exceed			
	J Analyte detected below quantitation limits				ND N	Not Detected at the Reporting Limit		
RL Reporting Limit				S S	Spike Recovery outside recovery limits			

GeoLabs, Inc.

Reported Date: 30-Jun-14

CLIENT:	Kurz Environmental

Lab Order: 1406206

Client Sample ID: MW-6
Collection Date: 6/19/2014 12:00:00 PM

Project: B&M Date Received: 6/20/2014

Lab ID: 1406206-001 Matrix: GROUNDWATER

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPH TARGET ANALYTES - MADE	EP EPH				Analyst: ZYZ
Prep Method	: (eph_Wpr)	Prep	Date:	6/25/2014 9:06:46 AM	
Phenanthrene	ND	1.01	μg/L	1	6/26/2014 7:57:00 AM
Acenaphthylene	ND	1.01	μg/L	1	6/26/2014 7:57:00 AM
Fluorene	ND	1.01	μg/L	1	6/26/2014 7:57:00 AM
Anthracene	ND	1.01	µg/L	1	6/26/2014 7:57:00 AM
Fluoranthene	ND	1,01	μg/L	1	6/26/2014 7:57:00 AM
Pyrene	ND	1.01	μg/L	1	6/26/2014 7:57:00 AM
Benzo(a)Anthracene	ND	0.404	μg/L	1	6/26/2014 7:57:00 AM
Chrysene	ND	1.01	μg/L	1	6/26/2014 7:57:00 AM
Benzo(b)Fluoranthene	ND	0.202	μg/L	1	6/26/2014 7:57:00 AM
Benzo(k)Fluoranthene	ND	0.202	μg/L	1	6/26/2014 7:57:00 AM
Benzo(a)Pyrene	ND	0.192	μg/L	1	6/26/2014 7:57:00 AM
Indeno(1,2,3-cd)Pyrene	ND	0.404	μg/L	1	6/26/2014 7:57:00 AM
Dibenz(a,h)Anthracene	ND	0.404	μg/L	1	6/26/2014 7:57:00 AM
Benzo(g,h,i)Perylene	ND	1.01	μg/L	1	6/26/2014 7:57:00 AM
Total PAH Target Concentration	ND	0.202	μg/L	1	6/26/2014 7:57:00 AM
Surr: 2,2-Difluorobiphenyl	102	40-140	%REC	1	6/26/2014 7:57:00 AM
Surr: 2-Fluorobiphenyl	77.2	40-140	%REC	; 1	6/26/2014 7:57:00 AM

VOLATILE ORGANIC COMPOUNDS - SW8260B

Analyst: ZYZ

Prep Method:		Prep	Date:			
1.1.1.2-Tetrachioroethane	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM	
1,1,1-Trichloroethane	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM	
1,1,2,2-Tetrachloroethane	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM	
1.1,2-Trichloroethane	П	2.00	μg/L	1	6/27/2014 9:42:00 AM	
1.1-Dichloroethane	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM	
1.1-Dichloroethene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM	
1.1-Dichloropropene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM	
1,2,3-Trichlorobenzene	ND	2.00	µg/L	1	6/27/2014 9:42:00 AM	
1,2,3-Trichloropropane	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM	
1.2.4-Trichlorobenzene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM	
1.2.4-Trimethylbenzene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM	
1.2-Dibromo-3-Chloropropane	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM	
1,2-Dibromoethane	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM	
1,2-Dichlorobenzene	ND	2.00	µg/L	1	6/27/2014 9:42:00 AM	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- RL Reporting Limit

- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside recovery limits

GeoLabs, Inc. 45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

Reported Date: 30-Jun-14

CLIENT:

Kurz Environmental

Client Sample ID: MW-6

Lab Order:

1406206

Collection Date: 6/19/2014 12:00:00 PM

Project:

B&M

Date Received: 6/20/2014

Lab ID:

1406206-001

Matrix: GROUNDWATER

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
OLATILE ORGANIC COMPOUNDS				Analyst: ZYZ	
Prep Method:		Prep	Date:		
1,2-Dichloroethane	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
1,2-Dichloropropane	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
1,3,5-Trimethylbenzene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
1,3-Dichlorobenzene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
1,3-Dichloropropane	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
1,4-Dichlorobenzene	ND	2.00	µg/L	1	6/27/2014 9:42:00 AM
1,4-Dioxane	ND	500	μg/L	1	6/27/2014 9:42:00 AM
2,2-Dichloropropane	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
2-Butanone	ND	10.0	μg/L	1	6/27/2014 9:42:00 AM
2-Chlorotoluene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
2-Hexanone	ND	10.0	μg/L	1	6/27/2014 9:42:00 AM
2-Methoxy-2-Methylbutane (TAME)	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
4-Chlorotoluene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
4-Isopropyltoluene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
4-Methyl-2-Pentanone	ND	5.00	μg/ L	1	6/27/2014 9:42:00 AM
Acetone	ND	10.0	μg/L	1	6/27/2014 9:42;00 AM
Benzene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Bromobenzene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Bromochloromethane	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Bromodichloromethane	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Bromoform	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Bromomethane	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Carbon Disulfide	ND	2.00	µg/L	1	6/27/2014 9:42:00 AM
Carbon Tetrachloride	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Chlorobenzene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Chloroethane	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Chloroform	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Chloromethane	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
cis-1,2-Dichloroethene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
cis-1,3-Dichloropropene	ND	0.170	μg/L	1	6/27/2014 9:42:00 AM
Dibromochloromethane	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Dibromomethane	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Dichlorodifluoromethane	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Diethyl Ether	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Diisopropyl Ether	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Ethylbenzene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- RL Reporting Limit

- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside recovery limits

GeoLabs, Inc.

Reported Date: 30-Jun-14

CLIENT:

Kurz Environmental

Client Sample ID: MW-6

Lab Order:

1406206

Collection Date: 6/19/2014 12:00:00 PM

Project:

B&M

Date Received: 6/20/2014

Lab ID:

1406206-001

Matrix: GROUNDWATER

Analyses	Result	RL Qı	al Units	DF	Date Analyzed
OLATILE ORGANIC COMPOUNDS	- SW8260B				Analyst: ZY Z
Prep Method:		Prep	Date:		
Ethyl-t-Butyl Ether	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Hexachlorobutadiene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Isopropylbenzene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Methyl Tert-Butyl Ether	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Methylene Chloride	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Naphthalene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
n-Butylbenzene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
n-Propylbenzene	ND	2.00	µg/L	1	6/27/2014 9:42:00 AM
sec-Butylbenzene	ND	2,00	μg/L	1	6/27/2014 9:42:00 AM
Styrene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
t-Butyl Alcohol	ND	20.0	μg/L	1	6/27/2014 9:42:00 AM
tert-Butylbenzene	ND	2.00	μg/ L	1	6/27/2014 9:42:00 AM
Tetrachloroethene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Tetrahydrofuran	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Toluene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
trans-1,2-Dichloroethene	ND	2.00	μg/L	1	6/27/2014 9;42:00 AM
trans-1,3-Dichloropropene	ND	0.270	μg/L	1	6/27/2014 9:42:00 AM
Trichloroethene	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Trichlorofluoromethane	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Vinyl Chloride	ND	2.00	µg/L	1	6/27/2014 9:42:00 AM
Xylenes, Total	ND	2.00	μg/L	1	6/27/2014 9:42:00 AM
Surr: 1,2-Dichloroethane-d4	107	70-130	%REC	1	6/27/2014 9:42:00 AM
Surr: 4-Bromofluorobenzene	104	70-130	%REC	1	6/27/2014 9:42:00 AM
Surr: Dibromofluoromethane	108	70-130	%REC	1	6/27/2014 9:42:00 AM
Surr: Toluene-d8	84.6	70-130	%REC	1	6/27/2014 9:42:00 AM

Qualifier	s:
Ondinio.	٠.

- Analyte detected in the associated Method Blank
- В E Value above quantitation range
- Analyte detected below quantitation limits
- RL Reporting Limit

- BRL Below Reporting Limit
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Spike Recovery outside recovery limits

GeoLabs, Inc.

Reported Date: 30-Jun-14

CLIENT:	Kurz Environmental	Client Sample ID: MW-5
Lab Order:	1406206	Collection Date: 6/19/2014 11:00:00 AM
Project:	$\mathbf{R} k_{\mathbf{M}}$	Th. 10 1 7 6/00/0044

Project: B&M Date Received: 6/20/2014

Lab ID: 1406206-002 Matrix: GROUNDWATER

Result	RL Qual Units		DF	Date Analyzed		
EPH RANGES - MADEP EPH						
(eph_Wpr)	Pre	Date:	6/25/2014 9:06:46 AM			
ND	101	μg/L	1	6/25/2014		
ND	101	μg/L	1	6/25/2014		
ND	101	μg/L	1	6/25/2014		
ND	101	μg/L	1	6/25/2014		
62.8	40-140	%REC	1	6/25/2014		
91.3	40-140	%REC	1	6/25/2014		
	(eph_Wpr) ND ND ND ND ND 62.8	(eph_Wpr) Prep ND 101 ND 101 ND 101 ND 101 ND 101 62.8 40-140	(eph_Wpr) Prep Date: ND 101 μg/L ND 101 μg/L ND 101 μg/L ND 101 μg/L 62.8 40-140 %REC	(eph_Wpr) Prep Date: 6/25/2014 9:06:46 AM ND 101 μg/L 1 62.8 40-140 %REC 1		

TOTAL METALS BY ICP - SW6010C

	Prep Method:	(SW3010A) Prep Date:		6/26/2014 1:30:23 PM		
Barium		0.348	0.0100	mg/L	1	6/26/2014
Cadmium		ND	0.0100	mg/L	1	6/26/2014
Chromium		0.0170	0.0100	mg/L	1	6/26/2014
Lead		ND	0.0100	mg/L	1	6/26/2014
Selenium		0.0260	0.0100	mg/L	1	6/26/2014
Silver		ND	0.0100	mg/L	1	6/26/2014

TOTAL METALS BY GFAA - 7010

	Prep Method:	(SW3020A)	Prep	Date:	6/23/2014 2:34:57 PM		
Arsenic		0.00172	0.00100	mg/L	1	6/23/2014	

TOTAL MERCURY - 7470A

	Prep Method:			Date:			
Mercury		0.000353	0.000200	mg/L	1	6/24/2014	

EPH TARGET ANALYTES - MADEP EPH

		Prep Method:	(eph_Wpr)	Pre	p Date:	6/25/2014 9:06:46 A	M	
Naphthalen	е		ND	1.01	μg/L	_ 1	6/26/2014 8:32:00 AM	
2-Methylnaphthalene ND		1.01	μg/L	_ 1	6/26/2014 8:32:00 AM			
Acenaphthe	ene		ND	1.01	µg/L	. 1	6/26/2014 8:32:00 AM	
Oualifiers:	В	Analyte detected in the associated Method Blank			BRL	Below Reporting Limit		
	E	Value above quantitation range			H	Holding times for preparation or analysis exceede		
	J	Analyte detected below quantitation limits			ND 1	Not Detected at the Reporting Limit		
	RL	Reporting Limit			s :	Spike Recovery outside recovery limits		

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

Analyst: QS

Analyst: QS

Analyst: EC

Analyst: ZYZ

Reported Date: 30-Jun-14

CLIENT: Kurz Environmental

Lab Order: 1406206

Project: B&M

Lab ID: 1406206-002

Client Sample ID: MW-5

Collection Date: 6/19/2014 11:00:00 AM

Date Received: 6/20/2014

Matrix: GROUNDWATER

Analyses Result		RL Q	ual Units	DF	Date Analyzed
EPH TARGET ANALYTES - MAD			,	Analyst: ZYZ	
Prep Method	: (eph_Wpr)	Prep	Date:	6/25/2014 9:06:46 AM	
Phenanthrene	ND	1.01	μg/L	1	6/26/2014 8:32:00 AM
Acenaphthylene	ND	1.01	µg/L	1	6/26/2014 8:32:00 AM
Fluorene	ND	1.01	μg/L	1	6/26/2014 8:32:00 AM
Anthracene	ND	1.01	μg/L	1	6/26/2014 8:32:00 AM
Fluoranthene	ND	1.01	μg/L	1	6/26/2014 8:32:00 AM
Pyrene	ND	1.01	μg/L	1	6/26/2014 8:32:00 AM
Benzo(a)Anthracene	ND	0.404	μg/L	1	6/26/2014 8:32:00 AM
Chrysene	ND	1.01	µg/L	1	6/26/2014 8:32:00 AM
Benzo(b)Fluoranthene	ND	0.202	μg/L	1	6/26/2014 8:32:00 AM
Benzo(k)Fluoranthene	ND	0.202	μg/L	1	6/26/2014 8:32:00 AM
Benzo(a)Pyrene	ND	0.192	μg/L	1	6/26/2014 8:32:00 AM
Indeno(1,2,3-cd)Pyrene	ND	0.404	μg/L	1	6/26/2014 8:32:00 AM
Dibenz(a,h)Anthracene	ND	0.404	μg/L	1	6/26/2014 8:32:00 AM
Benzo(g,h,i)Perylene	ND	1.01	μg/L	1	6/26/2014 8:32:00 AM
Total PAH Target Concentration	ND	0.202	μg/L	1	6/26/2014 8:32:00 AM
Surr: 2,2-Difluorobiphenyl	93.2	40-140	%REC	1	6/26/2014 8:32:00 AM
Surr: 2-Fluorobiphenyl	78.1	40-140	%REC	1	6/26/2014 8:32:00 AM

VOLATILE ORGANIC COMPOUNDS - SW8260B

Prep Method: Prep Date: 1,1,1,2-Tetrachloroethane ND 2.00 μg/L 1 6/27/2014 10:17:00 AM 1,1,1-Trichloroethane ND 2.00 µg/L 1 6/27/2014 10:17:00 AM 1,1,2,2-Tetrachloroethane ND 2.00 μg/L 1 6/27/2014 10:17:00 AM 1,1,2-Trichloroethane ND 2.00 μg/L 1 6/27/2014 10:17:00 AM 1.1-Dichloroethane ND 2.00 μg/L 1 6/27/2014 10:17:00 AM 1,1-Dichloroethene ND 2.00 μg/L 1 6/27/2014 10:17:00 AM 1,1-Dichloropropene ND 2.00 μg/L 1 6/27/2014 10:17:00 AM 1,2,3-Trichlorobenzene ND 2.00 μg/L 1 6/27/2014 10:17:00 AM

1,2,3-Trichloropropane ND 2.00 μg/L 6/27/2014 10:17:00 AM 1,2,4-Trichlorobenzene ND 2.00 μg/L 1 6/27/2014 10:17:00 AM 2.00 1,2,4-Trimethylbenzene ND μg/L 1 6/27/2014 10:17:00 AM 1,2-Dibromo-3-Chloropropane ND 2.00 µg/L 6/27/2014 10:17:00 AM

1,2-Dibromoethane ND 2.00 µg/L 1 6/27/2014 10:17:00 AM 1,2-Dichlorobenzene ND 2.00 µg/L 1 6/27/2014 10:17:00 AM

Qualifiers:

B Analyte detected in the associated Method Blank BRL Below Reporting Limit

E Value above quantitation range H Holding times for preparation or analysis exceeded

Analyte detected below quantitation limits ND Not Detected at the Reporting Limit

Reporting Limit S Spike Recovery outside recovery limits

GeoLabs, Inc. 45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811 Analyst: ZYZ

Reported Date: 30-Jun-14

CLIENT:

Kurz Environmental

Lab Order:

1406206

Project:

B&M

Lab ID:

1406206-002

Client Sample ID: MW-5

Collection Date: 6/19/2014 11:00:00 AM

Date Received: 6/20/2014

Matrix: GROUNDWATER

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS	- SW8260B				Analyst: ZYZ
Prep Method:	Pre	o Date:			
1,2-Dichloroethane	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
1,2-Dichloropropane	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
1,3,5-Trimethylbenzene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
1,3-Dichlorobenzene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
1,3-Dichloropropane	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
1,4-Dichlorobenzene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
1,4-Dioxane	ND	500	μg/L	1	6/27/2014 10:17:00 AM
2,2-Dichloropropane	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
2-Butanone	ND	10.0	μg/L	1	6/27/2014 10:17:00 AM
2-Chlorotoluene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AN
2-Hexanone	ND	10.0	µg/L	1	6/27/2014 10:17:00 AM
2-Methoxy-2-Methylbutane (TAME)	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
4-Chlorotoluene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
4-Isopropyltoluene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
4-Methyl-2-Pentanone	ND	5.00	µg/L	1	6/27/2014 10:17:00 AM
Acetone	ND	10.0	μg/L	1	6/27/2014 10:17:00 AM
Benzene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Bromobenzene	ND	2.00	µg/L	1	6/27/2014 10:17:00 AM
Bromochloromethane	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Bromodichloromethane	ND	2.00	µg/L	1	6/27/2014 10:17:00 AM
Bromoform	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Bromomethane	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Carbon Disulfide	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Carbon Tetrachloride	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Chlorobenzene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Chloroethane	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Chloroform	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Chloromethane	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
cis-1,2-Dichloroethene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
cis-1,3-Dichloropropene	ND	0.170	μg/L	1	6/27/2014 10:17:00 AM
Dibromochloromethane	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Dibromomethane	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Dichlorodifluoromethane	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Diethyl Ether	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Dilsopropyl Ether	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Ethylbenzene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM

Qualifiers:

- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits
- RL Reporting Limit

- BRL Below Reporting Limit
- Holding times for preparation or analysis exceeded Н
- Not Detected at the Reporting Limit ND
- Spike Recovery outside recovery limits

GeoLabs, Inc.

Reported Date: 30-Jun-14

CLIENT:

Kurz Environmental

Client Sample ID: MW-5

Lab Order:

1406206

Collection Date: 6/19/2014 11:00:00 AM

Project:

B&M

Date Received: 6/20/2014

Lab ID:

1406206-002

Matrix: GROUNDWATER

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
OLATILE ORGANIC COMPOUNDS	- SW8260B				Analyst: ZYZ
Prep Method:	Prep	Date:			
Ethyl-t-Butyl Ether	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Hexachlorobutadiene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Isopropylbenzene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Methyl Tert-Butyl Ether	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Methylene Chloride	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Naphthalene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
n-Butylbenzene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
n-Propylbenzene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
sec-Butylbenzene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Styrene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
t-Butyl Alcohol	ND	20.0	μg/L	1	6/27/2014 10:17:00 AM
tert-Butylbenzene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Tetrachloroethene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Tetrahydrofuran	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Toluene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
trans-1,2-Dichloroethene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
trans-1,3-Dichloropropene	ND	0.270	μg/L	1	6/27/2014 10:17:00 AM
Trichloroethene	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Trichlorofluoromethane	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Vinyl Chloride	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Xylenes, Total	ND	2.00	μg/L	1	6/27/2014 10:17:00 AM
Surr: 1,2-Dichloroethane-d4	107	70-130	%REC	1	6/27/2014 10:17:00 AM
Surr: 4-Bromofluorobenzene	100	70-130	%REC	1	6/27/2014 10:17:00 AM
Surr: Dibromofluoromethane	112	70-130	%REC	1	6/27/2014 10:17:00 AM
Surr: Toluene-d8	85.8	70-130	%REC	1	6/27/2014 10:17:00 AM

Qualifiers	

- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- RL Reporting Limit

- BRL Below Reporting Limit
 - H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside recovery limits

GeoLabs, Inc.

Reported Date: 30-Jun-14

ANALYTIC	AL REPORT			reported Ditto.	50 04.	u 17
CLIENT:	Kurz Environmer	ntal		Client Sample ID:	EW-2	
Lab Order:	1406206			Collection Date:	6/19/2	2014
Project:	B&M			Date Received:	6/20/2	2014
Lab ID:	1406206-003					JNDWATER
Analyses		Result	RL Q	ual Units	DF	Date Analyzed
EPH RANGES	- MADEP EPH					Analyst: KG
	Prep Method:	(eph_Wpr)	Pre	Date: 6/25/2014 9:	06:46 A	M
Adjusted C11-	C22 Aromatics	ND	102	μg/L	1	6/25/2014
C09-C18 Aliph	atics	ND	102	μg/L	1	6/25/2014
C19-C36 Aliph	atics	ND	102	μg/L	1	6/25/2014
•	11-C22 Aromatics	ND	102	μg/L	1	6/25/2014
-	rooctadecane	54.1	40-140	%REC	1	6/25/2014
Surr: o-Terp	henyi	90.4	40-140	%REC	1	6/25/2014
TOTAL META	LS BY ICP - SW60100	=				Analyst: QS
	Prep Method:	(SW3010A)	Pre	Date: 6/26/2014 1:	30:23 P	M
Barium		0.0140	0.0100	mg/L	1	6/26/2014
Cadmium		ND	0.0100	mg/L	1	6/26/2014
Chromium		ND	0.0100	mg/L	1	6/26/2014
Lead		ND	0.0100	mg/L	1	6/26/2014
Selenium		ND	0.0100	mg/L	1	6/26/2014
Silver		ND	0.0100	mg/L	1	6/26/2014
TOTAL METAI	LS BY GFAA - 7010					Analyst: QS
	Prep Method:	(SW3020A)	Prej	Date: 6/23/2014 2:	34:57 Pl	VI
Arsenic		ND	0.00100	mg/L	1	6/23/2014
TOTAL MERC	URY - 7470A					Analyst: EC
	Prep Method:		Prej	Date:		
Mercury		ND	0.000200	mg/L	1	6/24/2014
EPH TARGET	ANALYTES - MADEF	P EPH				Analyst: ZY
	Prep Method:	(eph_Wpr)	Pre	Date: 6/25/2014 9:	06:46 A	M
Naphthalene		ND	1.02	μg/L	1	6/26/2014 9:41:00 AM
2-Methylnapht	halene	ND	1.02	μg/L	1	6/26/2014 9:41:00 AM
Acenaphthene		ND	1.02	μg/L	1	6/26/2014 9:41:00 AM
Qualifiers:	B Analyte detected in the		Blank	BRL Below Reporting		
	E Value above quantita	tion range		H Holding times for	r prepara	tion or analysis exceeded

GeoLabs, Inc.

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

J Analyte detected below quantitation limits

RL Reporting Limit

Reported Date: 30-Jun-14

CLIENT:

Kurz Environmental

Client Sample ID: EW-2

Lab Order:

1406206

Collection Date: 6/19/2014

Project:

B&M

Lab ID:

Analyses

1406206-003

Date Received: 6/20/2014

DF

Matrix: GROUNDWATER

EPH TARGET	ANALYTES -	- MADEP	EPH

Analyst: ZYZ

Date Analyzed

Prep Method	f: (eph_Wpr)	Prep	Date:	6/25/2014 9:06:46 A	M
Phenanthrene	ND	1.02	μg/L	1	6/26/2014 9:41:00 AM
Acenaphthylene	ND	1.02	μg/L	1	6/26/2014 9:41:00 AM
Fluorene	ND	1.02	μg/L	1	6/26/2014 9:41:00 AM
Anthracene	ND	1.02	μg/L	1	6/26/2014 9:41:00 AM
Fluoranthene	ND	1.02	μg/L	1	6/26/2014 9:41:00 AM
Pyrene	ND	1.02	μg/L	1	6/26/2014 9:41:00 AM
Benzo(a)Anthracene	ND	0.408	μg/L	1	6/26/2014 9:41:00 AM
Chrysene	ND	1.02	μg/L	.1	6/26/2014 9:41:00 AM
Benzo(b)Fluoranthene	ND	0.204	μg/L	1	6/26/2014 9:41:00 AM
Benzo(k)Fluoranthene	ND	0.204	μg/L	1	6/26/2014 9:41:00 AM
Benzo(a)Pyrene	ND	0.194	μg/L	1	6/26/2014 9:41:00 AM
Indeno(1,2,3-cd)Pyrene	ND	0.408	μg/L	1	6/26/2014 9:41:00 AM
Dibenz(a,h)Anthracene	ND	0.408	μg/L	1	6/26/2014 9:41:00 AM
Benzo(g,h,i)Perylene	ND	1.02	μg/L	1	6/26/2014 9:41:00 AM
Total PAH Target Concentration	ND	0.204	μg/L	1	6/26/2014 9:41:00 AM
Surr: 2,2-Difluorobiphenyl	76.0	40-140	%REC	1	6/26/2014 9:41:00 AM
Surr: 2-Fluorobiphenyl	61.4	40-140	%REC	1	6/26/2014 9:41:00 AM

RL Qual Units

Result

VOLATILE ORGANIC COMPOUNDS - SW8260B

Analyst: ZYZ

Prep Method:		Prep	Date:		
1,1,1,2-Tetrachloroethane	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
1,1,1-Trichloroethane	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
1,1,2,2-Tetrachloroethane	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
1,1,2-Trichloroethane	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
1,1-Dichloroethane	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
1,1-Dichloroethene	ND	2.00	µg/L	1	6/27/2014 10:53:00 AM
1,1-Dichloropropene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
1,2,3-Trichlorobenzene	ND	2.00	µg/L	1	6/27/2014 10:53:00 AM
1,2,3-Trichloropropane	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
1,2,4-Trichlorobenzene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
1,2,4-Trimethylbenzene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
1,2-Dibromo-3-Chloropropane	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
1,2-Dibromoethane	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
1,2-Dichlorobenzene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM

Qualifiers:

- В Analyte detected in the associated Method Blank
- BRL Below Reporting Limit

Ε Value above quantitation range

- H Holding times for preparation or analysis exceeded
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit

RL Reporting Limit

Spike Recovery outside recovery limits

GeoLabs, Inc. 45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

Reported Date: 30-Jun-14

CLIENT:

Kurz Environmental

Client Sample ID: EW-2

Lab Order:

1406206

Collection Date: 6/19/2014

Project:

B&M

Date Received: 6/20/2014

Lab ID:

1406206-003

Matrix: GROUNDWATER

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
OLATILE ORGANIC COMPOUNDS -	SW8260B				Analyst: ZY Z
Prep Method:		Prep Date:			
1,2-Dichloroethane	ND	2.00	μg/L		6/27/2014 10:53:00 AN
1,2-Dichloropropane	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
1,3,5-Trimethylbenzene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
1,3-Dichlorobenzene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
1,3-Dichloropropane	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
1,4-Dichlorobenzene	ND	2.00	µg/L	1	6/27/2014 10:53:00 AM
1,4-Dioxane	ND	500	µg/L	1	6/27/2014 10:53:00 AM
2,2-Dichloropropane	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
2-Butanone	ND	10.0	μg/L	1	6/27/2014 10:53:00 AM
2-Chlorotoluene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
2-Hexanone	ND	10.0	μg/L	1	6/27/2014 10:53:00 AM
2-Methoxy-2-Methylbutane (TAME)	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
4-Chlorotoluene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
4-Isopropyltoluene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AN
4-Methyl-2-Pentanone	ND	5.00	μg/L	1	6/27/2014 10:53:00 AM
Acetone	ND	10.0	µg/∟	1	6/27/2014 10:53:00 AM
Benzene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Bromobenzene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Bromochloromethane	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Bromodichloromethane	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Bromoform	ND	2.00	µg/L	1	6/27/2014 10:53:00 AM
Bromomethane	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Carbon Disulfide	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Carbon Tetrachloride	ND	2,00	μg/L	1	6/27/2014 10:53:00 AM
Chlorobenzene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Chloroethane	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Chloroform	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Chloromethane	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
cis-1,2-Dichloroethene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
cis-1,3-Dichloropropene	ND	0.170	μg/L.	1	6/27/2014 10:53:00 AM
Dibromochloromethane	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Dibromomethane	ND	2.00	µg/L	1	6/27/2014 10:53:00 AM
Dichlorodifluoromethane	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Diethyl Ether	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Diisopropyl Ether	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Ethylbenzene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM

Qualifiers:

- E Value above quantitation range
- Analyte detected below quantitation limits
- RL Reporting Limit

- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside recovery limits

GeoLabs, Inc.

Reported Da:... 30-Jun-14

CLIENT:

Kurz Environmental

Lab Order:

1406206

Project:

B&M

Lab ID:

1406206-003

Client Sample ID: EW-2

Collection Date: 6/19/2014

Date Received: 6/20/2014

Matrix: GROUNDWATER

nalyses Result RL Qual Units		DF	Date Analyzed		
OLATILE ORGANIC COMPOUND				Analyst: ZYZ	
Prep Method:		Pre	p Date:		
Ethyl-t-Butyl Ether	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Hexachlorobutadiene	ND	2.00	μg/Ľ	1	6/27/2014 10:53:00 AM
Isopropylbenzene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Methyl Tert-Butyl Ether	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Methylene Chloride	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Naphthalene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
n-Butylbenzene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
n-Propylbenzene	ND	2.00	µg/L	1	6/27/2014 10:53:00 AM
sec-Butylbenzene	ND	2.00	μg/Ľ	1	6/27/2014 10:53:00 AM
Styrene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
t-Butyl Alcohol	ND	20.0	μg/L	1	6/27/2014 10:53:00 AM
tert-Butylbenzene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Tetrachloroethene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Tetrahydrofuran	ND	2.00	µg/L	1	6/27/2014 10:53:00 AM
Toluene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
trans-1,2-Dichloroethene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
trans-1,3-Dichloropropene	ND	0.270	μg/L .	1	6/27/2014 10:53:00 AM
Trichloroethene	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Trichlorofluoromethane	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Vinyl Chloride	ND	2.00	μg/L	1	6/27/2014 10:53:00 AM
Xylenes, Total	ND	2,00	μg/L	1	6/27/2014 10:53:00 AM
Surr: 1,2-Dichloroethane-d4	110	70-130	%REC	1	6/27/2014 10:53:00 AM
Surr: 4-Bromofluorobenzene	104	70-130	%REC	1	6/27/2014 10:53:00 AM
Surr: Dibromofluoromethane	112	70-130	%REC	1	6/27/2014 10:53:00 AM
Surr: Toluene-d8	86.0	70-130	%REC	1	6/27/2014 10:53:00 AM
				•	

Oua	lifiers

- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- RL Reporting Limit

- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside recovery limits

GeoLabs, Inc. 45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

Reported Date: 30-Jun-14

CLI	ENT:
Lab	Order:

Kurz Environmental

1406206

Project:

B&M

Lab ID:

1406206-004

Client Sample ID: MW-3A

Collection Date: 6/19/2014

Date Received: 6/20/2014

Matrix: GROUNDWATER

		Matrix. GROOM WITER					
Analyses	Result	RL Q	ual Units	DF	Date Analyzed		
EPH RANGES - MADEP EPH					Analyst: KG		
Prep Method:	(eph_Wpr)	Pre	p Date:	6/25/2014 9:06:46 AM			
Adjusted C11-C22 Aromatics	ND	101	µg/∟	1	6/25/2014		
C09-C18 Aliphatics	ND	101	μg/L	1	6/25/2014		
C19-C36 Aliphatics	ND	101	μg/L	1	6/25/2014		
Unadjusted C11-C22 Aromatics	ND	101	μg/L	1	6/25/2014		
Surr: 1-Chlorooctadecane	49.1	40-140	%REC	1	6/25/2014		
Surr: o-Terphenyl	91.5	40-140	%REC	1	6/25/2014		

TOTAL METALS BY ICP - SW6010C

Analyst: QS

	Prep Method:	(SW3010A)	Prep	Date:	6/26/2014 1:30:23 PM	
Barlum		0.0770	0.0100	mg/L	1	6/26/2014
Cadmium		ND	0.0100	mg/L	1	6/26/2014
Chromium		ND	0.0100	mg/L	1	6/26/2014
Lead		ND	0.0100	mg/L	1	6/26/2014
Selenium		ND	0.0100	mg/L	1	6/26/2014
Silver		ND	0.0100	mg/L	1	6/26/2014

TOTAL METALS BY GFAA - 7010

Analyst: QS

	Prep Method:	(SW3020A)	Prep Date: 6/23/2014 2:34:57 PM				
Arsenic		ND	0.00100	mg/L	1	6/23/2014	

TOTAL MERCURY - 7470A

Analyst: EC

Prep Method:	_	Prep Dat	te:			
Mercury	ND	0.000200	mg/L	1	6/24/2014	

EPH TARGET ANALYTES - MADEP EPH

Analyst: ZYZ

		Prep Method:	(eph_Wpr)	Pre	ep Date:	6/25/2014 9:06:46 AM	
Naphthalen 2-Methylna Acenaphthe	phthale	ne	ND ND ND	1.01 1.01 1.01	µg/L µg/L	1 1 1	6/26/2014 10:17:00 AM 6/26/2014 10:17:00 AM 6/26/2014 10:17:00 AM
Qualifiers:	B E J RL	Analyte detected in th Value above quantitat Analyte detected belo Reporting Limit	~		BRL E	Below Reporting Limit Holding times for preparatio Not Detected at the Reportin pike Recovery outside reco	on or analysis exceeded

GeoLabs, Inc.

