Attachment 7

Correspondence Relating to Electrical Vaults (Manholes)

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February 11, 2015

VIA E-MAIL AND CERTIFIED MAIL

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Re: Pilgrim Nuclear Power Station's National Pollutant Discharge Elimination System permit

Dear Messrs. Papadopoulos, Ferris and Ms. DeMeo,

Pilgrim Nuclear Power Station ("PNPS" or the "Station") operates subject to and with the benefit of a current, administratively continued National Pollutant Discharge Elimination System ("NPDES") permit, No. MA0003557, jointly issued by the United States Environmental Protection Agency ("EPA") and the Massachusetts Department of Environmental Protection ("MDEP"). *See, e.g.*, Correspondence from David M. Webster, EPA to Jacob Scheffer, Entergy, *re: Pilgrim Station's National Pollutant Discharge Elimination System (NPDES) Permit* (Oct. 25, 2004) (acknowledging PNPS's NPDES permit is administratively continued).[1]

[1] EPA, MDEP and PNPS have worked diligently to maintain the current permit dynamic by ensuring that PNPS' submission of relevant NPDES information is up to date. Thus, for instance, PNPS has clarified aspects of its NPDES Permit application in application updates provided to EPA and MDEP. *See, e.g.*, Correspondence from E.T. Boulette, Boston Edison to Edward K. McSweeney, EPA, *re: NPDES Permit Renewal Application for Pilgrim Station* (Oct. 25, 1995) (hereinafter "PNPS 1995 Application"); Correspondence from J.F. Alexander, Entergy to Edward K. McSweeney, EPA, *re: NPDES Permit Renewal Application for Pilgrim Station* (USNRC ADAMS Accession No. ML993430072) (Dec. 1, 1999) (updating PNPS's prior Application). Likewise, PNPS has performed continuing environmental analysis, and provided multiple substantive updates to major aspects of its NPDES permit application file. *See, e.g.*, Correspondence from Elise N. Zoli, Counsel for Entergy to

This correspondence respectfully addresses, for purposes of clarifying the historic record and responding to recent EPA questions in connection with renewal of PNPS's NPDES permit, the existing framework for stormwater discharges at the Station, with a focus on the scope of that coverage to include water collected in manholes that are part of the dewatering system for essential, thoroughly typical Station equipment and systems.

By way of roadmap for this correspondence, a brief Background section follows. Thereafter, in the Discussion section below, this correspondence outlines how our review has underscored that PNPS's permitting system for stormwater was developed and directed by EPA and MDEP in the mid-1990's as an interim measure, pending reissuance of PNPS's NDPES permit. Correspondence from Jane Downing, EPA to E.T. Boulette, Boston Edison (Mar. 1, 1996) (noting PNPS's NPDES Permit is expected to be renewed in 1998). The Discussion section also reflects EPA, MDEP's and PNPS's consistent efforts to address stormwater in an environmentally responsible manner, including one that comports with applicable Nuclear Regulatory Commission ("NRC") mandates and good industry practice for an important, regional baseload facility. Finally, and importantly, this correspondence suggests a reasonable and appropriate approach to what we understand is the imminent renewal of PNPS's NPDES permit.

Background

The PNPS site is approximately 1,800 acres, with the location of major structures, systems, components, equipment for the steam-electric generating Station consolidated on approximately 140 waterfront acres. *See, e.g.*, NRC, *Generic Supplemental Environmental Impact Statement for License Renewal of Nuclear Plants: Regarding Pilgrim Nuclear Power Station, Supplement 29*, 2-1 (July 2007), *available at:* http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1437/supplement29/v1/index.html. As with all steam-electric generating facilities, particularly large-scale baseload facilities such as PNPS, system components include the electric conduits that allow electricity to be delivered to the grid on a 24/7 basis, excepting scheduled maintenance outages – the very purpose of these facilities. *Id.* at 2-4. This equipment, to maintain its proper function, must be protected from salt spray, kept dry and, where rainfall infiltration creates a risk of arcing or comparable failures, dewatered. PNPS assures proper equipment function in many ways, including through the use of manholes designed to collect rainwater

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Damien Houlihan, EPA, *re: Response to Information Request in support of NPDES Permit Reissuance* (July 1, 2008); Correspondence from Ruth Silman, Counsel for Entergy to George Papadopoulos, EPA (Aug. 18, 2014). EPA and MDEP's strides to issue a renewed NPDES permit nonetheless have been constrained by the state of flux of the federal Clean Water Act Section 316(b) regulations, which are the focus of PNPS' renewed NPDES permit. *See, e.g.*, EPA, *Cooling Water Intakes – Rulemaking History*, http://water.epa.gov/lawsregs/lawsguidance/cwa/316b/rules.cfm (last visited Feb. 102, 2015) (providing history of 316(b) rulemaking starting with issuance of proposed rules for existing facilities in 2002); Correspondence from Jane Downing, EPA to E.T. Boulette, Boston Edison (Mar. 1, 1996) ("... the application is considered to be administratively and technically complete ... reissuance of the NPDES permit, however, will be delayed due to no fault of Boston Edison."). This dynamic, in connection with understandable departures of historic PNPS and agency personnel, *e.g.*, Nick Prodany, over time supports our detailed historic review here. Indeed, we have appreciated the opportunity to painstakingly review our own files.

and salt spray, removing it from the vicinity of Station equipment, including electric cables. These manholes have been in place since well before 1991.

Indeed, because of its location and a history of arcing at the switchyard that became an NRC focus in the early 1980's, PNPS has been vigilant about managing against the effects of sea and rainwater on electrical equipment. *See, e.g.*, NRC, *Information Notice 93-95: Storm-Related Loss of Offsite Power Events Due to Salt Buildup on Switchyard Insulators* (Dec. 13, 1995), *available at:* http://www.nrc.gov/reading-rm/doc-collections/gen-comm/info-notices/1993/in93095.html (hereinafter "NRC Information Notice") ("Since 1982, the Boston Edison Company Pilgrim station has also experienced several loss of offsite power events when *heavy ocean storms* deposited salt on the 345 kV switchyard causing the insulators to arc to ground.") (emphasis added); Enercon Services, Inc., *Enercon Response to Tetra Tech's Indian Point Closed-Cycle Cooling System Retrofit Evaluation Report*, prepared for Entergy Nuclear Indian Point 2, LLC, and Entergy Nuclear Indian Point 3, LLC (Dec. 2013), p. 28-29 ("Periodic salt deposition *during storm events has* caused electrical arcing at several plants," including PNPS), Figure 7-1 (providing picture of arcing) (excerpt enclosed) (emphasis added); NRC & EPRI, *EPRI/NRC-RES Fire PRA Methodology for Nuclear Power Facilities*, Final Report, NUREG/CR-6850 (Sept. 2005) (examining fires caused by, *inter alia*, arcing). PNPS's history of managing against the risks of storm damage includes the construction of manholes employed as rainwater (and theoretically flood) collection devices to dewater electric components and other systems.[2]

As detailed below, PNPS possesses all necessary authorizations for discharging dewatered manhole water through its stormwater discharge outfalls, and monitors and reports those discharges consistent with its authorizations and sound environmental stewardship.[3]

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[2] EPA historically modified PNPS's administratively continued NPDES Permit, an effective way to keep the permit current. *See, e.g.,* NPDES Permit Clarification Letters (authorizing changes under PNPS NPDES Permit); EPA NPDES Permit No. MA0003557, (Aug. 30, 1994) (noting 1994 modification).

[3] EPA also inquired as to whether PNPS would like to add specific tritium limits in its renewed NPDES permit. We respectfully submit that is not necessary at this time. PNPS's NPDES Permit does not regulate the discharge of radiological releases, *e.g.,* tritium. *See Train* v. *Colorado Public Interest Research Group, Inc.* 426 U.S. 1 (1976) ("We conclude, therefore, that the "pollutants" subject to regulation under the FWPCA do not include source, byproduct, and special nuclear materials, and that the EPA Administrator has acted in accordance with his statutory mandate in declining to regulate the discharge of such materials."). This is because NRC maintains primary responsibility for the regulation of radiological discharges from NRC-licensed facilities, *see id.*, including *by implementing EPA-derived standards. See, e.g.*, EPA, *EPA's Radiation Protection Standards* (Sept. 2013). Consistent with this federal regulatory program, PNPS monitors and reports on its radiological discharges consistent with NRC regulatory mandates, including "as low as reasonably achievable" or ALARA mandates, for radiological releases. *See, e.g.,* PNPS, *Annual Radioactive Effluent Report: January 1 through December 31, 2013* (May 14, 2014); NRC, *Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Regarding Pilgrim Nuclear Power Station - Final Report, Supplement 47*, pp. 2-98 to 2-99 (July 2007), *available at:* http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1437/supplement29/v1/index.html ("[PNPS] monitors the radiation and radioactivity released to the environment as a result of [its] operation. The results of measurements of radiological releases and environmental monitoring are summarized in two annual reports .... Limits for all radiological releases ... are designed to meet Federal standards ...."). That said, PNPS remains committed to full disclosure here. While PNPS's radiological effluent reports are publicly available, we also will provide copies to EPA routinely or upon request,

Discussion of PNPS's Authorizations for Manhole Dewatering

Since at least 1991, PNPS has been authorized, subject to its NPDES-permit monitoring obligations, to discharge "stormwater runoff" and other discharges classified as stormwater to Cape Cod Bay through existing outfalls and a miscellaneous storm drain. Specifically, PNPS's existing NPDES permit (as modified in 1994) includes various outfalls, specifically "004, 005, 006 and 007 yard drains," with a variety of discharge limits and monitoring requirements. *See, e.g.*, EPA, NPDES Permit No. MA0003557 (Aug. 30, 1994) (modifying PNPS NPDES Permit) (hereinafter "PNPS NPDES Permit"). The NPDES Permit modification states that "[t]he discharge shall consist only of stormwater runoff," with the definition of stormwater for PNPS including, for instance, process water, such as the discharge of demineralizer system and hydrogen injection system effluents through outfall 005. *See* PNPS NPDES at 12, Part A.7.i ("Yard Drain #005 may also accommodate demineralizer system and hydrogen injection system effluents ..."). Further, the Water Flow Diagram accompanying the NPDES permit reflects stormwater on a generic, site-wide basis going via these four "yard drains" to Cape Cod Bay. *See* PNPS NPDES at Attachment A.

Notably, the EPA attachment to the 1994 modification to PNPS's NPDES permit includes newly issued September 1, 1993 "Part II" NPDES conditions which contain the operative definition of stormwater: "storm water runoff, snow melt runoff, and surface runoff and *drainage*." *See* PNPS NPDES Permit at Part II, p. 22 (definition) (emphasis added); *see also* 40 C.F.R. § 122.26(b) (13) (employing the same definition). "Runoff" is defined as "*rainwater, leachate,* or other liquid that drains overland on any part of a land surface and runs off the land surface." *See* PNPS NPDES Permit at Part II, p. 30 (emphasis added). The NPDES Permit requires monitoring of these stormwater discharges on a twice yearly basis during significant storm events, an important acknowledgement that runoff varies with storm events. *See* PNPS NPDES Permit at 12. Thus, and in sum, PNPS's NPDES permit expressly contemplates the discharge of rainwater, whether as "drainage" or "leachate" from the surface, as well as the process waters that EPA and MDEP jointly authorized, be discharged as "stormwater" and other exempt discharges. Importantly, nothing in our files relating to PNPS's NPDES permit suggests that authorized stormwater discharges were limited to a particular portion of the site, were authorized solely from enumerated sources or were subject to volumetric limitations. Likewise, nothing in our files suggests that EPA or MDEP considered stormwater to be other than as would be expected from a large-scale nuclear power plant, one at which dewatering of subsurface electric cables would be customary and expected.

Further, PNPS's has historically monitored and reported its stormwater discharges consistent with its NPDES permit requirements. As EPA is aware, the PNPS NPDES Permit stormwater monitoring requirements (*see* PNPS NPDES Permit at p. 12) govern PNPS' ability to collect monitoring samples on a regular basis. Specifically, the permit requires stormwater outfalls be monitored twice a year during

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whichever option the agency prefers. *See, e.g.*, NRC, Radioactive Effluent and Environmental Reports for Pilgrim, http://www.nrc.gov/reactors/operating/ops-experience/tritium/plant-specific-reports/pilg.html (last visited Feb. 2, 2015) (providing PNPS' radiological effluent reports for 2005-2013).

the months of April and September, specifying monitoring by "grab sample … within the first hour of the start of a significant storm event … [from] some representative point prior to discharge into the receiving waters." *See* PNPS NPDES Permit at p. 12, Parts A.7.g, and A.7.h. Samples are sometimes unavailable under these monitoring specifications for a variety of reasons, including: (1) a lack of flow from outfalls during the first hour of a significant storm event, which occurs with low rainfall at the beginning of a significant storm event; (2) occurrence of storm events outside of customary daylight hours when stormwater technicians are on site and reasonably could obtain grab samples (e.g., holidays or nights); and (3) industrial safety limitations on the collection of samples during nighttime hours and during more extreme storm events. By way of background on the last reason, monitoring of the stormwater discharges requires technicians to climb out onto riprap abutting the shoreline and collect samples in a glass container—a potentially dangerous task, particularly at night and during storm conditions. As a result and as reported in PNPS' discharge monitoring reports ("DMRs"), Station personnel endeavor to proactively sample in non-applicable months (i.e., not April or September) when samples are unavailable in April or September and a significant storm event capable of being monitored occurs in proximity to those months. *See, e.g.,* Correspondence from David E. Noyes, Entergy to EPA (Nov. 21, 2014) (providing discharge monitoring report, including results for significant storm event in October). These efforts underscore PNPS's commitment to its NPDES permit and environmental stewardship.

In1996, PNPS also obtained an authorization to discharge collected rainwater, among other things, under a general permit issued by EPA and independently confirmed by MDEP. *See* Correspondence from EPA to Boston Edison (Aug. 30, 1996) (authorizing discharges at PNPS under GP and attaching NOI).[4] This is because, after discussing the matter at length with EPA and MDEP Staff, PNPS was asked to obtain, and in fact did obtain, an August 30, 1996 industrial stormwater general permit from EPA (the "1996 GP"), the use of which MDEP expressly approved by correspondence, dated August 30, 1996. *Id.*[5] The 1996 GP was to commence when the NPDES Permit was renewed (presumptively, without stormwater discharge requirements). Specifically, PNPS's October 25, 1995 Application cover letter includes a request that Outfalls 004, 005, 006 and 007, and the miscellaneous storm drain, be covered under the NPDES General Permit for Storm Water Discharges Associated with Industrial Activity (Permit No.

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[4] EPA administers the industrial storm water program, as it does the NPDES program, in Massachusetts. *See, e.g.,* EPA, *Authorization Status for EPA's Stormwater Construction and Industrial Programs*, http://water.epa.gov/polwaste/npdes/stormwater/Authorization-Status-for-EPAs-Stormwater-Construction-and-Industrial-Programs.cfm (last visited Jan. 28, 2015) (EPA list of states where program administered); *see also* Printer's National Environmental Assistance Center, *Industrial Stormwater Permitting Guide, Lesson 2,* p. 1 (reviewed by EPA), http://www.pneac.org/tormwater/l2p1.cfm (last visited Jan. 28, 2015) ("These procedures apply if you are located within one of the states or territories who are NOT authorized to administer the NPDES permit program although similar procedures exist in most other areas where states ARE the NPDES permitting authority.").

[5] A review of PNPS's 1995 NPDES-renewal application underscores that dewatering is authorized. *See, e.g.*, PNPS 1995 Application (reflecting MDEP statement that stormwater could be authorized under the industrial General Permit, i.e., stormwater discharges are typical of industrial facility). The Application includes a clear diagram that site-wide stormwater goes to the four identified outfalls and requests the addition of the "miscellaneous storm drain" later specifically approved. *See* PNPS 1995 Application at Water Flow Diagram (7007A).