Reported Date: 30-Jun-14

CLIENT:

Kurz Environmental

Lab Order:

1406206

Project:

B&M

Lab ID:

1406206-004

Client Sample ID: MW-3A

Collection Date: 6/19/2014

Date Received: 6/20/2014

Matrix: GROUNDWATER

Analyses	Result	RL Q	RL Qual Units		Date Analyzed	
PH TARGET ANALYTES - MAI	DEP EPH				Analyst: ZYZ	
Prep Metho	od: (eph_Wpr)	Prep	Date:	6/25/2014 9:06:46 AM		
Phenanthrene	ND	1.01	µg/L	1	6/26/2014 10:17:00 AM	
Acenaphthylene	ND	1.01	µg/L	1	6/26/2014 10:17:00 AM	
Fluorene	ND	1.01	μg/L	1	6/26/2014 10:17:00 AM	
Anthracene	ND	1.01	μg/L	1	6/26/2014 10:17:00 AM	
Fluoranthene	ND	1.01	μg/L	1	6/26/2014 10:17:00 AM	
Pyrene	ND	1.01	μg/L	1 '	6/26/2014 10:17:00 AM	
Benzo(a)Anthracene	ND	0.402	μg/L	1	6/26/2014 10:17:00 AM	
Chrysene	ND	1.01	μg/L	1	6/26/2014 10:17:00 AM	
Benzo(b)Fluoranthene	ND	0.201	μg/L	1	6/26/2014 10:17:00 AM	
Benzo(k)Fluoranthene	ND	0.201	μg/L	1	6/26/2014 10:17:00 AM	
Benzo(a)Pyrene	ND	0.191	μg/L	1	6/26/2014 10:17:00 AM	
Indeno(1,2,3-cd)Pyrene	ND	0.402	μg/L	1	6/26/2014 10:17:00 AM	
Dibenz(a,h)Anthracene	ND	0.402	μg/L	1	6/26/2014 10:17:00 AM	
Benzo(g,h,i)Perylene	ND	1.01	μg/L	1	6/26/2014 10:17:00 AM	
Total PAH Target Concentration	ND	0.201	µg/L	1	6/26/2014 10:17:00 AM	
Surr: 2,2-Difluorobiphenyl	106	40-140	%REC	1	6/26/2014 10:17:00 AM	
Surr: 2-Fluorobiphenyl	84.1	40-140	%REC	1	6/26/2014 10:17:00 AM	

VOLATILE ORGANIC COMPOUNDS - SW8260B

Prep Method:		Prep	Date:		
1,1,1,2-Tetrachloroethane	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
1,1,1-Trichloroethane	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
1,1,2,2-Tetrachloroethane	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
1,1,2-Trichloroethane	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
1,1-Dichloroethane	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
1,1-Dichloroethene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
1,1-Dichloropropene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
1,2,3-Trichlorobenzene	ND	2.00	µg/L	1	6/27/2014 11:31:00 AM
1,2,3-Trichloropropane	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
1,2,4-Trichlorobenzene	ND	2.00	µg/L	1	6/27/2014 11:31:00 AM
1,2,4-Trimethylbenzene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
1,2-Dibromo-3-Chloropropane	ND	2.00	µg/L	1	6/27/2014 11:31:00 AM
1,2-Dibromoethane	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
1,2-Dichlorobenzene	ND	2.00	µg/L	1	6/27/2014 11:31:00 AM

Qualifiers:

- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- RL Reporting Limit

- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside recovery limits

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

Analyst: ZYZ

Reported Date: 30-Jun-14

CLIENT:

Kurz Environmental

Lab Order:

1406206

Project: Lab ID; B&M

1406206-004

Client Sample ID: MW-3A

Collection Date: 6/19/2014

Date Received: 6/20/2014

Matrix: GROUNDWATER

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS -	SW8260B				Analyst: ZY Z
Prep Method:		Pre	p Date:		
1,2-Dichloroethane	ND	2.00	µg/L	1	6/27/2014 11:31:00 AM
1,2-Dichloropropane	ND	2.00	μg/L	1	6/27/2014 11:31:00 AN
1,3,5-Trimethylbenzene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
1,3-Dichlorobenzene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
1,3-Dichloropropane	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
1,4-Dichlorobenzene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
1,4-Dioxane	ND	500	μg/L	1	6/27/2014 11:31:00 AN
2,2-Dichloropropane	ND	2.00	μg/L	1 `	6/27/2014 11:31:00 AM
2-Butanone	ND	10.0	µg/L	1	6/27/2014 11:31:00 AM
2-Chlorotoluene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
2-Hexanone	ND	10.0	µg/L	1	6/27/2014 11:31:00 AM
2-Methoxy-2-Methylbutane (TAME)	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
4-Chlorotoluene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
4-Isopropyltoluene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
4-Methyl-2-Pentanone	ND	5.00	μg/L	1	6/27/2014 11:31:00 AM
Acetone	ND	10.0	μg/L	1	6/27/2014 11:31:00 AM
Benzene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Bromobenzene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Bromochloromethane	ND	2,00	μg/L	1	6/27/2014 11:31:00 AM
Bromodichloromethane	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Bromoform	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Bromomethane	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Carbon Disulfide	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Carbon Tetrachloride	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Chlorobenzene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Chloroethane	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Chloroform	ND	2.00	μg/ L	1	6/27/2014 11:31:00 AM
Chloromethane	NĐ	2.00	μg/L	1	6/27/2014 11:31:00 AM
cis-1,2-Dichtoroethene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
cis-1,3-Dichloropropene	ND	0.170	μg/L	1	6/27/2014 11:31:00 AM
Dibromochloromethane	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Dibromomethane	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Dichlorodifluoromethane	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Diethyl Ether	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Diisopropyl Ether	ND	2.00	µg/L	1	6/27/2014 11:31:00 AM
Ethylbenzene	ND	2.00	µg/L	1	6/27/2014 11:31:00 AM

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- RL Reporting Limit

- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside recovery limits

GeoLabs, Inc.

Reported Date: 30-Jun-14

CLIENT:

Kurz Environmental

Lab Order:

1406206

Project:

B&M

Lab ID:

1406206-004

Client Sample ID: MW-3A

Collection Date: 6/19/2014

Date Received: 6/20/2014

Matrix: GROUNDWATER

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
OLATILE ORGANIC COMPOUNDS -	SW8260B				Analyst: ZYZ
Prep Method:		Pre	p Date:		
Ethyl-t-Butyl Ether	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Hexachlorobutadiene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Isopropylbenzene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Methyl Tert-Butyl Ether	ND	2.00	µg/L	1	6/27/2014 11:31:00 AM
Methylene Chloride	ND	2.00	µg/L	1	6/27/2014 11:31:00 AM
Naphthalene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
n-Butylbenzene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
n-Propylbenzene	ND	2.00	µg/L	1	6/27/2014 11:31:00 AM
sec-Butylbenzene	ND	2.00	µg/L	1	6/27/2014 11:31:00 AM
Styrene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
t-Butyl Alcohol	ND	20.0	μg/L	1	6/27/2014 11:31:00 AM
tert-Butylbenzene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Tetrachloroethene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Tetrahydrofuran	ND	2.00	μg/L	1	6/27/2014 11;31:00 AM
Toluene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
trans-1,2-Dichloroethene	ND	2.00	µg/L	1	6/27/2014 11:31:00 AM
trans-1,3-Dichloropropene	ND	0.270	µg/L	1	6/27/2014 11:31:00 AM
Trichloroethene	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Trichlorofluoromethane	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Vinyl Chloride	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Xylenes, Total	ND	2.00	μg/L	1	6/27/2014 11:31:00 AM
Surr: 1,2-Dichloroethane-d4	108	70-130	%REC	1	6/27/2014 11:31:00 AM
Surr: 4-Bromofluorobenzene	105	70-130	%REC	1	6/27/2014 11:31:00 AM
Surr: Dibromofluoromethane	111	70-130	%REC	1	6/27/2014 11:31:00 AM
Surr: Toluene-d8	84.3	70-130	%REC	1	6/27/2014 11:31:00 AM

_	
Qual	lifiers:

Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

ANALYTICAL QC SUMMARY REPORT

Date: 30-Jun-14

CLIENT:

Kurz Environmental

Work Order:

1406206

Project:

B&M

TestCode: 6010C_W

Sample ID: MBLK-24322	SampType: MBLK	TestCod	le: 6010C_W	Units: mg/L		Prep Dat	e: 6/26/2	014	RunNo: 550	066	
Client ID: ZZZZZ	Batch ID: 24322	TestN	lo: SW6010 B	(SW3010A)		Analysis Dat	e: 6/26/2	014	SeqNo: 616	358	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	0.0500									
Cadmium	ND	0.0100									
Chromium	ND	0.0100									
Lead	ND	0.0100									
Selenium	ND	0.0100			***						
Silver	ND	0.0100								· · · · · · · · · · · · · · · · · · ·	
Sample ID: LCS-24322	SampType: LCS	TestCoo	le: 6010C_W	Units: mg/L		Prep Dat	e: 6/26/2	2014	RunNo: 550)66	
Client ID: ZZZZZ	Batch ID: 24322	TestN	lo: SW6010B	(SW3010A)		Analysis Dat	e: 6/26/2	1014	SeqNo: 616	356	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	1.926	0.0500	2	0	96.3	80	120	;			
Cadmium	1.891	0.0100	2	0	94.6	80	120)			
Chromium	1.967	0.0100	2	0	98.4	80	120)			
Lead	1.986	0.0100	2	0	99.3	80	120)			
Selenium	1.972	0.0100	2	0	98.6	80	120	1			
Silver	0.4630	0.0100	0.5	0	92.6	80	120)			
Sample ID: LCSD-24322	SampType: LCSD	TestCod	de: 6010 C_W	Units: mg/L		Prep Dat	e: 6/26/2	2014	RunNo: 550	066	
Client ID: ZZZZZ	Batch ID: 24322	TestN	lo: SW6010 B	(SW3010A)		Analysis Dat	:e: 6/26/ 2	2014	SeqNo: 616	357	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	t RPD Ref Val	%RPD	RPDLimit	Qual
Barium	1.882	0.0500	2	0	94.1	80	120	1.926	2.31	20	
Cadmium	1.887	0.0100	2	0	94.4	80	120	1.891	0.212	20	
Chromium	1.962	0.0100	2	0	98.1	80	120	1.967	0.255	20	
Lead	1.998	0.0100	2	0	99.9	80	120	1.986	0.602	20	
Oualifiers: BRL Below Ret	porting Limit		E Value	above quantitation ra	nge		H	Holding times for	preparation or a	nalysis exceed	ed
•	started below quantitation limits			etected at the Renortin			R	RPD outside recor	very limits		

J Analyte detected below quantitation limits

RL Reporting Limit

ND Not Detected at the Reporting Limit

Spike Recovery outside recovery limits

R RPD outside recovery limits

GeoLabs, Inc.

Kurz Environmental

Work Order:

1406206

Project:

B&M

TestCode: 6010C_W

Sample ID: LCSD-24322 Client ID: ZZZZZ	SampType: LCSD Batch ID: 24322		de: 6010C_W do: SW6010B	9	,			RunNo: 55066 SeqNo: 616357		- ,	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium Silver	1.981 0.4690	0.0100 0.0100	2 0.5	0 0	99.0 93.8	80 80	120 120	1.972 0.463	0.455 1.29	20 20	

Qualifiers:

BRL Below Reporting Limit

Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

Not Detected at the Reporting Limit

Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

Kurz Environmental

Work Order:

1406206

Project:

B&M

TestCode: 7010_W

Sample ID: MBLK-24303	SampType: MBLK	TestCode: 7010_W	Units: mg/L	Prep Date: 6/23/2014	RunNo: 55017
Client ID: ZZZZZ	Batch ID: 24303	TestNo: E200.9	(SW3020A)	Analysis Date: 6/23/2014	SeqNo: 615790
Analyte	Result	PQL SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Arsenic	ND	0.0100			
Sample ID: LCS-24303	SampType: LCS	TestCode: 7010_W	Units: mg/L	Prep Date: 6/23/2014	RunNo: 55017
Client ID: ZZZZZ	Batch ID: 24303	TestNo: E200.9	(SW3020A)	Analysis Date: 6/23/2014	SeqNo: 615788
Analyte	Result	PQL SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Arsenic	ND	0.0100 0.01	0	97.1 80 120	
Sample ID: LCSD-24303	SampType: LCSD	TestCode: 7010_W	Units: mg/L	Prep Date: 6/23/2014	RunNo: 55017
Client ID: ZZZZZ	Batch ID: 24303	TestNo: E200.9	(SW3020A)	Analysis Date: 6/23/2014	SeqNo: 615789
Analyte	Result	PQL SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Arsenic	0.01005	0.0100 0.01	0	100 80 120 0.009712	3.42 20

Qualifiers:

BRL Below Reporting Limit

Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

Kurz Environmental

Work Order:

1406206

Project:

B&M

TestCode: 8260B_W MCP

Sample ID: MBLK	SampType: MBLK		de: 8260B_W MC Units: µg/L		Prep Da			RunNo: 550		
Client ID: ZZZZZ	Batch ID: R55094	Test	No: SW8260B	Α	Analysis Da	ite: 6/27/2	014	SeqNo: 616	525	
Analyte	Result	PQL	SPK value SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	2.00								
1,1,1-Trichloroethane	ND	2.00								
1,1,2,2-Tetrachloroethane	ND	2.00								
1,1,2-Trichloroethane	ND	2.00								
1,1-Dichloroethane	ND	2.00								
1,1-Dichloroethene	ND	2.00								
1,1-Dichloropropene	ND	2.00								
1,2,3-Trichlorobenzene	ND	2.00								
1,2,3-Trichloropropane	ND	2.00								
1,2,4-Trichlorobenzene	ND	2.00								
1,2,4-Trimethylbenzene	ND	2.00								
1,2-Dibromo-3-Chloropropane	ND	2.00								
1,2-Dibromoethane	ND	2.00								
1,2-Dichlorobenzene	ND	2.00								
1,2-Dichloroethane	ND	2.00	•							
1,2-Dichloropropane	ND	2.00								
1,3,5-Trimethylbenzene	ND	2.00								
1,3-Dichlorobenzene	ND	2.00								
1,3-Dichloropropane	ND	2.00								
1,4-Dichlorobenzene	ND	2.00								
1,4-Dioxane	ND	500								
2,2-Dichloropropane	ND	2.00								
2-Butanone	ND	10.0								
2-Chlorotoluene	ND	2.00								
2-Hexanone	ND	10.0								
2-Methoxy-2-Methylbutane (TAME) ND	2.00								
4-Chiorotoluene	ND	2.00	•							
4-Isopropyitoluene	ND	2.00								
Qualifiers: BRL Below Reports	ing Limit		E Value above quantitation ra	nge		H	Holding times for	preparation or a	analysis exceed	ied
	₩		ATTA AT - A Thomas and an also Domontic			D	DDD outcide reco	42 14		

J Analyte detected below quantitation limits

RL Reporting Limit

Not Detected at the Reporting Limit

Spike Recovery outside recovery limits

RPD outside recovery limits

GeoLabs, Inc.

Kurz Environmental

MOLK OL

1406206

Project:

B&M

TestCode: 8260B_W MCP

Sample ID: MBLK	SampType: MBLK	TestCo	de: 8260B_W	MC Units: µg/L		Prep Da	ite:		RunNo: 55	094	
Client ID: ZZZZZ	Batch ID: R55094	Test	No: SW8260B			Analysis Da	ite: 6/27/	2014	SeqNo: 616		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimi	t RPD Ref Val	%RPD	RPDLimit	Qua
4-Methyl-2-Pentanone	ND	5.00									
Acetone	ND	10.0									
Benzene	ND	2.00									
Bromobenzene	ND	2.00									
Bromochloromethane	ND	2.00									
Bromodichloromethane	ND	2.00									
Bromoform	ND	2.00									
Bromomethane	ND	2.00									
Carbon Disulfide	ND	2.00									
Carbon Tetrachloride	ND	2.00									
Chlorobenzene	ND	2.00									
Chloroethane	ND	2.00									
Chloroform	ND	2.00									
Chloromethane	ND	2.00									
sis-1,2-Dichloroethene	ND	2.00									
cis-1,3-Dichloropropene	ND	0.170									
Dibromochloromethane	ND	2.00									
Dibromomethane	ND	2.00									
Dichlorodifluoromethane	ND	2.00									
Diethyl Ether	ND	2.00									
Diisopropyl Ether	ND	2.00									
Ethylbenzene	ND ND	2.00									
Ethyl-t-Butyl Ether	ND	2.00									
fexachlorobutadiene	ND ND	2.00									
sopropylbenzene	ND	2.00									
Methyl Tert-Butyl Ether	DN	2.00									
Methylene Chloride	ND	2.00									
laphthalene	ND	2.00									
		2.00									
Qualifiers: BRL Below Rep			E Value a	bove quantitation ran	ge		Н	Holding times for p	reparation or an	alveis evoque	
J Analyte de	tected below quantitation limits		ND Not Det	ected at the Reporting	g Limit		R	RPD outside recove	ry limits		

RL Reporting Limit

S Spike Recovery outside recovery limits

GeoLabs, Inc.

Kurz Environmental

Work Order:

1406206

RL Reporting Limit

Project:

B&M

TestCode: 8260B_W MCP

Sample ID: MBLK	SampType: MBLK	TestCod	ie: 8260B_W	MC Units: µg/L		Prep Dat	e:	RunNo: 55094			
Client ID: ZZZZZ	Batch ID: R55094	TestN	lo: SW8260B			Analysis Dat	e: 6/27/2	014	SeqNo: 616	525	
Analyte	Result	PQL.	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
n-Butylbenzene	ND	2.00									
n-Propylbenzene	ND	2.00									
sec-Butylbenzene	ND	2.00									
Styrene	ND	2.00									
t-Butyl Alcohol	ND	20.0									
tert-Butylbenzene	ND	2.00									
Tetrachioroethene	ND	2.00									
Tetrahydrofuran	ND	2.00									
Foluene	ND	2.00									
rans-1,2-Dichloroethene	ND	2.00									
rans-1,3-Dichloropropene	ND	0.270									
Frichloroethene	ND	2.00									
Trichlorofluoromethane	ND	2.00									
√inyl Chloride	ND	2.00									
Kylenes, Total	ND	2.00									
Surr: 1,2-Dichloroethane-d4	30.05	0	30	0	100	70	130				
Surr: 4-Bromofluorobenzene	32.04	0	30	0	107	70	130				
Surr: Dibromofluoromethane	30.29	0	30	0	101	70	130				
Surr: Toluene-d8	25.76	0	30	0	85.9	70	130				
Sample ID: LCS	SampType: LCS	TestCo	de: 8260B_W	MC Units: µg/L		Prep Da	te:		RunNo: 550	94	
Client ID: ZZZZZ	Batch ID: R55094	Test	No: SW8260B			Analysis Da	te: 6/26/2	014	SeqNo: 616	523	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
1,1,1,2-Tetrachloroethane	57.86	2.00	50	0	116	70	130				
1,1,1-Trichloroethane	52.81	2.00	50	0	106	70	130				
1,1,2,2-Tetrachloroethane	62.39	2.00	50	0	125	70	130)			
Qualifiers: BRL Below Repor	rting Limit		E Value	above quantitation ra	inge		Н	Holding times for	preparation or a	nalysis exceed	led
	cted below quantitation limits			etected at the Report	_		R	RPD outside reco	-		

S Spike Recovery outside recovery limits GeoLabs, Inc.

Kurz Environmental

Work Order:

1406206

Project:

B&M

TestCode: 8260B_W MCP

Sample ID: LCS	SampType: LCS	TestCo	de: 8260B_W	MC Units: µg/L		Prep Da	te:		RunNo: 550)94	
Client ID: ZZZZZ	Batch ID: R55094	Testh	No: SW8260B			Analysis Da	te: 6/26/20	14	SeqNo: 616	552 3	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,2-Trichloroethane	62.04	2.00	50	0	124	70	130				
1,1-Dichloroethane	46.01	2.00	50	0	92.0	70	130				
1,1-Dichloroethene	47.10	2.00	50	0	94.2	70	130				
1,1-Dichloropropene	60.37	2.00	50	0	121	70	130				
1,2,3-Trichlorobenzene	57.25	2.00	50	0	114	70	130				
1,2,3-Trichloropropane	64.40	2.00	50	0	129	70	130				
1,2,4-Trichlorobenzene	57.06	2.00	50	0	114	70	130				
1,2,4-Trimethylbenzene	62.61	2.00	50	0	125	70	130				
1,2-Dibromo-3-Chloropropane	60.85	2.00	50	0	122	70	130				
1,2-Dibromoethane	61.78	2.00	50	0	124	70	130				
1,2-Dichlorobenzene	55.68	2.00	50	0	111	70	130				
1,2-Dichloroethane	64.15	2.00	50	0	128	70	130				
1,2-Dichloropropane	61.80	2.00	, 50	O	124	70	130				
1,3,5-Trimethylbenzene	61.58	2.00	50	0	123	70	130				
1,3-Dichlorobenzene	56.48	2.00	50	0	113	70	130				
1,3-Dichloropropane	63.56	2.00	50	0	127	70	130				
1,4-Dichlorobenzene	53.55	2.00	50	0	107	70	130				
1,4-Dioxane	ND	500	50	0	0	70	130		•		s
2,2-Dichloropropane	55.37	2.00	50	0	111	70	130				
2-Butanone	43.01	10.0	50	0	86.0	70	130				
2-Chlorotoluene	62.09	2.00	50	0	124	70	130				
2-Hexanone	62.34	10.0	50	0	125	70	130				
2-Methoxy-2-Methylbutane (TAME		2.00	50	0	0	70	130				s
4-Chiorotoluene	61.03	2.00	50	0	122	70	130				J
4-Isopropyitoluene	66.22	2.00	50	0	132	70	130				s
4-Methyl-2-Pentanone	58.81	5.00	50	0	118	70	130				3
Acetone	38.74	10.0	50	0	77.5	70	130				
Benzene	59.31	2.00	50	0	119	70	130				

Qualifiers:

BRL Below Reporting Limit

Analyte detected below quantitation limits

RL Reporting Limit

- E Value above quantitation range
- ND Not Detected at the Reporting Limit
 - S Spike Recovery outside recovery limits

- Holding times for preparation or analysis exceeded
- R RPD outside recovery limits

GeoLabs, Inc.

Kurz Environmental

WOLK OLD

1406206

Project:

B&M

TestCode: 8260B_W MCP

Sample ID: LCS	SampType: LCS		_	MC Units: µg/L		Prep Da			RunNo: 55094		
Client ID: ZZZZZ	Batch ID: R55094	Testi	No: SW8260B			Analysis Da	te: 6/26/20)14	SeqNo: 610	6523	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Bromobenzene	60.46	2.00	50	0	121	70	130				
Bromochloromethane	45 .16	2.00	50	0	90.3	70	130				
Bromodichloromethane	61.56	2.00	50	0	123	70	130				
Bromoform	63.42	2.00	50	0	127	70	130				
Bromomethane	57.85	2.00	50	0	116	70	130				
Carbon Disulfide	55.11	2.00	50	0	110	70	130				
Carbon Tetrachloride	58.46	2.00	50	0	117	70	130				
Chlorobenzene	58.94	2.00	50	0	118	70	130				
Chloroethane	49.22	2.00	50	0	98.4	70	130				
Chloroform	49.27	2.00	50	0	98.5	70	130				
Chloromethane	52.20	2.00	50	0	104	70	130				
cis-1,2-Dichloroethene	53.87	2.00	50	0	108	70	130				
cis-1,3-Dichloropropene	64.85	0.170	50	0	130	70	130				
Dibromochloromethane	60.11	2.00	50	0	120	70	130				
Dibromomethane	59.78	2.00	50	0	120	70	130				
Dichlorodifluoromethane	61.91	2.00	50	0	124	70	130				
Diethyl Ether	ND	2.00	50	ο .	0	70	130				s
Diisopropyl Ether	41.78	2.00	50	0	83.6	70	130				J
Ethylbenzene	60.54	2.00	50	0	121	70	130				
Ethyl-t-Butyl Ether	39.79	2.00	50	0	79.6	70	130				
Hexachlorobutadiene	55.83	2.00	50	0	112	70	130				
Isopropylbenzene	70.94	2.00	50	0	142	70	130				s
Methyl Tert-Butyl Ether	49.20	2.00	50	0	98.4	70	130				3
Methylene Chloride	43.59	2.00	50	0	87.2	70	130				
Naphthalene	59.32	2.00	50	0	119	70	130				
n-Butylbenzene	64.83	2.00	50	0	130	70	130				
n-Propylbenzene	62.49	2.00	50	0	125	70	130				
sec-Butylbenzene	67.49	2.00	50	0	135	70	130				s

Qualifiers:

BRL Below Reporting Limit

Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

R RPD outside recovery limits

Kurz Environmental

Work Order:

1406206

Project:

B&M

TestCode: 8260B_W MCP

Sample ID: LCS	SampType: LCS	TestCo	de: 8260B_W	MC Units: µg/L		Prep Dat	te:		RunNo: 550)94		
Client ID: ZZZZZ	Batch ID: R55094	Test	No: SW8260B			Analysis Da	te: 6/26/20	14	SeqNo: 616523			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val		%RPD RPDLimit		Qual	
Styrene	58,46	2.00	50	0	117	70	130	7.0				
t-Butyl Alcohol	419.0	20.0	500	0	83.8	70	130					
tert-Butylbenzene	62.06	2.00	50	0	124	70	130					
Tetrachloroethene	61.83	2.00	50	0	124	70	130					
Tetrahydrofuran	43.19	2.00	50	0	86.4	70	130					
Toluene	56,67	2.00	50	0	113	70	130					
trans-1,2-Dichloroethene	45.64	2.00	50	0	91.3	70	130					
trans-1,3-Dichloropropene	66.22	0.270	50	0	132	70	130				s	
Trichloroethene	60.09	2.00	50	0	120	70	130					
Trichlorofluoromethane	60.76	2.00	50	0	122	70	130					
Vinyl Chloride	35.29	2.00	50	0	70.6	70	130					
Xylenes, Total	180.3	2.00	150	0	120	70	130					
Surr: 1,2-Dichloroethane-d4	28.88	0	30	0	96.3	70	130					
Surr: 4-Bromofluorobenzene	33.25	0	30	0	111	70	130					
Surr: Dibromofluoromethane	30.60	0	30	0	102	70	130					
Surr: Toluene-d8	25.32	0	30	0	84.4	70	130					
Sample ID: LCSD	SampType: LCSD	TestCo	de: 8260B_W	MC Units: µg/L		Prep Da	te:		RunNo: 550	94		
Client ID: ZZZZZ	Batch ID: R55094	Testi	No: SW8260 B			Analysis Da	te: 6/27/20	14	SeqNo: 616	5524		

Sample ID: LCSD	e ID: LCSD SampType: LCSD TestCode: 8260B_W MC Units: µg/L			Prep Date:			RunNo: 556	094			
Client ID: ZZZZZ	Batch ID: R55094	TestNo: SW8260B			Analysis Date: 6/27/2014				SeqNo: 616524		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	57.18	2.00	50	0	114	70	130	57.86	1.18	20	•
1,1,1-Trichloroethane	50.43	2.00	50	0	101	70	130	52.81	4.61	20	
1,1,2,2-Tetrachloroethane	60.37	2.00	50	0	121	70	130	62.39	3.29	20	
1,1,2-Trichloroethane	61.35	2.00	50	0	123	70	130	62.04	1.12	20	
1,1-Dichloroethane	44.99	2.00	50	٥	90.0	70	130	46.01	2.24	20	
1,1-Dichloroethene	46.42	2.00	50	0	92.8	70	130	47.1	1.45	20	

Qualifiers:

BRL Below Reporting Limit

Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

R RPD outside recovery limits

GeoLabs, Inc.