MAR000000) upon expiration of the current NPDES permit (and presumptively the elimination of the individual stormwater requirements), adding MADEP "had formally determined that the storm water discharges at the facility can be covered under the General Permit" in a September 11, 1995 letter. PNPS 1995 Application at p. 2. MADEP's September 11, 1995 correspondence, in fact, states: "The Department has determined that the stormwater discharges at the facility can be covered under the General Storm Water Permit (USEPA: 25 Sep 92)." PNPS 1995 Application at Attachment B. MADEP's correspondence provides a further caveat reflecting its position that PNPS's individual NPDES permit was more stringent: "The company should be reminded that the Department and USEPA can require an individual permit (with more restrictive conditions)." *Id.* In sum, the contemporaneous correspondence regarding the 1996 GP indicates that EPA and MADEP intended PNPS to employ the then-new GP system in lieu of individual NPDES stormwater requirements, when a new individual NPDES permit was issued, which EPA then expected to occur in 1998 – a date then within the original term of the GP. *See id.*; Correspondence from Jane Downing, EPA to E.T. Boulette, Boston Edison (Mar. 1, 1996) (noting PNPS NPDES Permit is expected to be renewed in 1998). At no time, however, did EPA or MADEP suggest that PNPS should retain the general permit approach when the 1998 projected deadline for issuance of the NPDES permit passed. Likewise, at no time did EPA or MADEP discuss with PNPS a continuing proposal to apply for later-issued multi-sector general permits ("MSGPs"), *i.e.,* in 1998, 2000 and 2008.

Instead, subsequent correspondence indicates that the EPA and MADEP reverted to the NPDES permit, which remained operative. For instance and most tellingly, in June 3, 1999 correspondence, EPA expressly authorized discharges from the "miscellaneous storm drain" under the NPDES Permit. *See* Correspondence from J. Alexander, Boston Edison to Nicholas Prodany, EPA (June 3, 1999) (hereinafter "PNPS 1999 NPDES Authorization") (noting EPA authorized discharges, without monitoring requirement, from miscellaneous storm drain under NPDES permit) (countersigned). Specifically, EPA authorized discharges from this storm drain, while at the same time acknowledging that the drain "would be considered ... as part of permit renewal," *i.e.,* NPDES-permit renewal. At no point in 1999 did EPA indicate that it instead wanted PNPS to continue with the new MSGP. *Id.* As a result, EPA's and MDEP's position appears to have been either to revert back to the NPDES permit upon termination of the 1996 GP or to continue that general permit until PNPS's NDPES permit was renewed.[6] This reversion to the NPDES permit as the operative stormwater permit is consistent with the approach in all subsequent discharge monitoring reports.

[6] EPA's continuation of PNPS's GP is atypical, but consistent with EPA's approach to the general permits nationally, which can be and routinely are administratively continued. *See, e.g.,* Printer's National Environmental Assistance Center, *Industrial Stormwater Permitting Guide, Lesson 2,* p. 1 (reviewed by EPA), http://www.pneac.org/stormwater/l2p1.cfm (last visited Jan. 28, 2015) ("NPDES permits, such as the MSGP, are to be issued for no more than 5 years. At times, however, issues may arise that prevent EPA or a state from reissuing that permit until sometime after the 5 year period has elapsed. In certain circumstances, permittees may continue to be covered under those "administratively extended" permits until such time as a new permit is issued or reissued. For EPA's MSGP, typically facilities that are covered under the permit remain covered until either coverage is terminated by the permittee or EPA or a new or reissued permit becomes available in which case the permittee is to follow the directions of that new permit. EPA regulations, however, do not allow the Agency to cover new

Critically, the 1996 GP was specifically designed for, among other industrial categories, the electric-generating sector, and included a broad range of typical associated equipment, including foundation and footing drains (not containing process water), waterline flushing, fire hydrant flushings, firefighting activities, routine wash-downs and groundwater. *See, e.g.*, EPA, *Final National Pollutant Discharge Elimination System Storm Water Multi-Sector General Permit for Industrial Activities*, 60 Fed. Reg. 50804, 50808, 50813 (Sept. 29, 1995) (hereinafter "the 1995 General Permit Notice") (listing "Steam Electric Power Generating Facilities" as covered by permit); *see also* EPA, *Multi-Sector General Permit For Stormwater Discharges Associated With Industrial Activity (MSGP)*, 103 (2008) (hereinafter "Current MSGP) ("This permit authorizes stormwater discharges from … steam electric power generation using … nuclear energy."). In fact, EPA statements in the 1996 GP specifically contemplate the presence of manholes. *See e.g.*, *1995* General Permit Notice at 50816 ("EPA recognizes that certification may not be feasible where facility personnel do not have access to an outfall, manhole, or other point of access to the conduit that ultimately receives the discharge."). Thus, there is nothing inherent in manholes or the trappings of a typical electric-generating station that can be considered a surprise under the stormwater program, as managed by EPA and MDEP in the 1990's at PNPS. Certainly, EPA and MDEP understood that PNPS was the very sort of industrial facility, with its switchyard and electric equipment, that could be covered generically and summarily under the GP and in fact authorized the facility to discharge in that manner. *See, e.g.*, 1995 General Permit Notice at 50974-75, 51199 (acknowledging switchyards, etc., at covered facilities); PNPS, *Management Practices: Stormwater* (Sept. 1999), at Site Drawing (providing PNPS' stormwater pollution prevent plan and illustrating switchyard and diesel generators).

PNPS's NPDES Permit and GP demonstrate that EPA has never directed, nor required, the monitoring of individual manholes, and there has been no change at the facility that warrants individual monitoring now. Rather, EPA has consistently authorized – as stormwater – the discharge of collected rainwater, including rainwater that accumulates in manholes, subject to the quantitative and qualitative outfall monitoring that the NPDES Permit provides for.

In sum and respectfully, our review confirms that, since 1991, PNPS has had an existing NPDES permit authorizing stormwater discharges via specified outfalls (i.e., 004-007) of collected rainwater, including as that rainwater collects and is dewatered from on-site manholes. Thus, discharges to Outfalls 004-007 or the miscellaneous storm drain of rainwater, runoff, drainage or dewatering leachate collected in manholes, provided the discharge is monitored in compliance with the NPDES Permit is authorized. Further, from at least 1996, PNPS also has had the 1996 GP as an extra measure. On balance, this history reflects the longstanding efforts of EPA, MADEP and PNPS to maintain a state-of-the-art

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facilities under an administratively extended general permit. In those instances, permittees should either apply for coverage under an individual permit (more detailed application forms and process), or if stated by EPA may follow the requirements described in the administratively extended general permit and rely on EPA's enforcement discretion to not take action against facilities trying to comply. Facilities should be aware that this second option does not protect them from citizen suits, an option that is available under the NPDES program.").

stormwater management program that is protective of water resources and quality, pending renewal of PNPS's NPDES permit.

To continue this commitment into the future, we respectfully submit that PNPS stands willing to implement a stormwater monitoring program that is consistent with current MSGP standards, *e.g.*, requiring monitoring consistent with the MSGP, which is substantially the same as PNPS's current monitoring requirements for discharges from stormwater-related outfalls. *Compare* Current MSGP at Section 8.O.8 (monitoring requirements) and PNPS's NPDES permit at 12 (monitoring requirements). Doing so will also entail PNPS's updated, reasonable identification of internal stormwater sources in the new version of its stormwater pollution prevention plan. We look forward to meeting and discussing this approach at your convenience.

Sincerely,

Elise N. Zoli

Enclosure

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June 30, 2015

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Re: **Response to the United State Environmental Protection Agency's ("USEPA") March 24, 2015 Request for Information**

Mr. Papadopoulos,

On behalf of Entergy Nuclear Generating Company ("Entergy"), I write in response to the USEPA's March 24, 2015 request (as revised in its June 9, 2015 correspondence) for information regarding stormwater discharges from "electrical vaults"[1] located at the Pilgrim Nuclear Power Station ("PNPS") (the "Request"). *See* Correspondence from Ken Moraff, EPA to David E. Noyes, Entergy (Mar. 24, 2015); Correspondence from Ken Moraff, EPA to David E. Noyes, Entergy (June 9, 2015). As an initial matter, Entergy greatly appreciated the opportunity to meet with USEPA on May 13, 2015, to discuss the Request and USEPA's June 9, 2015 response revising the Request to acknowledge expected conditions at the PNPS site. As revised, the Request requested that Entergy:

1. "collect one sample of water from at least (7) seven different [manholes] on the [PNPS] property and have it analyzed for [twenty-six (26)] parameters" at a specified Minimum Level of Detection ("MLD"); and

2. "provide a map showing the general location of all [manholes] that can accumulate stormwater, specifying which specific [manholes] were sampled as well as the location

[1] PNPS categorizes these stormwater collection structures as manholes, not "electrical vaults;" therefore, this correspondence will refer to manholes, and not "electrical vaults."

> of the four (4) existing NPDES-permitted stormwater outfalls, designated serial numbers 004, 005, 006, and 007."

Correspondence from Ken Moraff, EPA to David E. Noyes, Entergy, 3 (Mar. 24, 2015); *see also* Correspondence from Ken Moraff, EPA to David E. Noyes, Entergy (June 9, 2015).

In response to the Request, Entergy engaged Environmental Resources Management ("ERM") to collect and analyze the manhole samples, and ERM contracted out the analysis to TestAmerica Laboratories, Inc. ("TestAmerica"). From June 9 to 12, 2015, ERM collected water samples from seven manholes at PNPS, specifically CP-1, CP-4, MH-2, MH-4, MH-5, MH-L and MH-Q, including a field duplicate from MH-Q. Importantly, in the calendar week prior to testing approximately 0.90 inches of rain fell in Plymouth, Massachusetts, and water was not pumped from manholes (unless automated) in order to facilitate testing.[2]

As a result, at the time of sampling, one manhole that did not possess automated pumping had cabling that was temporarily, partially submerged: MH-Q. The last review of MH-Q occurred on May 28, 2015, at which point the cabling was dry. MH-Q was immediately pumped after sampling.

As detailed in ERM's report entitled *Summary of Manhole Sampling Activities* ("ERM Report") (attached as Exhibit A), samples were collected from each manhole using a peristaltic pump with dedicated polyethylene/silicone tubing. Depth to water and depth to the bottom of the concrete base of each manhole were measured with a water level probe. The samples were collected in the appropriate laboratory glassware, held on ice, and shipped for analysis by TestAmerica to their laboratory in Amherst, New York. All samples were analyzed by TestAmerica for the twenty-six (26) parameters identified in USEPA's June 9, 2015 letter; however, CP-4 was not analyzed for chromium III and VI due to missing the 24-hour holding time because of delay from onsite screening for tritium. The test methods used by TestAmerica to analyze each of the twenty-six (26) parameters are listed in Table 2 of the ERM Report.

Consistent with our prior discussions, ERM's sampling and analytical results demonstrate that cabling within PNPS's manholes is not typically submerged, and as a result stormwater pumped from these manholes contains only naturally occurring contaminants. Specifically, for all samples taken, only three (3) of the twenty-six (26) parameters were detected without qualification at or above the MLD specified in the Request (the "Detected Parameter(s)"). Results for the Detected Parameters are presented in Table 2 of the ERM Report, and provided below for illustrative purposes.

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[2] *See* ERM, *Summary of Manhole Sampling Activities* 2-3 (June 30, 2015).

Samples with Parameters Above the Request's Minimum Level of Detection ("MLD")											
	Type of Sample	**Analytical Method Used**	**USEPA's MLD**	**CP-1**	**CP-4**	**MH-2**	**MH-4**	**MH-5**	**MH-L**	**MH-Q**	**MH-Q (Duplicate)**
Iron (mg/L)	Grab	200.7	0.02	0.396	1.150	0.977	1.600	0.115	0.0944	0.439	0.451
Zinc (mg/L)	Grab	200.7	0.015	0.534	0.223	0.0538	0.0776	0.0175	0.0271	1.520	1.540
Copper (mg/L)	Grab	200.7	0.015	-	-	-	0.0286	-	-	-	-

The Detected Parameters are naturally occurring metals (iron, zinc and copper), that are known to occur in Massachusetts's soils at the following natural background concentrations: iron—20,000 mg/kg; zinc—100 mg/kg; and copper—40 mg/kg.[3] Indeed, the concentrations detected in PNPS' manholes are far below the natural soil concentrations.[4] The ubiquitous detection of iron and zinc in all samples collected further indicates that these detections likely are a result of natural background concentrations. Accordingly, the presence of iron, zinc and copper in the manhole samples is consistent with the collection of stormwater that runs over land, as well as surface –level potential soil infiltration, into the manholes.

In addition to the Detected Parameters, TestAmerica detected total phenols in the MH-2 sample above the MLD; however, that detection was qualified because the sample fell outside acceptable matrix spike/matrix spike duplicate (MS/MSD) recovery limits, which is an element of the laboratory quality control program. The purpose of the MS/MSD is to document the accuracy and precision of the method for that specific sample. MS/MSD samples are representative, but randomly chosen client samples that have known concentrations of analytes of interest added to the samples prior to sample preparation and analysis. They are processed along with the same un-spiked sample. If the matrix spike recovery does not fall within the method acceptance criteria, it indicates the sample matrix is interfering with the analysis. Matrix interference typically is associated with complications caused by constituents in the sample itself. For this reason, the detection of total phenol in MH-2 above the MLD should be considered an estimate, not an accurate detection. *See* ERM Report at 2. Further, total phenols are not expected to occur at the PNPS site, are not contaminants typically found at comparable sites, and were

[3] Massachusetts Department of Environmental Protection, *Technical Update: Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil* (May 23, 2002), available at: http://www.mass.gov/eea/docs/dep/cleanup/laws/backtu.pdf.
[4] The sample results provided in the table above are comparable to the units provided for natural background concentrations because one (1) liter (L) of water equals one (1) kilogram (kg) of water.

not observed above MLD in the other manhole samples, including when cabling was partially submerged (i.e., MH-Q).

A map showing the general location of all manholes that can accumulate stormwater and the location of the four (4) existing NPDES-permitted stormwater outfalls (serial numbers 004, 005, 006, and 007) is provided as Exhibit B. Manholes that can accumulate stormwater were identified by their inclusion in PNPS's Cable Reliability Program, which, consistent with the Nuclear Regulatory Commission requirements, is designed to ensure cabling is not submerged. *See, e.g.,* Entergy, PowerPoint: Discussion Regarding PNPS Manholes, p. 7 (provided to USEPA on May 13, 2015).

***

Entergy would be happy to discuss the results provided herein with USEPA. If you have questions or would like to arrange a meeting to discuss the results please do not hesitate to call me at 617-570-1612.

Sincerely,

Elise N. Zoli

cc: Kelli Dowell, Esq.
Assistant General Counsel, Entergy

Joseph Egan,
Environmental Specialist, Entergy

Memorandum

Environmental Resources Management

One Beacon Street, 5th Floor
Boston, MA 02108
(617) 646-7800
(617) 267-6447 (fax)

http://www.erm.com

To: Pilgrim Nuclear Power Station

From: ERM Project Team

Date: 30 June 2015

Subject: Summary of Manhole Sampling Activities

On behalf of Entergy Nuclear Operations, Inc. (Entergy), Environmental Resources Management (ERM) has prepared this memorandum summarizing the results of manhole sampling at the Pilgrim Nuclear Power Station (PNPS) ("Site") located in Plymouth, Massachusetts (Figure 1).