Kurz Environmental

Work Order:

1406206

Project:

B&M

TestCode: 8260B_W MCP

Sample ID: LCSD	SampType: LCSD	TestCo	de: 8260B_W	MC Units: μg/L		Prep Da	te:		RunNo: 55 ()94	
Client ID: ZZZZZ	Batch ID: R55094	Testi	No: SW8260B			Analysis Da	te: 6/27/20	14	SeqNo: 616	5524	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Vai	%RPD	RPDLimit	Qual
1,1-Dichloropropene	59.98	2.00	50	0	120	70	130	60.37	0.648	20	
1,2,3-Trichlorobenzene	59.61	2.00	50	0	119	70	130	57.25	4.04	20	
1,2,3-Trichloropropane	64.05	2.00	50	0	128	70	130	64.4	0.545	20	
1,2,4-Trichlorobenzene	58.72	2.00	50	0	117	70	130	57.06	2.87	20	
1,2,4-Trimethylbenzene	63.86	2.00	50	0	128	70	130	62.61	1.98	20	
1,2-Dibromo-3-Chloropropane	60.61	2.00	50	0	121	70	130	60.85	0.395	20	
1,2-Dibromoethane	61.77	2.00	50	0	124	70	130	61.78	0.0162	20	
1,2-Dichlorobenzene	55.70	2.00	50	0	111	70	130	55.68	0.0359	20	
1,2-Dichloroethane	60.81	2.00	50	0	122	70	130	64.15	5.35	20	
1,2-Dichloropropane	63.57	2.00	50	0	127	70	130	61.8	2,82	20	
1,3,5-Trimethylbenzene	62.95	2.00	50	0	126	70	130	61.58	2.20	20	
1,3-Dichlorobenzene	56.62	2.00	50	0	113	70	130	56.48	0.248	20	
1,3-Dichloropropane	62.94	2.00	50	0	126	70	130	63.56	0.980	20	
1,4-Dichlorobenzene	54.01	2,00	50	0	108	70	130	53.55	0.855	20	
1,4-Dioxane	ND	500	50	0	0	70	130	0	0	20	s
2,2-Dichloropropane	52.38	2.00	50	0	105	70	130	55.37	5.55	20	•
2-Butanone	49.64	10.0	50	0	99.3	70	130	43.01	14.3	20	
2-Chlorotoluene	63.23	2.00	50	0	126	70	130	62.09	1.82	20	
2-Hexanone	62.83	10.0	50	0	126	70	130	62.34	0.783	20	
2-Methoxy-2-Methylbutane (TAME)) ND	2.00	50	0	0	70	130	0	0	20	s
4-Chlorotoluene	61.81	2.00	50	0	124	70	130	61.03	1.27	20	Ŭ
4-Isopropyltoluene	70.91	2.00	50	0	142	70	130	66.22	6.84	20	s
4-Methyl-2-Pentanone	56.42	5.00	50	0	113	70	130	58.81	4.15	20	J
Acetone	41.94	10.0	50	0	83.9	70	130	38.74	7.93	20	
Benzene	63.21	2.00	50	0	126	70	130	59.31	6.37	20	
Bromobenzene	60.58	2.00	50	0	121	70	130	60.46	0.198	20	
Bromochloromethane	51.15	2.00	50	0	102	70	130	45.16	12.4	20	
Bromodichloromethane	62.84	2.00	50	0	126	70	130	61.56	2.06	20	

Qualifiers:

BRL Below Reporting Limit

J Analyte detected below quantitation limits

RL Reporting Limit

- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside recovery limits
- H Holding times for preparation or analysis exceeded
- R RPD outside recovery limits

GeoLabs, Inc.

Kurz Environmental

Work Order:

1406206

Project:

B&M

TestCode: 8260B_W MCP

Sample ID: LCSD	SampType: LCSD	TestCo	de: 8260B_W	MC Units: μg/L		Prep Da	te:		RunNo: 550)94	
Client ID: ZZZZZ	Batch ID: R55094	Testi	No: SW8260B			Analysis Da	te: 6/27/20	14	SegNo: 616	5524	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromoform	62.62	2.00	50	0	125	70	130	63.42	1.27	20	
Bromomethane	58.47	2.00	50	0	117	70	130	57.85	1.07	20	
Carbon Disulfide	54.60	2.00	50	0	109	70	130	55.11	0.930	20	
Carbon Tetrachloride	56.59	2.00	50	0	113	70	130	58.46	3.25	20	
Chlorobenzene	59.13	2.00	50	0	118	70	130	58.94	0.322	20	
Chloroethane	60.38	2.00	50	0	121	70	130	49.22	20.4	20	R
Chloroform	48.18	2.00	50	0	96.4	70	130	49.27	2.24	20	
Chloromethane	56.29	2.00	50	0	113	70	130	52.2	7.54	20	
cis-1,2-Dichloroethene	43.38	2.00	50	0	86.8	70	130	53.87	21.6	20	R
cis-1,3-Dichloropropene	64.69	0.170	50	0	129	70	130	64.85	0.247	20	
Dibromochloromethane	60.84	2.00	50	0	122	70	130	60.11	1.21	20	
Dibromomethane	63.06	2.00	50	0	126	70	130	59.78	5.34	20	
Dichlorodifluoromethane	64.09	2.00	50	0	128	70	130	61.91	3.46	20	
Diethyl Ether	ND	2.00	50	0	0	70	130	0	0	20	s
Diisopropyl Ether	43.02	2.00	50	0	86.0	70	130	41.78	2.92	20	
Ethylbenzene	61.13	2.00	50	0	122	70	130	60.54	0.970	20	
Ethyl-t-Butyl Ether	39.25	2.00	50	0	78.5	70	130	39.79	1.37	20	
Hexachlorobutadiene	58.66	2.00	50	0	117	70	130	55.83	4.94	20	
Isopropylbenzene	72.00	2.00	50	0	144	70	130	70.94	1.48	20	s
Methyl Tert-Butyl Ether	48.30	2.00	50	0	96.6	70	130	49.2	1.85	20	
Methylene Chloride	42.13	2.00	50	0	84.3	70	130	43.59	3.41	20	
Naphthalene	57 .57	2.00	50	0	115	70	130	59.32	2.99	20	
n-Butylbenzene	65.83	2.00	50	0	132	70	130	64.83	1.53	20	s
n-Propylbenzene	64.11	2.00	50	0	128	70	130	62.49	2.56	20	
sec-Butylbenzene	71.28	2.00	50	0	143	70	130	67.49	5.46	20	s
Styrene	59.60	2.00	50	0	119	70	130	58.46	1.93	20	
t-Butyl Alcohol	412.9	20.0	500	0	82.6	70	130	419	1.47	20	
tert-Butylbenzene	63,37	2.00	50	0	127	70	130	62.06	2.09	20	

Qualifiers:

BRL Below Reporting Limit

Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

R RPD outside recovery limits

GeoLabs, Inc.

Kurz Environmental

Work Order:

1406206

Project:

B&M

TestCode: 8260B_W MCP

Sample ID: LCSD Client ID: ZZZZZ	SampType: LCSD Batch iD: R55094		de: 8260B_W No: SW8260B	MC Units: µg/L		Prep Da Analysis Da		014	RunNo: 556 SeqNo: 616		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrachloroethene	62.82	2.00	50	0	126	70	130	61.83	1.59	20	
Tetrahydrofuran	48.73	2.00	50	0	97.5	70	130	43.19	12.1	20	
Toluene	60.12	2.00	50	0	120	70	130	56.67	5.91	20	
trans-1,2-Dichloroethene	43.49	2.00	50	0	87.0	70	130	45,64	4.82	20	
trans-1,3-Dichloropropene	71.30	0.270	50	0	143	70	130	66.22	7,39	20	s
Trichloroethene	63.68	2.00	50	0	127	70	130	60.09	5.80	20	Ŭ
Trichlorofluoromethane	71.37	2.00	50	0	143	70	130	60.76	16.1	20	s
Vinyl Chloride	39.11	2.00	50	0	78.2	70	130	35.29	10.3	20	Ū
Xylenes, Total	181.4	2.00	150	0	121	70	130	180.3	0.625	20	
Surr: 1,2-Dichloroethane-d4	29.96	0	30	0	99.9	70	130	0	0	0	
Surr: 4-Bromofluorobenzene	29.22	0	30	0	97.4	70	130	0	n	0	
Surr: Dibromofluoromethane	29.82	0	30	0	99.4	70	130	0	0	n	
Surr: Toluene-d8	26.80	0	30	0	89.3	70	130	0	0	0	

Qualifiers:

BRL Below Reporting Limit

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

Kurz Environmental

Work Order:

1406206

Project:

B&M

TestCode: EPHP_W

Sample ID: MB-24314	SampType: mblk	ToctCo	de: EPHP_W	Limites	<u> </u>				
							6/25/2014	RunNo: 55055	
Client ID: ZZZZZ	Batch ID: 24314	Testi	No: MADEP E	PH_ (eph_Wpr)		Analysis Date:	6/26/2014	SeqNo: 616181	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit RPD Ref Val	%RPD RPDLimit	Qual
Naphthalene	ND	1.00							
2-Methylnaphthalene	ND	1,00							
Acenaphthene	ND	1.00							
Phenanthrene	ND	1.00							
Acenaphthylene	ND	1.00							
Fluorene	ND	1.00							
Anthracene	ND	1.00							
Fluoranthene	ND	1.00							
Pyrene	ND	1.00							
Benzo(a)Anthracene	ND	0.400							
Chrysene	ND	1.00							
Benzo(b)Fluoranthene	ND	0.200							
Benzo(k)Fluoranthene	ND	0.200							
Benzo(a)Pyrene	ND	0.190							
Indeno(1,2,3-cd)Pyrene	ND	0.400							
Dibenz(a,h)Anthracene	ND	0.400							
Benzo(g,h,i)Perylene	ND	1.00							
Total PAH Target Concentration	ND	0.200							
Surr: 2,2-Difluorobiphenyl	21.36	0	25	0	85.4	40	140		
Surr: 2-Fluorobiphenyl	18.97	0	25	0	75.9	40	140		
Sample ID: LCS2-24314	SampType: Ics	TestCod	ie: EPHP_W	Units: µg/L		Prep Date:	6/25/2014	RunNo: 55055	
Client ID: ZZZZZ	Batch ID: 24314	TestN	lo: MADEP E	PH_ (eph_Wpr)		Analysis Date:	6/26/2014	SeqNo: 616183	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit RPD Ref Val	%RPD RPDLimit	Qual
Naphthalene	20.79	1.00	50	0	41.6	40	140		
2-Methylnaphthalene	20.68	1.00	50	0	41.4	40	140		
Qualifiers: BRL Below Report	ing Limit		E Value	above quantitation ran	nge		H Holding times for	preparation or analysis exceede	
	ed below quantitation limits			tected at the Reportin	_		R RPD outside reco		cu
RL Reporting Limit				Recovery outside reco	_		V 1/4 D origine 1950.	very mines	

Kurz Environmental

Work Order:

1406206

RL Reporting Limit

Project:

B&M

TestCode: EPHP_W

Sample ID: LCS2-24314	SampType: Ics	TestCo	de: EPHP_W	Units: µg/L		Prep Dat	te: 6/25/20	14	RunNo: 550	055	
Client ID: ZZZZZ	Batch ID: 24314	Testi	No: MADEP E	PH_ (eph_Wpr)		Analysis Da	te: 6/26/20	14	SeqNo: 616	6183	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	26.28	1.00	50	0	52.6	40	140				
Phenanthrene	35.02	1.00	50	0	70.0	40	140				
Acenaphthylene	26.78	1.00	50	0	53.6	40	140				
Fluorene	33.18	1.00	50	0	66.4	40	140				
Anthracene	34.85	1.00	50	0	69.7	40	140				
Fluoranthene	35.62	1.00	50	0	71.2	40	140				
Pyrene	38.94	1.00	50	0	77.9	40	140				
Benzo(a)Anthracene	40.81	0.400	50	0	81.6	40	140				
Chrysene	41.88	1.00	50	0	83.8	40	140				
Benzo(b)Fluoranthene	36.58	0.200	50	0	73.2	40	140				
Benzo(k)Fluoranthene	37.74	0.200	50	0	75.5	40	140				
Benzo(a)Pyrene	36.91	0.190	50	0	73.8	40	140				
Indeno(1,2,3-cd)Pyrene	41,96	0.400	50	0	83.9	40	140				
Dibenz(a,h)Anthracene	43.14	0.400	50	0	86.3	40	140				
Benzo(g,h,i)Perylene	43.01	1.00	50	0	86.0	40	140				
Surr: 2,2-Difluorobiphenyl	22.21	0	25	0	88.8	40	140				
Surr: 2-Fluorobiphenyl	19.02	0	25	0	76.1	40	140				
Sample ID: LCS-24314	SampType: Ics	TestCo	de: EPHP_W	Units: µg/L		Prep Da	te: 6/25/20	14	RunNo: 550)55	
Client ID: ZZZZZ	Batch ID: 24314	Test	No: MADEP E	PH_ (eph_Wpr)		Analysis Dat	te: 6/26/20	14	SeqNo: 616	5209	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	20.73	1.00	50	0	41.5	40	140				
2-Methylnaphthalene	22.19	1.00	50	0	44.4	40	140				
Acenaphthene	26.75	1.00	50	0	53. 5	40	140				
Phenanthrene	35.46	1.00	50	0	70.9	40	140				
Acenaphthylene	26.59	1.00	50	0	53.2	40	140				
Qualifiers: BRL Below Repo	orting Limit		E Value	above quantitation ra	nge		H F	Iolding times for	preparation or a	nalysis exceed	led
•	ected below quantitation limits			etected at the Reportin	_			RPD outside recov	-	J=== ======	

GeoLabs, Inc.

S Spike Recovery outside recovery limits

Kurz Environmental

Work Order:

1406206

Project:

B&M

TestCode: EPHP_W

Sample ID: LCS-24314	SampType: Ics	TestCo	de: EPHP_W	Units: µg/L		Prep Da	te: 6/25/20	14	RunNo: 550)55	
Client ID: ZZZZZ	Batch ID: 24314	TestNo: MADEP EPH_ (eph_Wpr)			Analysis Date: 6/26/2014			SeqNo: 616209			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	32.72	1.00	50	0	65.4	40	140				
Anthracene	35.00	1.00	50	0	70.0	40	140				
Fluoranthene	35.69	1.00	50	0	71.4	40	140				
Pyrene	38.83	1.00	50	0	77.7	40	140				
Benzo(a)Anthracene	40.50	0.400	50	0	81.0	40	140				
Chrysene	41.47	1.00	50	0	82.9	40	140				
Benzo(b)Fluoranthene	37.48	0.200	50	0	75.0	40	140				
Benzo(k)Fluoranthene	39.17	0.200	50	0	78.3	40	140				
Benzo(a)Pyrene	37.49	0.190	50	0	75.0	40	140				
Indeno(1,2,3-cd)Pyrene	43.04	0.400	50	0	86.1	40	140				
Dibenz(a,h)Anthracene	42.85	0.400	50	0	85.7	40	140				
Benzo(g,h,i)Perylene	42.22	1.00	50	0	84.4	40	140				
Surr: 2,2-Difluorobiphenyl	23.02	0	25	0	92.1	40	140				
Surr: 2-Fluorobiphenyl	18.71	0	25	0	74.8	40	140				

Qualifiers:

BRL Below Reporting Limit

Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

Kurz Environmental

Work Order:

1406206

Project:

B&M

TestCode: epht_w

Result ND ND ND ND 56.06 95.49 DE: Lcs DE: 24314 Result ND ND ND	PQL 100 100 100 100 0 0	100 100 de: epht_w No: MADEP E SPK value	SPK Ref Val 0 0 Units: µg/L	%REC 56.1 95.5 %REC 48.7	40 40 Prep Da Analysis Da LowLimit	140 140 140 te: 6/25/20 te: 6/25/20	RPD Ref Val	SeqNo: 61 %RPD RunNo: 556 SeqNo: 610 %RPD	RPDLimit	Qual
ND ND ND 56.06 95.49 De: Lcs D: 24314 Result	100 100 100 100 0 0 TestCo TestI	100 100 de: epht_w No: MADEP E SPK value	0 0 Units: µg/L PH (eph_Wpr) SPK Ref Val	56.1 95.5 %REC	40 40 Prep Da Analysis Da LowLimit	140 140 te: 6/25/20 te: 6/25/20 HighLimit	014 114	RunNo: 55 SeqNo: 61	060 6257	
ND ND 56.06 95.49 De: Lcs D: 24314 Result	100 100 100 0 0 TestCo TestI	de: epht_w No: MADEP E SPK value	0 Units: μg/L PH (eph_Wpr) SPK Ref Val	95.5 %REC	40 Prep Da Analysis Da LowLimit	140 te: 6/25/20 te: 6/25/20 HighLimit	114	SeqNo: 61	6257	Qual
ND ND 56.06 95.49 De: Lcs D: 24314 Result	100 100 0 0 TestCo TestI	de: epht_w No: MADEP E SPK value	0 Units: μg/L PH (eph_Wpr) SPK Ref Val	95.5 %REC	40 Prep Da Analysis Da LowLimit	140 te: 6/25/20 te: 6/25/20 HighLimit	114	SeqNo: 61	6257	Qual
ND 56.06 95.49 De: Lcs D: 24314 Result	TestCo TestI PQL 100	de: epht_w No: MADEP E SPK value	0 Units: μg/L PH (eph_Wpr) SPK Ref Val	95.5 %REC	40 Prep Da Analysis Da LowLimit	140 te: 6/25/20 te: 6/25/20 HighLimit	114	SeqNo: 61	6257	Qual
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95.49 D: 24314 Result	TestCo TestI PQL 100	de: epht_w No: MADEP E SPK value	0 Units: μg/L PH (eph_Wpr) SPK Ref Val	95.5 %REC	40 Prep Da Analysis Da LowLimit	140 te: 6/25/20 te: 6/25/20 HighLimit	114	SeqNo: 61	6257	Qual
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D: 24314 Result	PQL 100	No: MADEP E SPK value	PH (eph_Wpr) SPK Ref Val		Analysis Da	te: 6/25/20	114	SeqNo: 61	6257	Qual
Result ND	PQL 100	SPK value	SPK Ref Val		LowLimit	HighLimit		SeqNo: 61	6257	Qual
ND	100	100					RPD Ref Val	%RPD	RPDLimit	Quai
			0	10.7		······································				
ND	100			40.7	40	140				
	,	100	0	74.3	40	140				
ND	100	100	0	53.1	40	140				
76.63	0	100	0	76.6	40	140				
83.03	0	100	0	83.0	40	140				
e: Lcsd	TestCo	de: epht_w	Units: µg/L		Prep Dat	e: 6/25/20	14	RunNo: 55()60	
D: 24314	Test	No: MADEP E	PH (eph_Wpr)		Analysis Dat	e: 6/25/20	14	SeqNo: 616		
Result	PQL	SPK value	SPK Ref Vai	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
ND	100	100	0	55.1	40	140	48.71	<u> </u>	25	
ND	100	100	0	79.2	40			•		
ND	100	100	0	65.2	40			•		
74.24	0	100	0	74.2	40			•		
	0	100	0	99.1	40	140	0	0	•	
	ND ND ND	ND 100 ND 100 ND 100 74.24 0	ND 100 100 ND 100 100 ND 100 100 74.24 0 100	Result PQL SPK value SPK Ref Val ND 100 100 0 ND 100 100 0 ND 100 100 0 74.24 0 100 0	Result PQL SPK value SPK Ref Val %REC ND 100 100 0 55.1 ND 100 100 0 79.2 ND 100 100 0 65.2 74.24 0 100 0 74.2	Result PQL SPK value SPK Ref Val %REC LowLimit ND 100 100 0 55.1 40 ND 100 100 0 79.2 40 ND 100 100 0 65.2 40 74.24 0 100 0 74.2 40	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit ND 100 100 0 55.1 40 140 ND 100 100 0 79.2 40 140 ND 100 100 0 65.2 40 140 74.24 0 100 0 74.2 40 140	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val ND 100 100 0 55.1 40 140 48.71 ND 100 100 0 79.2 40 140 74.34 ND 100 100 0 65.2 40 140 53.08 74.24 0 100 0 74.2 40 140 0	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD ND 100 100 0 55.1 40 140 48.71 0 ND 100 100 0 79.2 40 140 74.34 0 ND 100 100 0 65.2 40 140 53.08 0 74.24 0 100 0 74.2 40 140 0 0	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit ND 100 100 0 55.1 40 140 48.71 0 25 ND 100 100 0 79.2 40 140 74.34 0 25 ND 100 100 0 65.2 40 140 53.08 0 25 74.24 0 100 0 74.2 40 140 0 0 0 00.42 0 100 0 74.2 40 140 0 0 0

Qualifiers:

BRL Below Reporting Limit

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

R RPD outside recovery limits

GeoLabs, Inc.

Kurz Environmental

Work Order:

1406206

Project:

B&M

TestCode: HG-7470A_W

Sample ID: MB-24307 Client ID: ZZZZZ	SampType: MBLK Batch ID: 24307	TestCode: HG-7470A_W Units: mg/L Prep Date: 6/24/2014 RunNo: 55039 TestNo: SW7470A (SW7470A/E2 Analysis Date: 6/24/2014 SeqNo: 616560	
Analyte Mercury	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDL	imit Qual
	ND	0.000200	
Sample ID: LCS-24307 Client ID: ZZZZZ	SampType: LCS Batch ID: 24307	TestCode: HG-7470A_W Units: mg/L Prep Date: 6/24/2014 RunNo: 55039 TestNo: SW7470A (SW7470A/E2 Analysis Date: 6/24/2014 SeqNo: 616561	
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLi	mit Qual
Mercury	0.004650	0.000200 0.005 0 93.0 80 120	- Quar
Sample ID: LCSD-24307 Client ID: ZZZZZ	SampType: LCSD Batch ID: 24307	TestCode: HG-7470A_W Units: mg/L Prep Date: 6/24/2014 RunNo: 55039 TestNo: SW7470A (SW7470A/E2 Analysis Date: 6/24/2014 SeqNo: 616562	
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLin	nit Qual
Mercury	0.004990	0.000200 0.005 0 99.8 80 120 0.0045	20

Qualifiers:

BRL Below Reporting Limit

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

CHAIN OF CUSTODY RECORD GeoLabs, Inc. Environmental Laboratories

45 Johnson Lane, Braintree, MA 02184 p 781.848.7844 • f 781.848.7811

	Sample	Handling:	circle	choice
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Matrix Co	odes:						Re	ceived	on Ice		Preservatives			1	= = = = = = = = = = = = = = = = = = =						
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.4&L.0870102	C of CR.09/22	/10 THANK YO late paym	OU - WE APPI ent charge of	RECIATE YOUR BU	JSINESS All o	discountir	ig will be	e remove	d after 90	days •	All Payment terms are NET 30 Days. A Collection costs, including attorney"s	T (PH-	0148)		<u>'</u>		NH (2	508) MA (· (MA_016	1	
			-	fees and cor	urt costs, will b	e applied	to balar	ces that	go beyor	nd NET 3	0 days.						RI (LA	(000252)	(medio)	,	

Thursday, July 03, 2014



GeoLabs, Inc. 45 Johnson Lane Braintree MA 02184 Tele: 781 848 7844

Fax: 781 848 7811

Mark Germano Kurz Environmental P. O. Box 358 Sherborn, MA 01770

TEL: (339) 793-3528

FAX:

Project:

B&M

Location:

Order No.: 1406272

Dear Mark Germano:

GeoLabs, Inc. received 2 sample(s) on 6/27/2014 for the analyses presented in the following report.

The laboratory results in this report relate only to samples submitted. All data for associated QC met method or laboratory specifications, except where noted in the Case Narrative.

Analytical methods and results meet requirements of 310CMR 40.5056(J) as per MADEP Compendium of Analytical Methods (CAM).

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

David Mick

Laboratory Director

For current certifications, please visit our website at www.geolabs.com

Certifications:

CT (PH-0148) - MA (M-MA015) - NH (2508) - RI (LA000252)

A PROBLEM TO A STATE OF THE STATE OF	MassDEP An	alytical Protocol e	enification Factor		Marketon Tolking Brown Barry					
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tion: B&M				·						
ovides certification	for the following da	ta set: 1406272 (004	000)							
☑ Ground	water/Surface Wat	ar D Scil/Sodiment	-002)							
ol (check all that a	ipply below):	er in Soll/Sediment	☐ Drinking Water ☐ A	Air 🗆	Other-wast	tewater				
7470/7471 Hg CAM III B 🖂	MassDEP VPH CAM IV A	8081 Pesicides CAM V B	7196 Hex Cr	-	MassDEP A	APH				
7010 Metals CAM III C 区	MassDEP EPH CAM IV B 区	8151 Herbicides CAM V C	8330 Explosives CAM VIII A		TO-15 VOC					
6020 Metals CAM III D	8082 PCB CAM V A 🔲	9014 Total Cyanide/PAC CAM VI A □	6860 Perchlorate CAM VIII B							
Responses to Que	estions A through	F are required for "P	resumptive Cortainty"	tatus						
A properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?										
Were the analytic	d CAM	⊠ Yes	□ No							
Were all required of protocol(s)	Were all required corrective actions and analytical response actions specified in the selected CAM ☐ Yes ☐ No protocol(s) implemented for all identified performance standard non-confirmances?									
Does the laborator Assurance and Q	Does the laboratory report comply with all reporting requirements specified in CAM VII A "Quality Table".									
VPH, EPH, APH a. VPH, EPH modification(s	and TO-15 only: , and APH Methods o s)? (Refer to the indivi	nly: Was each method c dual method(s) for a list	conducted without significan of significant modifications.	t)	⊠ Yes	□ No				
b. APH and TO	-15 Methods only: Wa	is the complete analyte	list reported for each metho	d?	□ Yes	□ No				
Evaluated III a I	aporatory narrative (ir	ichidina all "No" reenone	one to Outpotions A theorems	ed and E)	⊠ Yes	□ No				
Questions G, H,	and I below are re	auired for "Presumn	tive Cortains etatus							
		protocol(s)?			⊠ Yes	□No				
<u>er Note:</u> Data that <u>representativ</u>	achieve "Presumptiv eness requirements	e Certainty" status ma described in 310 CMR	ny not necessarily meet th	e data (usablility ar	nd				
Were all QC	performance standa	rds as specified in the С	AM protocol(s) achieved?	07-330.		⊠ No¹				
Were results rep	orted for the complete	analyte list specified in	the selected CAM protocol/	's)?		⊠ No ¹				
esponses must be	addressed in an at	tached laboratory narr	ative.							
ole for obtaining th	e ipformation,∕the m	s of perjury that, based aterial contained in thi	d upon my personal inquir s analytical report is, to th	y of ie best						
David V	Wich	Positio	n: Laboratory Director							
David Mick		Date: _	July 3, 2014		***************************************					
	tion: B&M pvides certification Ground of (check all that a 7470/7471 Hg CAM III B 7010 Metals CAM III C Gozo Metals CAM III D Gozo	ition: B&M Sovides certification for the following date Surface Water of the collowing date	ition: B&M RTN: poides certification for the following data set: 1406272 (001- Soil/Sediment Soil/Sediment	Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analtyload DVPH, APH, APH and TO-15 only: a. APH and TO-15 Methods only: Was the complete analyte list reported for each method will a laboratory narrative (including all "No" responses to Questions A through PAL, APH and TO-15 Methods only: Was the complete analyte list specified in the selected CA protecol(s)? Were all applicable CAM protocol QC and performance standard non-conformances identific evaluated in a laboratory narrative (including all "No" responses to Questions A through Pac analytical reports of the selected CAM VIII A To-15 Methods only: Was the complete analyte list specified in the selected CAM VIII A To-15 Methods only: Was the complete analytic list reported for evaluated in a laboratory narrative (including all "No" responses to the selection of the ApH and To-15 Methods only: Was each method conducted without significant modification (s)? (Refer to the individual method(s) for a list of significant modifications. b. APH and TO-15 Methods only: Was the complete analyte list reported for each method very separative in the selected CAM protocol(s)? (including limits at or below at laboratory narrative for the Acquisition and Reporting of Analtyload Developed the selected CAM protocol (s) and the selected CAM protocol (s) for a list of significant modifications. b. APH and TO-15 Methods only: Was the complete analyte list reported for each method were all applicable CAM protocol QC and performance standard non-conformances identification. Cambridge of the selected CAM protocol (s) and performance standard non-conformances identifications. Does the laboratory narrative (including all "No" responses to Questions A through the protocol (s) and performance standard non-conformances identification and performance identification and performance identification and performance identification and performance identification. Cambridge of the cambridge of the complete analyte list specified in the selected CAM protocol	Project #:	ition: B&M				

Date: 03-Jul-14

CLIENT:

Kurz Environmental

Project:

B&M

Lab Order:

1406272

CASE NARRATIVE

Physical Condition of Samples

The project was received by the laboratory in satisfactory condition. The sample(s) were received undamaged, in appropriate containers with the correct preservation.

Project Documentation

The project was accompanied by satisfactory Chain of Custody documentation.

Analysis of Sample(s)

Select metals reported via method 6010C, per client request.

All extractable samples were extracted and analyzed and any Volatile samples were analyzed within method specified holding times and according to GeoLabs documented Standard Operating Procedure. The following analytical anomalies or non-conformances were noted by the laboratory during the processing of these samples:

See QC to review spike & RPD % recoveries outside of recovery limits.

Limits for 1,4-Dioxane, EDB, and Hexachlorobutadiene do not meet MCP limits.

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 07/03/14

Kurz Environmental

Project:

B&M

Lab Order:

1406272

CASE NARRATIVE

EPH Methods

Method for Ranges: MADEP EPH 04-1.1 Method for Target Analytes: 8270 GC/MS

Carbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

Adjusted C11-C22 Aromatic Hydrocarbons exclude concentrations of Target PAH Analytes

CERTIFICATION:

Were all QA/QC procedures REQUIRED by the EPH Method followed? YES Were all performance/acceptance standards achieved? NO (See Case Narrative) Were any significant modifications made to the EPH method? NO

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 07/03/14

Reported Date: 03-Jul-14

CLIENT:

Kurz Environmental

Client Sample 1D: EW-1

Lab Order:

1406272

Project:

Tag Number:

B&M

Lab ID:

1406272-001A

Collection Date: 6/26/2014

Date Received: 6/27/2014

Matrix: GROUNDWATER

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS -	SW8260B				Analyst: Z C
Prep Method:		Pre	p Date:		
1,1,1,2-Tetrachloroethane	ND	2.00	μg/L	 1	6/30/2014 6:27:00 PM
1,1,1-Trichloroethane	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
1,1,2,2-Tetrachloroethane	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
1,1,2-Trichloroethane	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
1,1-Dichloroethane	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
1,1-Dichloroethene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
1,1-Dichloropropene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
1,2,3-Trichlorobenzene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
1,2,3-Trichloropropane	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
1,2,4-Trichlorobenzene	ND	2.00	µg/∟	1	6/30/2014 6:27:00 PM
1,2,4-Trimethylbenzene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
1,2-Dibromo-3-Chloropropane	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
1,2-Dibromoethane	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
1,2-Dichlorobenzene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
1,2-Dichloroethane	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
1,2-Dichloropropane	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
1,3,5-Trimethylbenzene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
1,3-Dichlorobenzene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
1,3-Dichloropropane	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
1,4-Dichlorobenzene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
1,4-Dioxane	ND	500	μg/L	1	6/30/2014 6:27:00 PM
2,2-Dichloropropane	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
2-Butanone	ND	10.0	μg/L	1	6/30/2014 6:27:00 PM
2-Chlorotoluene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
2-Hexanone	ND	10.0	μg/L	1	6/30/2014 6:27:00 PM
2-Methoxy-2-Methylbutane (TAME)	ND	2.00	μg/L	1	6/30/2014 6;27;00 PM
4-Chlorotoluene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
4-Isopropyltoluene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
4-Methyl-2-Pentanone	ND	5.00	μg/L	1	6/30/2014 6:27:00 PM
Acetone	32.7	10.0	μg/L	1	6/30/2014 6:27:00 PM
Benzene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Bromobenzene	ND	2.00	μg/L,	1	6/30/2014 6:27:00 PM
Bromochloromethane	ND	2.00	µg/L	1	6/30/2014 6:27:00 PM
Bromodichloromethane	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Bromoform	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM

GeoLabs, Inc.

Value above quantitation range

Analyte detected below quantitation limits

E

RL Reporting Limit

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

Н

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Spike Recovery outside recovery limits

Reported Date: 03-Jul-14

CLIENT:

Kurz Environmental

Client Sample ID: EW-1

Lab Order:

1406272

Tag Number:

Project:

B&M

Lab ID:

1406272-001A

Collection Date: 6/26/2014

Date Received: 6/27/2014

Matrix: GROUNDWATER

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
OLATILE ORGANIC COMPOUNDS	6 - SW8260B				Analyst: ZC
Prep Method:		Pre	p Date:		
Bromomethane	ND	2.00	µg/L	1	6/30/2014 6:27:00 PM
Carbon Disulfide	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Carbon Tetrachloride	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Chlorobenzene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Chloroethane	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Chloroform	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Chloromethane	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
cis-1,2-Dichloroethene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
cis-1,3-Dichloropropene	ND	0.170	µg/L	1	6/30/2014 6:27:00 PM
Dibromochloromethane	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Dibromomethane	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Dichlorodifluoromethane	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Diethyl Ether	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Diisopropyl Ether	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Ethylbenzene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Ethyl-t-Butyl Ether	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Hexachlorobutadiene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Isopropylbenzene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Methyl Tert-Butyl Ether	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Methylene Chloride	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Naphthalene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
n-Butylbenzene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
n-Propylbenzene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
sec-Butylbenzene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Styrene	ND	2.00	µg/L	1	6/30/2014 6:27:00 PM
t-Butyl Alcohol	ND	20.0	μg/L	1	6/30/2014 6:27:00 PM
tert-Butylbenzene	ND	2.00	μg/L	1	6/30/2014 6;27:00 PM
Tetrachloroethene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Tetrahydrofuran	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Toluene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
trans-1,2-Dichloroethene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
trans-1,3-Dichloropropene	ND	0.270	μg/L	1	6/30/2014 6:27:00 PM
Trichloroethene	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Trichlorofluoromethane	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM
Vinyl Chloride	ND	2.00	μg/L	1	6/30/2014 6:27:00 PM

Qualifiers:

- B Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits
- RL Reporting Limit

- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Spike Recovery outside recovery limits

Reported Data: 03-Jul-14

CLIENT:

Kurz Environmental

1406272

Lab Order: Project: Lab ID:

B&M

1406272-001A

Client Sample ID: EW-1

Tag Number:

Collection Date: 6/26/2014

Date Received: 6/27/2014

Matrix: GROUNDWATER

					,
Result	RL	Qua	l Units	DF	Date Analyzed
SW8260B					Analyst: ZC
	Pi	rep D	ate:		
ND	2.00		μg/L	1	6/30/2014 6:27:00 PM
123	70-130		%REC	1	6/30/2014 6:27:00 PM
103	70-130		%REC	1	6/30/2014 6:27:00 PM
134	70-130	s	%REC	1	6/30/2014 6:27:00 PM
68.2	70-130	s	%REC	1	6/30/2014 6:27:00 PM
	ND 123 103 134	SW8260B ND 2.00 123 70-130 103 70-130 134 70-130	SW8260B Prep D ND 2.00 123 70-130 103 70-130 134 70-130 S	SW8260B Prep Date: ND 2.00 μg/L 123 70-130 %REC 103 70-130 %REC 134 70-130 S %REC	Prep Date: ND 2.00 µg/L 1 123 70-130 %REC 1 103 70-130 %REC 1 134 70-130 S %REC 1

Qualifiers:

В Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

RLReporting Limit BRL Below Reporting Limit

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

Spike Recovery outside recovery limits

Reported Date: 03-Jul-14

CLIENT:

Kurz Environmental

Client Sample ID: MW-3

Lab Order:

1406272

Tag Number:

Project:

B&M

Collection Date: 6/26/2014

Lab ID: 1406272-002A Date Received: 6/27/2014

Matrix: GROUNDWATER

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS	- SW8260B		*		Analyst: ZC
Prep Method:		Prep Date:			
1,1,1,2-Tetrachloroethane	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
1,1,1-Trichloroethane	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
1,1,2,2-Tetrachloroethane	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
1,1,2-Trichloroethane	ND	2.00	µg/L	1	6/30/2014 7:02:00 PM
1,1-Dichloroethane	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
1,1-Dichloroethene	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
1,1-Dichloropropene	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
1,2,3-Trichlorobenzene	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
1,2,3-Trichloropropane	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
1,2,4-Trichlorobenzene	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
1,2,4-Trimethylbenzene	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
1,2-Dibromo-3-Chloropropane	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
1,2-Dibromoethane	ND	2,00	μg/L	1	6/30/2014 7:02:00 PM
1,2-Dichlorobenzene	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
1,2-Dichloroethane	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
1,2-Dichloropropane	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
1,3,5-Trimethylbenzene	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
1,3-Dichlorobenzene	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
1,3-Dichloropropane	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
1,4-Dichlorobenzene	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
1,4-Dîoxane	ND	500	μg/L	1	6/30/2014 7:02:00 PM
2,2-Dichloropropane	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
2-Butanone	ND	10.0	μg/L	1	6/30/2014 7:02:00 PM
2-Chlorotoluene	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
2-Hexanone	ND	10.0	µg/L	1	6/30/2014 7:02:00 PM
2-Methoxy-2-Methylbutane (TAME)	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
4-Chlorotoluene	ND	2.00	µg/L	1	6/30/2014 7:02:00 PM
4-Isopropyltoluene	ND	2.00	µg/L	1	6/30/2014 7:02:00 PM
4-Methyl-2-Pentanone	ND	5.00	μg/L	1	6/30/2014 7:02:00 PM
Acetone	ND	10.0	μg/L	1	6/30/2014 7:02:00 PM
Benzene	ND	2.00	μg/L μg/L	1	6/30/2014 7:02:00 PM
Bromobenzene	ND	2.00	µg/L	1	6/30/2014 7:02:00 PM
Bromochloromethane	ND	2.00	μg/L μg/L	1	6/30/2014 7:02:00 PM
Bromodichloromethane	ND	2.00	μg/L μg/L	1	6/30/2014 7:02:00 PM
Bromoform	ND	2.00	μg/L μg/L	' 1	6/30/2014 7:02:00 PM 6/30/2014 7:02:00 PM

Qualifiers:

Analyte detected in the associated Method Blank В

BRL Below Reporting Limit

 ${\tt E}$ Value above quantitation range

H Holding times for preparation or analysis exceeded

J Analyte detected below quantitation limits ND Not Detected at the Reporting Limit

RL Reporting Limit

Spike Recovery outside recovery limits

Reported Date: 03-Jul-14

CLIENT:

Kurz Environmental

Lab Order:

1406272

1406272-002A

Client Sample ID: MW-3

Tag Number:

Project: Lab ID:

B&M

Date Received: 6/27/2014

Collection Date: 6/26/2014

Matrix: GROUNDWATER

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
OLATILE ORGANIC COMPOUNDS - S	SW8260B				Analyst: Z C
Prep Method:		Pre	p Date:		
Bromomethane	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
Carbon Disulfide	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
Carbon Tetrachloride	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
Chlorobenzene	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
Chloroethane	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
Chloroform	ND	2.00	µg/L	1	6/30/2014 7:02:00 PM
Chloromethane	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
cis-1,2-Dichloroethene	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
cis-1,3-Dichloropropene	ND	0.170	μg/L	1	6/30/2014 7:02:00 PM
Dibromochloromethane	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
Dibromomethane	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
Dichlorodifluoromethane	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
Diethyl Ether	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
Ollsopropyl Ether	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
Ethylbenzene	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
Ethyl-t-Butyl Ether	ND	2.00	µg/L	1	
lexachlorobutadiene	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
sopropylbenzene	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
Methyl Tert-Butyl Ether	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
Methylene Chloride	ND	2.00	μg/L μg/L	1	6/30/2014 7:02:00 PM
laphthalene	ND	2.00		1	6/30/2014 7:02:00 PM
-Butylbenzene	ND	2.00	μg/L μg/L	1	6/30/2014 7:02:00 PM
-Propylbenzene	ND	2.00		1	6/30/2014 7:02:00 PM
ec-Butylbenzene	ND	2.00	µg/L		6/30/2014 7:02:00 PM
Styrene	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
Butyl Alcohol	ND	20.0	μg/L	1	6/30/2014 7:02:00 PM
ert-Butylbenzene	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
etrachloroethene	ND		µg/L	1	6/30/2014 7:02:00 PM
etrahydrofuran	ND ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
oluene	ND	2.00	μg/L	1	6/30/2014 7:02:00 PM
rans-1,2-Dichloroethene	ND	2.00	µg/L	1	6/30/2014 7:02:00 PM
rans-1,3-Dichloropropene		2.00	µg/L	1	6/30/2014 7:02:00 PM
richloroethene	ND	0.270	μg/L "	1	6/30/2014 7:02:00 PM
richlorofluoromethane	ND	2.00	µg/L	1	6/30/2014 7:02:00 PM
inyl Chloride	ND	2.00	μg/L "	1	6/30/2014 7:02:00 PM
myr Onlottue	ND	2.00	μg/L 	1	6/30/2014 7:02:00 PM
palifiers: B Analyte detected in the asso-		nk	BRL Below Re	porting Limit	
E Value above quantitation ran			H Holding ti	mes for preparati	ion or analysis exceeded
J Analyte detected below quare	ntitation limits			ted at the Report	
RL Reporting Limit				overy outside rec	

Reported Date: 03-Jul-14

CLIENT: Lab Order:

Kurz Environmental

1406272

B&M

Client Sample ID: MW-3

Tag Number:

Project:

Collection Date: 6/26/2014

Lab ID:

1406272-002A

Date Received: 6/27/2014

Matrix: GROUNDWATER

Analyses	Result	Result RL Qual Units			DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS -	SW8260B					Analyst: ZC
Prep Method:	Р	rep D	ate:			
Xylenes, Total	N D	2.00		μg/L	1	6/30/2014 7:02:00 PM
Surr: 1,2-Dichloroethane-d4	124	70-130		%REC	1	6/30/2014 7:02:00 PM
Surr: 4-Bromofluorobenzene	97.5	70-130		%REC	1	6/30/2014 7:02:00 PM
Surr: Dibromofluoromethane	132	70-130	S	%REC	1	6/30/2014 7:02:00 PM
Surr: Toluene-d8	66.8	70-130	s	%REC	1	6/30/2014 7:02:00 PM

Qualifiers:

 $B \quad \ \mbox{Analyte detected in the associated Method Blank}$

Ε Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Spike Recovery outside recovery limits

GeoLabs, Inc.

Reported Date: 03-Jul-14

CLIENT:

Kurz Environmental

Client Sample 1D: MW-3

Lab Order:

1406272

Tag Number:

Project:

B&M

Lab ID:

Collection Date: 6/26/2014

1406272-002B

Date Received: 6/27/2014

Matrix: GROUNDWATER

Analyses

Result

RL Qual Units

DF Date Analyzed

EPH RANGES - MADEP EPH

Analyst: KG

Prep Method:	(eph_Wpr)	Pre	Date: 6/30/2	6/30/2014 11:53:09 AM			
Adjusted C11-C22 Aromatics	ND	100	ug/L	1	7/1/2014		
C09-C18 Aliphatics	ND	100	µg/L	1	7/1/2014		
C19-C36 Aliphatics	ND	100	μg/L	1	7/1/2014		
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1	7/1/2014		
Surr: 1-Chlorooctadecane	59.3	40-140	%REC	1	7/1/2014		
Surr: o-Terphenyl	100	40-140	%REC	1	7/1/2014		

EPH TARGET ANALYTES - MADEP EPH

Analyst: ZYZ

Prep Method	f: (eph_Wpr)	Pre	p Date:	6/30/2014 11:53:09	AM
Naphthalene	ND	1.00	μg/L	1	7/2/2014 9:28:00 AM
2-Methylnaphthalene	ND	1.00	μg/L	1	7/2/2014 9:28:00 AM
Acenaphthene	ND	1.00	μg/L	1	7/2/2014 9:28:00 AM
Phenanthrene	ND	1.00	μg/L	1	7/2/2014 9:28:00 AM
Acenaphthylene	ND	1.00	μg/L	1	7/2/2014 9:28:00 AM
Fluorene	ND	1.00	μg/L	1	7/2/2014 9:28:00 AM
Anthracene	ND	1.00	μg/L	1	7/2/2014 9:28:00 AM
Fluoranthene	ND	1.00	μg/L	1	7/2/2014 9:28:00 AM
Pyrene	ND	1.00	μg/L	1	7/2/2014 9:28:00 AM
Benzo(a)Anthracene	ND	0.400	μg/L	1	7/2/2014 9:28:00 AM
Chrysene	ND	1.00	μg/L.	1	7/2/2014 9:28:00 AM
Benzo(b)Fluoranthene	ND	0.200	μg/L	1	7/2/2014 9:28:00 AM
Benzo(k)Fluoranthene	ND	0.200	μg/L	1	7/2/2014 9:28:00 AM
Benzo(a)Pyrene	ND	0.190	μg/L	1	7/2/2014 9:28:00 AM
ndeno(1,2,3-cd)Pyrene	ND	0.400	μg/L	1	7/2/2014 9:28:00 AM
Dibenz(a,h)Anthracene	ND	0.400	μg/L	1	7/2/2014 9:28:00 AM
Benzo(g,h,i)Perylene	ND	1,00	μg/L	1	7/2/2014 9:28:00 AM
Fotal PAH Target Concentration	ND	0.200	μg/L	1	7/2/2014 9:28:00 AM
Surr: 2,2-Difluorobiphenyl	67.6	40-140	%REG	3 1	7/2/2014 9:28:00 AM
Surr: 2-Fluorobiphenyl	51.6	40-140	%REC	•	7/2/2014 9:28:00 AM

Qualifiers:

- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- RL Reporting Limit

- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside recovery limits

Reported Pate: 03-Jul-14

CLIENT:

Kurz Environmental

Client Sample ID: MW-3

Lab Order:

1406272

Tag Number:

Project:

B&M

Collection Date: 6/26/2014

Lab ID:

1406272-002C

Date Received: 6/27/2014

Matrix: GROUNDWATER

Analyses

Result

RL Qual Units

DF

Date Analyzed

TOTAL METALS BY ICP - SW6010C

Analyst: ZYZ

	Prep Method:	(SW3010A)	Prep	Date:	7/2/2014 12:21:46 PM	
Arsenic		0.0310	0.0100	mg/L	1	7/3/2014
Barium		0.115	0.0100	mg/L	1	7/3/2014
Cadmium		ND	0.0100	mg/L	1	7/3/2014
Chromium		0.0480	0.0100	mg/L	1	7/3/2014
Lead		ND	0.0100	mg/L	1	7/3/2014
Selenium		ND	0.0100	mg/L	1	7/3/2014
Silver		ND	0.0100	mg/L	1	7/3/2014

TOTAL MERCURY - 7470A

Analyst: EC

	-	(SW7470A/E245.1)		Prep Date:	7/1/2011	2:51:29 PI	VI	
Mercury		ND	0.000200			1	7/1/2014	

Qualifiers:

Analyte detected in the associated Method Blank В

BRL Below Reporting Limit

Value above quantitation range Е

Н Holding times for preparation or analysis exceeded

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

RL Reporting Limit

Spike Recovery outside recovery limits

ANALYTICAL QC SUMMARY REPORT

Date: 03-Jul-14

CLIENT:

Project:

Kurz Environmental

Work Order:

1406272

B&M

TestCode: 6010C_W

Sample ID: MB-24348	SampType: MBLK	Toot?-	do: 00400 :::	11.7								
				•		Prep Dat	te: 7/2/20 ⁴	RunNo: 55164				
Cherry ID. 22777	Batch ID: 24348	TestNo: SW6010B		(SW3010A)		Analysis Dat	te: 7/3/20 ⁻	14	SeqNo: 617230			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Arsenic	ND	0.0100						·····				
Barium	ND	0.0500										
Cadmium	ND	0.0100										
Chromium	ND	0.0100										
Lead	ND	0.0100										
Selenium	ND	0.0100										
Silver	ND	0.0100										
Sample ID: LCS-24348	SampType: LCS	TestCod	de: 6010C_W	Units: mg/L	***************************************	Prep Date	e: 7/2/201		RunNo: 55	164		
Client ID: ZZZZZ	Batch ID: 24348				Analysis Date: 7/3/2014				SeqNo: 617228			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Arsenic	2.026	0.0100	2	0	101	80	120		***************************************			
Barium	1.951	0.0500	2	0	97.6	80	120					
Cadmium	1.947	0.0100	2	0	97.4	80	120					
Chromium	1.990	0.0100	2	0	99.5	80	120					
_ead	1.958	0.0100	2	0	97.9	80	120					
Selenium	1,988	0.0100	2	0	99.4	80	120					
Silver	0.4880	0.0100	0.5	0	97.6	80	120					
Sample ID: LCSD-24348	SampType: LCSD	TestCode: 6010C_W		Units: mg/L		Prep Date: 7/2/2014		4	RunNo: 55164			
Client ID: ZZZZZ	Batch ID: 24348	TestN	o: SW6010B	(SW3010A)		Analysis Date			SeqNo: 617			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
rsenic	1.974	0.0100	2	0	98.7	80	120	2.026	2.60	20		
Barium	1.950	0.0500	2	. 0	97.5	80	120	1.951	0.0513	20 20		
Qualifiers: BRL Below Reporting Limit J Analyte detected below quantitation limits RL Reporting Limit			E Value above quantitation range ND Not Detected at the Reporting Limit S Spike Recovery outside recovery limits			H Holding times for preparation or analysis exceeded R RPD outside recovery limits					d	

Spike Recovery outside recovery limits

Kurz Environmental

Work Order:

1406272

Project:

B&M

TestCode: 6010C_W

Sample ID: LCSD-24348 Client ID: ZZZZZ Analyte	SampType: LCSD Batch ID: 24348	TestCode: 6010C_W TestNo: SW6010B				Prep Da Analysis Da	te: 7/2/201 te: 7/3/201	RunNo: 55164 SeqNo: 617229			
	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Cadmium	1.904	0.0100	2	0	95.2	80	120	1.947	2.22		
Chromium	1.946	0.0100	2	0	97.3	80	120	1.99	2.23	20	
Lead	1.912	0.0100	2	0	95.6	80	120	1.958	2.24 2.38	20 20	
Selenium Silver	1.938	0.0100	2	0	96.9	80	120	1.988	2.55	20	
×4101	0.4950	0.0100	0.5	0	99.0	80	120	0.488	1.42	20	

Qualifiers:

BRL Below Reporting Limit

Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ID Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

Kurz Environmental

Work Order:

1406272

Project:

B&M

TestCode: 8260B_W MCP

Sample ID: MBLK	SampType: MBLK	TestCode: 8260B_W MC Units: μg/L TestNo: SW8260B				Prep Da	ite:	RunNo: 55113			
Client ID: ZZZZZ	Batch ID: R55113					Analysis Da	ite: 6/30/20	SeqNo: 616727			
Analyte	Resuit	PQL	SPK value	SPK value SPK Ref Val		LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachioroethane	ND	2.00	-			·		7			- Qua
1,1,1-Trichloroethane	ND	2.00									
1,1,2,2-Tetrachloroethane	ND	2.00									
1,1,2-Trichloroethane	ND	2.00									
1,1-Dichloroethane	ND	2.00									
1,1-Dichloroethene	ND	2.00									
1,1-Dichloropropene	ND	2.00									
1,2,3-Trichlorobenzene	ND	2.00									
1,2,3-Trichloropropane	ND	2.00									
1,2,4-Trichlorobenzene	ND	2.00									
,2,4-Trimethylbenzene	ND	2.00									
1,2-Dibromo-3-Chloropropane	ND	2.00									
1,2-Dibromoethane	ND	2.00									
1,2-Dichlorobenzene	ND	2.00		•							
,2-Dichloroethane	ND	2.00									
,2-Dichloropropane	ND	2.00									
,3,5-Trimethylbenzene	ND	2.00									
,3-Dichlorobenzene	ND	2.00									
,3-Dichloropropane	ND	2.00									
.4-Dichlorobenzene	ND	2.00									
,4-Dioxane	ND ND	500									
,2-Dichloropropane	ND	2.00									
2-Butanone	ND	10,0									
-Chiorotoluene	ND	2.00									
-Hexanone	ND ND	10.0									
-Methoxy-2-Methylbutane (TAM)		2.00		*							
-Chlorotoluene	ND ND										
-Isopropyltoluene	ND ND	2.00 2.00									

J Analyte detected below quantitation limits

RL Reporting Limit

Value above quantitation range

Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

Kurz Environmental

Work Order:

1406272

Project:

B&M

TestCode: 8260B_W MCP

Sample ID: MBLK Client ID: ZZZZZ	SampType: MBLK Batch ID: R55113		de: 8260B_W MC Units: µg/L No: SW8260B		Prep Da Analysis Da		RunNo: 55113 SeqNo: 616727			
Analyte	Result	PQL	SPK value SPK Ref Val	%REC	LowLimit	Hight imit	RPD Ref Val			
4-Methyl-2-Pentanone	ND	5.00					THE THE TAI	%RPD	RPDLimit	Qu
Acetone	ND	10.0								
Benzene	ND	2.00								
Bromobenzene	ND	2.00								
Bromochloromethane	ND	2.00								
Bromodichloromethane	ND	2.00								
Bromoform	ND	2.00								
Bromomethane	ND	2.00								
Carbon Disulfide	ND	2.00								
Carbon Tetrachloride	ND	2.00								
Chlorobenzene	ND	2.00								
Chloroethane	ND	2.00								
Chloroform	ND	2.00								
Chloromethane	ND	2.00								
cis-1,2-Dichloroethene	ND	2.00								
cis-1,3-Dichloropropene	ND	0.170								
Dibromochloromethane	ND	2.00								
Dibromomethane	ND	2.00								
Dichlorodifluoromethane	ND	2.00								
Diethyl Ether	ND	2.00								
Diisopropyl Ether	ND	2.00								
Ethylbenzene	ND ND									
Ethyl-t-Butyl Ether	ND ND	2.00								
fexachlorobutadiene	ND UN	2.00								
sopropyibenzene		2.00								
Methyl Tert-Butyl Ether	ND	2.00								
Methylene Chloride	ND	2,00								
laphthalene	ND	2.00								
	ND	2.00								

J Analyte detected below quantitation limits

RL Reporting Limit

Not Detected at the Reporting Limit

Spike Recovery outside recovery limits

Holding times for preparation or analysis exceeded

RPD outside recovery limits

GeoLabs, Inc.

Kurz Environmental

Work Order:

1406272

Project:

CLIENT:

B&M

RL Reporting Limit

TestCode: 8260B_W MCP

					·					TACA	
Sample ID: MBLK	SampType: MBLK	TestCo	ode: 8260B_W	/ MC Units: µg/L	~ 1	Prep Da	ate:		RunNo: 55	113	
Client ID: ZZZZZ	Batch ID: R55113	Test	No: SW8260E	3		Analysis Da	ate: 6/30/2	014	SeqNo: 61		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qu
n-Butylbenzene	ND	2.00					***************************************		;;;		
n-Propylbenzene	ND	2.00									
sec-Butylbenzene	ND	2.00									
Styrene	ND	2.00									
t-Butyl Alcohol	ND	20.0									
tert-Butylbenzene	ND	2.00									
Tetrachloroethene	ND	2.00									
Tetrahydrofuran	ND	2.00									
Toluene	ND	2.00									
trans-1,2-Dichloroethene	ND	2.00									
trans-1,3-Dichloropropene	ND	0.270									
Trichloroethene	ND	2.00									
Trichlorofluoromethane	ND	2.00									
Vinyl Chloride	ND	2.00									
Xylenes, Total	ND	2.00									
Surr: 1,2-Dichloroethane-d4	33.12	0	30	0	110	70	130				
Surr: 4-Bromofluorobenzene	31.51	0	30	0	105	70	130				
Surr: Dibromofluoromethane	38.18	0	30	0	127	70	130				
Surr: Toluene-d8	20.82	0	30	0	69.4	70	130				S
Sample ID: LCS	SampType: LCS	TestCo	de: 8260B W	MC Units: µg/L	***************************************	Prep Da	te·		RunNo: 551	40	
Client ID: ZZZZZ	Batch ID: R55113		Vo: SW8260B			Analysis Da		.4.4			
		1001	01102000			Milalysis Da	le. 6/30/20	714	SeqNo: 616	725	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
1,1,1,2-Tetrachloroethane	54.78	2.00	50	0	110	70	130				
1,1,1-Trichloroethane	46.98	2.00	50	0	94.0	70	130				
1,1,2,2-Tetrachloroethaле	62.30	2.00	50	0	125	70	130				
Qualifiers: BRL Below Report	ting Limit		E Value	above quantitation ran			— н н	Holding times for	nrengration or or	valuais Y	
J Analyte detec	ted below quantitation limits			etected at the Reportin	-			PD outside recov		iaiysis exceede	a
RI. Reporting Lin	•			D			1C F	a monmine lecon	ory minus		

GeoLabs, Inc.

45 Johnson Lane ~ Braintree MA 02184 ~ 781 848 7844 ~ 781 848 7811

Kurz Environmental

Work Order:

1406272

Project:

B&M

TestCode: 8260B_W MCP

Sample ID: LCS	SampType: LCS	TestCo	de: 8260B W	MC Units: μg/L		Prep Da	to:				
Client ID: ZZZZZ	Batch ID: R55113		_ No: SW8260 B	F-3/ 		•			RunNo: 55		
	, , , , , , , , , , , , , , , , , , , ,		10. 0110200D			Analysis Da	te: 6/30/20	114	SeqNo: 616	3725	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,2-Trichloroethane	56.57	2.00	50	0	113	70				THE DELIMINE	Quai
1,1-Dichloroethane	41.32	2.00	50	0	82.6	70 70	130 130				
1,1-Dichloroethene	42.09	2.00	50	0	84.2	70	130				
1,1-Dichloropropene	58.04	2.00	50	0	116	70	130				
1,2,3-Trichlorobenzene	38.93	2.00	50	0	77.9	70	130				
1,2,3-Trichloropropane	56.56	2.00	50	0	113	70 70					
1,2,4-Trichlorobenzene	47.80	2.00	50	Ö	95.6	70	130				
1,2,4-Trimethylbenzene	62.39	2.00	50	o	125	70 70	130				
1,2-Dibromo-3-Chloropropane	49.12	2.00	50	0	98.2	70	130				
1,2-Dibromoethane	54.82	2.00	50	0	110		130				
1,2-Dichlorobenzene	53.97	2.00	50	0	108	70 70	130				
1,2-Dichloroethane	58.23	2.00	50	0	116	70 70	130				
1,2-Dichloropropane	59.78	2.00	50	0	120	70 70	130				
1,3,5-Trimethylbenzene	61,39	2.00	50	0	123	70 70	130				
1,3-Dichlorobenzene	55.99	2.00	50	0		70	130				
1,3-Dichloropropane	59.61	2.00	50	0	112 119	70	130				
1,4-Dichlorobenzene	52.02	2.00	50	0		70	130				
1,4-Dioxane	ND	500	50	0	104	70	130				
2,2-Dichloropropane	40.65	2.00	50 50	0	0	70	130				S
2-Butanone	34.88	10.0	50		81.3	70	130				
2-Chlorotoluene	62.93	2.00	50 50	0	69.8	70	130				S
?-Hexanone	54:62	10.0	50	0	126	70	130				
2-Methoxy-2-Methylbutane (TAME)	ND	2.00	50	0	109	70	130				
1-Chlorotoluene	60.05	2.00	50	0	0	70	130				S
1-isopropyitoluene	68,95	2.00	50 50	0	120	70	130				
I-Methyl-2-Pentanone	53.36	5,00		0	138	70	130				s
Acetone	40.39	10.0	50	0	107	70	130				
Benzene	60.75	2.00	50 50	0	80.8	70	130				
	00.70	2.00	50	0	122	70	130				

Qualifiers:

BRL Below Reporting Limit

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

D Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

RPD outside recovery limits

GeoLabs, Inc.

Kurz Environmental

Work Order:

1406272

Project:

B&M

TestCode: 8260B_W MCP

Sample ID: LCS	SampType: LCS	TestCo	de: 8260B_W	MC Units: μg/L		Prep Da	te:		RunNo: 55	113	
Client ID: ZZZZZ	Batch ID: R55113	Testi	No: SW8260B			Analysis Da	te: 6/30/20	114	SeqNo: 616	6725	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromobenzene	57.29	2.00	50	0	115	70	130				
Bromochloromethane	34.02	2.00	50	0	68.0	70	130				s
Bromodichloromethane	57.03	2.00	50	0	114	70	130				3
Bromoform	54.47	2.00	50	0	109	70	130				
Bromomethane	49.52	2.00	50	0	99.0	70	130				
Carbon Disulfide	48.03	2.00	50	0	96.1	70	130				
Carbon Tetrachloride	52.05	2.00	50	0	104	70	130				
Chlorobenzene	58.53	2.00	50	0	117	70	130				
Chloroethane	57.89	2.00 -	50	0	116	70	130				
Chloroform	38.13	2.00	50	0	76.3	70	130				
Chloromethane	61.66	2.00	50	0	123	70	130				
cis-1,2-Dichloroethene	37.12	2.00	50	0	74.2	70	130				
cis-1,3-Dichloropropene	61.02	0.170	50	0	122	70	130				
Dibromochloromethane	54.54	2.00	50	0	109	70	130				
Dibromomethane	55.08	2.00	50	0	110	70	130				
Dichlorodifluoromethane	41.78	2.00	50	0	83.6	70	130				
Diethyl Ether	ND	2.00	50	0	0	70	130				_
Diisopropyl Ether	37.28	2.00	50	0	74,6	70	130				S
Ethylbenzene	60.80	2.00	50	0	122	70	130				
Ethyl-t-Butyl Ether	35.65	2.00	50	0	71.3	70	130				
-fexachlorobutadiene	53.88	2.00	50	0	108	70	130				
sopropylbenzene	71.84	2.00	50	0	144	70	130				_
Methyl Tert-Butyl Ether	42.08	2.00	50	0	84.2	70	130				S
Methylene Chloride	37.80	2.00	50	0	75.6	70	130				
Naphthalene	44.54	2.00	50	Đ	89.1	70	130				
n-Butylbenzene	67.82	2.00	50	0	136	70	130				
n-Propylbenzene	66.64	2.00	50	0	133	70	130				S
sec-Butylbenzene	72.56	2.00	50	0	145	70	130				S S

Qualifiers:

BRL Below Reporting Limit

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

D Not Detected at the Reporting Limit

Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

R RPD outside recovery limits

GeoLabs, Inc.