PNPS is currently undergoing renewal of the station's National Pollutant Discharge Elimination System (NPDES) permit through the Environmental Protection Agency (EPA). As part of the permit renewal process, EPA has requested the collection of water samples from manholes, as several manholes receive rainwater and are pumped to permitted storm water drains in order to keep cables dry.

Purpose and Scope

The purpose of the sampling activities was to support PNPS with the collection and laboratory analysis of water samples from select manholes. The activities included collecting samples from seven manhole locations, and submitting them for analysis as prescribed by EPA permit renewal requirements (Appendix A). EPA's analytical requirements include specific Minimum Levels of detection (MLD) for each analysis . The MLD is associated with establishing the presence or absence of each analyte in a sample, but does not directly correlate to any specific regulatory standard.

Methodology

From 9 to 12 June 2015, ERM collected water samples from seven manholes at PNPS including locations CP-1, CP-4, MH-2, MH-4, MH-5, MH-L and MH-Q. For the purposes of this report, all CP and MH locations are collectively referred to as manholes. Manhole MH-K was originally targeted for sampling, but PNPS personnel reported that this manhole was dry. According the National Oceanic and Atmospheric Administration (NOAA) weather station located at the Plymouth Municipal Airport, approximately 0.90 inches of rain fell during the calendar week prior to the sampling.

PNPS personnel provided ERM with access to the manholes. Figure 2 shows the approximate locations of the manholes that were sampled. Depth to water and depth to the bottom of the concrete base of each manhole were measured with a water level probe. Samples were collected from each manhole using a peristaltic pump with dedicated polyethylene / silicone tubing. The samples were collected in the appropriate laboratory glassware, held on ice, and transferred to a courier from TestAmerica Laboratories, Inc. (TestAmerica), a certified commercial laboratory. Samples were shipped for analysis by TestAmerica to their laboratory in Amherst, New York. The analytical parameters for testing by the laboratory included 26 parameters identified in Appendix A as provided to ERM. A field duplicate was collected at MH-Q (DUP-1) and analyzed for all parameters. CP-4 was not analyzed for chromium III and VI due to missing the 24-hour holding time because of delay from onsite screening for tritium.

RESULTS

Depth to water and depth to the bottom of manhole measurement are included in Table 1. All manholes were sampled as planned, with the exception of MH-K, which was dry.

Sample results including laboratory qualifiers for manhole sampling are summarized in Table 2 and laboratory analytical reports are included in Appendix B. Laboratory qualifiers are also described in the Definitions / Glossary and are discussed within the Case Narratives of the individual laboratory reports. The Total Phenols result for MH-2 was qualified "F1" due to a failed matrix spike and / or matrix spike duplicate. As indicated in the case narrative, sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. Matrix interference typically is associated with complications caused by constituents in the sample itself and the sample result may be considered an estimate. In general, phenols are a group of industrial compounds that are used in the production of synthetic chemicals and would therefore not be expected at an operating nuclear power plant site.

Please contact us at 617-646-7800 if you have any questions or comments.

Sincerely,

Matthew Daly, P.G.
Principal-In-Charge

James Allen, P.G.
Senior Project Geologist

Joshua G. Klement
Project Geologist

Attachments:

Table 1: Manhole Gauging Observations
Table 2: Manhole Sampling Analytical Results

Figure 1: Site Locus Map
Figure 2: Manhole Sampling Locations

Appendix A: Summary of Monitoring Parameters
Appendix B: Laboratory Analytical Reports

Tables

Table 1
Summary of Manhole Gauging Data & Observations
Entergy
Pilgrim Nuclear Power Station
600 Rocky Hill Rd, Plymouth, MA

Manhole Designation	Date/Time of Sample	Depth to Water (feet)*	Depth to Bottom (feet)*	Observations
CP-1	6/9/15 13:20	7.45	8.1	Sediment at base of manhole
CP-4	6/11/15 9:26	8.12	9.8	Air bubbles flowing into manhole
MH-2	6/9/15 10:15	9.28	10.4	No observations noted
MH-4	6/10/15 13:35	9.18	9.9	No observations noted
MH-5	6/10/15 13:55	9.6	9.9	Slight Sheen observed on surface of water in manhole
MH-K	6/11/15 8:30	Dry	Dry	Dry per PNPS personnel
MH-L	6/12/15 13:10	8.75	9.0	Sediment at base of manhole
MH-Q	6/12/15 9:45	3.65	7.0	Submerged cables noted

Notes
*All measurements were taken from the top of the manhole rim

Table 2
Manhole Sampling Results
Pilgrim Nuclear Power Station
Plymouth, Massachusetts

Parameter	Type of Sample (e.g., grab)	Analytical Method Used	EPA Required Minimum Level of Detection (MLD)	Units (µg/L or mg/L)	MH-2 6/9/2015	MH-4 6/10/2015	MH-5 6/10/2015	MH-L 6/12/2015	MH-Q 6/12/2015	DUP-1 (MH-Q) 6/12/2015	CP-1 6/9/2015	CP-4 6/11/2015
1. Total Suspended Solids (TSS)	Grab	2540D	5	mg/L	< 4.0	< 4.0	4.8	< 4.0	< 4.0	< 4.0	< 4.0	4.4
2. Total Petroleum Hydrocarbons (TPH)	Grab	1664A	5.0	mg/L	< 5.1 F1	< 4.9	< 5.0	< 4.9	< 4.9	< 4.9	< 5.1	< 4.9
3. Cyanide	Grab	335.4	10	µg/L	< 10	< 10	< 10	5.3 J	< 10	< 10	< 10	< 10
4. Benzene	Grab	8260C	2	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
5. Toluene	Grab	8260C	2	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
6. Ethylbenzene	Grab	8260C	2	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
7a. (m,p) Xylenes	Grab	8260C	2	µg/L	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
7b. o-Xylene	Grab	8260C	2	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
7c. Total Xylenes	Grab	8260C	2	µg/L	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
8. Total BTEX	Grab	8260C	2	µg/L	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
9. Naphthalene	Grab	8260C	2	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
10. Total Phenols	Grab	420.4	50	µg/L	52.6 F1,**	< 10.0	6.9 J	17.1	< 10.0	< 10.0	9.7 J	< 10.0
11. Total Phthalates (Phthalate esthers)	Grab	8270C/D LL	5	µg/L	< 4.7*	0.14 J*	< 4.7*	< 4.7	0.11 J	0.12 J	< 4.8	0.11 F1, J
12. Bis (2-Ethylhexyl) phthalate	Grab	8270C/D LL	5	µg/L	< 4.7	< 4.8	< 4.7	< 4.7	< 4.7	< 4.7	< 4.8	< 4.7 F1
13. Total Polychlorinated Biphenyls (PCBs)	Grab	608	0.5	µg/L	0.23	< 0.057	< 0.063	< 0.057	< 0.056	< 0.057	< 0.056	< 0.057
14. Antimony	Grab	200.8	10	µg/L	2.5	0.30 J	0.23 J	0.51 J	0.34 J	0.33 J	1.4	1.0
15. Arsenic	Grab	200.7	20	µg/L	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
16. Cadmium	Grab	200.7	10	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.6	2.1
17. Chromium III	Grab	3500	15	µg/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	NA
18. Chromium VI	Grab	3500	10	µg/L	8.6 J	< 10	< 10	< 10 F1	< 10	< 10	< 10	NA
19. Copper	Grab	200.7	15	µg/L	9.6 J	28.6	3.6 J	14.2	4.1 J	4.6 J	6.8 J	10.7
20. Lead	Grab	200.7	20	µg/L	13.0	8.3	< 5.0	3.9 J	15.4	15.9	9.6	< 5.0
21. Mercury	Grab	245.1	0.2	µg/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
22. Nickel	Grab	200.7	20	µg/L	2.5 J	4.5 J	< 10.0	2.9 J, B	3.4 J, B	3.6 J, B	< 10.0	1.5 J, B
23. Selenium	Grab	200.7	20	µg/L	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0
24. Silver	Grab	200.7	10	µg/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
25. Zinc	Grab	200.7	15	µg/L	53.8 B	77.6	17.9	27.1	1,520	1,540	534 B	233
26. Iron	Grab	200.7	20	µg/L	977	1,600	115	94.4	439	451	396	1,150

Notes:
B = Analyte was found in Blank and Sample. See case narrative in lab report for further details.
F1 = Matrix Spike and/or Matrix Spike Duplicate is outside acceptable limits. See case narrative in lab report for further details.
J = Result is less than the reporting limit (RL) but greater than the MDL; concentration is estimated. See case narrative in lab report for further details.
NA = Not Analyzed
* = Relative Percent Difference of Laboratory Control Standard or the Laboratory Control Standard Duplicate exceeds the control limits. See case narrative in lab report for further details.
** = Matrix interference typically is associated with complications caused by constituents in the sample and the sample result may be considered an estimate.
µg/L = Micrograms per liter.
< = Analyte was not detected above the laboratory reporting limit (RL)
Total PCBs, Phthalates, and Xylenes are reported as a sum of the detections or < the highest applicable individual RL

Figures

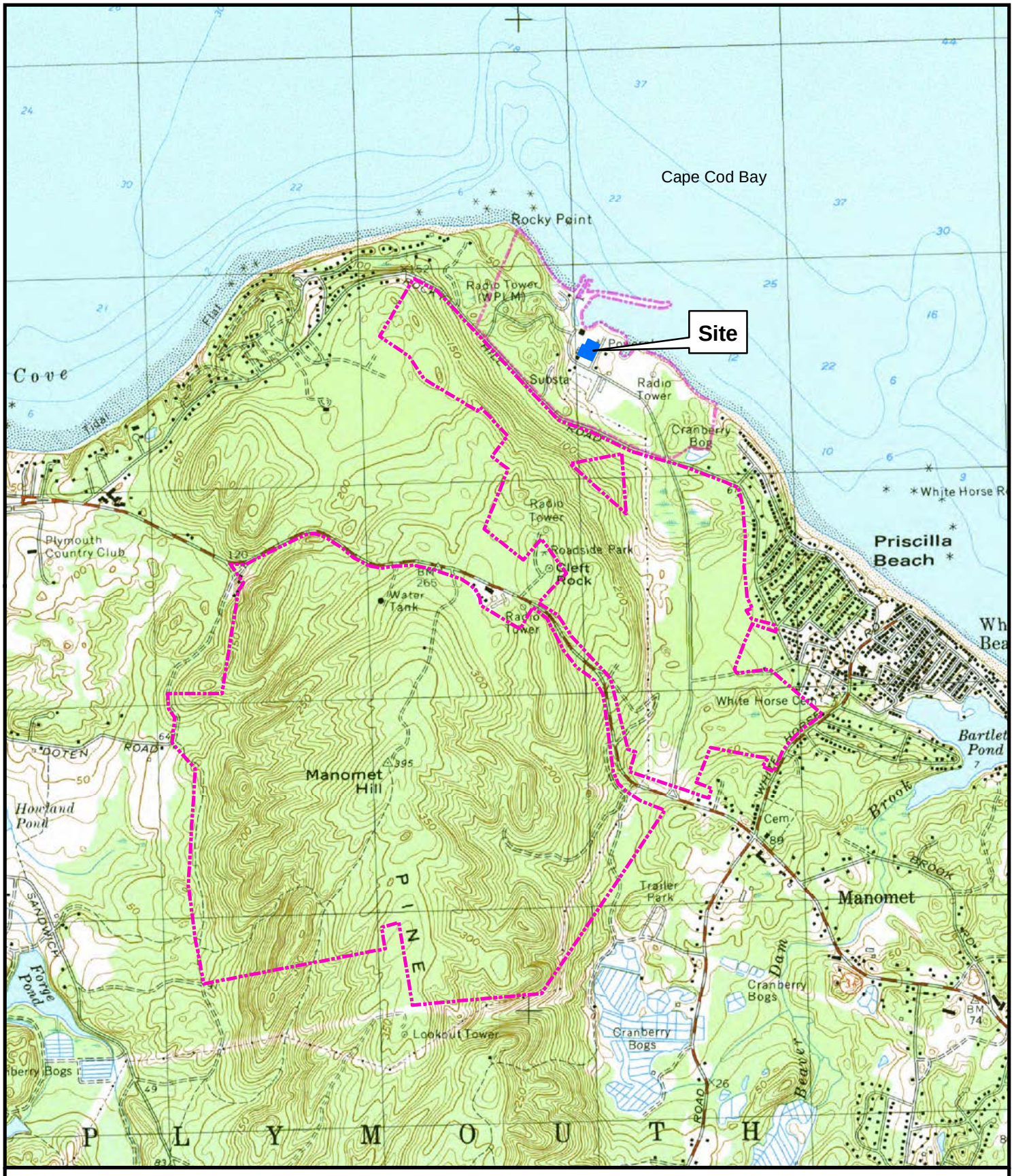

Figure 1 - Site Locus Map

Pilgrim Nuclear Power Station
Plymouth, MA

ERM

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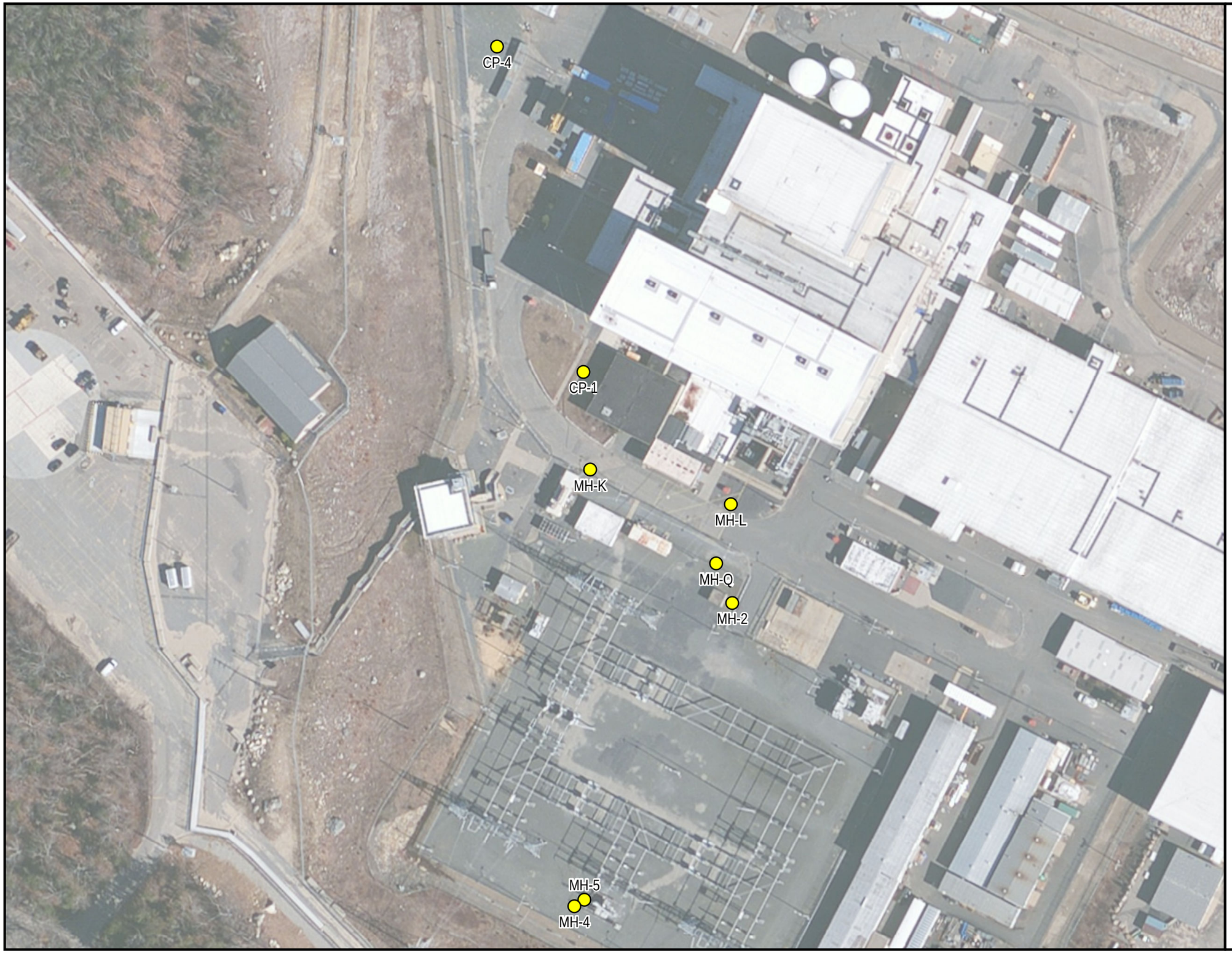