Kurz Environmental

Work Order:

1406272

Project:

B&M

TestCode: 8260B W MCP

			· · · · · · · · · · · · · · · · · · ·					TestCode:			
Sample ID: LCS	SampType: LCS	TestCo	ode: 8260B_W	MC Units: µg/L	-	Prep Da	ate:		DunNe. F		
Client ID: ZZZZZ	Batch ID: R55113	Tesi	No: SW8260B	•		•	ate: 6/30/2	014	RunNo: 58 SeqNo: 61		
Апајуте	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	PPDI :	_
Styrene	59.62	2.00	50	0	119	70		7.1. 2. (6) 7.1	70NFD	RPDLimit	Qu
t-Butyl Alcohol	371.6	20.0	500	0	74.3		130				
tert-Butylbenzene	61.63	2.00	50	0	123	70	130				
Tetrachloroethene	63.12	2.00	50	0	125	70	130				
Tetrahydrofuran	33.55	2.00	50	0	67.1	70	130				
Toluene	61.31	2.00	50	0		70	130				S
trans-1,2-Dichloroethene	37.09	2.00	50	0	123 74,2	70	130				
rans-1,3-Dichloropropene	63.96	0.270	50	0	128	70	130				
Trichloroethene	55.03	2.00	50	0	110	70	130				
Frichlorofluoromethane	69.57	2.00	50	0	139	70	130				
/inyl Chloride	48.79	2.00	50	0	97.6	70	130				S
(ylenes, Total	179.6	2.00	150	0	120	70	130				
Surr: 1,2-Dichloroethane-d4	26.52	0	30	0		70	130				
Surr: 4-Bromofluorobenzene	32.56	0	30	0	88.4	70	130				
Surr: Dibromofluoromethane	29.03	0	30	0	109	70	130				
Surr: Toluene-d8	27.81	. 0	30	0	96.8 92.7	70	130				
Sample ID: LCSD	Sam-Time Loop				92.1	70	130				
	SampType: LCSD	TestCo	ie: 8260B_W i	MC Units: µg/L		Prep Dat	te:		RunNo: 551	12	
Client ID: ZZZZZ	Batch ID: R55113	TestN	io: SW8260B		,	Analysis Dat	e: 6/30/20	14			
nalyte	Result	PQL	SPK value	SDA DOLANO					SeqNo: 616	726	
,1,1,2-Tetrachloroethane	57.44				%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLImit	Quа
.1,1-Trichloroethane		2.00	50	0	115	70	130	54.78	4.74	. 20	
.1,2,2-Tetrachioroethane	55.02	2.00	50	0	110	70	130	46.98	15.8	20	
1,2-Trichloroethane	61.54	2.00	50	0	123	70	130	62.3	1.23	20	
1-Dichloroethane	55.90	2.00	50	0	112	70	130	56.57	1 19	20	

Qualifiers:

1,1-Dichloroethane

1,1-Dichloroethene

BRL Below Reporting Limit

J Analyte detected below quantitation limits

43.44

46.58

2.00

2.00

RL Reporting Limit

Value above quantitation range

50

50

Not Detected at the Reporting Limit

Spike Recovery outside recovery limits

Holding times for preparation or analysis exceeded

1.19

5.00

10.1

20

20

20

RPD outside recovery limits

41.32

42.09

70

70

130

130

GeoLabs, Inc.

0

0

86.9

93.2

Page 21 of 28

CLIENT:

Kurz Environmental

Work Order:

1406272

Project:

B&M

TestCode: 8260B_W MCP

Sample ID: LCSD Client ID: ZZZZZ	SampType: LCSD Batch ID: R55113		de: 8260B_W No: SW8260B	MC Units: µg/L		Prep Dat Analysis Dat		14.4	RunNo: 55		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC				SeqNo: 61		
1,1-Dichloropropene	57.46	2.00	50				nightimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trichlorobenzene	42.22	2.00	50 50	0	115	70	130	58.04	1.00	20	
1,2,3-Trichloropropane	59.55	2.00	50 50	0	84.4	70	130	38.93	8.11	20	
1,2,4-Trichlorobenzene	51.99	2.00		0	119	70	130	56.56	5.15	20	
1,2,4-Trimethylbenzene	64.71	2.00	50	0	104	70	130	47.8	8.40	20	
.2-Dibromo-3-Chloropropane	53.73	2.00	50	0	129	70	130	62.39	3.65	20	
,2-Dibromoethane	55.89	2.00	50	0	107	70	130	49.12	8.96	20	
,2-Dichlorobenzene	55.65		50	0	112	70	130	54.82	1.93	20	-
,2-Dichloroethane	59.68	2.00	50	0	111	70	130	53.97	3.07	20	
,2-Dichloropropane		2.00	50	0	119	70	130	58.23	2,46	20	
,3,5-Trimethylbenzene	65.73	2.00	50	0	131	70	130	59.78	9.48	20	_
,3-Dichlorobenzene	63.06	2.00	50	0	126	70	130	61,39	2.68	20	S
,3-Dichloropropane	59.18	2.00	50	0	118	70	130	55.99	5.54		
,4-Dichlorobenzene	59.87	2.00	50	0	120	70	130	59.61	0.435	20	
,4-Dioxane	55.49	2.00	50	0	111	70	130	52.02	6.46	20	
,2-Dichloropropane	ND	500	50	0	0	70	130	0	0.46	20	_
-Butanone	50.95	2.00	50	0	102	70	130	40.65	-	20	S
-Chlorotoluene	41.61	10.0	50	0	83.2	70	130	34.88	22.5	20	R
-Hexanone	58.64	2.00	50	0	117	70	130	62.93	17.6	20	
	54.68	10.0	50	0	109	70	130	54.62	7.06	20	
-Methoxy-2-Methylbutane (TAME) -Chlorotoluene	ND	2.00	50	0	0	70	130		0.110	20	
	61.90	2.00	50	0	124	70	130	0	0	20	S
-Isopropyltoluene	74.84	2.00	50	0	150	70	130	60.05	3.03	20	
-Methyl-2-Pentanone	54.33	5.00	50	0	109	70		68,95	8.19	20	S
cetone	38.87	10.0	50	0	77.7	70 70	130	53.36	1.80	20	
enzene	60.31	2.00	50	ő	121		130	40.39	3.84	20	
romobenzene	58.82	2.00	50	0	118	70 70	130	60.75	0.727	20	
omochloromethane	44.50	2.00	50	0		70	130	57.29	2.64	20	
omodichloromethane	60.55	2.00	50 50		89.0	70	130	34.02	26.7	20	R
nalifiers: BRL Below Reporting				0	121	70	130	57.03	5.99	20	

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

Not Detected at the Reporting Limit

Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

RPD outside recovery limits

GeoLabs, Inc.

Kurz Environmental

Work Order:

1406272

Project:

B&M

TestCode: 8260B_W MCP

Sample ID: LCSD	SampType: LCSD	TestCo	de: 8260B_W	MC Units: μg/L		Prep Da	te:		RunNo: 55	113	-
Client ID: ZZZZZ	Batch ID: R55113	Test	No: SW8260B			Analysis Da	te: 6/30/20	14	SeqNo: 616		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromoform	55.78	2.00	50	0	112	70	130	54.47	2.38	20	
Bromomethane	56.99	2.00	50	0	114	70	130	49.52	14.0	20	
Carbon Disulfide	53.98	2.00	50	0	108	70	130	48.03	11.7	20	
Carbon Tetrachloride	60.25	2.00	50	0	120	70	130	52.05	14.6	20	
Chlorobenzene	61.80	2.00	50	0	124	70	130	58.53	5.44	20	
Chloroethane	60.91	2.00	50	0	122	70	130	57.89	5.08		
Chloroform	43.23	2.00	50	0	86.5	70	130	38.13	12.5	20	
Chloromethane	67.85	2.00	50	0	136	70	130	61.66	9.56	20	•
cis-1,2-Dichloroethene	41.99	2.00	50	0	84.0	70	130	37.12	12.3	20	S
cis-1,3-Dichloropropene	67.71	0.170	50	0	135	70	130	61.02	10.4	20	_
Dibromochloromethane	54.92	2.00	50	0	110	70	130	54.54	0.694	20	S
Dibromomethane	60.38	2.00	50	. 0	121	70	130	55.08	9.18	20	
Dichlorodifluoromethane	80.31	2.00	50	0	161	70	130	41.78	63.1	20	
Diethyl Ether	ND	2.00	50	0	0	70	130	41.78	03.1	20	SR
Diisopropyl Ether	38.76	2.00	50	0	77.5	70	130	37.28	3.89	20	S
Ethylbenzene	64.10	2.00	50	0	128	70	130	60.8	5.28	20	
Ethyl-t-Butyl Ether	42.72	2.00	50	0	85.4	70	130	35.65	5.28 18.0	20	
Hexachlorobutadiene	58.08	2.00	50	0	116	70	130	53.88		20	
Isopropyibenzene	72.12	2.00	50	0	144	70	130	71.84	7.50	20	_
Methyl Tert-Butyl Ether	43.05	2.00	50	0	86.1	70	130	42.08	0.389	20	S
Methylene Chloride	40.75	2.00	50	0	81.5	70	130	42.06 37.8	2.28	20	
Naphthalene	49.32	2.00	50	C	98.6	70	130		7.51	20	
n-Butylbenzene	71.66	2.00	50	0	143	70	130	44.54	10.2	20	
n-Propylbenzene	64.64	2.00	50	0	129	70 70	130	67.82	5.51	20	S
sec-Butylbenzene	77.33	2.00	50	0	155	70	130	66.64	3.05	20	
Styrene	62.28	2.00	50	0	125			72.56	6.36	20	S
-Butyl Alcohol	452.7	20.0	500	0		70 70	130	59.62	4.36	20	
ert-Butylbenzene	63.31	2.00	500	0	90.5 127	70 70	130 130	371.6 61.63	19.7 2.69	20	

Qualifiers:

BRL Below Reporting Limit

Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ID Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

R RPD outside recovery limits

GeoLabs, Inc.

Kurz Environmental

Work Order:

1406272

Project:

B&M

TestCode: 8260B_W MCP

Sample ID: LCSD Client ID: ZZZZZ	SampType: LCSD Batch ID: R55113		de: 8260B_W No: SW8260B	MC Units: µg/L	4	Prep Da Analysis Da		014	RunNo: 55		-
Analyte ————————————————————————————————————	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrachloroethene	63.11	2.00	50	0	126	70	130				Qua
Tetrahydrofuran	39.48	2.00	50	0	79.0	70		63.12	0.0158	20	
Toluene	62.56	2.00	50	n	125		130	33.55	16.2	20	
trans-1,2-Dichloroethene	42.09	2.00	50	0		70	130	61.31	2.02	20	
trans-1,3-Dichloropropene	64.91	0.270	50	0	84.2	70	130	37.09	12.6	20	
Trichloroethene	60.72	2.00		0	130	70	130	63.96	1.47	20	
Trichlorofluoromethane	76.83	-	50	0	121	70	130	55.03	9.83	20	
Vinyl Chloride		2.00	50	0 .	154	70	130	69.57	9.92	20	s
Kylenes, Total	48.80	2.00	50	0	97.6	70	130	48.79	0.0205	20	0
Surr: 1,2-Dichloroethane-d4	187.3	2.00	150	0	125	70	130	179.6	4.19		
	28.22	0	30	0	94.1	70	130	0	13	20	
Surr: 4-Bromofluorobenzene	31.36	0	30	0	105	70	130	0	•	0	
Surr: Dibromofluoromethane	30.07	0	30	0	100	70	130		0	0	
Surr: Toluene-d8	26.35	0	30	0	87.8	70	130	0	0	0	
				-	٠,٠٥	70	130	0	0	0	

Qualifiers:

BRL Below Reporting Limit

Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

R RPD outside recovery limits

GeoLabs, Inc.

Kurz Environmental

Work Order:

1406272

Project:

B&M

TestCode: EPHP_W

Sample ID: MB-24332	SampType: mblk	TestCoo	ie: EPHP_W	Units: µg/L		Prep Date	e: 6/30/2014	RunNo: 551	25	
Client ID: ZZZZZ	Batch ID: 24332	TestN	o: MADEP E	PH_ (eph_Wpr)		Analysis Date	e: 7/1/2014	SeqNo: 616	797	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	%RPD	RPDLimit	Qua
Naphthalene	ND	1.00								
2-Methylnaphthalene	ND	1.00								
Acenaphthene	ND	1.00								
Phenanthrene	ND	1.00								
Acenaphthylene	ND	1.00								
Fluorene	ND	1.00								
Anthracene	ND	1.00								
Fluoranthene	ND	1.00								
Pyrene	ND	1.00								
Benzo(a)Anthracene	ND	0.400								
Chrysene	ND	1.00								
Benzo(b)Fluoranthene	ND	0.200								
Benzo(k)Fluoranthene	ND	0.200								
Benzo(a)Pyrene	ND	0.190								
Indeno(1,2,3-cd)Pyrene	ND	0.400								
Dibenz(a,h)Anthracene	ND	0.400								
Benzo(g,h,i)Perylene	ND	1.00								
Total PAH Target Concentration	ND	0.200								
Surr: 2,2-Diffuorobiphenyl	14.88	0	25	0	59.5	40	140			
Surr: 2-Fluorobiphenyl	14.51	0	25	0	58.0	40	140			
Sample ID: Ics-24332	SampType: ics	TestCod	s: EPHP_W	Units: µg/L		Prep Date	e: 6/30/2014	RunNo: 5512	25	
Client ID: ZZZZZ	Batch ID: 24332			PH_ (eph_Wpr)		Analysis Date		SeqNo: 6169		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	17.74	1.00	50	0	35.5	40	140	-		
2-Methylnaphthalene	20.76	1.00	50	0	41.5	40	140			S
Qualifiers: BRL Below Reports	ing Limit		E Value :	above quantitation ran	nge		H Holding times for	preparation of		
	ed below quantitation limits			tected at the Reportin			R RPD outside reco		arysis exceede	d
RL Reporting Lin	•			Recovery outside reco	_		A Ard ouiside reco	very limits		

Kurz Environmental

Work Order:

1406272

Project:

B&M

TestCode: EPHP_W

Sample iD: Ics-24332	SampType: Ics	TestCo	de: EPHP_W	Units: µg/L		Prep Da	te: 6/30/20	014	RunNo: 58	125	_
Client ID: ZZZZZ	Batch ID: 24332	Test	No: MADEP E	PH_ (eph_Wpr)		Analysis Da			SeqNo: 61		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Acenaphthene	22.49	1.00	50	0	45.0	40	140				
Phenanthrene	28.13	1.00	50	0	56.3	40	140				
Acenaphthylene	22.46	1.00	50	0	44.9	40	140				
Fluorene	25.84	1.00	50	0	51.7	40	140				
Anthracene	28.27	1.00	50	0	56.5	40	140				
Fluoranthene	31.82	1.00	50	0	63.6	40	140				
Pyrene	30.00	1.00	50	0	60.0	40	140				
Benzo(a)Anthracene	32.50	0.400	50	o o	65.0	40	140				
Chrysene	32.76	1.00	50	0	65.5	40 40					
Benzo(b)Fluoranthene	43.80	0.200	50	0	87.6		140				
Benzo(k)Fluoranthene	43.60	0.200	50	0	87.5 87.2	40	140				
Benzo(a)Pyrene	42,22	0.190	50	0	84.4	40	140				
Indeno(1,2,3-cd)Pyrene			0	92.6	40 40	140					
Dibenz(a,h)Anthracene	45.25	0.400	50	0	90.5		140				
Benzo(g,h,i)Perylene	48.78	1.00	50	0	90.5 97.6	40	140				
Surr: 2,2-Difluorobiphenyl	18.61	0	25	0	97.6 74.4	40 40	140				
Surr: 2-Fluorobiphenyl	14.75	0	25	o	59.0	40 40	140 140				
Sample ID: LCS2-24332	SampType: LCSD	TestCod	de: EPHP_W	Units: µg/L		Prep Date	e: 6/30/20 ⁻	14	RunNo: 55 1		
Client ID: ZZZZZ	Batch ID: 24332	TestN	lo: MADEP EI	PH_ (eph_Wpr)	,	Analysis Dat			SeqNo: 616		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC			RPD Ref Val	%RPD	RPDLimit	0
Naphthalene	18.84	1.00	50	0	37.7	40	140				Qua
2-Methylnaphthalene	20.29	1.00	50	o o	40.6	40		17,74	6.01	25	S
Acenaphthene	23.99	1.00	50	Ö	48.0	40	140	20.76	2.29	25	
Phenanthrene	27.87	1.00	50	0	55.7		140	22.49	6.45	25	
cenaphthylene	23.10	1.00	50	0	46.2	40 40	140 140	28.13 22.46	0.929 2.81	25 25	

Qualifiers:

BRL Below Reporting Limit

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

R RPD outside recovery limits

GeoLabs, Inc.

Work Order:

Kurz Environmental

CLIENT:

1406272

Project:

B&M

TestCode: EPHP_W

Sample ID: LCS2-24332 Client ID: ZZZZZ	SampType: LCSD Batch ID: 24332		de: EPHP_W No: MADEP E	Units: µg/L PH_ (eph_Wpr)		Prep Da Analysis Da			RunNo: 55 1 SeqNo: 61 6		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Quai
Fluorene	27.15	1.00	50	0	54.3	40	140	25.84			- Quai
Anthracene	27.95	1.00	50	0	55.9	40	140	28.27	4.94	25	
Fluoranthene	32.00	1.00	50	0	64.0	40	140	20.2 <i>1</i> 31.82	1.14	25	
Pyrene	29.97	1.00	50	0	59.9	40	140		0.564	25	
Benzo(a)Anthracene	32.45	0.400	50	0	64.9	40	140	30	0.100	25	
Chrysene	33.10	1.00	50	0	66.2	40		32.5	0.154	25	
Benzo(b)Fluoranthene	44.13	0.200	50	0	88.3	40	140	32.76	1.03	25	
Benzo(k)Fluoranthene	44.66	0.200	50	0	89.3		140	43.8	0.751	25	
Benzo(a)Pyrene	44.63	0,190	50	0	89.3	40	140	43.6	2.40	25	
ndeno(1,2,3-cd)Pyrene	49.26	0.400	50	0		40	140	42.22	5.55	25	
Dibenz(a,h)Anthracene	47.66	0.400	50		98.5	40	140	46.31	6.17	25	
Benzo(g,h,i)Perylene	54.90	1.00	50 50	0	95.3	40	140	45.25	5.19	25	
Surr: 2,2-Difluorobiphenyl	18.88	1.00		0	110	40	140	48.78	11.8	25	
Surr: 2-Fluorobiphenyl	15.31		25	0	75.5	40	140	0	0	0	
-	15.51	0	25	0	61.2	40	140	0	0	0	

Qualifiers:

BRL Below Reporting Limit

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

Not Detected at the Reporting Limit

Spike Recovery outside recovery limits

H Holding times for preparation or analysis exceeded

R RPD outside recovery limits

GeoLabs, Inc.

Kurz Environmental

Work Order: Project:

1406272

B&M

TestCode: epht_w

Client ID: ZZZZZ Batch Analyte C09-C18 Aliphatics C19-C36 Aliphatics Unadjusted C11-C22 Aromatics Surr: 1-Chlorooctadecane Surr: o-Terphenyl	Result ND ND ND T2.39 82.71 Type: Lcs TID: 24332 Result ND ND		100 100 de: epht_w No: MADEP E SPK value	SPK Ref Val 0 0 Units: µg/L PH (eph_Wpr) SPK Ref Val 0	%REC 72.4 82.7 %REC 56.7	40 40 Prep Dat Analysis Dat LowLimit	140 140 140 e: 6/30/2	t RPD Ref Val	SeqNo: 61 %RPD RunNo: 55 SeqNo: 616 %RPD	RPDLimit	
C09-C18 Aliphatics C19-C36 Aliphatics Unadjusted C11-C22 Aromatics Surr: 1-Chlorooctadecane Surr: o-Terphenyl Sample ID: LCS-24332 SampT Client ID: ZZZZZ Batch Analyte C09-C18 Aliphatics C19-C36 Aliphatics Unadjusted C11-C22 Aromatics Surr: 1-Chlorooctadecane Surr: o-Terphenyl	ND ND 72.39 82.71 Type: Lcs 1 ID: 24332 Result	100 100 0 0 TestCo TestI	100 100 de: epht_w No: MADEP E SPK value	0 0 Units: µg/L PH (eph_Wpr) SPK Ref Val	72.4 82.7 %REC	40 40 Prep Dat Analysis Dat LowLimit	140 140 e: 6/30/2	014 014	RunNo: 55' SeqNo: 616	110 6680	
C19-C36 Aliphatics Unadjusted C11-C22 Aromatics Surr: 1-Chlorooctadecane Surr: o-Terphenyl Sample ID: LCS-24332 SampT Client ID: ZZZZZ Batch Analyte C09-C18 Aliphatics C19-C36 Aliphatics Unadjusted C11-C22 Aromatics Surr: 1-Chlorooctadecane Surr: o-Terphenyl	ND ND 72.39 82.71 Type: Lcs 1 ID: 24332 Result	100 100 0 0 TestCo TestI	de: epht_w No: MADEP E SPK value	0 Units: μg/L PH (eph_Wpr) SPK Ref Val	82.7 %REC	40 Prep Dat Analysis Dat LowLimit	e: 6/30/2 e: 6/30/2	014 014	SeqNo: 616	680	Qual
Unadjusted C11-C22 Aromatics Surr: 1-Chlorooctadecane Surr: o-Terphenyl Sample ID: LCS-24332 SampT Client ID: ZZZZZ Batch Analyte C09-C18 Aliphatics C19-C36 Aliphatics Unadjusted C11-C22 Aromatics Surr: 1-Chlorooctadecane Surr: o-Terphenyl	ND ND 72.39 82.71 Type: Lcs 1ID: 24332 Result	100 100 0 0 TestCo TestI PQL	de: epht_w No: MADEP E SPK value	0 Units: μg/L PH (eph_Wpr) SPK Ref Val	82.7 %REC	40 Prep Dat Analysis Dat LowLimit	e: 6/30/2 e: 6/30/2	014 014	SeqNo: 616	680	Oug
Surr: 1-Chlorooctadecane Surr: o-Terphenyl Sample ID: LCS-24332 SampT Client ID: ZZZZZ Batch Analyte C09-C18 Aliphatics C19-C36 Aliphatics Jnadjusted C11-C22 Aromatics Surr: 1-Chlorooctadecane Surr: o-Terphenyl	ND 72.39 82.71 Type: Lcs a ID: 24332 Result	100 0 0 TestCo TestI PQL	de: epht_w No: MADEP E SPK value	0 Units: μg/L PH (eph_Wpr) SPK Ref Val	82.7 %REC	40 Prep Dat Analysis Dat LowLimit	e: 6/30/2 e: 6/30/2	014 014	SeqNo: 616	680	Oug
Surr: o-Terphenyl Sample ID: LCS-24332 SampT Client ID: ZZZZZ Batch Analyte C09-C18 Aliphatics C19-C36 Aliphatics Jnadjusted C11-C22 Aromatics Surr: 1-Chlorooctadecane Surr: o-Terphenyl	72.39 82.71 Type: Lcs a ID: 24332 Result	0 0 TestCo TestI PQL	de: epht_w No: MADEP E SPK value	0 Units: μg/L PH (eph_Wpr) SPK Ref Val	82.7 %REC	40 Prep Dat Analysis Dat LowLimit	e: 6/30/2 e: 6/30/2	014 014	SeqNo: 616	680	Ougl
Sample ID: LCS-24332 SampT Client ID: ZZZZZ Batch Analyte C09-C18 Aliphatics C19-C36 Aliphatics Jnadjusted C11-C22 Aromatics Surr: 1-Chlorooctadecane Surr: o-Terphenyl	82.71 Type: Lcs a ID: 24332 Result	0 TestCo TestI PQL 100	de: epht_w No: MADEP E SPK value	0 Units: μg/L PH (eph_Wpr) SPK Ref Val	82.7 %REC	40 Prep Dat Analysis Dat LowLimit	e: 6/30/2 e: 6/30/2	014 014	SeqNo: 616	680	Ougl
Client ID: ZZZZZ Batch Analyte C09-C18 Aliphatics C19-C36 Aliphatics Jnadjusted C11-C22 Aromatics Surr: 1-Chlorooctadecane Surr: o-Terphenyl	ype: Lcs a ID: 24332 Result	TestCo TestI PQL	de: epht_w No: MADEP E SPK value	Units: µg/L PH (eph_Wpr) SPK Ref Val	%REC	Prep Dat Analysis Dat LowLimit	e: 6/30/2 e: 6/30/2	014 014	SeqNo: 616	680	Oual
Client ID: ZZZZZ Batch Analyte C09-C18 Aliphatics C19-C36 Aliphatics Unadjusted C11-C22 Aromatics Surr: 1-Chlorooctadecane Surr: o-Terphenyl	Result	PQL 100	No: MADEP E SPK value	PH (eph_Wpr) SPK Ref Val		Analysis Dat	e: 6/30/2	014	SeqNo: 616	680	Oual
Analyte C09-C18 Aliphatics C19-C36 Aliphatics Unadjusted C11-C22 Aromatics Surr: 1-Chlorooctadecane Surr: o-Terphenyl	Result ND	PQL 100	No: MADEP E SPK value	PH (eph_Wpr) SPK Ref Val		Analysis Dat	e: 6/30/2	014	SeqNo: 616	680	Ougl
Analyte C09-C18 Aliphatics C19-C36 Aliphatics Jnadjusted C11-C22 Aromatics Surr: 1-Chlorocctadecane Surr: o-Terphenyl	Result ND	PQL 100	SPK value	SPK Ref Val		LowLimit					Oual
C09-C18 Aliphatics C19-C36 Aliphatics Unadjusted C11-C22 Aromatics Surr: 1-Chlorooctadecane Surr: o-Terphenyl	ND	100	100				HighLimit	RPD Ref Val			Oual
C19-C36 Aliphatics Jnadjusted C11-C22 Aromatics Surr: 1-Chlorooctadecane Surr: o-Terphenyl			100				MANUAL	RPD Ref Val	%RPD	RPDI imit	Ougl
Jnadjusted C11-C22 Aromatics Surr: 1-Chlorooctadecane Surr: o-Terphenyl				0	EC 7					IN DENIM	Qual
Surr: 1-Chlorocctadecane Surr: o-Terphenyl	,,,,					40	140				
Surr: 1-Chlorocctadecane Surr: o-Terphenyl	ND	100	100	0	80.9	40	140				
Surr: o-Terphenyl	86.00		100	0	74.5	40	140				
	98.82	0	100	0	86.0	40	140				
Sample ID: LCS2-24332 SampTu	90.02	0	100	0	98.8	40	140				
	/pe: Lcsd	TestCod	ie: epht_w	Units: µg/L							
Client ID: ZZZZZ Batch	ID: 24332		· —			Prep Date		• •	RunNo: 551	10	
	21002	I esuv	lo: MADEP EF	'H (eph_Wpr)		Analysis Date	: 6/30/20	114	SeqNo: 616	694	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	و معاملات			99,10. 010	001	
09-C18 Aliphatics	ND	100			MREC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
19-C36 Aliphatics	ND ND	100 100	100	0	57.7	40	140	56.73	0	25	
Inadjusted C11-C22 Aromatics	ND		100	0	89.5	40	140	80.91	0	25	
Surr: 1-Chlorooctadecane	90.54	100	100	0	76.9	40	140	74.46	•	25	
Surr: o-Terphenyl		0	100	0	90.5	40	140	74.40	0	25	
	100.0	0	100	0	100	40	140	0	0	0	
_						. •	170	U	0	0	
ualifiers: BRL Below Reporting Limit											

RL Reporting Limit

S Spike Recovery outside recovery limits

R RPD outside recovery limits

GeoLabs, Inc.

CHAIN OF CUSTODY RECORD

GeoLabs, Inc. Environmental Laboratories 45 Johnson Lane, Braintree, MA 02184 p 781.848.7844 • f 781.848.7811 www.geolabs.com

Sample Handling: circle choice Filtration Done

Not Needed Lab to do

PAGE

							-	ervation	L	an to c	o Y/N										
1-day 2-day	Turnaroun	d: circle on 3-day 5 / 7-da	ys	Data Fax Format: Excel	Delivery: c		email PDF			GW-1 S-1 QC)	MCP Methods DEP Other	Requ	CT RCP	(Reasona	choice (s ble Confic am - Crite	lence Pro	tocols)		•	
Client: Address: Contact:	l Mo	ark Ca		ND		- Fax								Projec Projec Invoice	t P0:	C	ien	и Г			
l T	OLLECTIO	ON .				CONT	1	R				Preservative	e:			Analy	sis Re	quested		Lab U	lse Or
A T E	T I M E	A M P B L Y E D		SAMPLE LOCATION / II	ו	T Y P E	Q A N T I T	M A T R I	C O M P	G R A B	GeoLabs	SAMPLE NUMBER	6	Wetale	Mitage					TEMPERATURE	L A B
6/26		MAG	EW MW	1-1 -3 -3		V	12	GW GW		XXX	627	12-001	X	+	130						H
V		V	MW	-3		A	İ	éw		*					X						
Matrix Code GW = Ground WW = Waste V	Water Vater	DW = Drinkir SL = Sludge		S = Soil 0 = 0il	A = Air OT = Other			eceived	on Ice		Preservative 1 = Hcl 2 = HN03	3 = H2S04	5 = Na0 6 = ME0		= Other	A = G =	ntainers: = Amber = Glass = Summa	B = Baç P = Plas V = Voa	stic	0 = Other	r
Relinguished	<u> </u>	THANK YO	DU - WE APPRA	CIATE VOLID BI	Date / Tim		-	1/4			Received by:	helet.		lu	1	Da U	ate / Time	14	12	35	

Monday, April 13, 2015

GeoLabs, Inc.

GeoLabs, Inc. 45 Johnson Lane Braintree MA 02184 Tele: 781 848 7844

Fax: 781 848 7811

Peter Cook IC Environmental Management,Inc. 25 Tia Place Franklin, MA 02038

TEL: 508-498-8236 FAX: 508-541-7443

Project:

Location:

17 Lawrence St, Norfolk MA

Order No.: 1504030

Dear Peter Cook:

GeoLabs, Inc. received 6 sample(s) on 4/3/2015 for the analyses presented in the following report.

The laboratory results in this report relate only to samples submitted.

All data for associated QC met method or laboratory specifications, except when noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

David Mick

Sincerely

Laboratory Director

For current certifications, please visit our website at www.geolabs.com Certifications:

CT (PH-0148) - MA (M-MA015) - NH (2508) - RI (LA000252)

Date: 13-Apr-15

CLIENT:

IC Environmental Management, Inc.