Legend

Manhole Sampling Locations (approximate)

NOTES:
- Manhole sampling locations are approximate and were digitized based on aerial imagery

N

0 25 50 100 150 200
Feet

Figure 2 - Manhole Sampling Locations
Pilgrim Nuclear Power Station
Plymouth, MA

ERM

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Appendix A
EPA Monitoring Parameters

Rec'd 6/3/15 by e-mail

Summary of Monitoring Parameters

	Parameter	Minimum Level (ML) of detection [1]
	1. Total Suspended Solids (TSS)	5 mg/L
	2. Total Petroleum Hydrocarbons (TPH)	5.0mg/L
	3. Cyanide (CN)	10 ug/L
	4. Benzene (B)	2 ug/L
	5. Toluene (T)	2 ug/L
	6. Ethylbenzene (E)	2 ug/L
	7. (m,p,o) Xylenes (X)	2 ug/L
	8. Total Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) [2]	2 ug/L
	9. Naphthalene	2 ug/L
	10. Total Phenols	50 ug/L
	11. Total Phthalates (Phthalate esters)	5 ug/L
	12. Bis (2-Ethylhexyl) Phthalate	5 ug/L
	13. Total Polychlorinated Biphenyls (PCBs)	0.5 ug/L

	Metal parameter	Total Recoverable Metal [3] - ML
	14. Antimony	10 ug/l
	15. Arsenic	20 ug/l
	16. Cadmium	10 ug/l
	17. Chromium III (trivalent)	15 ug/l
	18. Chromium VI (hexavalent)	10 ug/l
	19. Copper	15 ug/l
	20. Lead	20 ug/l
	21. Mercury	0.2 ug/l
	22. Nickel	20 ug/l
	23. Selenium	20 ug/l
	24. Silver	10 ug/l
	25. Zinc	15 ug/l
	26. Iron	20 ug/l

Footnotes:

[1] Minimum Level (ML) is the lowest level at which the analytical system gives a recognizable signal and acceptable calibration point for the analyte. The ML represents the lowest concentration at which an analyte can be measured with a known level of confidence. The ML is calculated by multiplying the laboratory-determined method detection limit by 3.18 (see 40 CFR Part 136, Appendix B).

[2] BTEX = sum of Benzene, Toluene, Ethylbenzene, and total Xylenes.

[3] With the exception of Chromium III and Chromium VI

Appendix B
Laboratory Analytical Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-81856-1
Client Project/Site: Monitoring Parameters Analysis
Revision: 1

For:
ERM-Northeast
One Beacon Steet
5th Floor
Boston, Massachusetts 02108

Attn: Ms. Heather M Usle

Authorized for release by:
6/29/2015 3:26:17 PM

Becky Mason, Project Manager II
(413)572-4000
becky.mason@testamericainc.com

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Definitions/Glossary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-81856-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

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

Case Narrative

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-81856-1

Job ID: 480-81856-1

Laboratory: TestAmerica Buffalo

Narrative

Revised report: revised case narrative to add note about MS/MSD for method 420.4.

Receipt
The samples were received on 6/10/2015 at 1:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.6º C and 0.8º C.

Receipt Exceptions
Pursuant to the client's request, the following samples were analyzed for all parameters indicated on the Chain of Custody (COC) form: MH-2 (480-81856-1) and CP-1 (480-81856-2).

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

GC/MS Semi VOA
Method 8270C LL: The continuing calibration verification (CCV) associated with batch 480-247517 recovered above the upper control limit for Di-n-octyl phthalate. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8270C LL: The continuing calibration verification (CCV) analyzed in batch 480-247517 was outside the method criteria for Pentachlorophenol. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated.

Method 8270C LL: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 480-247456 recovered outside control limits for the following analytes: Butyl benzyl phthalate.

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

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

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

General Chemistry
Method 420.4: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 480-247289 and analytical batch 480-247614 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 1664A: The matrix spike (MS) recovery for 248439 was outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 480-247456.

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

Detection Summary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-81856-1

Client Sample ID: MH-2 — Lab Sample ID: 480-81856-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	0.23		0.057	0.036	ug/L	1		608	Total/NA
Copper	9.6	J	10.0	1.6	ug/L	1		200.7 Rev 4.4	Total/NA
Iron	977		50.0	19.3	ug/L	1		200.7 Rev 4.4	Total/NA
Lead	13.0		5.0	3.0	ug/L	1		200.7 Rev 4.4	Total/NA
Nickel	2.5	J	10.0	1.3	ug/L	1		200.7 Rev 4.4	Total/NA
Zinc	53.8	B	10.0	1.5	ug/L	1		200.7 Rev 4.4	Total/NA
Antimony	2.5		1.0	0.15	ug/L	1		200.8	Total/NA
Phenolics, Total Recoverable	52.6	F1	10.0	5.0	ug/L	1		420.4	Total/NA
Chromium, hexavalent	0.0086	J	0.010	0.0050	mg/L	1		SM 3500 CR D	Total/NA

Client Sample ID: CP-1 — Lab Sample ID: 480-81856-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	1.6		1.0	0.50	ug/L	1		200.7 Rev 4.4	Total/NA
Copper	6.8	J	10.0	1.6	ug/L	1		200.7 Rev 4.4	Total/NA
Iron	396		50.0	19.3	ug/L	1		200.7 Rev 4.4	Total/NA
Lead	9.6		5.0	3.0	ug/L	1		200.7 Rev 4.4	Total/NA
Zinc	534	B	10.0	1.5	ug/L	1		200.7 Rev 4.4	Total/NA
Antimony	1.4		1.0	0.15	ug/L	1		200.8	Total/NA
Phenolics, Total Recoverable	9.7	J	10.0	5.0	ug/L	1		420.4	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-81856-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MH-2

Date Collected: 06/09/15 10:15
Date Received: 06/10/15 01:55

Lab Sample ID: 480-81856-1

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			06/10/15 17:24	1
Toluene	ND		1.0	0.51	ug/L			06/10/15 17:24	1
Ethylbenzene	ND		1.0	0.74	ug/L			06/10/15 17:24	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			06/10/15 17:24	1
o-Xylene	ND		1.0	0.76	ug/L			06/10/15 17:24	1
Xylenes, Total	ND		2.0	0.66	ug/L			06/10/15 17:24	1
Total BTEX	ND		2.0	1.0	ug/L			06/10/15 17:24	1
Naphthalene	ND		1.0	0.43	ug/L			06/10/15 17:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*92*		*71 - 126*		*06/10/15 17:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*66 - 137*		*06/10/15 17:24*	*1*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*		*06/10/15 17:24*	*1*
Dibromofluoromethane (Surr)	*103*		*60 - 140*		*06/10/15 17:24*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		4.7	0.40	ug/L		06/11/15 08:27	06/11/15 19:04	1
Butyl benzyl phthalate	ND	*	2.8	0.15	ug/L		06/11/15 08:27	06/11/15 19:04	1
Diethyl phthalate	ND		0.47	0.061	ug/L		06/11/15 08:27	06/11/15 19:04	1
Dimethyl phthalate	ND		0.47	0.054	ug/L		06/11/15 08:27	06/11/15 19:04	1
Di-n-butyl phthalate	ND		1.9	0.33	ug/L		06/11/15 08:27	06/11/15 19:04	1
Di-n-octyl phthalate	ND		4.7	0.19	ug/L		06/11/15 08:27	06/11/15 19:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*91*		*39 - 146*	*06/11/15 08:27*	*06/11/15 19:04*	*1*
2-Fluorobiphenyl	*78*		*37 - 120*	*06/11/15 08:27*	*06/11/15 19:04*	*1*
2-Fluorophenol (Surr)	*34*		*18 - 120*	*06/11/15 08:27*	*06/11/15 19:04*	*1*
Nitrobenzene-d5 (Surr)	*61*		*34 - 132*	*06/11/15 08:27*	*06/11/15 19:04*	*1*
Phenol-d5 (Surr)	*23*		*11 - 120*	*06/11/15 08:27*	*06/11/15 19:04*	*1*
p-Terphenyl-d14	*118*		*58 - 147*	*06/11/15 08:27*	*06/11/15 19:04*	*1*

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.057	0.036	ug/L		06/11/15 07:49	06/11/15 18:41	1
PCB-1221	ND		0.057	0.036	ug/L		06/11/15 07:49	06/11/15 18:41	1
PCB-1232	ND		0.057	0.036	ug/L		06/11/15 07:49	06/11/15 18:41	1
PCB-1242	ND		0.057	0.036	ug/L		06/11/15 07:49	06/11/15 18:41	1
PCB-1248	**0.23**		0.057	0.036	ug/L		06/11/15 07:49	06/11/15 18:41	1
PCB-1254	ND		0.057	0.029	ug/L		06/11/15 07:49	06/11/15 18:41	1
PCB-1260	ND		0.057	0.029	ug/L		06/11/15 07:49	06/11/15 18:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*47*		*26 - 135*	*06/11/15 07:49*	*06/11/15 18:41*	*1*
Tetrachloro-m-xylene	*80*		*27 - 159*	*06/11/15 07:49*	*06/11/15 18:41*	*1*

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10.0	5.6	ug/L		06/11/15 11:16	06/11/15 23:01	1
Cadmium	ND		1.0	0.50	ug/L		06/11/15 11:16	06/11/15 23:01	1
Copper	**9.6**	**J**	10.0	1.6	ug/L		06/11/15 11:16	06/11/15 23:01	1

Client Sample ID: MH-2

Date Collected: 06/09/15 10:15
Date Received: 06/10/15 01:55

Lab Sample ID: 480-81856-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**977**		50.0	19.3	ug/L		06/11/15 11:16	06/11/15 23:01	1
Lead	**13.0**		5.0	3.0	ug/L		06/11/15 11:16	06/11/15 23:01	1
Nickel	**2.5**	**J**	10.0	1.3	ug/L		06/11/15 11:16	06/11/15 23:01	1
Selenium	ND		15.0	8.7	ug/L		06/11/15 11:16	06/11/15 23:01	1
Silver	ND		3.0	1.7	ug/L		06/11/15 11:16	06/11/15 23:01	1
Zinc	**53.8**	**B**	10.0	1.5	ug/L		06/11/15 11:16	06/11/15 23:01	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**2.5**		1.0	0.15	ug/L		06/11/15 08:44	06/11/15 18:12	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.12	ug/L		06/12/15 10:15	06/12/15 14:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (1664A)	ND	F1	5.1	2.0	mg/L		06/17/15 02:40	06/17/15 03:17	1
Cyanide, Total	ND		0.010	0.0050	mg/L		06/11/15 08:52	06/12/15 12:40	1
Phenolics, Total Recoverable	**52.6**	**F1**	10.0	5.0	ug/L		06/10/15 11:47	06/11/15 12:10	1
Chromium, hexavalent	**0.0086**	**J**	0.010	0.0050	mg/L			06/10/15 08:45	1
Cr (III)	ND		0.010	0.0060	mg/L			06/15/15 15:57	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	4.0	mg/L			06/11/15 07:02	1

Client Sample ID: CP-1

Date Collected: 06/09/15 13:20
Date Received: 06/10/15 01:55

Lab Sample ID: 480-81856-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			06/10/15 17:48	1
Toluene	ND		1.0	0.51	ug/L			06/10/15 17:48	1
Ethylbenzene	ND		1.0	0.74	ug/L			06/10/15 17:48	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			06/10/15 17:48	1
o-Xylene	ND		1.0	0.76	ug/L			06/10/15 17:48	1
Xylenes, Total	ND		2.0	0.66	ug/L			06/10/15 17:48	1
Total BTEX	ND		2.0	1.0	ug/L			06/10/15 17:48	1
Naphthalene	ND		1.0	0.43	ug/L			06/10/15 17:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*93*		*71 - 126*		*06/10/15 17:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*66 - 137*		*06/10/15 17:48*	*1*
4-Bromofluorobenzene (Surr)	*106*		*73 - 120*		*06/10/15 17:48*	*1*
Dibromofluoromethane (Surr)	*101*		*60 - 140*		*06/10/15 17:48*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		4.8	0.40	ug/L		06/11/15 08:27	06/11/15 19:34	1
Butyl benzyl phthalate	ND	*	2.9	0.15	ug/L		06/11/15 08:27	06/11/15 19:34	1

Client Sample ID: CP-1

Date Collected: 06/09/15 13:20
Date Received: 06/10/15 01:55

Lab Sample ID: 480-81856-2

Matrix: Water

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diethyl phthalate	ND		0.48	0.061	ug/L		06/11/15 08:27	06/11/15 19:34	1
Dimethyl phthalate	ND		0.48	0.054	ug/L		06/11/15 08:27	06/11/15 19:34	1
Di-n-butyl phthalate	ND		1.9	0.33	ug/L		06/11/15 08:27	06/11/15 19:34	1
Di-n-octyl phthalate	ND		4.8	0.19	ug/L		06/11/15 08:27	06/11/15 19:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*104*		*39 - 146*	*06/11/15 08:27*	*06/11/15 19:34*	*1*
2-Fluorobiphenyl	*88*		*37 - 120*	*06/11/15 08:27*	*06/11/15 19:34*	*1*
2-Fluorophenol (Surr)	*41*		*18 - 120*	*06/11/15 08:27*	*06/11/15 19:34*	*1*
Nitrobenzene-d5 (Surr)	*66*		*34 - 132*	*06/11/15 08:27*	*06/11/15 19:34*	*1*
Phenol-d5 (Surr)	*29*		*11 - 120*	*06/11/15 08:27*	*06/11/15 19:34*	*1*
p-Terphenyl-d14	*95*		*58 - 147*	*06/11/15 08:27*	*06/11/15 19:34*	*1*

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.056	0.036	ug/L		06/11/15 07:49	06/11/15 18:57	1
PCB-1221	ND		0.056	0.036	ug/L		06/11/15 07:49	06/11/15 18:57	1
PCB-1232	ND		0.056	0.036	ug/L		06/11/15 07:49	06/11/15 18:57	1
PCB-1242	ND		0.056	0.036	ug/L		06/11/15 07:49	06/11/15 18:57	1
PCB-1248	ND		0.056	0.036	ug/L		06/11/15 07:49	06/11/15 18:57	1
PCB-1254	ND		0.056	0.029	ug/L		06/11/15 07:49	06/11/15 18:57	1
PCB-1260	ND		0.056	0.029	ug/L		06/11/15 07:49	06/11/15 18:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*47*		*26 - 135*	*06/11/15 07:49*	*06/11/15 18:57*	*1*
Tetrachloro-m-xylene	*83*		*27 - 159*	*06/11/15 07:49*	*06/11/15 18:57*	*1*