Project:

Lab Order:

1504030

CASE NARRATIVE

Physical Condition of Samples

The project was received by the laboratory in satisfactory condition. The sample(s) were received undamaged, in appropriate containers with the correct preservation.

Project Documentation

The project was accompanied by satisfactory Chain of Custody documentation. Total metals cancelled per client request 04/06/15.

Analysis of Sample(s)

All extractable samples were extracted and analyzed and any Volatile samples were analyzed within method specified holding times and according to GeoLabs documented Standard Operating Procedure. No analytical anomalies or non-conformances were noted by the laboratory during the processing of these samples.

SIGNATURE:

PRINTED NAME: David Mick

LAB DIRECTOR

DATE: 04/13/15

Mercury

Reporting Limit

Reported Date: 13-Apr-15

CLIENT: IC Environmental Management, Inc. Client Sample ID: MW-1DX Lab Order: 1504030 Collection Date: 4/2/2015 9:40:00 AM Project: Date Received: 4/3/2015 Lab ID: 1504030-001 Matrix: GROUNDWATER Analyses Result RL Qual Units DF Date Analyzed DISSOLVED METALS BY ICP - SW6010C Analyst: ZYZ Prep Method: (SW3005A) Prep Date: 4/8/2015 10:52:39 AM Antimony ND 0.00600 mg/L 4/8/2015 Arsenic 0.0690 0.0133 mg/L 1 4/8/2015 Barlum ND 0.0500 1 mg/L 4/8/2015 Beryllium ND 0.00100 mg/L 1 4/8/2015 Cadmium ND 0.00400 mg/L 4/8/2015 Chromium ND 0.0700 mg/L 4/8/2015 Lead ND 0.0100 mg/L 4/8/2015 Nicke! ND 0.100 mg/L 1 4/8/2015 Selenium ND 0.0500 mg/L 4/8/2015 Thallium ND 0.0100 mg/L 1 4/8/2015 Vanadium ND 0.0300 mg/L 1 4/8/2015 Zinc ND 0.180 mg/L 4/8/2015 **DISSOLVED SILVER - E200.7** Analyst: ZYZ Prep Method: (SW3005A) Prep Date: 4/8/2015 10:52:39 AM Silver-Dissolved ND 0.00700 mg/L 4/8/2015 **DISSOLVED MERCURY - 7470A** Analyst: EC Prep Method: (SW7470A/E245.1) Prep Date: 4/7/2015 4:39:58 PM

Oualifiers:	В	Analyte detected in the associated Method Blank	BRL	Below Reporting Limit
	·E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit

0.000200

mg/L

1

Spike Recovery outside recovery limits

4/7/2015

ND

Reported Date: 13-Apr-15

CLIENT: IC Environmental Management, Inc. Client Sample ID: EW-2 Lab Order: 1504030 Collection Date: 4/2/2015 10:45:00 AM Project: Date Received: 4/3/2015 Lab ID: 1504030-002 Matrix: GROUNDWATER Analyses Result RL Qual Units DF **Date Analyzed** DISSOLVED METALS BY ICP - SW6010C Analyst: ZYZ Prep Method: (SW3005A) Prep Date: 4/8/2015 10:52:39 AM Antimony ND 0.00600 4/8/2015 mg/L 1 Arsenic 0.0220 0.0133 mg/L 1 4/8/2015 Barium ND 0.0500 mg/L 1 4/8/2015 Beryllium ND 0.00100 mg/L 1 4/8/2015 Cadmium ND 0.00400 mg/L 4/8/2015 Chromium ND 0.0700 mg/L 4/8/2015 Lead ND 0.0100 mg/L 4/8/2015 Nickel ND 0.100 mg/L 4/8/2015 Selenium ND 0.0500 mg/L 4/8/2015 Thallium ND 0.0100 mg/L 1 4/8/2015 Vanadium ND 0.0300 mg/L 4/8/2015 1 Zinc ND 0.180 mg/L 4/8/2015 **DISSOLVED SILVER - E200.7** Analyst: ZYZ Prep Method: (SW3005A) Prep Date: 4/8/2015 10:52:39 AM Silver-Dissolved ND 0.00700 mg/L 1 4/8/2015 **DISSOLVED MERCURY - 7470A** Analyst: EC Prep Method: (SW7470A/E245.1) Prep Date: 4/7/2015 4:39:58 PM

Qua	lifie	ers:
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Mercury

Analyte detected in the associated Method Blank

ND

0.000200

mg/L

E Value above quantitation range

Analyte detected below quantitation limits

RL Reporting Limit BRL Below Reporting Limit

Holding times for preparation or analysis exceeded

4/7/2015

Not Detected at the Reporting Limit

RL Reporting Limit

Reported Date: 13-Apr-15

ANALYTICA	L REPORT						7A A W
CLIENT:	IC Environment	al Management,Inc.		Clier	it Sample ID:	MW-3	3
Lab Order:	1504030			Co	llection Date:	4/2/20	15 11:15:00 AM
Project:					ate Received:		
Lab ID:	1504030-003						NDWATER
Analyses		Result	RL	Qual Un	its	DF	Date Analyzed
DISSOLVED ME	TALS BY ICP - SV	V6010C					Analyst: ZY
	Prep Method:	(SW3005A)	1	Prep Date:	4/8/2015 10:	52:39 Al	-
Antimony		ND	0.00600	mg/	1	1	4/8/2015
Arsenic		0.0200	0.0133	mg/		1	4/8/2015
Barium		ND	0.0500	mg/		1	4/8/2015
Beryllium		ND	0.00100	mg/		1	4/8/2015
Cadmium		ND	0.00400	mg/		1	4/8/2015
Chromium		ND	0.0700	mg/		1	4/8/2015
Lead		ND	0.0100	mg/		1	4/8/2015
Nickel		ND	0.100	mg/		1	
Selenium		ND	0.0500	_		1	4/8/2015
Thallium		ND	0.0300	mg/		1	4/8/2015 4/8/2015
Vanadium		ND	0.0300	mg/			
Zinc		ND	0.0300	mg/l mg/l		1	4/8/2015 4/8/2015
Silver-Dissolved	Prep Method:	(SW3005A)		rep Date:	4/8/2015 10:5		
211/421-1719201/480		NU ,	0.00700	mg/l	-	1	4/8/2015
DISSOLVED ME	RCURY - 7470A						Analyst: EC
	Prep Method:	(SW7470A/E245.1)	Р	rep Date:	4/7/2015 4:39	:58 PM	
Mercury		ND	0.000200	mg/L		1	4/7/2015
OLATILE ORGA	NIC COMPOUNDS	6 - SW8260B					Analyst: Adm
	Prep Method:		P	rep Date:			
1,1,1,2-Tetrachlord		ND	2.00	µg/L	1	1	4/9/2015 3:08:00 PM
1,1,1-Trichloroetha	ane	ND	2.00	µg/L	1	I	4/9/2015 3:08:00 PM
1,1,2,2-Tetrachloro	pethane	ND	2.00	μg/L	1	I	4/9/2015 3:08:00 PM
1,1,2-Trichloroetha	ane	NĐ	2.00	μg/L	1		4/9/2015 3:08:00 PM
1,1-Dichloroethane	3	ND	2.00	µg/L	1		4/9/2015 3:08:00 PM
1,1-Dichloroethene	•	ND	2.00	μg/L	1		4/9/2015 3:08:00 PM
1,1-Dichloroproper	ne	ND	2.00	µg/L	1		4/9/2015 3:08:00 PM
1,2,3-Trichlorobena	zene	ND	2.00	μg/L	1		4/9/2015 3:08:00 PM
Qualifiers: B	Analyte detected in the	e associated Method Bla	nk	BRL B	elow Reporting L	imit	
E	Value above quantitat						on or analysis exceeded
J	Analyte detected below	_			ot Detected at the		•
RI.	Reporting Limit	-			nike Recovery out		

Reported Date: 13-Apr-15

CLIENT: IC Environmental Management, Inc. Client Sample ID: MW-3

Lab Order: 1504030 Collection Date: 4/2/2015 11:15:00 AM

Project: Date Received: 4/3/2015

Lab ID: 1504030-003 Matrix: GROUNDWATER

Analyses	Result	RL	Qual Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS		Analyst: Adm			
Prep Method:		Pi	ep Date:		
1,2,3-Trichloropropane	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM
1,2,4-Trichlorobenzene	ND	2.00	μg/L	1	4/9/2015 3:08:00 PM
1,2,4-Trimethylbenzene	ND	2.00	μg/L	1	4/9/2015 3:08:00 PM
1,2-Dibromo-3-Chloropropane	ND	2.00	μg/L	1	4/9/2015 3:08:00 PM
1,2-Dibromoethane	ND	2.00	μg/L.	1	4/9/2015 3:08:00 PM
1,2-Dichlorobenzene	ND	2.00	μg/L	1	4/9/2015 3:08:00 PM
1,2-Dichloroethane	ND	2.00	μg/L	1	4/9/2015 3:08:00 PM
1,2-Dichloropropane	ND	2.00	μg/L	1	4/9/2015 3:08:00 PM
1,3,5-Trimethylbenzene	ND	2.00	μg/L	1	4/9/2015 3:08:00 PM
1,3-Dichlorobenzene	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM
1,3-Dichloropropane	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM
1,4-Dichlorobenzene	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM
1,4-Dioxane	ND	500	µg/L	1	4/9/2015 3:08:00 PM
2,2-Dichloropropane	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM
2-Butanone	ND	10.0	µg/L	1	4/9/2015 3:08:00 PM
2-Chlorotoluene	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM
2-Hexanone	ND	10.0	µg/L	1	4/9/2015 3:08:00 PM
2-Methoxy-2-Methylbutane (TAME)	ND	2.00	μg/L	1	4/9/2015 3:08:00 PM
4-Chlorotoluene	ND	2.00	μg/L	1	4/9/2015 3:08:00 PM
4-Isopropyitoluene	ND	2.00	μg/L	1	4/9/2015 3:08:00 PM
4-Methyl-2-Pentanone	ND	5.00	μg/L	1	4/9/2015 3:08:00 PM
Acetone	ND	10.0	μg/L	1	4/9/2015 3:08:00 PM
Benzene	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM
Bromobenzene	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM
Bromochloromethane	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM
Bromodichloromethane	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM
Bromoform	ND	2.00	μg/L	1	4/9/2015 3:08:00 PM
Bromomethane	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM
Carbon Disulfide	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM
Carbon Tetrachloride	ND	2.00	μg/L	1	4/9/2015 3:08:00 PM
Chlorobenzene	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM
Chloroethane	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM
Chloroform	ND	2.00	μg/L	1	4/9/2015 3:08:00 PM
Chloromethane	ND	2.00	μg/L	1	4/9/2015 3:08:00 PM
cis-1.2-Dichloroethene	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM
cis-1,3-Dichloropropene	ND	0.170	µg/L	1	4/9/2015 3:08:00 PM

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- RL Reporting Limit

- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside recovery limits

Reported Date: 13-Apr-15

CLIENT:

IC Environmental Management, Inc.

Client Sample ID: MW-3

Lab Order:

Collection Date: 4/2/2015 11:15:00 AM

Project:

1504030

Date Received: 4/3/2015

Lab ID: 1504030-003		Matrix: GROUNDWATER							
Analyses	Result	RL C	ual Units	DF	Date Analyzed				
VOLATILE ORGANIC COMPOUN	DS - SW8260B				Analyst: Admir				
Prep Method	l a	Pre	p Date:						
Dibromochloromethane	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM				
Dibromomethane	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM				
Dichlorodifluoromethane	ND	2.00	μg/L	1	4/9/2015 3:08:00 PM				
Diethyl Ether	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM				
Diisopropyl Ether	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM				
Ethylbenzene	ND	2.00	μg/L	1	4/9/2015 3:08:00 PM				
Ethyl-t-Butyl Ether	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM				
Hexachlorobutadiene	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM				
Isopropylbenzene	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM				
Methyl Tert-Butyl Ether	NĐ	2.00	µg/L	1	4/9/2015 3:08:00 PM				
Methylene Chloride	ND	2.00	μg/L	1	4/9/2015 3:08:00 PM				
Naphthalene	ND	2,00	μg/L	1	4/9/2015 3:08:00 PM				
n-Butylbenzene	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM				
n-Propylbenzene	ND	2.00	μg/L	1	4/9/2015 3:08:00 PM				
sec-Butylbenzene	ND	2.00	μg/L	1	4/9/2015 3:08:00 PM				
Styrene	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM				
t-Butyl Alcohol	ND	20.0	µg/L	1	4/9/2015 3:08:00 PM				
tert-Butylbenzene	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM				
Tetrachloroethene	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM				
Tetrahydrofuran	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM				
Toluene	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM				
trans-1,2-Dichloroethene	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM				
trans-1,3-Dichloropropene	ND	0.270	µg/L	1	4/9/2015 3:08:00 PM				
Trichloroethene	3.02	2.00	μg/L	1	4/9/2015 3:08:00 PM				
Trichlorofluoromethane	ND	2.00	μg/L	1	4/9/2015 3:08:00 PM				
Vinyl Chloride	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM				
Xylenes, Total	ND	2.00	µg/L	1	4/9/2015 3:08:00 PM				

Qualifiers:

- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits
- RL Reporting Limit

- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Spike Recovery outside recovery limits

Reported Date: 13-Apr-15

Analyst: ZYZ

Analyst: ZYZ

CLIENT: IC Environmental Management, Inc. Client Sample ID: EW-1

Lab Order: 1504030 Collection Date: 4/2/2015 12:00:00 PM

Project: Date Received: 4/3/2015

Lab ID: 1504030-004 Matrix: GROUNDWATER

Analyses Result RL Qual Units DF Date Analyzed

DISSOLVED METALS BY ICP - SW6010C

Prep Method: (SW3005A) Prep Date: 4/8/2015 10:52:39 AM **Antimony** ND 0.00600 mg/L 4/8/2015 Arsenic ND 0.0133 mg/L 4/8/2015 1 Barium ND 0.0500 mg/L 1 4/8/2015 Beryllium ND 0.00100 mg/L 1 4/8/2015 Cadmium ND 0.00400 mg/L 1 4/8/2015 Chromium ND 0.0700 ma/L 4/8/2015 Lead ND 0.0100 mg/L 4/8/2015 Nickel ND 0.100 mg/L 4/8/2015 Selenium ND 0.0500 mg/L 4/8/2015 Thallium 0.0100 ND mg/L 4/8/2015 Vanadium ND 0.0300 4/8/2015 mg/L Zinc 0.312 0.180 mg/L 4/8/2015

DISSOLVED SILVER - E200.7

Prep Method: (SW3005A) Prep Date: 4/8/2015 10:52:39 AM Silver-Dissolved ND 0.00700 mg/L 4/8/2015

DISSOLVED MERCURY - 7470A

Analyst: EC

	Prep Method:	(SW7470A/E245.1)		Prep Date:	4/7/2015 4:39:58 PM	
Mercury		ND	0.000200	mg/L	1	4/7/2015

Qualifiers:

Analyte detected in the associated Method Blank

BRL Below Reporting Limit

E Value above quantitation range

Holding times for preparation or analysis exceeded

J Analyte detected below quantitation limits Not Detected at the Reporting Limit

RL Reporting Limit

RL Reporting Limit

Reported Date: 13-Apr-15

CLIENT:	IC :	Environmenta	l Management,Inc.		Clie	ent	Sample ID:	MW-6	
Lab Order:	150	4030			C	olle	ection Date:	4/2/20	15 12:40:00 PM
Project:]	Dat	e Received:	4/3/201	15
Lab ID:	150	4030-005							NDWATER
Analyses			Result	RL	Qual U	nit	s	DF	Date Analyzed
DISSOLVED	METALS	BY ICP - SW	/6010C						Analyst:
		Prep Method:	(SW3005A)		Prep Date:		4/8/2015 10:5	52:39 AN	1
Antimony			ND	0.00600	m	g/L		1	4/8/2015
Arsenic			0.0320	0.0133	m	g/L		1	4/8/2015
Barium			ND	0.0500	m	g/L		1	4/8/2015
Beryllium			ND	0.00100	m	g/L		1	4/8/2015
Cadmium			ND	0.00400	m	g/L		1	4/8/2015
Chromium			ND	0.0700		g/L		1	4/8/2015
Lead			ND	0.0100		g/L		1	4/8/2015
Nickel			ND	0.100		g/L		1	4/8/2015
Selenium			ND	0.0500		g/L		1	4/8/2015
Thallium			ND	0.0100		g/L		1	4/8/2015
Vanadium			ND	0.0300		g/L		1	4/8/2015
Zinc			ND	0.180		g/L		1	4/8/2015
DISSOLVED S		E200.7 Prep Method:	(SW3005A)	F	rep Date:		4/8/2015 10:5	2:39 AM	Analyst: 2
DISSOLVED S	Į.		(SW3005A)	0.00700	Prep Date:	-		2:39 AM	•
Silver-Dissolve	ed	Prep Method:				-			4/8/2015
Silver-Dissolve	ed MERCUR	Prep Method:		0.00700		g/L		1	
Silver-Dissolve	ed MERCUR	Prep Method:	ND	0.00700	mg	g/L	4/7/2015 4:39:	1	4/8/2015
Silver-Dissolve PISSOLVED IN	ed MERCUR F	Prep Method: Y - 7470A Prep Method:	ND (\$W7470A/E245.1) ND	0.00700 P	mg rep Date:	g/L	4/7/2015 4:39:	1 :58 PM	4/8/2015 Analyst: E
Silver-Dissolve PISSOLVED IN	ed MERCUR F	Prep Method: Y - 7470A Prep Method:	ND (\$W7470A/E245.1) ND	0.00700 P 0.000200	mg rep Date:	g/L	4/7/2015 4:39:	1 :58 PM	4/8/2015 Analyst: E
Silver-Dissolve DISSOLVED IN	ed MERCUR F	Prep Method: Y - 7470A Prep Method: COMPOUNDS	ND (\$W7470A/E245.1) ND	0.00700 P 0.000200	rep Date: mg	g/L	4/7/2015 4:39:	1 : 58 PM	4/8/2015 Analyst: E
Silver-Dissolve DISSOLVED IN Mercury	ed MERCUR F RGANIC (Prep Method: Y - 7470A Prep Method: COMPOUNDS	ND (SW7470A/E245.1) ND 6 - SW8260B	0.00700 P 0.000200	rep Date: rep Date:	g/L g/L	4/7/2015 4:39	1 58 PM	4/8/2015 Analyst: E 4/7/2015 Analyst: A
Silver-Dissolve DISSOLVED IN Mercury OLATILE OR 1,1,1,2-Tetrach 1,1,1-Trichloron	ed MERCUR F RGANIC (P hloroethane	Prep Method: Y - 7470A Prep Method: COMPOUNDS Prep Method:	ND (\$W7470A/E245.1) ND S - \$W8260B	0.00700 P 0.000200 P 2.00 2.00	rep Date: rep Date: rep Date: µg/ µg/	g/L /L	4/7/2 015 4:39 :	1 58 PM	4/8/2015 Analyst: E 4/7/2015 Analyst: A 4/9/2015 3:41:00 PM 4/9/2015 3:41:00 PM
Silver-Dissolve PISSOLVED IN Mercury OLATILE OR 1,1,1,2-Tetrach 1,1,1-Trichloror 1,1,2,2-Tetrach 1,1,2-Tetrach	MERCUR F RGANIC (phloroethan ethane	Prep Method: Y - 7470A Prep Method: COMPOUNDS Prep Method:	ND (SW7470A/E245.1) ND S - SW8260B ND ND	0.00700 P 0.000200 P	rep Date: rep Date: rep Date: µg/ µg/ µg/	g/L /L /L	4/7/2015 4:39 :	1 58 PM	4/8/2015 Analyst: E 4/7/2015 Analyst: A 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN
Mercury OLATILE OR 1,1,1,2-Tetrach 1,1,1-Trichlorod 1,1,2-Tetrach 1,1,2-Tetrach 1,1,2-Tetrach 1,1,2-Tetrach	MERCUR F RGANIC (P Inloroethan ethane ethane ethane	Prep Method: Y - 7470A Prep Method: COMPOUNDS Prep Method:	ND (SW7470A/E245.1) ND S - SW8260B ND ND ND ND ND ND ND	0.00700 P 0.000200 P 2.00 2.00 2.00 2.00	rep Date: rep Date: rep Jule: pg/ pg/ pg/	/L //L	4/7/2015 4:39 :	1 58 PM	4/8/2015 Analyst: E 4/7/2015 Analyst: A 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN
Mercury OLATILE OR 1,1,1,2-Tetrach 1,1,1-Trichlorod 1,1,2-Tetrach 1,1,2-Tetrach 1,1,2-Tetrach 1,1,2-Tetrach 1,1,2-Tetrach 1,1,2-Trichlorod 1,1-Dichloroeth	MERCUR F RGANIC (P Inloroethan ethane ethane ethane ethane ethane hane hane	Prep Method: Y - 7470A Prep Method: COMPOUNDS Prep Method:	ND (\$W7470A/E245.1) ND S - \$W8260B ND ND ND ND ND ND ND ND ND ND ND ND	0.00700 P 0.000200 P 2.00 2.00 2.00 2.00 2.00	rep Date: rep Date: ug/ ug/ ug/ ug/	/L //L //L	4/7/2015 4:39 :	1 58 PM	4/8/2015 Analyst: E 4/7/2015 Analyst: A 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN
Mercury OLATILE OR 1,1,1,2-Tetrach 1,1,1-Trichloro 1,1,2-Tetrach 1,1,2-Tetrach 1,1,2-Trichloro 1,1,2-Trichloro 1,1-Dichloroeth 1,1-Dichloroeth	MERCUR F RGANIC (P hloroethan ethane nioroethan ethane nane nane	Prep Method: Y - 7470A Prep Method: COMPOUNDS Prep Method:	ND (\$W7470A/E245.1) ND ND ND ND ND ND ND ND ND ND ND ND ND	0.00700 P 0.000200 P 2.00 2.00 2.00 2.00 2.00	rep Date: rep Date: rep yg/ pg/ pg/ pg/ pg/	/L //L //L //L	4/7/2015 4:39 :	1 58 PM	4/8/2015 Analyst: E 4/7/2015 Analyst: A 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN
Mercury OLATILE OR 1,1,1,2-Tetrach 1,1,1-Trichloro 1,1,2,2-Tetrach 1,1,2-Trichloro 1,1,2-Trichloro 1,1-Dichloroeth 1,1-Dichloroeth 1,1-Dichloropro	RGANIC (phloroethan ethane hioroethan ethane hane hane hane hane hane hane hane	Prep Method: Y - 7470A Prep Method: COMPOUNDS Prep Method:	ND (\$W7470A/E245.1) ND ND ND ND ND ND ND ND ND ND ND ND ND	0.00700 P 0.000200 P 2.00 2.00 2.00 2.00 2.00	rep Date: rep Date: pg/ pg/ pg/ pg/ pg/ pg/	/L //L //L //L	4/7/2015 4:39:	1 .58 PM	4/8/2015 Analyst: E 4/7/2015 Analyst: A 4/9/2015 3:41:00 PM
Mercury OLATILE OR 1,1,1,2-Tetrach 1,1,1-Trichloro 1,1,2-Tetrach 1,1,2-Tetrach 1,1,2-Trichloro 1,1,2-Trichloroeth 1,1-Dichloroeth 1,1-Dichloroeth 1,1-Dichloroeth 1,1-Dichloroeth 1,1-Dichloroeth 1,1-Dichloroeth	MERCUR F RGANIC (P nloroethan ethane nioroethan ethane nane hene ppene benzene	Prep Method: Y - 7470A Prep Method: COMPOUNDS Prep Method: e	ND (\$W7470A/E245.1) ND ND ND ND ND ND ND ND ND ND ND ND ND	0.00700 P 0.000200 P 2.00 2.00 2.00 2.00 2.00	rep Date: rep Date: rep Jug/ pg/ pg/ pg/ pg/ pg/	/L //L //L //L //L //L	4/7/2015 4:39:	1 58 PM	4/8/2015 Analyst: E 4/7/2015 Analyst: A 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN 4/9/2015 3:41:00 PN
Mercury OLATILE OR 1,1,1,2-Tetrach 1,1,1-Trichloro 1,1,2-Tetrach 1,1,2-Tetrach 1,1,2-Trichloro 1,1,2-Trichloro 1,1-Dichloroeth 1,1-Dichloroeth 1,1-Dichloropro 1,2,3-Trichlorot Qualifiers:	MERCUR F RGANIC (P Inloroethan ethane nioroethan ethane nane hene ppene benzene B Analy	Prep Method: Y - 7470A Prep Method: COMPOUNDS Prep Method: e	ND (SW7470A/E245.1) ND ND ND ND ND ND ND ND ND ND ND ND ND	0.00700 P 0.000200 P 2.00 2.00 2.00 2.00 2.00	rep Date: rep Date: rep Date: rep date: r	g/L /L /L /L /L /L /L /L	4/7/2015 4:39: 1 1 1 1 1 1 ow Reporting L	1	4/8/2015 Analyst: E 4/7/2015 Analyst: A 4/9/2015 3:41:00 PN
Mercury OLATILE OR 1,1,1,2-Tetrach 1,1,1-Trichloro 1,1,2-Tetrach 1,1,2-Tetrach 1,1,2-Trichloro 1,1-Dichloroeth 1,1-Dichloroeth 1,1-Dichloroeth 1,1-Dichloroeth 1,2,3-Trichlorot Qualifiers:	MERCUR F RGANIC (P Inloroethan ethane nioroethan ethane nane nene ppene benzene B Analy E Value	Prep Method: Y - 7470A Prep Method: COMPOUND: Prep Method: e e	ND (SW7470A/E245.1) ND ND ND ND ND ND ND ND ND ND ND ND ND	0.00700 P 0.000200 P 2.00 2.00 2.00 2.00 2.00	rep Date: rep Date: rep Date: pg/ pg/ pg/ pg/ pg/ BRL H	g/L //L //L //L //L //L //L //L //L //L	4/7/2015 4:39: 1 1 1 1 1 1 ow Reporting L	1 .58 PM	4/8/2015 Analyst: E 4/7/2015 Analyst: A 4/9/2015 3:41:00 PN

Reported Date: 13-Apr-15

CLIENT:

IC Environmental Management, Inc.

Client Sample ID: MW-6

Lab Order:

1504030

Collection Date: 4/2/2015 12:40:00 PM

Project:

Date Received: 4/3/2015

Lab ID:

1504030-005

Matrix: GROUNDWATER

Analyses	Result	RL	Qual Units	DF	Date Analyzed
/OLATILE ORGANIC COMPOUNDS - S	W8260B				Analyst: Admi
Prep Method:		P	rep Date:		
1,2,3-Trichloropropane	ND	2.00	µg/L	1	4/9/2015 3:41:00 PM
1,2,4-Trichlorobenzene	ND	2.00	ha/r	1	4/9/2015 3:41:00 PM
1,2,4-Trimethylbenzene	ND	2.00	μg/L	i	4/9/2015 3:41:00 PM
1,2-Dibromo-3-Chloropropane	ND	2.00	µg/L	1	4/9/2015 3:41:00 PM
1,2-Dibromoethane	ND	2.00	µg/L	1	4/9/2015 3:41:00 PM
1,2-Dichlorobenzene	ND	2.00	µg/L	1	4/9/2015 3:41:00 PM
1,2-Dichloroethane	ND	2.00	μg/L	1	4/9/2015 3:41:00 PM
1,2-Dichloropropane	ND	2.00	µg/L	1	4/9/2015 3:41:00 PM
1,3,5-Trimethylbenzene	ND	2.00	µg/L.	1	4/9/2015 3:41:00 PM
1,3-Dichlorobenzene	ND	2.00	μg/L	1	4/9/2015 3:41:00 PM
1,3-Dichloropropane	ND	2.00	µg/L	1	4/9/2015 3:41:00 PM
1,4-Dichlorobenzene	ND	2.00	µg/L	1	4/9/2015 3:41:00 PM
1,4-Dioxane	ND	500	µg/L	1	4/9/2015 3:41:00 PM
2,2-Dichloropropane	ND	2.00	µg/L	1	4/9/2015 3:41:00 PM
2-Butanone	ND	10.0	μg/L	1	4/9/2015 3:41:00 PM
2-Chlorotoluene	ND	2.00	µg/L	1	4/9/2015 3:41:00 PM
2-Hexanone	ND	10.0	μg/L	1	4/9/2015 3:41:00 PM
2-Methoxy-2-Methylbutane (TAME)	ND	2.00	µg/L	1	4/9/2015 3:41:00 PM
4-Chlorotoluene	ND	2.00	µg/L	1	4/9/2015 3:41:00 PM
4-Isopropyltoluene	ND	2.00	µg/L	1	4/9/2015 3:41:00 PM
4-Methyl-2-Pentanone	ND	5.00	μg/L	1	4/9/2015 3:41:00 PM
Acetone	ND	10.0	μg/L	1	4/9/2015 3:41:00 PM
Benzene	ND	2.00	µg/L	1	4/9/2015 3:41:00 PM
Bromobenzene	ND	2.00	µg/∟	1	4/9/2015 3:41:00 PM
Bromochloromethane	ND	2.00	μg/L	1	4/9/2015 3:41:00 PM
Bromodichloromethane	ND	2.00	µg/L	1	4/9/2015 3:41:00 PM
Bromoform	ND	2.00	µg/L	1	4/9/2015 3:41:00 PM
Bromomethane	ND	2.00	µg/L	1	4/9/2015 3:41:00 PM
Carbon Disulfide	ND	2.00	μg/L	1	4/9/2015 3:41:00 PM
Carbon Tetrachloride	ND	2.00	µg/L	1	4/9/2015 3:41:00 PM
Chlorobenzene	ND	2.00	µg/L	1	4/9/2015 3:41:00 PM
Chloroethane	ND	2.00	µg/L	1	4/9/2015 3:41:00 PM
Chloroform	ND	2.00	µg/L	1	4/9/2015 3:41:00 PM
Chloromethane	ND	2.00	μg/L	1	4/9/2015 3:41:00 PM
cis-1,2-Dichloroethene	ND	2.00	ha\r	1	4/9/2015 3:41:00 PM
yimmirediale	ND	2,00	µg/L	'	HOW OF THE THE

Qualifiers:

- В Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits
- RL Reporting Limit

- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Spike Recovery outside recovery limits

Reported Date: 13-Apr-15

CLIENT:

IC Environmental Management, Inc.