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10.0	5.6	ug/L		06/11/15 11:16	06/11/15 23:04	1
Cadmium	**1.6**		1.0	0.50	ug/L		06/11/15 11:16	06/11/15 23:04	1
Copper	**6.8**	**J**	10.0	1.6	ug/L		06/11/15 11:16	06/11/15 23:04	1
Iron	**396**		50.0	19.3	ug/L		06/11/15 11:16	06/11/15 23:04	1
Lead	**9.6**		5.0	3.0	ug/L		06/11/15 11:16	06/11/15 23:04	1
Nickel	ND		10.0	1.3	ug/L		06/11/15 11:16	06/11/15 23:04	1
Selenium	ND		15.0	8.7	ug/L		06/11/15 11:16	06/11/15 23:04	1
Silver	ND		3.0	1.7	ug/L		06/11/15 11:16	06/11/15 23:04	1
Zinc	**534**	**B**	10.0	1.5	ug/L		06/11/15 11:16	06/11/15 23:04	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**1.4**		1.0	0.15	ug/L		06/11/15 08:44	06/11/15 18:18	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.12	ug/L		06/12/15 10:15	06/12/15 14:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (1664A)	ND		5.1	2.0	mg/L		06/17/15 02:40	06/17/15 03:17	1

Client Sample ID: CP-1

Date Collected: 06/09/15 13:20
Date Received: 06/10/15 01:55

Lab Sample ID: 480-81856-2
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0050	mg/L		06/11/15 08:52	06/12/15 12:42	1
Phenolics, Total Recoverable	**9.7**	**J**	10.0	5.0	ug/L		06/10/15 11:47	06/11/15 12:16	1
Chromium, hexavalent	ND		0.010	0.0050	mg/L			06/10/15 08:45	1
Cr (III)	ND		0.010	0.0060	mg/L			06/15/15 15:57	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	4.0	mg/L			06/11/15 07:02	1

Client Sample ID: TRIP BLANK

Date Collected: 06/09/15 11:11
Date Received: 06/10/15 01:55

Lab Sample ID: 480-81856-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			06/10/15 11:49	1
Toluene	ND		1.0	0.51	ug/L			06/10/15 11:49	1
Ethylbenzene	ND		1.0	0.74	ug/L			06/10/15 11:49	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			06/10/15 11:49	1
o-Xylene	ND		1.0	0.76	ug/L			06/10/15 11:49	1
Xylenes, Total	ND		2.0	0.66	ug/L			06/10/15 11:49	1
Total BTEX	ND		2.0	1.0	ug/L			06/10/15 11:49	1
Naphthalene	ND		1.0	0.43	ug/L			06/10/15 11:49	1
Tert-amyl methyl ether	ND		1.0	0.27	ug/L			06/10/15 11:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*93*		*71 - 126*		*06/10/15 11:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*66 - 137*		*06/10/15 11:49*	*1*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*		*06/10/15 11:49*	*1*
Dibromofluoromethane (Surr)	*97*		*60 - 140*		*06/10/15 11:49*	*1*

Surrogate Summary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-81856-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	12DCE	BFB	DBFM
Lab Sample ID	Client Sample ID	(71-126)	(66-137)	(73-120)	(60-140)
480-81856-1	MH-2	92	93	104	103
480-81856-2	CP-1	93	92	106	101
480-81856-3	TRIP BLANK	93	89	105	97
LCS 480-247185/4	Lab Control Sample	93	89	109	98
LCSD 480-247185/5	Lab Control Sample Dup	89	91	105	98
MB 480-247185/7	Method Blank	93	91	107	99

Surrogate Legend

TOL = Toluene-d8 (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPH
Lab Sample ID	Client Sample ID	(39-146)	(37-120)	(18-120)	(34-132)	(11-120)	(58-147)
480-81856-1	MH-2	91	78	34	61	23	118
480-81856-2	CP-1	104	88	41	66	29	95
LCS 480-247456/2-A	Lab Control Sample	95	71	46	90	32	90
LCSD 480-247456/3-A	Lab Control Sample Dup	87	76	37	63	26	77
MB 480-247456/1-A	Method Blank	93	83	44	75	30	102

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = p-Terphenyl-d14

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB1	TCX1
Lab Sample ID	Client Sample ID	(26-135)	(27-159)
480-81856-1	MH-2	47	80
480-81856-2	CP-1	47	83
LCS 480-247418/2-A	Lab Control Sample	44	80
MB 480-247418/1-A	Method Blank	49	79

Surrogate Legend

DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-247185/7
Matrix: Water
Analysis Batch: 247185

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			06/10/15 10:27	1
Toluene	ND		1.0	0.51	ug/L			06/10/15 10:27	1
Ethylbenzene	ND		1.0	0.74	ug/L			06/10/15 10:27	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			06/10/15 10:27	1
o-Xylene	ND		1.0	0.76	ug/L			06/10/15 10:27	1
Xylenes, Total	ND		2.0	0.66	ug/L			06/10/15 10:27	1
Total BTEX	ND		2.0	1.0	ug/L			06/10/15 10:27	1
Naphthalene	ND		1.0	0.43	ug/L			06/10/15 10:27	1
Tert-amyl methyl ether	ND		1.0	0.27	ug/L			06/10/15 10:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*93*		*71 - 126*		*06/10/15 10:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*66 - 137*		*06/10/15 10:27*	*1*
4-Bromofluorobenzene (Surr)	*107*		*73 - 120*		*06/10/15 10:27*	*1*
Dibromofluoromethane (Surr)	*99*		*60 - 140*		*06/10/15 10:27*	*1*

Lab Sample ID: LCS 480-247185/4
Matrix: Water
Analysis Batch: 247185

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			25.0	25.8		ug/L		103	71 - 124		
Toluene			25.0	24.4		ug/L		97	80 - 122		
Ethylbenzene			25.0	24.2		ug/L		97	77 - 123		
m-Xylene & p-Xylene			25.0	24.6		ug/L		98	76 - 122		
o-Xylene			25.0	24.8		ug/L		99	76 - 122		
Naphthalene			25.0	23.0		ug/L		92	66 - 125		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*93*		*71 - 126*
1,2-Dichloroethane-d4 (Surr)	*89*		*66 - 137*
4-Bromofluorobenzene (Surr)	*109*		*73 - 120*
Dibromofluoromethane (Surr)	*98*		*60 - 140*

Lab Sample ID: LCSD 480-247185/5
Matrix: Water
Analysis Batch: 247185

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			25.0	24.7		ug/L		99	71 - 124	4	13
Toluene			25.0	22.6		ug/L		91	80 - 122	7	15
Ethylbenzene			25.0	22.7		ug/L		91	77 - 123	6	15
m-Xylene & p-Xylene			25.0	22.8		ug/L		91	76 - 122	8	16
o-Xylene			25.0	23.1		ug/L		92	76 - 122	7	16
Naphthalene			25.0	22.9		ug/L		91	66 - 125	0	20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 480-247185/5
Matrix: Water
Analysis Batch: 247185

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	89		71 - 126
1,2-Dichloroethane-d4 (Surr)	91		66 - 137
4-Bromofluorobenzene (Surr)	105		73 - 120
Dibromofluoromethane (Surr)	98		60 - 140

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Lab Sample ID: MB 480-247456/1-A
Matrix: Water
Analysis Batch: 247517

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247456

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		5.0	0.42	ug/L		06/11/15 08:27	06/11/15 17:34	1
Butyl benzyl phthalate	ND		3.0	0.16	ug/L		06/11/15 08:27	06/11/15 17:34	1
Diethyl phthalate	ND		0.50	0.064	ug/L		06/11/15 08:27	06/11/15 17:34	1
Dimethyl phthalate	ND		0.50	0.057	ug/L		06/11/15 08:27	06/11/15 17:34	1
Di-n-butyl phthalate	ND		2.0	0.35	ug/L		06/11/15 08:27	06/11/15 17:34	1
Di-n-octyl phthalate	ND		5.0	0.20	ug/L		06/11/15 08:27	06/11/15 17:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	93		39 - 146	06/11/15 08:27	06/11/15 17:34	1
2-Fluorobiphenyl	83		37 - 120	06/11/15 08:27	06/11/15 17:34	1
2-Fluorophenol (Surr)	44		18 - 120	06/11/15 08:27	06/11/15 17:34	1
Nitrobenzene-d5 (Surr)	75		34 - 132	06/11/15 08:27	06/11/15 17:34	1
Phenol-d5 (Surr)	30		11 - 120	06/11/15 08:27	06/11/15 17:34	1
p-Terphenyl-d14	102		58 - 147	06/11/15 08:27	06/11/15 17:34	1

Lab Sample ID: LCS 480-247456/2-A
Matrix: Water
Analysis Batch: 247517

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 247456

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bis(2-ethylhexyl) phthalate	4.00	4.21	J	ug/L		105	69 - 136
Butyl benzyl phthalate	4.00	4.25		ug/L		106	58 - 164
Diethyl phthalate	4.00	4.07		ug/L		102	57 - 145
Dimethyl phthalate	4.00	3.75		ug/L		94	55 - 136
Di-n-butyl phthalate	4.00	3.85		ug/L		96	59 - 172
Di-n-octyl phthalate	4.00	4.85	J	ug/L		121	76 - 141
Naphthalene	4.00	3.24		ug/L		81	25 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	95		39 - 146
2-Fluorobiphenyl	71		37 - 120
2-Fluorophenol (Surr)	46		18 - 120
Nitrobenzene-d5 (Surr)	90		34 - 132
Phenol-d5 (Surr)	32		11 - 120
p-Terphenyl-d14	90		58 - 147

Lab Sample ID: LCSD 480-247456/3-A
Matrix: Water
Analysis Batch: 247517

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 247456

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bis(2-ethylhexyl) phthalate			4.00	3.92	J	ug/L		98	69 - 136	7	15
Butyl benzyl phthalate			4.00	3.35	*	ug/L		84	58 - 164	24	16
Diethyl phthalate			4.00	3.80		ug/L		95	57 - 145	7	15
Dimethyl phthalate			4.00	3.43		ug/L		86	55 - 136	9	15
Di-n-butyl phthalate			4.00	4.07		ug/L		102	59 - 172	6	15
Di-n-octyl phthalate			4.00	4.46	J	ug/L		111	76 - 141	8	16
Naphthalene			4.00	3.26		ug/L		81	25 - 125	0	29

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*87*		*39 - 146*
2-Fluorobiphenyl	*76*		*37 - 120*
2-Fluorophenol (Surr)	*37*		*18 - 120*
Nitrobenzene-d5 (Surr)	*63*		*34 - 132*
Phenol-d5 (Surr)	*26*		*11 - 120*
p-Terphenyl-d14	*77*		*58 - 147*

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 480-247418/1-A
Matrix: Water
Analysis Batch: 247617

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247418

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.060	0.038	ug/L		06/11/15 07:49	06/11/15 16:33	1
PCB-1221	ND		0.060	0.038	ug/L		06/11/15 07:49	06/11/15 16:33	1
PCB-1232	ND		0.060	0.038	ug/L		06/11/15 07:49	06/11/15 16:33	1
PCB-1242	ND		0.060	0.038	ug/L		06/11/15 07:49	06/11/15 16:33	1
PCB-1248	ND		0.060	0.038	ug/L		06/11/15 07:49	06/11/15 16:33	1
PCB-1254	ND		0.060	0.031	ug/L		06/11/15 07:49	06/11/15 16:33	1
PCB-1260	ND		0.060	0.031	ug/L		06/11/15 07:49	06/11/15 16:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*49*		*26 - 135*	*06/11/15 07:49*	*06/11/15 16:33*	*1*
Tetrachloro-m-xylene	*79*		*27 - 159*	*06/11/15 07:49*	*06/11/15 16:33*	*1*

Lab Sample ID: LCS 480-247418/2-A
Matrix: Water
Analysis Batch: 247617

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 247418

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016			1.00	0.942		ug/L		94	40 - 142
PCB-1260			1.00	0.728		ug/L		73	67 - 148

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*44*		*26 - 135*
Tetrachloro-m-xylene	*80*		*27 - 159*

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 480-247320/1-A
Matrix: Water
Analysis Batch: 247697

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247320

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10.0	5.6	ug/L		06/11/15 11:16	06/11/15 22:29	1
Cadmium	ND		1.0	0.50	ug/L		06/11/15 11:16	06/11/15 22:29	1
Copper	ND		10.0	1.6	ug/L		06/11/15 11:16	06/11/15 22:29	1
Iron	ND		50.0	19.3	ug/L		06/11/15 11:16	06/11/15 22:29	1
Lead	ND		5.0	3.0	ug/L		06/11/15 11:16	06/11/15 22:29	1
Nickel	ND		10.0	1.3	ug/L		06/11/15 11:16	06/11/15 22:29	1
Selenium	ND		15.0	8.7	ug/L		06/11/15 11:16	06/11/15 22:29	1
Silver	ND		3.0	1.7	ug/L		06/11/15 11:16	06/11/15 22:29	1
Zinc	8.99	J	10.0	1.5	ug/L		06/11/15 11:16	06/11/15 22:29	1

Lab Sample ID: LCS 480-247320/2-A
Matrix: Water
Analysis Batch: 247697

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 247320

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	200	192.3		ug/L		96	85 - 115
Cadmium	200	192.1		ug/L		96	85 - 115
Copper	200	193.9		ug/L		97	85 - 115
Iron	10000	9244		ug/L		92	85 - 115
Lead	200	190.5		ug/L		95	85 - 115
Nickel	200	190.3		ug/L		95	85 - 115
Selenium	200	200.7		ug/L		100	85 - 115
Silver	50.0	49.66		ug/L		99	85 - 115
Zinc	200	195.4		ug/L		98	85 - 115

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 480-247457/1-A
Matrix: Water
Analysis Batch: 247779

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247457

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.15	ug/L		06/11/15 08:44	06/11/15 16:30	1

Lab Sample ID: LCS 480-247457/2-A
Matrix: Water
Analysis Batch: 247779

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 247457

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	20.0	20.25		ug/L		101	85 - 115

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 480-247718/1-A
Matrix: Water
Analysis Batch: 247860

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247718

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.12	ug/L		06/12/15 10:15	06/12/15 14:03	1

Lab Sample ID: LCS 480-247718/2-A
Matrix: Water
Analysis Batch: 247860

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 247718

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	6.67	6.78		ug/L		102	85 - 115

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 480-248437/1-A
Matrix: Water
Analysis Batch: 248439

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248437

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (1664A)	ND		5.0	1.9	mg/L		06/17/15 02:40	06/17/15 03:17	1

Lab Sample ID: LCS 480-248437/2-A
Matrix: Water
Analysis Batch: 248439

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248437

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Petroleum Hydrocarbons (1664A)	20.0	12.80		mg/L		64	64 - 132

Lab Sample ID: 480-81856-1 MS
Matrix: Water
Analysis Batch: 248439

Client Sample ID: MH-2
Prep Type: Total/NA
Prep Batch: 248437

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Petroleum Hydrocarbons (1664A)	ND	F1	10.1	4.14	J F1	mg/L		41	64 - 132

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 480-247483/1-A
Matrix: Water
Analysis Batch: 247829

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247483

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0050	mg/L		06/11/15 08:52	06/12/15 12:34	1

Method: 335.4 - Cyanide, Total (Continued)

Lab Sample ID: LCS 480-247483/2-A
Matrix: Water
Analysis Batch: 247829

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 247483

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			0.400	0.379		mg/L		95	90 - 110		

Lab Sample ID: 480-81856-1 DU
Matrix: Water
Analysis Batch: 247829

Client Sample ID: MH-2
Prep Type: Total/NA
Prep Batch: 247483

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Cyanide, Total	ND			ND		mg/L				NC	15

Method: 420.4 - Phenolics, Total Recoverable

Lab Sample ID: MB 480-247289/1-A
Matrix: Water
Analysis Batch: 247614

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247289

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenolics, Total Recoverable	ND		10.0	5.0	ug/L		06/10/15 11:47	06/11/15 08:45	1

Lab Sample ID: LCS 480-247289/2-A
Matrix: Water
Analysis Batch: 247614

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 247289

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Phenolics, Total Recoverable			100	96.56		ug/L		97	90 - 110		

Lab Sample ID: 480-81856-1 MS
Matrix: Water
Analysis Batch: 247614

Client Sample ID: MH-2
Prep Type: Total/NA
Prep Batch: 247289

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Phenolics, Total Recoverable	52.6	F1	100	99.58	F1	ug/L		47	90 - 110		

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 480-247410/1
Matrix: Water
Analysis Batch: 247410

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	4.0	mg/L			06/11/15 07:02	1

Lab Sample ID: LCS 480-247410/2
Matrix: Water
Analysis Batch: 247410

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			253	250.8		mg/L		99	88 - 110		

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: 480-81856-1 DU
Matrix: Water
Analysis Batch: 247410

Client Sample ID: MH-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Suspended Solids	ND			ND		mg/L				NC	15

Method: SM 3500 CR D - Chromium, Hexavalent

Lab Sample ID: MB 480-247285/3
Matrix: Water
Analysis Batch: 247285

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND		0.010	0.0050	mg/L			06/10/15 08:45	1

Lab Sample ID: LCS 480-247285/4
Matrix: Water
Analysis Batch: 247285

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chromium, hexavalent			0.0500	0.0571		mg/L		114	85 - 115		

Lab Sample ID: 480-81856-1 DU
Matrix: Water
Analysis Batch: 247285

Client Sample ID: MH-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chromium, hexavalent	0.0086	J		ND		mg/L				NC	15

QC Association Summary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-81856-1

GC/MS VOA

Analysis Batch: 247185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-81856-1	MH-2	Total/NA	Water	8260C	
480-81856-2	CP-1	Total/NA	Water	8260C	
480-81856-3	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-247185/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-247185/5	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 480-247185/7	Method Blank	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 247456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-81856-1	MH-2	Total/NA	Water	3510C	
480-81856-2	CP-1	Total/NA	Water	3510C	
LCS 480-247456/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 480-247456/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 480-247456/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 247517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-81856-1	MH-2	Total/NA	Water	8270C LL	247456
480-81856-2	CP-1	Total/NA	Water	8270C LL	247456
LCS 480-247456/2-A	Lab Control Sample	Total/NA	Water	8270C LL	247456
LCSD 480-247456/3-A	Lab Control Sample Dup	Total/NA	Water	8270C LL	247456
MB 480-247456/1-A	Method Blank	Total/NA	Water	8270C LL	247456

GC Semi VOA

Prep Batch: 247418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-81856-1	MH-2	Total/NA	Water	3510C	
480-81856-2	CP-1	Total/NA	Water	3510C	
LCS 480-247418/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 480-247418/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 247617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-81856-1	MH-2	Total/NA	Water	608	247418
480-81856-2	CP-1	Total/NA	Water	608	247418
LCS 480-247418/2-A	Lab Control Sample	Total/NA	Water	608	247418
MB 480-247418/1-A	Method Blank	Total/NA	Water	608	247418

Metals

Prep Batch: 247320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-81856-1	MH-2	Total/NA	Water	200.7	
480-81856-2	CP-1	Total/NA	Water	200.7	
LCS 480-247320/2-A	Lab Control Sample	Total/NA	Water	200.7	
MB 480-247320/1-A	Method Blank	Total/NA	Water	200.7	

Metals (Continued)

Prep Batch: 247457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-81856-1	MH-2	Total/NA	Water	200.8	
480-81856-2	CP-1	Total/NA	Water	200.8	
LCS 480-247457/2-A	Lab Control Sample	Total/NA	Water	200.8	
MB 480-247457/1-A	Method Blank	Total/NA	Water	200.8	

Analysis Batch: 247697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-81856-1	MH-2	Total/NA	Water	200.7 Rev 4.4	247320
480-81856-2	CP-1	Total/NA	Water	200.7 Rev 4.4	247320
LCS 480-247320/2-A	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	247320
MB 480-247320/1-A	Method Blank	Total/NA	Water	200.7 Rev 4.4	247320

Prep Batch: 247718

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-81856-1	MH-2	Total/NA	Water	245.1	
480-81856-2	CP-1	Total/NA	Water	245.1	
LCS 480-247718/2-A	Lab Control Sample	Total/NA	Water	245.1	
MB 480-247718/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 247779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-81856-1	MH-2	Total/NA	Water	200.8	247457
480-81856-2	CP-1	Total/NA	Water	200.8	247457
LCS 480-247457/2-A	Lab Control Sample	Total/NA	Water	200.8	247457
MB 480-247457/1-A	Method Blank	Total/NA	Water	200.8	247457

Analysis Batch: 247860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-81856-1	MH-2	Total/NA	Water	245.1	247718
480-81856-2	CP-1	Total/NA	Water	245.1	247718
LCS 480-247718/2-A	Lab Control Sample	Total/NA	Water	245.1	247718
MB 480-247718/1-A	Method Blank	Total/NA	Water	245.1	247718

General Chemistry

Analysis Batch: 247285

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-81856-1	MH-2	Total/NA	Water	SM 3500 CR D	
480-81856-1 DU	MH-2	Total/NA	Water	SM 3500 CR D	
480-81856-2	CP-1	Total/NA	Water	SM 3500 CR D	
LCS 480-247285/4	Lab Control Sample	Total/NA	Water	SM 3500 CR D	
MB 480-247285/3	Method Blank	Total/NA	Water	SM 3500 CR D	

Prep Batch: 247289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-81856-1	MH-2	Total/NA	Water	Distill/Phenol	
480-81856-1 MS	MH-2	Total/NA	Water	Distill/Phenol	
480-81856-2	CP-1	Total/NA	Water	Distill/Phenol	
LCS 480-247289/2-A	Lab Control Sample	Total/NA	Water	Distill/Phenol	
MB 480-247289/1-A	Method Blank	Total/NA	Water	Distill/Phenol	

General Chemistry (Continued)

Analysis Batch: 247410

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-81856-1	MH-2	Total/NA	Water	SM 2540D	
480-81856-1 DU	MH-2	Total/NA	Water	SM 2540D	
480-81856-2	CP-1	Total/NA	Water	SM 2540D	
LCS 480-247410/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 480-247410/1	Method Blank	Total/NA	Water	SM 2540D	

Prep Batch: 247483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-81856-1	MH-2	Total/NA	Water	Distill/CN	
480-81856-1 DU	MH-2	Total/NA	Water	Distill/CN	
480-81856-2	CP-1	Total/NA	Water	Distill/CN	
LCS 480-247483/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
MB 480-247483/1-A	Method Blank	Total/NA	Water	Distill/CN	

Analysis Batch: 247614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-81856-1	MH-2	Total/NA	Water	420.4	247289
480-81856-1 MS	MH-2	Total/NA	Water	420.4	247289
480-81856-2	CP-1	Total/NA	Water	420.4	247289
LCS 480-247289/2-A	Lab Control Sample	Total/NA	Water	420.4	247289
MB 480-247289/1-A	Method Blank	Total/NA	Water	420.4	247289

Analysis Batch: 247829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-81856-1	MH-2	Total/NA	Water	335.4	247483
480-81856-1 DU	MH-2	Total/NA	Water	335.4	247483
480-81856-2	CP-1	Total/NA	Water	335.4	247483
LCS 480-247483/2-A	Lab Control Sample	Total/NA	Water	335.4	247483
MB 480-247483/1-A	Method Blank	Total/NA	Water	335.4	247483

Analysis Batch: 248140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-81856-1	MH-2	Total/NA	Water	SM 3500 CR D	
480-81856-2	CP-1	Total/NA	Water	SM 3500 CR D	

Prep Batch: 248437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-81856-1	MH-2	Total/NA	Water	1664A	
480-81856-1 MS	MH-2	Total/NA	Water	1664A	
480-81856-2	CP-1	Total/NA	Water	1664A	
LCS 480-248437/2-A	Lab Control Sample	Total/NA	Water	1664A	
MB 480-248437/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 248439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-81856-1	MH-2	Total/NA	Water	1664A	248437
480-81856-1 MS	MH-2	Total/NA	Water	1664A	248437
480-81856-2	CP-1	Total/NA	Water	1664A	248437
LCS 480-248437/2-A	Lab Control Sample	Total/NA	Water	1664A	248437
MB 480-248437/1-A	Method Blank	Total/NA	Water	1664A	248437

Lab Chronicle

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-81856-1

Client Sample ID: MH-2

Lab Sample ID: 480-81856-1

Date Collected: 06/09/15 10:15

Matrix: Water

Date Received: 06/10/15 01:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	247185	06/10/15 17:24	SWO	TAL BUF
Total/NA	Prep	3510C			247456	06/11/15 08:27	TRG	TAL BUF
Total/NA	Analysis	8270C LL		1	247517	06/11/15 19:04	DMR	TAL BUF
Total/NA	Prep	3510C			247418	06/11/15 07:49	TRG	TAL BUF
Total/NA	Analysis	608		1	247617	06/11/15 18:41	KS	TAL BUF
Total/NA	Prep	200.7			247320	06/11/15 11:16	TAS	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	247697	06/11/15 23:01	TRB	TAL BUF
Total/NA	Prep	200.8			247457	06/11/15 08:44	TAS	TAL BUF
Total/NA	Analysis	200.8		1	247779	06/11/15 18:12	MTM2	TAL BUF
Total/NA	Prep	245.1			247718	06/12/15 10:15	LRK	TAL BUF
Total/NA	Analysis	245.1		1	247860	06/12/15 14:44	LRK	TAL BUF
Total/NA	Prep	1664A			248437	06/17/15 02:40	LAW	TAL BUF
Total/NA	Analysis	1664A		1	248439	06/17/15 03:17	LAW	TAL BUF
Total/NA	Prep	Distill/CN			247483	06/11/15 08:52	NDB	TAL BUF
Total/NA	Analysis	335.4		1	247829	06/12/15 12:40	KMF	TAL BUF
Total/NA	Prep	Distill/Phenol			247289	06/10/15 11:47	GMG	TAL BUF
Total/NA	Analysis	420.4		1	247614	06/11/15 12:10	EKB	TAL BUF
Total/NA	Analysis	SM 2540D		1	247410	06/11/15 07:02	EKB	TAL BUF
Total/NA	Analysis	SM 3500 CR D		1	247285	06/10/15 08:45	DLG	TAL BUF
Total/NA	Analysis	SM 3500 CR D		1	248140	06/15/15 15:57	MTM2	TAL BUF

Client Sample ID: CP-1

Lab Sample ID: 480-81856-2

Date Collected: 06/09/15 13:20

Matrix: Water

Date Received: 06/10/15 01:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	247185	06/10/15 17:48	SWO	TAL BUF
Total/NA	Prep	3510C			247456	06/11/15 08:27	TRG	TAL BUF
Total/NA	Analysis	8270C LL		1	247517	06/11/15 19:34	DMR	TAL BUF
Total/NA	Prep	3510C			247418	06/11/15 07:49	TRG	TAL BUF
Total/NA	Analysis	608		1	247617	06/11/15 18:57	KS	TAL BUF
Total/NA	Prep	200.7			247320	06/11/15 11:16	TAS	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	247697	06/11/15 23:04	TRB	TAL BUF
Total/NA	Prep	200.8			247457	06/11/15 08:44	TAS	TAL BUF
Total/NA	Analysis	200.8		1	247779	06/11/15 18:18	MTM2	TAL BUF
Total/NA	Prep	245.1			247718	06/12/15 10:15	LRK	TAL BUF
Total/NA	Analysis	245.1		1	247860	06/12/15 14:45	LRK	TAL BUF
Total/NA	Prep	1664A			248437	06/17/15 02:40	LAW	TAL BUF
Total/NA	Analysis	1664A		1	248439	06/17/15 03:17	LAW	TAL BUF
Total/NA	Prep	Distill/CN			247483	06/11/15 08:52	NDB	TAL BUF
Total/NA	Analysis	335.4		1	247829	06/12/15 12:42	KMF	TAL BUF
Total/NA	Prep	Distill/Phenol			247289	06/10/15 11:47	GMG	TAL BUF
Total/NA	Analysis	420.4		1	247614	06/11/15 12:16	EKB	TAL BUF

Lab Chronicle

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-81856-1

Client Sample ID: CP-1

Lab Sample ID: 480-81856-2

Date Collected: 06/09/15 13:20
Date Received: 06/10/15 01:55

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D		1	247410	06/11/15 07:02	EKB	TAL BUF
Total/NA	Analysis	SM 3500 CR D		1	247285	06/10/15 08:45	DLG	TAL BUF
Total/NA	Analysis	SM 3500 CR D		1	248140	06/15/15 15:57	MTM2	TAL BUF

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-81856-3

Date Collected: 06/09/15 11:11
Date Received: 06/10/15 01:55

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	247185	06/10/15 11:49	SWO	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-81856-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Massachusetts	State Program	1	M-NY044	06-30-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260C		Water	Benzene
8260C		Water	Ethylbenzene
8260C		Water	m-Xylene & p-Xylene
8260C		Water	Naphthalene
8260C		Water	o-Xylene
8260C		Water	Tert-amyl methyl ether
8260C		Water	Toluene
8260C		Water	Total BTEX
8260C		Water	Xylenes, Total
8270C LL	3510C	Water	Bis(2-ethylhexyl) phthalate
8270C LL	3510C	Water	Butyl benzyl phthalate
8270C LL	3510C	Water	Diethyl phthalate
8270C LL	3510C	Water	Dimethyl phthalate
8270C LL	3510C	Water	Di-n-butyl phthalate
8270C LL	3510C	Water	Di-n-octyl phthalate
SM 3500 CR D		Water	Chromium, hexavalent
SM 3500 CR D		Water	Cr (III)

Method Summary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-81856-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8270C LL	Semivolatile Organic Compounds by GCMS - Low Levels	SW846	TAL BUF
608	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	TAL BUF
200.7 Rev 4.4	Metals (ICP)	EPA	TAL BUF
200.8	Metals (ICP/MS)	EPA	TAL BUF
245.1	Mercury (CVAA)	EPA	TAL BUF
1664A	HEM and SGT-HEM	1664A	TAL BUF
335.4	Cyanide, Total	MCAWW	TAL BUF
420.4	Phenolics, Total Recoverable	MCAWW	TAL BUF
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL BUF
SM 3500 CR D	Chromium, Hexavalent	SM	TAL BUF
SM 3500 CR D	Chromium, Trivalent	SM	TAL BUF

Protocol References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

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

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

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-81856-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-81856-1	MH-2	Water	06/09/15 10:15	06/10/15 01:55
480-81856-2	CP-1	Water	06/09/15 13:20	06/10/15 01:55
480-81856-3	TRIP BLANK	Water	06/09/15 11:11	06/10/15 01:55

TestAmerica Westfield
501 Southampton Road
Westfield MA 01085
Phone: (413) 572-4000 Fax: (303) 467-7247

TestAmerica Boston
240 Bear Hill Road -- Suite 104
Waltham MA 02451
Phone: (781) 466-6900 Fax: (781) 466-6901

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information: ERM
Client Contact: Joshua Klement
Company: ERM
Address: One Beacon St, 5th Floor
City: Boston, MA 02108
State and Zip:
Client's Phone: 617-646-7800
Client's Contact Email: james.allen@erm.com, matt.daly@erm.com, joshua.klement@erm.com
Client's Project Name/Number: 0241099
Sample Collection Site Name & Location: PMPS, Plymouth, MA

Sample Collector's Name (Please Print Neatly): JGK
Sample Collector's Phone: 617-646-7800
Lab PM: Becky Mason
E-Mail:
Lab COC Barcode Label

COC No: 32483
Page: 1 of 1
Job #: 02410

Due Date Requested:
Turnaround Time (TAT) Requested (business days): 5-day TAT
Quote # or Project #: 48012058
PO #:
WO #:
PWS ID #:

Analysis Requested

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	3500 Cr6 + Cr3	Metals (200.8 mod, 200.7 mod, 245.1)	Oil + Grease and TPH 1664A calc	420.4 Total Recoverable Phenolics	8260C BTEX + 8260 MOD	8270C_Low Level SVOCs short list	608 - PCB - Priority Pollutant	2540D - TSS	335.4 Total Cn	TPH (hold)	Hold all analyses	Total Number of Containers (enter total for each line)	Special Instructions & Notes:
			Preservation Codes →		N	O	S	S	A	N	N	N	B	N			
MH-2	06/09/15	10:15	G	Z											X	16	
CP-1	06/09/15	13:20	G	Z											X	~~8~~ 14	
Trip Blank	06/09/15	11:11													X	2	

480-81856 Chain of Custody

See quote for selected analyte list and required reporting limits.