Client Sample ID: MW-6

Lab Order:

1504030

Collection Date: 4/2/2015 12:40:00 PM

Project:

Date Received: 4/3/2015 Lab ID: 1504030-005 Matrix: GROUNDWATER Analyses Result RL Qual Units DF Date Analyzed **VOLATILE ORGANIC COMPOUNDS - SW8260B** Analyst: Admir Prep Method: Prep Date: Dibromochloromethane ND 2.00 µg/L 1 4/9/2015 3:41:00 PM Dibromomethane ND 2.00 µg/L 1 4/9/2015 3:41:00 PM Dichlorodifluoromethane ND 2.00 µg/L 1 4/9/2015 3:41:00 PM Diethyl Ether ND 2.00 µg/L 1 4/9/2015 3:41:00 PM Diisopropyl Ether ND 2.00 µg/L 1 4/9/2015 3:41:00 PM Ethylbenzene ND 2.00 µg/L 4/9/2015 3:41:00 PM Ethyl-t-Butyl Ether ND 2.00 4/9/2015 3:41:00 PM µg/L 1 Hexachlorobutadiene ND 2.00 µg/L 1 4/9/2015 3:41:00 PM Isopropyibenzene ND 2.00 µg/L 4/9/2015 3:41:00 PM Methyl Tert-Butyl Ether ND 2,00 µg/L 1 4/9/2015 3:41:00 PM Methylene Chloride ND 2.00 μg/L 1 4/9/2015 3:41:00 PM Naphthalene ND 2.00 µg/L 1 4/9/2015 3:41:00 PM n-Butylbenzene ND 2.00 µg/L 1 4/9/2015 3:41:00 PM n-Propylbenzene ND 2.00 μg/L 1 4/9/2015 3:41:00 PM sec-Butylbenzene ND 2.00 4/9/2015 3:41:00 PM µg/L 1 Styrene ND 2.00 4/9/2015 3:41:00 PM µg/L 1 t-Butyl Alcohol ND 20.0 µg/L 1 4/9/2015 3:41:00 PM tert-Butylbenzene ND 2.00 μg/L. 1 4/9/2015 3:41:00 PM Tetrachloroethene ND 2.00 µg/L 1 4/9/2015 3:41:00 PM Tetrahydrofuran ND 2.00 1 µg/L 4/9/2015 3:41:00 PM Toluene ND 2.00 µg/L 1 4/9/2015 3:41:00 PM trans-1,2-Dichloroethene ND 2.00 1 µg/L 4/9/2015 3:41:00 PM trans-1,3-Dichloropropene ND 0.270 µg/L 1 4/9/2015 3:41:00 PM Trichloroethene ND 2.00 µg/L 1 4/9/2015 3:41:00 PM Trichlorofluoromethane ND 2.00 µg/L 1 4/9/2015 3:41:00 PM Vinyl Chloride ND 2.00 µg/L 1 4/9/2015 3:41:00 PM

2.00

µg/L

Qua	lifi	ers:

Xylenes, Total

Analyte detected in the associated Method Blank В

ND

- E Value above quantitation range
- J Analyte detected below quantitation limits
- Reporting Limit

- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded

1

4/9/2015 3:41:00 PM

- Not Detected at the Reporting Limit
- Spike Recovery outside recovery limits

Reported Date: 13-Apr-15

CLIENT: IC Environmental Management, Inc. Client Sample ID: MW-5 Lab Order: 1504030 Collection Date: 4/2/2015 1:15:00 PM Project: Date Received: 4/3/2015 Lab ID: 1504030-006 Matrix: GROUNDWATER RL Qual Units DF Result **Date Analyzed** Analyses **DISSOLVED METALS BY ICP - SW6010C** Analyst: ZYZ Prep Method: (\$W3005A) Prep Date: 4/8/2015 10:52:39 AM 1 4/8/2015 Antimony ND 0.00600 mg/L Arsenic 0.0360 0.0133 mg/L 1 4/8/2015 Barium ND 0.0500 mg/L 1 4/8/2015 Beryllium ND 0.00100 mg/L 4/8/2015 Cadmium 0.00400 ND mg/L 4/8/2015 Chromium ND 0.0700 mg/L 4/8/2015 Lead ND 0.0100 mg/L 4/8/2015 Nickel ND 0.100 mg/L 1 4/8/2015 Selenium ND 0.0500 1 4/8/2015 mg/L Thallium ND 0.0100 mg/L 4/8/2015 Vanadium ND 0.0300 4/8/2015 mg/L 1 mg/L 4/8/2015 Zinc ND 0.180 **DISSOLVED SILVER - E200.7** Analyst: ZYZ (SW3005A) Prep Method: Prep Date: 4/8/2015 10:52:39 AM Silver-Dissolved ND 0.00700 mg/L 4/8/2015 **DISSOLVED MERCURY - 7470A** Analyst: EC Prep Method: (SW7470A/E245.1) Prep Date: 4/7/2015 4:39:58 PM 1 4/7/2015 Mercury ND 0.000200 mg/L

Qualifiers:	В	Analyte detected in the associated Method Blank	BRL	Below Reporting Limit
	E	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	RL	Reporting Limit	S	Spike Recovery outside recovery limits

1504030

GeoLabs																Page		of	-		
<i>Environmen</i> 45 Johnson L		bora	tories	5	RUSH: 2Ams STANDARD: 5Days X						SPECIAL INSTRUCTIONS										
Braintree, MA		4								Rus										11111111111	
Office:	781-84		44								roved By:										- 1
Fax:	781-84	18-78	11									Please Filter Dissolved Metals							- 1		
Cilent: Address:	IC En 25 Tia Frank	a Pl.		al	4	et Num et Loca		17 L Nort	-		Street	Car	cel	T. 1	refe	els,	per	DUK	2 4	6	P
Phone:	7 . (31111							TYON	OIK,	IVIA											
Fax:					Purch	ase O	rder#:	-													- 1
Contact:	Peter	F. C	ook		Collec	ted By	/ :	R. B	erge	r											- 1
E-mail:											17/10/100			AN	ALYS	ES RI	QUE	STED			
	COL	LECT			CONT	AINER						4	.7	C							
SAMPLE ID	D A T E	T I M E	S A M P L E D	SAMPLE LOCATION	T Y P E	QUANT	M A T R I	C O M P	GRAB	PRES	GEOLABS SAMPLE NUMBER	Disslv. Metals	I Medals to	VOC'S 2360						TEMPERATURE	L A B P H
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EW-2	4.2.15	1045	RB	Well EW-2	Р	2	GW		Х	27	CC3-	Х	*							1	П
MW-3	4.2.15	115	RB	Well MW-3	PV	4	GW			127	-003	X	K	×							Н
EW-1	4.2.15	200	RB	Well EW-1	Р	2	GW		Х	27	-004	Х	K								П
MW-6	4.2.15			Well MW-6	PV	4	GW		Х	127		Х	X	×			1			\vdash	Н
MW-5	4.2.15	115	RB	Well MW-5	Р	2	GW		Х	27	-006	Х	K								H
																					H
CONTAINER (CODES:			MATRIX CODES:			ERVATI			S:	Relinquished By:	D	ate/Tir	ne	Rece	eived	B)x:		Date	/Tim	e:
A = Amber				GW = Ground Wa		1 = H	CI	7 =	ICE		Relinquished By:	4	4/3/1	5	1	1		43	3/3	1	50
			WW = Wastewate		2 = H	-				Relinquished By:	- 7			Rece	jvett	By:		parameter and the same			
G = Glass				DW = Drinking W	ater	3 = H ₂					(TAM)	43	1	<u>433</u>		-					
1			$a_2S_2O_3$			Relinguished By: Received						ir.	-/								
S = Summa (S = Soil A = A			NaOH				C	INCOT.	A DC	1	Jel	rile;	111	PY	315	16	55
O = Other	V = V	UA		O = Oil OT =	Other	6 = M	eOH			_	∫ ← G	EUL	ABS (HA	IN O	F'CL	STC	DA	/		

VONICE

Thursday, June 18, 2015

Peter Cook IC Environmental Management, Inc. 25 Tia Place Franklin, MA 02038

TEL: 508-498-8236 FAX: 508-541-7443

Project:

Tom DiPlacido

Location:

17 Lawrence St, Norfolk MA

Order No.: 1506117

GeoLabs, Inc.

Braintree MA 02184

Tele: 781 848 7844

Fax: 781 848 7811

GeoLabs, Inc. 45 Johnson Lane

Dear Peter Cook:

GeoLabs, Inc. received 3 sample(s) on 6/11/2015 for the analyses presented in the following report.

The laboratory results in this report relate only to samples submitted.

All data for associated QC met method or laboratory specifications, except when noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

David Mick

Laboratory Director

For current certifications, please visit our website at www.geolabs.com Certifications:

CT (PH-0148) - MA (M-MA015) - NH (2508) - RI (LA000252)

Date: 18-Jun-15

CLIENT:

IC Environmental Management, Inc.

Project:

Tom DiPlacido

Lab Order:

1506117

CASE NARRATIVE

Physical Condition of Samples

The project was received by the laboratory in satisfactory condition. The sample(s) were received undamaged, in appropriate containers with the correct preservation with the following exception: Samples were filtered and preserved upon receipt of laboratory.

Project Documentation

The project was accompanied by satisfactory Chain of Custody documentation.

Analysis of Sample(s)

All extractable samples were extracted and analyzed and any Volatile samples were analyzed within method specified holding times and according to GeoLabs documented Standard Operating Procedure. No analytical anomalies or non-conformances were noted by the laboratory during the processing of these samples.

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/18/15

Reported Date: 18-Jun-15

CLIENT: IC Environmental Management, Inc. Client Sample ID: (TOWN WELL) WS-3 Lab Order: 1506117 Tag Number: Project: Tom DiPlacido Collection Date: 6/10/2015 8:30:00 AM Lab ID: Date Received: 6/11/2015 1506117-001A Matrix: GROUNDWATER Analyses Result RL Qual Units DF Date Analyzed DISSOLVED METALS BY ICP - SW6010C Analyst: QS Prep Method: (SW3005A) Prep Date: 6/15/2015 12:37:09 PM Antimony 0.00600 ND mg/L 1 6/15/2015 Arsenic 0.0170 0.0133 mg/L 1 6/15/2015 Barium ND 0.0500 mg/L 1 6/15/2015 Beryllium ND 0.00100 mg/L 1 6/15/2015 Cadmium ND 0.00400 mg/L 1 6/15/2015 Chromium ND 0.0700 mg/L 1 6/15/2015 Lead ND 0.0100 mg/L 1 6/15/2015 Nickel ND 0.100 mg/L 1 6/15/2015 Selenium ND 0.0500 mg/L 1 6/15/2015 Thallium ND 0.0100 mg/L 6/15/2015 Vanadium ND 0.0300 mg/L 1 6/15/2015 Zinc ND 0.180 mg/L 1 6/15/2015 **DISSOLVED SILVER - E200.7** Analyst: QS Prep Method: (SW3005A) Prep Date: 6/15/2015 12:37:09 PM Sliver-Dissolved ND 0.00700 mg/L 1 6/15/2015 Analyst: EC

DISSOLVED	MERCURY	- 7470A
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	Prep Method:	(SW7470A/E245.1)		Prep Date:	6/15/2015 4:49:22 PM	
Mercury		ND	0.000200) mg/L	1	6/15/2015

Qualifiers:

В Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

RL Reporting Limit

BRL Below Reporting Limit

Holding times for preparation or analysis exceeded H

ND Not Detected at the Reporting Limit

ANALYTICAL	REPORT
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Reported Date: 18-Jun-15

CLIENT: IC Environmental Management, Inc. Client Sample ID: MW-3DX Lab Order: 1506117 Tag Number: Project: Tom DiPlacido Collection Date: 6/10/2015 9:40:00 AM Lab ID: 1506117-002A Date Received: 6/11/2015 Matrix: GROUNDWATER Analyses Result RL Qual Units DF Date Analyzed **DISSOLVED METALS BY ICP - SW6010C** Analyst: QS Prep Method: (SW3005A) Prep Date: 6/15/2015 12:37:09 PM Antimony ND 0.00600 mg/L 6/15/2015 Arsenic 0.0200 0.0133 mg/L 1 6/15/2015 Barlum 0.0570 0.0500 mg/L 1 6/15/2015 Beryllium ND 0.00100 mg/L 1 6/15/2015 Cadmium ND 0.00400 mg/L 1 6/15/2015 Chromium ND 0.0700 mg/L 1 6/15/2015 Lead ND 0.0100 mg/L 1 6/15/2015 Nickel ND 0.100 mg/L 1 6/15/2015 Selenium ND 0.0500 mg/L 1 6/15/2015 Thailium ND 0.0100 mg/L 1 6/15/2015 Vanadium ND 0.0300 mg/L 1 6/15/2015 Zinc ND 0.180 mg/L 6/15/2015 **DISSOLVED SILVER - E200.7** Analyst: QS Prep Method: (SW3005A) Prep Date: 6/15/2015 12:37:09 PM Silver-Dissolved ND 0.00700 mg/L 1 6/15/2015

DISSOLVED MERCURY - 7470A

Analyst: EC

	Prep Method:	(SW7470A/E245.1)		Prep Date:	6/15/2015 4:49:22 PM	
Mercury		ND	0.000208) mg/L	1	6/15/2015

Qualifiers:

Analyte detected in the associated Method Blank В

E Value above quantitation range

J Analyte detected below quantitation limits

Reporting Limit

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

Reported Date: 18-Jun-15

CLIENT: IC Environmental Management, Inc. Client Sample ID: MW-9DX Lab Order: 1506117 Tag Number: Tom DiPlacido Project: Collection Date: 6/10/2015 10:20:00 AM Lab ID: 1506117-003A Date Received: 6/11/2015 Matrix: GROUNDWATER Analyses Result RL Qual Units DF **Date Analyzed DISSOLVED METALS BY ICP - SW6010C** Analyst: QS Prep Method: (SW3005A) Prep Date: 6/15/2015 12:37:09 PM 0.00600 Antimony ND mg/L 1 6/15/2015 Arsenic ND 0.0133 mg/L 1 6/15/2015 Barlum ND 0.0500 mg/L 1 6/15/2015 Beryllium ND 0.00100 6/15/2015 1 mg/L Cadmium ND 0.00400 mg/L 1 6/15/2015 Chromium ND 0.0700 6/15/2015 mg/L 1 ND 0.0100 Lead 1 6/15/2015 mg/L Nickel ND 0.100 mg/L 1 6/15/2015 Selenium ND 0.0500 mg/L 1 6/15/2015 Thallium ND 6/15/2015 0.0100 mg/L 1 Vanadium ND 0.0300 mg/L 1 6/15/2015 Zìnc 6/15/2015 ND 0.180 mg/L **DISSOLVED SILVER - E200.7** Analyst: QS (SW3005A) Prep Method: Prep Date: 6/15/2015 12:37:09 PM ND 6/15/2015 Silver-Dissolved 0.00700 mg/L **DISSOLVED MERCURY - 7470A** Analyst: EC Prep Method: (SW7470A/E245.1) Pren Date: 6/15/2015 A-49-22 PM

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 	ero establishment	 	

Mercury ND 0.000200 mg/L 1 6/15/2015

Qualifiers:

E

Analyte detected in the associated Method Blank

Value above quantitation range

J Analyte detected below quantitation limits

Reporting Limit

BRL Below Reporting Limit

Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

CHAIN OF CUSTODY RECORD

GeoLabs, Inc. Environmental Laboratories

	Sample	Handling:	circle	choice
1	Filtration	D	one	
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ı			all to at	

1506/17 Special Instructions opecial menuc

GeoLabs,	7 p 78	nnson Land 1.848.7844 .geolabs.c	• f 78				Prese	rvation	La	to do	1 x / x 20	we	-filter +	cken pr	West	NC *	
1-day 2-day		: circle one 3-day 5/7-day		Dat Fax Forma Excel	a Delivery: ci	200	oice (s email PDF		8	GW-1 S-1 QC	MCP Methods DEP Other		irements: circle choice CT RCP (Reasonable Co State / Fed Program - C	nfidence Protocols	3)		
Balalanana	2500	IA Pla	en .		8-3452	1	Phone: Fax: email: Email to				Project: Tom Di Placido II Project PO: Invoice to *: IC E ny				10 17 s+,	nate	olk MA
	GOLLECTIO	I DI	Т			CONT	TAINEI	3		T	Preserative:	IC		alysis Reque		Lab Us	
D A T E	T I M E	S A M P B L Y E		SAMPLE LOCATION A		T Y P E	Q A N I T	M A T H I	G O M P	G R A B	Geolabs SAMPLE NUMBER	disselved		arysis neque	sted	TEMPERATURE	L A B
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Relinquishe	ed by: K	of Bu	A		Date / Ti	me c	-/I(18	673	ĵo	Received by:) Le	6.//125 ce 6/	Date / Time	1/130 1602		





CERTIFICATE OF ANALYSIS

Capital Environmental Attn: Mr. Robert Berger 46 Washburn Street Northborough, MA 01532

Date Received: 9/23/15 Date Reported: 9/30/15

P.O. #:

Work Order #: 1509-20516

DESCRIPTION: NORFOLK MA - WATER TESTING FOR ARSENIC

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA and Massachusetts Contingency Plan (MCP) approved methodologies where applicable. The specific methodologies are listed in the methods column of the Certificate of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.

Certification #: RI LAI00033, MA M-RI015, CT PH-0508, ME RI00015 NH 2537, NY 11726

This Certificate represents all data associated with the referenced work order and is paginated for completeness. The complete Certificate includes one attachment; the original Chain of Custody.

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:

Data Reporting

enc: Chain of Custody

Customer Name:

Capital Environmental

Page 2 of 7

Work Order #:

1509-20516

		Ma	ssD	EP Analytical Proto	ocol Certifica	tion	Form			
Laboratory Nam Project / Location		R.I. Analytical La	borate	ories	Work Order #:		1509-20516	73.1		
Floject / Locatio		ORFOLK MA -	WATI	ER TESTING FOR ARS	SENIC		RI	N :		
This Form provi	des ce	rtifications for th	e follo	owing data set: list Labo	ratory Sample II	D Nu	mber(s):			
	150	9-20516-001 thro	ough	1509-20516-005						
Matrices:	Gro	undwater/Surface	Wate	r Soil / Sedi	ment 🔲	Drink	ing Water A	ir [7 01	her
(OAYAR Profixed).	(che	e Californata prálive	elow							31970
8260 VOC		7470/7471 Hg		MassDEP VPH	8081 Pesticides	3	7196 Hex Cr	MassD	EP AP	Н
CAM II A		CAM III B		CAM IV A	CAM V B		CAM VI B	CAM I		
8270 SVOC CAM II B		7010 Metals CAM III C		MassDEP EPH CAM IV B	8151 Herbicide CAM V C	s 🔲	8330 Explosives CAM VIII A	TO-15 CAM I		
6010 Metals CAM III A		6020 Metals CAM III D	Ø	8082 PCB CAM V A	9014 Total Cyanid /PAC CAM VI A	, 	6860 Perchlorate CAM V111 B			
Affirmative respo	nses	to Questions A thr	ough	F are required for "Presul	mptive Certainty'	statu				
Were all sam	ples rea	ceived in a condition of	onsiste	ent with those described on th	e Chain-of Custody	nrone	rly preserved (including		-	
A temperature)	in the	field or laboratory, and	l prepa	red/analyzed within method l	nolding times?			_ /	Yes	⊔ No
B Were the ana	Were the analytical methods(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? Yes No									
Were all requ C identified per	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all									
D Guidelines for	r the A	equisition and Report	ing of					trol .	Yes	□ No
E method(s) for	r a list (of significant modification	ttions).	h method conducted without		tion(s)	? (Refer to the individual		☐ Yes	
				plete analyte list reported for e rmance standard non-conform		Lovelev	ntad in a laboustani mamatin		☐ Yes	
F (including all	"No" 1	esponses to Question:	A thro	ough E)? equired for "Presumptive			ated in a laboratory narrativ	<u> </u>	X Yes	□ No
				porting limits specified in the			,		Yes	□ No
Data User Note: Data to 310 CMR 40, 1056 (2)(k)	that ach	ieve "Presumptive Certai	nty" sta	ntus may not necessarily meet the	data usability and rep	resenta	tiveness requirements describe	ed in	103	140
H Were all QC p	erform	ance standards specif	ied in t	he CAM protocol(s) achieved	!?				Yes	
				specified in the selected CAI					☐ Yes	X No
				in an attached laboratory						
responsible for and belief, is ac	· obta	ining the informa	ains ation,	and penalties of perju the material contained	ry that, based u d in this analyti	ipon i cal re	my personal inquiry or eport is, to the best or	of those f my kn	e owled	ge
Signature		Soul	1		Position:	La	boratory Director			
Printed Name:		Eric H.	ensen		Date:		9-30-15			

Case Narrative

Date: 9/30/2015

Capital Environmental Attn: Mr. Robert Berger

46 Washburn Street

Northborough, MA 01532

Project: NORFOLK MA - WATER TESTING FOR ARSENIC

Work Order #: 1509-20516

The following exceptions were noted for this Work Order:

Metals by 6020

Question I - Per the client's request, only a subset of the MCP analyte list for SW-846 Method 6020 Metals is reported.

There were no additional exceptions or analytical issues to discuss concerning the testing requirements for the project.

R.I. Analytical Laboratories, Inc. CERTIFICATE OF ANALYSIS

Capital Environmental

Date Received: 9/23/15 Work Order #: 1509-20516

NORFOLK MA - WATER TESTING FOR ARSENIC

Sample # 001 SAMPLE DESCRIPTION: WELL - 1DX

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 9/23/2015 @ 08:55

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZ	ZED	ANALYST
Total Metals Arsenic	0.002	0.001	mg/l	SW-846 6020A	9/30/15	12:46	PJC
Dissolved Metals Analyzed by ICPMS Arsenic ICPMS Digestion	<0.001	0.001	mg/l	SW-846 6020A SW-846 3020A	9/25/15 9/24/15	13:00 21:28	PJC CRC
Digestion date	Digested			SW-846 3020A	9/24/15	8:40	JRW

Sample # 002 SAMPLE DESCRIPTION: WELL - 9DX

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 9/23/2015 @ 09:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZ	ZED	ANALYST
Total Metals							
Arsenic	0.007	0.001	mg/l	SW-846 6020A	9/30/15	13:03	PJC
Dissolved Metals Analyzed by ICPMS							
Arsenic	< 0.001	0.001	mg/l	SW-846 6020A	9/25/15	13:32	PJC
ICPMS Digestion				SW-846 3020A	9/24/15	21:28	CRC
Digestion date	Digested			SW-846 3020A	9/24/15	8:40	JRW

Sample # 003 SAMPLE DESCRIPTION: WELL - MW-5

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 9/23/2015 @ 10:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALY	ZED	ANALYST
Total Metals	.0.004						
Arsenic Dissolved Metals Analyzed by ICPMS	<0.001	100.0	mg/l	SW-846 6020A	9/30/15	13:08	PJC
Arsenic	<0.001	0.001	mg/l	SW-846 6020A	9/25/15	13:38	PJC
ICPMS Digestion				SW-846 3020A	9/24/15	21:28	CRC
Digestion date	Digested			SW-846 3020A	9/24/15	8:40	JRW

R.I. Analytical Laboratories, Inc. **CERTIFICATE OF ANALYSIS**

Capital Environmental

Date Received: 9/23/15

Work Order #: 1509-20516

NORFOLK MA - WATER TESTING FOR ARSENIC

Sample # 004 SAMPLE DESCRIPTION: WELL - MW-3DX

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 9/23/2015 @ 10:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	метнор	DATE ANALYZ	ZED	ANALYST
Total Metals Arsenic	0.12	0.01	mg/i	SW-846 6020A	9/30/15	13:13	PJC
Dissolved Metals Analyzed by ICPMS Arsenic ICPMS Digestion	<0.001	0.001	mg/l	SW-846 6020A SW-846 3020A	9/25/15 9/24/15	13:43 21:28	PJC CRC
Digestion date	Digested			SW-846 3020A	9/24/15	8:40	JRW

Sample # 005 SAMPLE DESCRIPTION: WELL - WS-3

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 9/23/2015 @ 11:15

PARAMETER SAMPLE DET. DAT RESULTS LIMIT UNITS METHOD ANA	ALYZED	ANALYST
Total Metals		
Arsenic <0.001 0.001 mg/l SW-846 6020A 9/30/1	15 13:19	PJC
Dissolved Metals Analyzed by ICPMS		
Arsenic <0.001 0.001 mg/l SW-846 6020A 9/25/1	15 13:49	PJC
ICPMS Digestion SW-846 3020A 9/24/1	15 21:28	CRC
Digestion date Digested SW-846 3020A 9/24/3	15 8:40	JRW

QA/QC Report

Client: Capital Environmental

WO #: 1509-20516 **Date:** 9/30/2015

-Method Blanks Results-

Parameter	Units	Results	Date Analyzed
Dissolved Metals			
Arsenic (mg/l)	mg/l	<0.001	9/25/2015
Metals by ICPMS			
Arsenic	mg/l	<0.001	9/30/2015

Page 7 of 7

-LCS/LCS Duplicate Data Results-

Parameter	CRM Acceptance Limits	Spike Conc	LCS Cone	LCS % Rec	LCS Dup Conc	LCS DUP % Rec	% RPD	Date Analyzed
Dissolved Metals Arsenic (mg/l) Metals by ICPMS		0.050	0.052	104	0.050	100	4	9/25/2015
Arsenic		0.050	0.050	100	0.049	98	2	9/30/2015

41 I Warwio Tel:	.I. Ana Ilinois Av ck, RI 028 800-937- 401-738-	88-3007 Hudson, MA 01749-1331 2580 Tel: 800-937-2580	or Composite	Containers & Type	Preservation Code P	Matrix Code M		I Otal Atsertic	Dissolved Arsenic (Lab Filter_					F
Date Collected	Time Collected	Field Sample Identification	Grab	Jo#		Маш	1 1	2012	Disso					
09-23-15	08:55	Well – 1DX	G	2 P	NP N	GW	2	(x					
09-23-15	09:20	Well – 9 DX	Ğ	2 P	NP N	GW)	(х					
09-23-15	10:10	Well – MW-5	G	2 P	NP N	GW)		x					
09-23-15	10:50	Well – MW-3DX	G	2 P	NP N	GW	2		x					
09-23-15	11:15	Well – WS-3	G	2 P	NP N	GW)	(X					
				S	3									
		Cheff mornagon	$(\times$	/			21,017			Project Information			Table to	JAS.A
Company	Name: Ca	pital Environmental / IC Environmental				+ -	ect Name		Norfolk MA – V	X		k)		
City / State		Washburn Street rthborough, MA 01532				-	Number		Robert Berger	Project Numbe	er: 8-439-2083	Fax: 5	508-393-	5567
	phone: (50	8) 393-5550 Fax: (508) 39 Robert Berger, LSP	3-556	7		Sa	mpled by Quote No	:	Robert Berger	Email report to these addresses:	rberger.capital			
1 PM		Sished By Date Time 9/23/15 12:46 P	8	\rightarrow	- 1	Receive	d By	- 1944 - 1944	Date 12'S	1600	X 5 Bu	Turn Aroundal X usiness days	EMAIL	Report

MCP Data Enhancement QC Package? Yes

Circle if applicable: GW-1

4.8°C

Sample Pick Up Only

X Shipped on ice

Temp. Upon Receipt 4.8 °C

RIAL sampled; attach field hours



CERTIFICATE OF ANALYSIS

Capital Environmental Attn: Mr. Robert Berger 46 Washburn Street Northborough, MA 01532 **Date Received:** 10/20/15 **Date Reported:** 10/27/15 **P.O.** #: 1630

Work Order #: 1510-22628

DESCRIPTION: PROJECT# 1630 BUCKLEY AND MANN, NORFOLK, MA

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA and Massachusetts Contingency Plan (MCP) approved methodologies where applicable. The specific methodologies are listed in the methods column of the Certificate of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.

Certification #: RI LAI00033, MA M-RI015, CT PH-0508, ME RI00015 NH 2537, NY 11726

This Certificate represents all data associated with the referenced work order and is paginated for completeness. The complete Certificate includes one attachment; the original Chain of Custody.

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:

Data Reporting

enc: Chain of Custody

Customer Name:

Capital Environmental

Page 2 of 7

Work Order #:

1510-22628

PROJECT# 1630 BUCKLEY AND MANN, NORFOLK, MA This Form provides certifications for the following data set: list Laboratory Sample ID Number(s): 1510-22628-001 through 1510-22628-005 Matrices: Groundwater/Surface Water Soil / Sediment Drinking Water A CAM Protocol (check all that apply below): 8260 VOC 7470/7471 Hg MassDEP VPH 8081 Pesticides 7196 Hex Cr	TN: Air Other MassDEP APH CAM IX A
PROJECT# 1630 BUCKLEY AND MANN, NORFOLK, MA This Form provides certifications for the following data set: list Laboratory Sample ID Number(s): 1510-22628-001 through 1510-22628-005 Matrices: Groundwater/Surface Water Soil / Sediment Drinking Water A CAM Protocol (check all that apply below): 8260 VOC 7470/7471 Hg MassDEP VPH 8081 Pesticides 7196 Hex Cr	Air Other MassDEP APH
1510-22628-001 through 1510-22628-005 Matrices: ☐ Groundwater/Surface Water ☐ Soil / Sediment ☐ Drinking Water ☐ A CAM Protocol (check all that apply below): 8260 VOC 7470/7471 Hg MassDEP VPH 8081 Pesticides 7196 Hex Cr	MassDEP APH
Matrices: Groundwater/Surface Water Soil / Sediment Drinking Water A CAM Protocol (check all that apply below): 8260 VOC 7470/7471 Hg MassDEP VPH 8081 Pesticides 7196 Hex Cr	MassDEP APH
CAM Protocol (check all that apply below): 8260 VOC 7470/7471 Hg MassDEP VPH 8081 Pesticides 7196 Hex Cr	MassDEP APH
	11:
CAM II A CAM III B CAM IV A CAM V B CAM V I B	
8270 SVOC	TO-15 VOC CAM IX B
6010 Metals CAM III A GOOD Metals CAM V A GOOD	
Affirmative responses to Questions A through F are required for "Presumptive Certainty" status	
Were all samples received in a condition consistent with those described on the Chain-of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	Yes No
Were the analytical methods(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? B	Yes 🗆 No
Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	Yes 🗆 No
Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Cor Guidelines for the Acquisition and Reporting of Analytical Data"?	ntrol X Yes □ No
 a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? 	□ Yes □ No
Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Ouestions A through E)?	
Responses to Questions G,H and I below are required for "Presumptive Certainty" status G Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)? Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements describ	Yes □ No
H Were all QC performance standards specified in the CAM protocol(s) achieved? I Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes No No
¹ All negative responses must be addressed in an attached laboratory narrative.	
l, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry responsible for obtaining the information, the material contained in this analytical report is, to the best of and belief, is accurate and complete.	of those of my knowledge
Signature Position: Laboratory Director	
Printed Name: Eric H. Jensen Date: (0-27-15	

Case Narrative

Date: 10/27/2015

Capital Environmental Attn: Mr. Robert Berger 46 Washburn Street Northborough, MA 01532

Project: PROJECT# 1630 BUCKLEY AND MANN, NORFOLK, MA

Work Order #: 1510-22628

The following exceptions were noted for this Work Order:

Dissolved Metals by 6020

Question I - Per the client's request, only a subset of the MCP analyte list for SW-846 Method 6020 Dissolved Metals is reported.