Preservation Codes:
A - Hydrochloric Acid
B - Sodium Hydroxide
C - Zinc Acetate
D - Nitric Acid
E - Sodium Bisulfite
F - Methanol
H - Ascorbic Acid
J - Deionized Water
M - Hexane
N - No Preservative
P - Sodium Sulfate
Q - Sodium Sulfite
R - Sodium Thiosulfate
S - Sulfuric Acid
Z - other (specify)

Regulatory Programs:
MCP ☐ GW1/S1 ☐
RCP ☐ CT RSR ☐
DEP Form ☐ EDD Required ☐
eDEP Filing ☐ NPDES ☐

SUBCONTRACT POLICY: Unless you provide instructions to the contrary, or specify which sub-contract labs are or are not to be used, you agree in advance to permit TestAmerica to use certified, subcontract labs, without any additional notification made by us, as necessary to fulfill your work order.

Possible Hazard Identification (please check off each that may apply):
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal Requirements (A fee may be assessed if samples are retained longer than 1 month):
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

** **Matrix Types**: A=Air S=Solid/Soil W=Water O=Oil X=Waste (non-water) Z=Other: storm water

► NOTE!! ALL SAMPLES MUST BE TRANSPORTED IN A COOLER, ON ICE !! ◄

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Joshua Klement	6-9-15 15:15			6/9/15 15:15	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	6/9/15 17:00	TA		10 June 15 0155	TAB
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

0.8, 0.6 #1

WI-QA-010 rev 8

Revised 10/29/2014
TAL-8245-360R

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6/29/2015

Login Sample Receipt Checklist

Client: ERM-Northeast

Job Number: 480-81856-1

Login Number: 81856
List Number: 1
Creator: Williams, Christopher S

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	ERM
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	True	

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-82004-1
Client Project/Site: Monitoring Parameters Analysis

For:
ERM-Northeast
One Beacon Steet
5th Floor
Boston, Massachusetts 02108

Attn: Ms. Heather M Usle

Authorized for release by:
6/18/2015 4:50:55 PM

Becky Mason, Project Manager II
(413)572-4000
becky.mason@testamericainc.com

Table of Contents

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Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82004-1

Job ID: 480-82004-1

Laboratory: TestAmerica Buffalo

Narrative

Receipt
The samples were received on 6/11/2015 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.0º C.

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

GC/MS Semi VOA
Method 8270C LL: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 480-247573 recovered outside control limits for the following analytes: Diethyl phthalate.

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

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

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

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

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 480-247573.

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

Detection Summary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82004-1

Client Sample ID: MH-4 — Lab Sample ID: 480-82004-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl phthalate	0.14	J *	0.48	0.061	ug/L	1		8270C LL	Total/NA
Copper	28.6		10.0	1.6	ug/L	1		200.7 Rev 4.4	Total/NA
Iron	1600		50.0	19.3	ug/L	1		200.7 Rev 4.4	Total/NA
Lead	8.3		5.0	3.0	ug/L	1		200.7 Rev 4.4	Total/NA
Nickel	4.5	J	10.0	1.3	ug/L	1		200.7 Rev 4.4	Total/NA
Zinc	77.6		10.0	1.5	ug/L	1		200.7 Rev 4.4	Total/NA
Antimony	0.30	J	1.0	0.15	ug/L	1		200.8	Total/NA

Client Sample ID: MH-5 — Lab Sample ID: 480-82004-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	3.6	J	10.0	1.6	ug/L	1		200.7 Rev 4.4	Total/NA
Iron	115		50.0	19.3	ug/L	1		200.7 Rev 4.4	Total/NA
Zinc	17.9		10.0	1.5	ug/L	1		200.7 Rev 4.4	Total/NA
Antimony	0.23	J	1.0	0.15	ug/L	1		200.8	Total/NA
Phenolics, Total Recoverable	6.9	J	10.0	5.0	ug/L	1		420.4	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	4.8		4.0	4.0	mg/L	1		SM 2540D	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-82004-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MH-4

Date Collected: 06/10/15 13:35
Date Received: 06/11/15 09:00

Lab Sample ID: 480-82004-1

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			06/12/15 17:44	1
Toluene	ND		1.0	0.51	ug/L			06/12/15 17:44	1
Ethylbenzene	ND		1.0	0.74	ug/L			06/12/15 17:44	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			06/12/15 17:44	1
o-Xylene	ND		1.0	0.76	ug/L			06/12/15 17:44	1
Xylenes, Total	ND		2.0	0.66	ug/L			06/12/15 17:44	1
Total BTEX	ND		2.0	1.0	ug/L			06/12/15 17:44	1
Naphthalene	ND		1.0	0.43	ug/L			06/12/15 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*71 - 126*		*06/12/15 17:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*66 - 137*		*06/12/15 17:44*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*06/12/15 17:44*	*1*
Dibromofluoromethane (Surr)	*104*		*60 - 140*		*06/12/15 17:44*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		4.8	0.40	ug/L		06/11/15 14:05	06/17/15 16:43	1
Butyl benzyl phthalate	ND		2.9	0.15	ug/L		06/11/15 14:05	06/17/15 16:43	1
Diethyl phthalate	**0.14**	**J ***	0.48	0.061	ug/L		06/11/15 14:05	06/17/15 16:43	1
Dimethyl phthalate	ND		0.48	0.054	ug/L		06/11/15 14:05	06/17/15 16:43	1
Di-n-butyl phthalate	ND		1.9	0.33	ug/L		06/11/15 14:05	06/17/15 16:43	1
Di-n-octyl phthalate	ND		4.8	0.19	ug/L		06/11/15 14:05	06/17/15 16:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*86*		*39 - 146*	*06/11/15 14:05*	*06/17/15 16:43*	*1*
2-Fluorobiphenyl	*86*		*37 - 120*	*06/11/15 14:05*	*06/17/15 16:43*	*1*
2-Fluorophenol (Surr)	*44*		*18 - 120*	*06/11/15 14:05*	*06/17/15 16:43*	*1*
Nitrobenzene-d5 (Surr)	*74*		*34 - 132*	*06/11/15 14:05*	*06/17/15 16:43*	*1*
Phenol-d5 (Surr)	*32*		*11 - 120*	*06/11/15 14:05*	*06/17/15 16:43*	*1*
p-Terphenyl-d14	*99*		*58 - 147*	*06/11/15 14:05*	*06/17/15 16:43*	*1*

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.057	0.036	ug/L		06/12/15 08:19	06/12/15 21:57	1
PCB-1221	ND		0.057	0.036	ug/L		06/12/15 08:19	06/12/15 21:57	1
PCB-1232	ND		0.057	0.036	ug/L		06/12/15 08:19	06/12/15 21:57	1
PCB-1242	ND		0.057	0.036	ug/L		06/12/15 08:19	06/12/15 21:57	1
PCB-1248	ND		0.057	0.036	ug/L		06/12/15 08:19	06/12/15 21:57	1
PCB-1254	ND		0.057	0.029	ug/L		06/12/15 08:19	06/12/15 21:57	1
PCB-1260	ND		0.057	0.029	ug/L		06/12/15 08:19	06/12/15 21:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*39*		*26 - 135*	*06/12/15 08:19*	*06/12/15 21:57*	*1*
Tetrachloro-m-xylene	*84*		*27 - 159*	*06/12/15 08:19*	*06/12/15 21:57*	*1*

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10.0	5.6	ug/L		06/12/15 08:00	06/12/15 16:59	1
Cadmium	ND		1.0	0.50	ug/L		06/12/15 08:00	06/12/15 16:59	1
Copper	**28.6**		10.0	1.6	ug/L		06/12/15 08:00	06/12/15 16:59	1

Client Sample ID: MH-4

Date Collected: 06/10/15 13:35
Date Received: 06/11/15 09:00

Lab Sample ID: 480-82004-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	1600		50.0	19.3	ug/L		06/12/15 08:00	06/12/15 16:59	1
Lead	8.3		5.0	3.0	ug/L		06/12/15 08:00	06/12/15 16:59	1
Nickel	4.5	J	10.0	1.3	ug/L		06/12/15 08:00	06/12/15 16:59	1
Selenium	ND		15.0	8.7	ug/L		06/12/15 08:00	06/12/15 16:59	1
Silver	ND		3.0	1.7	ug/L		06/12/15 08:00	06/12/15 16:59	1
Zinc	77.6		10.0	1.5	ug/L		06/12/15 08:00	06/12/15 16:59	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.30	J	1.0	0.15	ug/L		06/15/15 08:10	06/15/15 18:34	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.12	ug/L		06/16/15 09:30	06/16/15 13:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (1664A)	ND		4.9	1.9	mg/L		06/18/15 12:28	06/18/15 12:37	1
Cyanide, Total	ND		0.010	0.0050	mg/L		06/15/15 16:50	06/16/15 20:27	1
Phenolics, Total Recoverable	ND		10.0	5.0	ug/L		06/15/15 21:10	06/16/15 08:11	1
Chromium, hexavalent	ND		0.010	0.0050	mg/L			06/11/15 10:10	1
Cr (III)	ND		0.010	0.0060	mg/L			06/17/15 14:13	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	4.0	mg/L			06/14/15 07:10	1

Client Sample ID: MH-5

Date Collected: 06/10/15 13:55
Date Received: 06/11/15 09:00

Lab Sample ID: 480-82004-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			06/12/15 18:06	1
Toluene	ND		1.0	0.51	ug/L			06/12/15 18:06	1
Ethylbenzene	ND		1.0	0.74	ug/L			06/12/15 18:06	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			06/12/15 18:06	1
o-Xylene	ND		1.0	0.76	ug/L			06/12/15 18:06	1
Xylenes, Total	ND		2.0	0.66	ug/L			06/12/15 18:06	1
Total BTEX	ND		2.0	1.0	ug/L			06/12/15 18:06	1
Naphthalene	ND		1.0	0.43	ug/L			06/12/15 18:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*71 - 126*		*06/12/15 18:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*66 - 137*		*06/12/15 18:06*	*1*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*06/12/15 18:06*	*1*
Dibromofluoromethane (Surr)	*101*		*60 - 140*		*06/12/15 18:06*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		4.7	0.40	ug/L		06/11/15 14:05	06/17/15 17:13	1
Butyl benzyl phthalate	ND		2.8	0.15	ug/L		06/11/15 14:05	06/17/15 17:13	1

Client Sample ID: MH-5

Date Collected: 06/10/15 13:55
Date Received: 06/11/15 09:00

Lab Sample ID: 480-82004-2

Matrix: Water

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diethyl phthalate	ND	*	0.47	0.061	ug/L		06/11/15 14:05	06/17/15 17:13	1
Dimethyl phthalate	ND		0.47	0.054	ug/L		06/11/15 14:05	06/17/15 17:13	1
Di-n-butyl phthalate	ND		1.9	0.33	ug/L		06/11/15 14:05	06/17/15 17:13	1
Di-n-octyl phthalate	ND		4.7	0.19	ug/L		06/11/15 14:05	06/17/15 17:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*69*		*39 - 146*	*06/11/15 14:05*	*06/17/15 17:13*	*1*
2-Fluorobiphenyl	*65*		*37 - 120*	*06/11/15 14:05*	*06/17/15 17:13*	*1*
2-Fluorophenol (Surr)	*37*		*18 - 120*	*06/11/15 14:05*	*06/17/15 17:13*	*1*
Nitrobenzene-d5 (Surr)	*59*		*34 - 132*	*06/11/15 14:05*	*06/17/15 17:13*	*1*
Phenol-d5 (Surr)	*28*		*11 - 120*	*06/11/15 14:05*	*06/17/15 17:13*	*1*
p-Terphenyl-d14	*86*		*58 - 147*	*06/11/15 14:05*	*06/17/15 17:13*	*1*

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.063	0.040	ug/L		06/12/15 08:19	06/12/15 21:41	1
PCB-1221	ND		0.063	0.040	ug/L		06/12/15 08:19	06/12/15 21:41	1
PCB-1232	ND		0.063	0.040	ug/L		06/12/15 08:19	06/12/15 21:41	1
PCB-1242	ND		0.063	0.040	ug/L		06/12/15 08:19	06/12/15 21:41	1
PCB-1248	ND		0.063	0.040	ug/L		06/12/15 08:19	06/12/15 21:41	1
PCB-1254	ND		0.063	0.033	ug/L		06/12/15 08:19	06/12/15 21:41	1
PCB-1260	ND		0.063	0.033	ug/L		06/12/15 08:19	06/12/15 21:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*56*		*26 - 135*	*06/12/15 08:19*	*06/12/15 21:41*	*1*
Tetrachloro-m-xylene	*79*		*27 - 159*	*06/12/15 08:19*	*06/12/15 21:41*	*1*

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10.0	5.6	ug/L		06/12/15 08:00	06/12/15 17:02	1
Cadmium	ND		1.0	0.50	ug/L		06/12/15 08:00	06/12/15 17:02	1
Copper	**3.6**	**J**	10.0	1.6	ug/L		06/12/15 08:00	06/12/15 17:02	1
Iron	**115**		50.0	19.3	ug/L		06/12/15 08:00	06/12/15 17:02	1
Lead	ND		5.0	3.0	ug/L		06/12/15 08:00	06/12/15 17:02	1
Nickel	ND		10.0	1.3	ug/L		06/12/15 08:00	06/12/15 17:02	1
Selenium	ND		15.0	8.7	ug/L		06/12/15 08:00	06/12/15 17:02	1
Silver	ND		3.0	1.7	ug/L		06/12/15 08:00	06/12/15 17:02	1
Zinc	**17.9**		10.0	1.5	ug/L		06/12/15 08:00	06/12/15 17:02	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.23**	**J**	1.0	0.15	ug/L		06/15/15 08:10	06/15/15 18:40	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.12	ug/L		06/16/15 09:30	06/16/15 13:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (1664A)	ND		5.0	1.9	mg/L		06/18/15 12:28	06/18/15 12:37	1

Client Sample ID: MH-5

Date Collected: 06/10/15 13:55
Date Received: 06/11/15 09:00

Lab Sample ID: 480-82004-2
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0050	mg/L		06/15/15 16:50	06/16/15 20:30	1
Phenolics, Total Recoverable	**6.9**	**J**	10.0	5.0	ug/L		06/17/15 15:37	06/18/15 10:05	1
Chromium, hexavalent	ND		0.010	0.0050	mg/L			06/11/15 10:10	1
Cr (III)	ND		0.010	0.0060	mg/L			06/17/15 14:13	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**4.8**		4.0	4.0	mg/L			06/16/15 09:21	1