There were no additional exceptions or analytical issues to discuss concerning the testing requirements for the project.

R.I. Analytical Laboratories, Inc. CERTIFICATE OF ANALYSIS

Capital Environmental

Digestion date

Date Received: 10/20/15
Work Order #: 1510-22628

PROJECT# 1630 BUCKLEY AND MANN, NORFOLK, MA

Sample # 001 SAMPLE DESCRIPTION: SAMPLE TYPE: GRAB	WELL-1	DX	SAMPI	LE DATE/TI	IMIE: 10/20/2015 (@ 09:19		
PARAMETER		SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALY	ZED	ANALYST
Total Metals								
Arsenic		< 0.001	0.001	mg/l	SW-846 6020A	10/22/15	12:29	PJC
Dissolved Metals Analyzed by ICPMS								
Arsenic		< 0.001	0.001	mg/l	SW-846 6020A	10/22/15	15:44	PJC
ICPMS Digestion					SW-846 3020A	10/21/15	19:26	CRC
Digestion date		Digested			SW-846 3020A	10/22/15	8:25	JRW
Sample # 002 SAMPLE DESCRIPTION: SAMPLE TYPE: GRAB	MW-5		CARADI		TRATE: 10/20/2015	2.00.45		
SAMILETTIE. OKAD				LE DATE/TI	IME: 10/20/2015 (w 09: 4 5		
PARAMETER		SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALY	ZED	ANALYS'
Total Metals								
Arsenic		< 0.001	0.001	mg/l	SW-846 6020A	10/22/15	12:35	PJC
Dissolved Metals Analyzed by ICPMS								
Arsenic		< 0.001	0.001	mg/l	SW-846 6020A	10/22/15	16:05	PJC
ICPMS Digestion					SW-846 3020A	10/21/15	19:26	CRC
Digestion date		Digested			SW-846 3020A	10/22/15	8:25	JRW
Sample # 003 SAMPLE DESCRIPTION:	WS-3							
SAMPLE TYPE: GRAB			SAMPI	E DATE/TI	ME: 10/20/2015 @	2 10:30		
PARAMETER		SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALY?	ZED	ANALYST
Total Metals								
Arsenic		<0.001	0.001	mg/l	SW-846 6020A	10/22/15	12:40	PJC
Dissolved Metals Analyzed by ICPMS								
Arsenic		< 0.001	0.001	mg/l	SW-846 6020A	10/22/15	16:21	PJC
ICPMS Digestion					SW-846 3020A	10/21/15	19:26	CRC

SW-846 3020A

10/22/15

8:25

JRW

Digested

R.I. Analytical Laboratories, Inc. CERTIFICATE OF ANALYSIS

Capital Environmental

Date Received: 10/20/15 Work Order #: 1510-22628

PROJECT# 1630 BUCKLEY AND MANN, NORFOLK, MA

Sample # 004 SAMPLE DESCRIPTION: WELL-3DX

SAMPLE TYPE: **GRAB**

SAMPLE DATE/TIME: 10/20/2015 @ 11:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZ	ZED	ANALYST
Total Metals Arsenic	<0.001	0.001	mg/l	SW-846 6020A	10/22/15	12:46	PJC
Dissolved Metals Analyzed by ICPMS Arsenic ICPMS Digestion	<0.001	0.001	mg/l	SW-846 6020A SW-846 3020A	10/22/15 10/21/15	16:27 19:26	PJC CRC
Digestion date	Digested			SW-846 3020A	10/22/15	8:25	JRW

Sample # 005 SAMPLE DESCRIPTION: WELL-9DX

SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 10/20/2015 @ 11:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALY2	ŒD	ANALYST
Total Metals Arsenic	<0.001	0.001	mg/l	SW-846 6020A	10/22/15	13:12	PJC
Dissolved Metals Analyzed by ICPMS Arsenic ICPMS Digestion	<0.001	0.001	mg/l	SW-846 6020A SW-846 3020A	10/22/15 10/21/15	16:32 19:26	PJC CRC
Digestion date	Digested			SW-846 3020A	10/22/15	8:25	JRW

QA/QC Report

Client: Capital Environmental

WO #: 1510-22628 **Date:** 10/27/2015

-Method Blanks Results-

Parameter	Units	Results	Date Analyzed
Dissolved Metals	-		
Arsenic (mg/l)	mg/l	<0.001	10/22/2015
Metals by ICPMS			
Arsenic	mg/l	<0.001	10/22/2015

Page 7 of 7

-LCS/LCS Duplicate Data Results-

Parameter	CRM Acceptance Limits	Spike Conc	LCS Conc	LCS % Rec	LCS Dup Conc	LCS DUP % Rec	% RPD	Date Analyzed
Dissolved Metals Arsenic (mg/l)		0.050	0.043	86	0.043	86	0	10/22/2015
Metals by ICPMS								
Arsenic		0.050	0.052	104	0.046	92	12	10/22/2015

R 41] Warwi Tel:	.I. Ana Illinois Av	88-3007 Hudson, MA 01749-1331 2580 Tel: 800-937-2580 1970 Fax: 978-568-0078	Grab or Composite	# of Containers & Type ^C	Preservation Code P	Matrix Code M	Total Arsenic	Dissolved Arsenic											William 4
Collected	Collected	Field Sample Identification	Ğ	#	ద	Σ	P	ă											
10.20.15	9:19 a	Well-1DX	G	2P	N/I	GW	х	х							1	1			
10.20.15	9:45 a	MW-5	G	2P	N/I	GW	х	x						-	+	+		-1	
10.20.15	10:30 a	WS-3	G	2P	N/I	GW	x	x						1	-	+-		-	
10.20.15	11:10 a	Well-3DX	G	2P	N/I	GW	x	x			-			_	-	+-	+		
10.20.15	11:45 a	Well-9DX	G	2P	N/I	GW	х	x											
													+	-	-		\vdash		_
					_ 5														
																		4	
														+	+	+			_

	Client Inform	ation			Project Information	ER HORONAGE	
Company Name:	Capital Environmental,	LLC	Project Name:	Buckley and Ma	nn, Norfolk, MA	A THE RESIDENCE OF THE PARTY OF	
Address:	46 Washburn Street		P.O. Number:			1630	
City / State / Zip:	Northborough, MA 0153	32	Report To:	Robert Berger	Cell: 508-439		508-393-5567
Telephone:	(508) 393-5550	Fax: (508) 393-5567	Sampled by:		Email report		
Contact Person:	Mr. Robert Berger, LSP		Quote No:		to these rberg addresses:	er.capitalerivironm	ental@gmail.com

Relinquished By	Date	Time 4	Received By	Date	Time
Rob Berger	10.20.2015	1603	ANS	Color	1603
Pan 9,	10/20/97	1605	Ne j	10/20	1608
	11/20	1800	Kushin Phelan	10/20115	1800

	Normal	X	EMAIL Report					
X	5 Business days							
	Rush		(business days)					

Project Comm

Circle if applicable: GW-1, GW-2, GW-3, S-1,

MCP Data Enhancement QC Package?

Lab Use Only Sample Pick Up Only RIAL sampled; attach field hours X Shipped on ice

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH₄Cl, H=HCl, M=MeOH, N=HNO₃, NP=None, S=H₂SO₄, SB=NaHSO₄, SH=NaOH, T=Na₂S₂O₃, Z=ZnOAc Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, O=____

Page 1 of 1



M	Final Report
	Re-Issued Report
	Revised Report
Re	port Date:
30-	Oct-15 14:27

Laboratory Report

Capital Environmental, LLC

46 Washburn Street

Project: Buckley + Mann - Norfolk, MA
Project #: 1630

Northborough, MA 01532

Attn: Robert Berger

Laboratory ID	Client Sample ID	<u>Matrix</u>	Date Sampled	Date Received
SC13948-01	Well-1DX	Ground Water	20-Oct-15 09:19	21-Oct-15 15:10
SC13948-02	MW-5	Ground Water	20-Oct-15 09:45	21-Oct-15 15:10
SC13948-03	WS-3	Ground Water	20-Oct-15 10:30	21-Oct-15 15:10
SC13948-04	Well-3DX	Ground Water	20-Oct-15 11:10	21-Oct-15 15:10
SC13948-05	Well-9DX	Ground Water	20-Oct-15 11:45	21-Oct-15 15:10

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.

All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110 Connecticut # PH-0777 Florida # E87936 Maine # MA138 New Hampshire # 2538 New Jersey # MA011 New York # 11393 Pennsylvania # 68-04426/68-02924 Rhode Island # LAO00098 USDA # S-51435



Authorized by:

June O'Connor Laboratory Director

Eurofins Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 10 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our Quality web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (PA-68-04426).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Eurofins Spectrum Analytical, Inc. Project #: 1630											
Project Location: Buckley + Mann - Norfolk, MA RTN:											
This	form provides cer	tifications for the follow	ving data set:	C13948-01 through SC1	3948-05						
Matr	ices: Ground Wa	ter									
CAM	Protocol										
	8260 VOC 7470/7471 Hg MassDEP VPH 8081 Pesticides 7196 Hex Cr MassDEP AI CAM II A CAM III B CAM IV A CAM V B CAM VI B CAM IX A										
	270 SVOC AM II B	TO-15 VOC CAM IX B									
/	010 Metals AM III A	6860 Perchlorate CAM VIII B									
		Affirmative response	es to questions A through	F are required for Presu	mptive Certainty'status						
A	Were all samples preserved (includ times?	received in a condition ling temperature) in the	consistent with those described or laboratory, and pr	cribed on the Chain of Cu epared/analyzed within m	stody, properly aethod holding	Yes ✓ No					
В	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?										
С	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?										
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?										
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? Ye										
F	Were all applicab	ole CAM protocol QC an	d performance standard r ling all "No" responses to	non-conformances identification (a) questions A through E)?	ed and	✓ Yes No					
		Responses to que	stions G, H and I below a	re required for P resump	tive Certainty'ktatus	-					
G	Were the reportin			cified in the selected CAN		✓ Yes No					
Data l	User Note: Data tha		tainty'status may not necess	arily meet the data usability							
Н	Were all QC perfe	ormance standards speci	fied in the CAM protocol	(s) achieved?		✓ Yes No					
I											
All ne	gative responses are	addressed in a case narra	tive on the cover page of th	is report.		-					
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.											
	goros)										
					June O'Connor Laboratory Director Date: 10/30/2015						

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 1.8 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method. Regulatory limits may not be achieved if specific method and/or technique was not requested on the Chain of Custody.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

In accordance with 40 CFR 136.3, samples for dissolved metals analysis must be filtered within 15 minutes of collection and before adding preservatives. Samples not filtered in the field within 15 minutes of collection are not within method requirements.

There is no relevant protocol-specific QC and/or performance standards non-conformances to report.

Sample Acceptance Check Form

Client:	Capital Environmental, LLC			
Project:	Buckley + Mann - Norfolk, MA / 1630			
Work Order:	SC13948			
Sample(s) received on:	10/21/2015			
The following outlines t	he condition of samples for the attached Chain of Custody upon receipt.			
		Yes	No	N/A
Were custody se	als present?		√	
Were custody se	als intact?			\checkmark
Were samples re	seeived at a temperature of $\leq 6^{\circ}$ C?	\checkmark		
Were samples co	poled on ice upon transfer to laboratory representative?	\checkmark		
Were sample co.	ntainers received intact?	\checkmark		
	roperly labeled (labels affixed to sample containers and include sample ID, site project number and the collection date)?	$\overline{\checkmark}$		
Were samples as	ecompanied by a Chain of Custody document?	√		
include sample	Custody document include proper, full, and complete documentation, which shall D, site location, and/or project number, date and time of collection, collector's name, e, sample matrix and any special remarks concerning the sample?			
Did sample conf	ainer labels agree with Chain of Custody document?	\checkmark		
Were samples re	ceived within method-specific holding times?			П

Summary of Hits

Lab ID:

Client ID:

Parameter

Result

Flag Reporting Limit

Units

Analytical Method

No hits detected.

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Well-1D					Project #		<u>Matrix</u> Ground W		ection Date			cceived	
SC13948								20					
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert
Total Met	tals by EPA 200/6000 Series	Methods											
	Preservation	Field Preserved		N/A			1	EPA 200/6000 methods			LNB	1520017	7
	tals by EPA 6000/7000 Series												
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0027	1	SW846 6010C	28-Oct-15	29-Oct-15	tbc	1520417	7
Soluble M	letals by EPA 200/6000 Serie												
	Filtration	Lab Filtered	MF	N/A			1	EPA 200.7/3005A/601 0		21-Oct-15 16:45	LNB	1520043	3
Soluble M	letals by EPA 6000/7000 Ser	ies Methods						v					
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0027	1	SW846 6010C	28-Oct-15	29-Oct-15	tbc	1520419)
	dentification			011									
MW-5					Project #		Matrix		ection Date			ceived	
SC13948	1-02			16	530	Ground Water 20-Oct-15 09:4			:45	21-Oct-15			
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert
Total Met	tals by EPA 200/6000 Series	Methods											
	Preservation	Field Preserved		N/A			1	EPA 200/6000 methods			LNB	1520017	•
	als by EPA 6000/7000 Series	Methods											
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0027	1	SW846 6010C	28-Oct-15	29-Oct-15	tbc	1520417	•
Soluble M	letals by EPA 200/6000 Serie	es Methods											
	Filtration	Lab Filtered	MF	N/A			1	EPA 200.7/3005A/601 0	21-Oct-15 16:45	21-Oct-15 16:45	LNB	1520043	;
Soluble M	letals by EPA 6000/7000 Ser	ies Methods											
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0027	1	SW846 6010C	28-Oct-15	29-Oct-15	tbc	1520419)
	dentification			011 4.7			2.7.1						
WS-3					Project #		Matrix		ection Date	-		Received	
SC13948	-03			10	30		Ground W	ater 20	-Oct-15 10	:30	21-	Oct-15	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Total Met	als by EPA 200/6000 Series	Methods											
	Preservation	Field Preserved		N/A			1	EPA 200/6000 methods			LNB	1520017	
Total Met	als by EPA 6000/7000 Series	Methods											
7440-38-2	Arsenic	< 0.0040		mg/i	0.0040	0.0027	1	SW846 6010C	28-Oct-15	29-Oct-15	tbc	1520417	
Soluble M	letals by EPA 200/6000 Serie	es Methods											
	Filtration	Lab Filtered	MF	N/A			1	EPA 200.7/3005A/601 0	21-Oct-15 16:45	21-Oct-15 16:45	LNB	1520043	
	letals by EPA 6000/7000 Ser			_									
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0027	1	SW846 6010C	28-Oct-15	29-Oct-15	tbc	1520419	

Sample Identification Well-3DX SC13948-04		Client Project #			<u>Matrix</u> Ground Water		ection Date O-Oct-15 11		Received 21-Oct-15				
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Total Met	als by EPA 200/6000 Se	eries Methods										_	
	Preservation	Field Preserved		N/A			- 1-	EPA 200/6000 methods			LNB	1520017	
Total Met	als by EPA 6000/7000 S	Series Methods											
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0027	1	SW846 6010C	28-Oct-15	29-Oct-15	tbc	1520417	
Soluble M	letals by EPA 200/6000	Series Methods											
	Filtration	Lab Filtered	MF	N/A			1	EPA 200.7/3005A/601 0	21-Oct-15 16:45	21-Oct-15 16:45	LNB	1520043	i
Soluble M	etals by EPA 6000/700	0 Series Methods						· ·					
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0027	1	SW846 6010C	28-Oct-15	29-Oct-15	tbc	1520419	
Sample Id	dentification												
Well-9DX	ζ.				Project #	<u>Matri</u>			ection Date			<u>ceived</u>	
SC13948	-05			16	530		Ground W	ater 20	-Oct-15 11	:45	21-	Oct-15	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Total Meta	als by EPA 200/6000 Se	eries Methods											
	Preservation	Field Preserved		N/A			1	EPA 200/6000 methods			LNB	1520017	
Total Meta	als by EPA 6000/7000 S	Series Methods											
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0027	1	SW846 6010C	28-Oct-15	29-Oct-15	tbc	1520417	
Soluble M	etals by EPA 200/6000	Series Methods											
	Filtration	Lab Filtered	MF	N/A			1	EPA 200.7/3005A/601 0	21-Oct-15 16:45	21-Oct-15 16:45	LNB	1520043	
Soluble M	etals by EPA 6000/700	O Series Methods											

0.0040 0.0027

SW846 6010C 28-Oct-15 29-Oct-15 tbc

7440-38-2 Arsenic

< 0.0040

mg/l

1520419

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1520417 - SW846 3005A										
Blank (1520417-BLK1)					Pr	epared: 28-	Oct-15 An	alyzed: 29-O	ct-15	
Arsenic	< 0.0040		mg/l	0.0040						
LCS (1520417-BS1)					Pre	epared: 28-	Oct-15 An	alyzed: 29-0	ct-15	
Arsenic	1.28		mg/l	0.0040	1.25		103	85-115		
LCS Dup (1520417-BSD1)					Pre	epared: 28-	Oct-15 And	alyzed: 29-O	et-15	
Arsenic	1.26		mg/l	0.0040	1.25		101	85-115	2	20

Soluble Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1520419 - SW846 3005A										
Blank (1520419-BLK1)					Pre	epared: 28-	Oct-15 Ana	alvzed: 29-O	ct-15	
Arsenic	< 0.0040		mg/l_	0.0040						
LCS (1520419-BS1)					Pre	epared: 28-	Oct-15 Ana	alyzed: 29-O	ct-15	
Arsenic	1.17		mg/l	0.0040	1.25		94	85-115		
LCS Dup (1520419-BSD1)					Pre	epared: 28-	Oct-15 And	alyzed: 29-O	ct-15	
Arsenic	1.29		mg/l	0.0040	1.25		103	85-115	10	20
Duplicate (1520419-DUP1)			Source: So	C13948-02	Pre	epared: 28-	Oct-15 Ana	alyzed: 29-O	ct-15	
Arsenic	< 0.0040		mg/l	0.0040		BRL				20
Matrix Spike (1520419-MS1)			Source: So	C13948-03	Pre	epared: 28-	Oct-15 Ana	alyzed: 29-O	ct-15	
Arsenic	1.19		mg/l	0.0040	1.25	BRL	95	75-125		
Matrix Spike Dup (1520419-MSD1)			Source: SO	213948-03	Pre	epared: 28-	Oct-15 Ana	alyzed: 29-O	ct-15	
Arsenic	1.30		mg/l	0.0040	1.25	BRL	104	75-125	9	20
Post Spike (1520419-PS1)			Source: SO	C13948-03	Pre	epared: 28-	Oct-15 Ana	alyzed: 29-0	ct-15	
Arsenic	1.32		mg/l	0.0040	1.25	BRL	106	80-120		

Notes and Definitions

dry Sample results reported on a dry weight basis

NR Not Reported

RPD Relative Percent Difference

MF In accordance with 40 CFR 136.3, samples for dissolved metals analysis must be filtered within 15 minutes of collection

and before adding preservatives. Samples not filtered in the field within 15 minutes of collection are not within method

requirements.

<u>Laboratory Control Sample (LCS)</u>: A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

<u>Matrix Spike</u>: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

<u>Surrogate</u>: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by: June O'Connor

CHAIN OF CUSTODY RECORD

Special Handling:	1
Standard TAT 7 to 10 business days	4
Rush TAT - Date Needed:	
All TATs subject to laboratory approval	
Min. 24-hr notification needed for rushes	
Samples disposed after 60 days unless otherwise instructed	L.

Page of SPECTRUM ANALYTICAL, INC. Report To: CAp, + 1 Environmental, LLC 46 WASHBURN ST Northburo, MA 01532 Invoice To: SAME AS Repro Project No: Location: Telephone #: P.O No.: 1630 Project Mgr: Quote/RQN: 2=HCI 1=Na₂S2O₃ F=Field Filtered 4=HNO₃ 5=NaOH 6=Ascorbic Acid List Preservative Code below: QA/QC Reporting Notes: II= ICE 7=CH3OH 8-NaHSO₄ 9=Deionized Water 10=H₃PO₄ * additional charges may appply 4 11 Containers DW=Dinking Water GW=Groundwater SW=Surface Water WW=Waste Water **Analysis** CT DPH RCP Report? O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas Standard No OC ☐ DQA* ASP A* ASP B* # of Plastic ☐ NJ Reduced* ☐ NJ Full* G= Grab C=Compsite ☐ Tier II* Tier IV* Other: Lab ID: Sample ID: Date: State-specific reporting standards: 10.20.15 919A G GW G GW 10.20.15 945A 10.20.15 1030A G GW G GW 10.20.15 10-20.15 1145A Relinquished by: Received by: Time: Temp °C EDD format: E-mail to: Robe Capital - Enviso . Cum

Present Intact Broken

☐ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

Condition upon receipt: Custody Seals:

Ambient MIced

EXHIBIT C



DIVISION OF FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581 p: (508) 389-6300 | f: (508) 389-7890

MASS.GOV/MASSWILDLIFE

Jack Buckley, Director

July 13, 2017

Thomas DiPlacido
DiPlacido Development Corp.
850 Franklin Street, Suite 8
Wrentham MA 02093

RE: Project Location: 17, 65 and 67 Lawrence Street, Norfolk

Project Description: The Preserve at Abbyville Residential Development

NHESP File No.: 13-32057

Dear Applicant:

Thank you for submitting the MESA Project Review Checklist, site plans (dated March 15, 2017, Overview Plan dated April 25, 2017) and other required materials to the Natural Heritage and Endangered Species Program of the MA Division of Fisheries & Wildlife (the "Division") for review pursuant to the Massachusetts Endangered Species Act (MESA) (MGL c.131A) and its implementing regulations (321 CMR 10.00).

Based on a review of the information that was provided and the information that is currently contained in our database, the Division has determined that this project, as currently proposed, **will not result in a prohibited Take** of state-listed rare species. This determination is a final decision of the Division of Fisheries & Wildlife pursuant to 321 CMR 10.18. Any changes to the proposed project or any additional work beyond that shown on the site plans may require an additional filing with the Division pursuant to the MESA. This project may be subject to further review if no physical work is commenced within five years from the date of issuance of this determination, or if there is a change to the project.

Please note that this determination addresses only the matter of state-listed species and their habitats. If you have any questions regarding this letter please contact Jesse Leddick, Endangered Species Review Biologist, at (508) 389-6386.

Sincerely,

Thomas W. French, Ph.D.

Assistant Director

cc: Norfolk Conservation Commission

S.M. Lorusso & Sons, Inc.

Stephen Mann, Buckley & Mann, Inc.

Diana Walden, BSC Group, Inc.

EXHIBIT D

EXHIBIT D

PUBLIC INVOLVEMENT PLAN INTERVIEW FEEDBACK FORMER BUCKLEY & MANN SITE NORFOLK, MASSACHUSETTS RELEASE TRACKING NUMBER 2-3000173

The text provided in italic type includes the content of the letter received from Sandra Myatt, on behalf of the PIP petitioners, on July 17, 2018. Buckley & Mann's response to each question is presented in bold type after each question.

TO: Steve Vetere Vetere@mabbett.com

RE: Public Involvement Plan Interview Request

Former Buckley & Mann Site

RTN 2-3000173

CC: Mr. McCarthy, Norfolk Town Planner rmccarthy@norfolk.ma.us

Mr. Hathaway, Norfolk Town Administrator jhathaway@norfolk.ma.us

Norfolk Board of Health Betsy Fijol <u>bfijol@norfolk.ma.us</u>

Norfolk Conservation Commission and Zoning Board of Appeals abrady@norfolk.ma.us

Norfolk Conservation Commission, Agent Janet DeLonga jdelonga@norfolk.ma.us

Board of Selectmen, Chair Mr. Lehan jlehan@norfolk.mamus

Board of Selectmen, Vice Chair jpalumbo@norfolk.ma.us

Board of Selectmen, Clerk kkalkut@norfolk.ma.us

Town Clerk, Carol Greene cgreene@norfok.ma.us

Norfolk Public Works dpw@norfolk.ma.us

Mr. Joseph Laughton, MADEP Waste Site Cleanup <u>Joseph.laughton@state.ma.us</u>

From: Sandra Myatt and Subgroup of PIP Petitioners

Mr. David Dimond digitaldimond@gmail.com

July 17, 2018

Dear Mr. Vetere,

We are in receipt of your request for information describing our concerns for the disposal site at 17 Lawrence Street as you prepare the Draft Public Involvement Plan. This letter, from a subset of the PIP petitioners, states some of our concerns. We expect that as more data becomes available as to the horizontal and vertical extent of contamination, more questions and concerns will arise. Most of our concerns stem from the fact that the retracted AUL is not the only contaminated portion of the property. We would like to know what other hazardous materials exist, where they exist, and what health risks are associated with the combination of contaminants found. We are concerned with how the water, wildlife and environmental receptors are impacted. We would like to know if contamination has reached into any bedrock fractures which supply water to private and public wells. Lastly, we want to protect local water supplies and area residents from harm.

1. **Determine the horizontal and vertical extent of contamination**: Include downgradient status via various waterways (Mill River, trenches and the Tail Race) as well as Bush Pond. Vertical

delineation shall include method to evaluate bedrock aquifers such as examination of area private wells and the Gold Street well for chemicals known to be on site. Provide 3D mapping of contamination plumes.

Response: One of the objectives of the Phase II investigation will be to delineate the horizontal and vertical extent of contamination. The Mill River, Carbonizer Trench, Tail Race, and Bush Pond will be investigated. No bedrock groundwater assessment is planned for the Phase II because the project team does not believe that it is warranted at this time. Groundwater sampling data from existing wells screened in the overburden aquifer have not encountered evidence of contamination, and the contaminants-of-concern at the Site (metals, petroleum hydrocarbons, PAHs) do not have the physical characteristics that are typically necessary to migrate into the bedrock.

2. Online Repository of Information: This online repository is in addition to public library repositories in Norfolk and Franklin. We would like reports/documents/sampling data etc. uploaded as they are obtained by Mabbett or other LSPs working on this site, including Weston and Sampson. Items should include photographs and other pertinent material collected to date and continuing throughout the site remediation. PIP process is to continue if possible, through future cleanup/audits.

Response: The project team will work with the Town to make interim submittals available to the public for review. The exact mechanism to be used is unknown at this time.

3. **Consider 200-year history of factory operations:** Locations which reflect the earliest structures and various operations through the centuries should be tested, including locations when it was a papermill, a tannery, as well as the textile operation's most recent history. Please contact previous employees of the mill to determine undocumented dumping practices.

Response: The project team is reviewing historical information regarding manufacturing operations that occupied the Site prior to Buckley & Mann and will incorporate this information into the Phase II Scope of Work. Additional interviews with people familiar with historical site operations are being interviewed to learn more about the processes that were employed at the Site during its use as a textile manufacturer.

4. **Potential Vernal Pool Assessment/Certification:** Perform appropriate testing of Lagoons 1 & 2 and Carbonizer Lagoon and other natural waterbodies on site for contamination and wildlife. Report results to Natural Heritage and Endangered Species Program for vernal pool certification or provide pathway for certification with public involvement. These waterbodies would be tested as part of horizontal extent.

Response: The Phase II Scope of Work includes sediment and surface water sampling in lagoons and other water bodies in the vicinity of the Site.

5. **Risk Assessment:** Evaluate risks associated with substances found to determine if significant risk to human health or environment exists. Consider substances alone and in combination with each other. Perform health survey and report findings. Discuss pathways for exposure including air and water.

Response: A Method 3 human health and environmental risk assessment will be performed once the nature and extent of contamination has been delineated. The risk assessment will follow MassDEP protocols.

Report Exceedances of MCP Standards. Document when exceedances in Mabbett's April 26, 2018
 Project Status Summary, will be reported to proper authorities. Specify reporting schedule for future exceedances.

Response: Exceedances encountered during the March and April 2018 sampling efforts did not trigger any new reporting requirements. The metals and one PAH detected above reportable concentrations did not represent a new reporting condition. However, Buckley & Mann did submit a revision to the notification to document the specific metals and PAH that were detected. Buckley & Mann will report future release conditions as warranted and within the time frames established in the MCP.

7. **Answer Previous PIP Concerns:** A previous PIP on this same property occurred in the early 2000s. These concerns are being sent separately to be addressed during this investigation.

Response: The project team will address all releases in accordance with the Massachusetts Contingency Plan to document a condition of No Significant Risk and achieve a Permanent Solution.

8. **Zone II Considerations and Protections:** Provide protections for water quality in this recharge zone by examining the filtration capacity of the overburden and the impact of its possible removal considering the results of horizontal/vertical disposal site delineation. Include bedrock aquifer impact if uncontaminated overburden is removed as proposed.

Response: The scope of the PIP is limited to MCP and disposal site issues. The nature and extent of contamination in groundwater will be characterized to support a Permanent Solution with respect to groundwater contamination. If elevated concentrations of one or more contaminant are detected in a monitoring well that is located within the Zone II, then the Site would be reclassified as Tier 1. Impacts on groundwater from the removal of clean soil at the Site are beyond the scope of the MCP process.

9. **Disposal Site Boundaries Evaluated:** Once the disposal site boundaries have been specified, the relationship of the disposal site, to the proposed Abbyville project needs to be reviewed to evaluate the design and safety to existing and future residents. Also re-evaluate the environmental impacts from the development such as the rise in water table from wastewater treatment plant considering the disposal site and possible post clean-up configuration.

Response: The proximity of the disposal site boundary to residential homes will be a key consideration for the cleanup strategy. The human health risk assessment will necessarily consider the increased potential for exposure to contaminated environmental media that would result from the construction of new homes in close proximity to the Site. Potential environmental impacts from the wastewater treatment plan are beyond the scope of the MCP process.

10. **Establish Buffer Zones at Property Boundaries:** Considering that long term monitoring of the site post-remediation may be necessary, residents would like a buffer zone of existing vegetation 500'

from the property lines to remain into perpetuity. Monitoring wells in these buffer zones should be established along the perimeter. Consider and document all possible impacts post-cleanup, including back diffusion of contaminants, their long-term existence in the soil and their future migration and degradation. Establish if geochemical conditions favor degradation for long term management of any remaining onsite plumes. More discussion of active and sustained treatment of contaminants will be necessary once the disposal site has been fully delineated.

Response: The Phase II Comprehensive Site Assessment will evaluate the fate and transport of contaminants, and the site cleanup strategy will be designed to be protective of human health and the environment in perpetuity with consideration given to all of the potential migration pathways and exposure routes for any contaminated media remaining on site.

Thank You,

We look forward to working cooperatively with all parties to understand and manage this site for the safest outcome possible and to achieve a condition of no significant risk to human health or the environment.

Sandra Myatt
PIP Petitioner and a subset of PIP Petitioners