Client Sample ID: TRIP BLANK

Date Collected: 06/10/15 06:00
Date Received: 06/11/15 09:00

Lab Sample ID: 480-82004-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			06/12/15 18:29	1
Toluene	ND		1.0	0.51	ug/L			06/12/15 18:29	1
Ethylbenzene	ND		1.0	0.74	ug/L			06/12/15 18:29	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			06/12/15 18:29	1
o-Xylene	ND		1.0	0.76	ug/L			06/12/15 18:29	1
Xylenes, Total	ND		2.0	0.66	ug/L			06/12/15 18:29	1
Total BTEX	ND		2.0	1.0	ug/L			06/12/15 18:29	1
Naphthalene	ND		1.0	0.43	ug/L			06/12/15 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*71 - 126*		*06/12/15 18:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*		*06/12/15 18:29*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*06/12/15 18:29*	*1*
Dibromofluoromethane (Surr)	*104*		*60 - 140*		*06/12/15 18:29*	*1*

Surrogate Summary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82004-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	12DCE	BFB	DBFM
Lab Sample ID	Client Sample ID	(71-126)	(66-137)	(73-120)	(60-140)
480-82004-1	MH-4	102	100	100	104
480-82004-2	MH-5	105	98	101	101
480-82004-3	TRIP BLANK	104	102	100	104
LCS 480-247706/5	Lab Control Sample	106	94	104	100
MB 480-247706/7	Method Blank	106	91	104	96

Surrogate Legend

TOL = Toluene-d8 (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPH
Lab Sample ID	Client Sample ID	(39-146)	(37-120)	(18-120)	(34-132)	(11-120)	(58-147)
480-82004-1	MH-4	86	86	44	74	32	99
480-82004-2	MH-5	69	65	37	59	28	86
LCS 480-247573/2-A	Lab Control Sample	83	87	46	81	36	98
LCSD 480-247573/3-A	Lab Control Sample Dup	73	78	50	71	37	88
MB 480-247573/1-A	Method Blank	70	74	38	61	29	101

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = p-Terphenyl-d14

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB1	TCX1
Lab Sample ID	Client Sample ID	(26-135)	(27-159)
480-82004-1	MH-4	39	84
480-82004-2	MH-5	56	79
LCS 480-247698/2-A	Lab Control Sample	52	102
MB 480-247698/1-A	Method Blank	61	96

Surrogate Legend

DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-247706/7
Matrix: Water
Analysis Batch: 247706

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			06/12/15 11:40	1
Toluene	ND		1.0	0.51	ug/L			06/12/15 11:40	1
Ethylbenzene	ND		1.0	0.74	ug/L			06/12/15 11:40	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			06/12/15 11:40	1
o-Xylene	ND		1.0	0.76	ug/L			06/12/15 11:40	1
Xylenes, Total	ND		2.0	0.66	ug/L			06/12/15 11:40	1
Total BTEX	ND		2.0	1.0	ug/L			06/12/15 11:40	1
Naphthalene	ND		1.0	0.43	ug/L			06/12/15 11:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*71 - 126*		*06/12/15 11:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*66 - 137*		*06/12/15 11:40*	*1*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*		*06/12/15 11:40*	*1*
Dibromofluoromethane (Surr)	*96*		*60 - 140*		*06/12/15 11:40*	*1*

Lab Sample ID: LCS 480-247706/5
Matrix: Water
Analysis Batch: 247706

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	25.1		ug/L		100	71 - 124
Toluene	25.0	26.2		ug/L		105	80 - 122
Ethylbenzene	25.0	25.3		ug/L		101	77 - 123
m-Xylene & p-Xylene	25.0	25.7		ug/L		103	76 - 122
o-Xylene	25.0	25.9		ug/L		104	76 - 122
Naphthalene	25.0	26.2		ug/L		105	66 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*106*		*71 - 126*
1,2-Dichloroethane-d4 (Surr)	*94*		*66 - 137*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*
Dibromofluoromethane (Surr)	*100*		*60 - 140*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Lab Sample ID: MB 480-247573/1-A
Matrix: Water
Analysis Batch: 248366

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247573

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		5.0	0.42	ug/L		06/11/15 14:05	06/17/15 15:14	1
Butyl benzyl phthalate	ND		3.0	0.16	ug/L		06/11/15 14:05	06/17/15 15:14	1
Diethyl phthalate	ND		0.50	0.064	ug/L		06/11/15 14:05	06/17/15 15:14	1
Dimethyl phthalate	ND		0.50	0.057	ug/L		06/11/15 14:05	06/17/15 15:14	1
Di-n-butyl phthalate	ND		2.0	0.35	ug/L		06/11/15 14:05	06/17/15 15:14	1
Di-n-octyl phthalate	ND		5.0	0.20	ug/L		06/11/15 14:05	06/17/15 15:14	1

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: MB 480-247573/1-A
Matrix: Water
Analysis Batch: 248366

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247573

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	70		39 - 146	06/11/15 14:05	06/17/15 15:14	1
2-Fluorobiphenyl	74		37 - 120	06/11/15 14:05	06/17/15 15:14	1
2-Fluorophenol (Surr)	38		18 - 120	06/11/15 14:05	06/17/15 15:14	1
Nitrobenzene-d5 (Surr)	61		34 - 132	06/11/15 14:05	06/17/15 15:14	1
Phenol-d5 (Surr)	29		11 - 120	06/11/15 14:05	06/17/15 15:14	1
p-Terphenyl-d14	101		58 - 147	06/11/15 14:05	06/17/15 15:14	1

Lab Sample ID: LCS 480-247573/2-A
Matrix: Water
Analysis Batch: 248366

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 247573

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bis(2-ethylhexyl) phthalate	4.00	4.29	J	ug/L		107	69 - 136
Butyl benzyl phthalate	4.00	3.98		ug/L		100	58 - 164
Diethyl phthalate	4.00	3.99		ug/L		100	57 - 145
Dimethyl phthalate	4.00	3.77		ug/L		94	55 - 136
Di-n-butyl phthalate	4.00	4.23		ug/L		106	59 - 172
Di-n-octyl phthalate	4.00	4.17	J	ug/L		104	76 - 141
Naphthalene	4.00	3.33		ug/L		83	25 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	83		39 - 146
2-Fluorobiphenyl	87		37 - 120
2-Fluorophenol (Surr)	46		18 - 120
Nitrobenzene-d5 (Surr)	81		34 - 132
Phenol-d5 (Surr)	36		11 - 120
p-Terphenyl-d14	98		58 - 147

Lab Sample ID: LCSD 480-247573/3-A
Matrix: Water
Analysis Batch: 248366

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 247573

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bis(2-ethylhexyl) phthalate	4.00	3.76	J	ug/L		94	69 - 136	13	15
Butyl benzyl phthalate	4.00	3.51		ug/L		88	58 - 164	13	16
Diethyl phthalate	4.00	3.42	*	ug/L		85	57 - 145	16	15
Dimethyl phthalate	4.00	3.35		ug/L		84	55 - 136	12	15
Di-n-butyl phthalate	4.00	3.88		ug/L		97	59 - 172	9	15
Di-n-octyl phthalate	4.00	3.55	J	ug/L		89	76 - 141	16	16
Naphthalene	4.00	3.08		ug/L		77	25 - 125	8	29

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	73		39 - 146
2-Fluorobiphenyl	78		37 - 120
2-Fluorophenol (Surr)	50		18 - 120
Nitrobenzene-d5 (Surr)	71		34 - 132
Phenol-d5 (Surr)	37		11 - 120

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCSD 480-247573/3-A
Matrix: Water
Analysis Batch: 248366

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 247573

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl-d14	*88*		*58 - 147*

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 480-247698/1-A
Matrix: Water
Analysis Batch: 247868

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247698

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.060	0.038	ug/L		06/12/15 08:19	06/12/15 17:11	1
PCB-1221	ND		0.060	0.038	ug/L		06/12/15 08:19	06/12/15 17:11	1
PCB-1232	ND		0.060	0.038	ug/L		06/12/15 08:19	06/12/15 17:11	1
PCB-1242	ND		0.060	0.038	ug/L		06/12/15 08:19	06/12/15 17:11	1
PCB-1248	ND		0.060	0.038	ug/L		06/12/15 08:19	06/12/15 17:11	1
PCB-1254	ND		0.060	0.031	ug/L		06/12/15 08:19	06/12/15 17:11	1
PCB-1260	ND		0.060	0.031	ug/L		06/12/15 08:19	06/12/15 17:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*61*		*26 - 135*	*06/12/15 08:19*	*06/12/15 17:11*	*1*
Tetrachloro-m-xylene	*96*		*27 - 159*	*06/12/15 08:19*	*06/12/15 17:11*	*1*

Lab Sample ID: LCS 480-247698/2-A
Matrix: Water
Analysis Batch: 247868

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 247698

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	1.00	1.12		ug/L		112	40 - 142
PCB-1260	1.00	0.944		ug/L		94	67 - 148

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*52*		*26 - 135*
Tetrachloro-m-xylene	*102*		*27 - 159*

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 480-247568/1-A
Matrix: Water
Analysis Batch: 247976

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247568

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10.0	5.6	ug/L		06/12/15 08:00	06/12/15 16:01	1
Cadmium	ND		1.0	0.50	ug/L		06/12/15 08:00	06/12/15 16:01	1
Copper	ND		10.0	1.6	ug/L		06/12/15 08:00	06/12/15 16:01	1
Iron	ND		50.0	19.3	ug/L		06/12/15 08:00	06/12/15 16:01	1
Lead	ND		5.0	3.0	ug/L		06/12/15 08:00	06/12/15 16:01	1
Nickel	ND		10.0	1.3	ug/L		06/12/15 08:00	06/12/15 16:01	1
Selenium	ND		15.0	8.7	ug/L		06/12/15 08:00	06/12/15 16:01	1

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

Lab Sample ID: MB 480-247568/1-A
Matrix: Water
Analysis Batch: 247976

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247568

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		3.0	1.7	ug/L		06/12/15 08:00	06/12/15 16:01	1
Zinc	ND		10.0	1.5	ug/L		06/12/15 08:00	06/12/15 16:01	1

Lab Sample ID: LCS 480-247568/2-A
Matrix: Water
Analysis Batch: 247976

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 247568

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	200	197.2		ug/L		99	85 - 115
Cadmium	200	196.2		ug/L		98	85 - 115
Copper	200	202.6		ug/L		101	85 - 115
Iron	10000	9527		ug/L		95	85 - 115
Lead	200	192.7		ug/L		96	85 - 115
Nickel	200	193.3		ug/L		97	85 - 115
Selenium	200	204.9		ug/L		102	85 - 115
Silver	50.0	51.02		ug/L		102	85 - 115
Zinc	200	202.2		ug/L		101	85 - 115

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 480-247820/1-A
Matrix: Water
Analysis Batch: 248311

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247820

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.15	ug/L		06/15/15 08:10	06/15/15 17:21	1

Lab Sample ID: LCS 480-247820/2-A
Matrix: Water
Analysis Batch: 248311

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 247820

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	20.0	21.05		ug/L		105	85 - 115

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 480-248221/1-A
Matrix: Water
Analysis Batch: 248365

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248221

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.12	ug/L		06/16/15 09:30	06/16/15 13:01	1

Lab Sample ID: LCS 480-248221/2-A
Matrix: Water
Analysis Batch: 248365

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248221

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	6.67	6.90		ug/L		103	85 - 115

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 480-248836/1-A
Matrix: Water
Analysis Batch: 248837

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248836

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (1664A)	ND		5.0	1.9	mg/L		06/18/15 12:28	06/18/15 12:37	1

Lab Sample ID: LCS 480-248836/2-A
Matrix: Water
Analysis Batch: 248837

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248836

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Petroleum Hydrocarbons (1664A)	20.0	13.90		mg/L		69	64 - 132

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 480-248156/1-A
Matrix: Water
Analysis Batch: 248425

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248156

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0050	mg/L		06/15/15 16:50	06/16/15 20:17	1

Lab Sample ID: LCS 480-248156/2-A
Matrix: Water
Analysis Batch: 248425

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248156

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.400	0.398		mg/L		100	90 - 110

Method: 420.4 - Phenolics, Total Recoverable

Lab Sample ID: MB 480-248181/1-A
Matrix: Water
Analysis Batch: 248256

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248181

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenolics, Total Recoverable	ND		10.0	5.0	ug/L		06/15/15 21:10	06/16/15 06:41	1

Lab Sample ID: LCS 480-248181/2-A
Matrix: Water
Analysis Batch: 248256

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248181

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenolics, Total Recoverable	100	98.44		ug/L		98	90 - 110

Lab Sample ID: 480-82004-1 DU
Matrix: Water
Analysis Batch: 248256

Client Sample ID: MH-4
Prep Type: Total/NA
Prep Batch: 248181

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Phenolics, Total Recoverable	ND		ND		ug/L		NC	20

Method: 420.4 - Phenolics, Total Recoverable (Continued)

Lab Sample ID: MB 480-248628/1-A
Matrix: Water
Analysis Batch: 248809

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248628

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenolics, Total Recoverable	ND		10.0	5.0	ug/L		06/17/15 15:37	06/18/15 07:07	1

Lab Sample ID: LCS 480-248628/2-A
Matrix: Water
Analysis Batch: 248809

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248628

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenolics, Total Recoverable	100	97.36		ug/L		97	90 - 110

Lab Sample ID: 480-82004-2 MS
Matrix: Water
Analysis Batch: 248809

Client Sample ID: MH-5
Prep Type: Total/NA
Prep Batch: 248628

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenolics, Total Recoverable	6.9	J	100	110.7		ug/L		104	90 - 110

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 480-247942/1
Matrix: Water
Analysis Batch: 247942

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	4.0	mg/L			06/14/15 07:10	1

Lab Sample ID: LCS 480-247942/2
Matrix: Water
Analysis Batch: 247942

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	242	245.6		mg/L		101	88 - 110

Lab Sample ID: 480-82004-1 DU
Matrix: Water
Analysis Batch: 247942

Client Sample ID: MH-4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	ND		ND		mg/L		NC	15

Lab Sample ID: MB 480-248261/1
Matrix: Water
Analysis Batch: 248261

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	4.0	mg/L			06/16/15 09:21	1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 480-248261/2
Matrix: Water
Analysis Batch: 248261

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	249	252.0		mg/L		101	88 - 110

Method: SM 3500 CR D - Chromium, Hexavalent

Lab Sample ID: MB 480-247643/3
Matrix: Water
Analysis Batch: 247643

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND		0.010	0.0050	mg/L			06/11/15 10:10	1

Lab Sample ID: LCS 480-247643/4
Matrix: Water
Analysis Batch: 247643

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	0.0500	0.0571		mg/L		114	85 - 115

Lab Sample ID: 480-82004-2 DU
Matrix: Water
Analysis Batch: 247643

Client Sample ID: MH-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chromium, hexavalent	ND		ND		mg/L		NC	15

QC Association Summary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82004-1

GC/MS VOA

Analysis Batch: 247706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-1	MH-4	Total/NA	Water	8260C	
480-82004-2	MH-5	Total/NA	Water	8260C	
480-82004-3	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-247706/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-247706/7	Method Blank	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 247573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-1	MH-4	Total/NA	Water	3510C	
480-82004-2	MH-5	Total/NA	Water	3510C	
LCS 480-247573/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 480-247573/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 480-247573/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 248366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-1	MH-4	Total/NA	Water	8270C LL	247573
480-82004-2	MH-5	Total/NA	Water	8270C LL	247573
LCS 480-247573/2-A	Lab Control Sample	Total/NA	Water	8270C LL	247573
LCSD 480-247573/3-A	Lab Control Sample Dup	Total/NA	Water	8270C LL	247573
MB 480-247573/1-A	Method Blank	Total/NA	Water	8270C LL	247573

GC Semi VOA

Prep Batch: 247698

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-1	MH-4	Total/NA	Water	3510C	
480-82004-2	MH-5	Total/NA	Water	3510C	
LCS 480-247698/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 480-247698/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 247868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-1	MH-4	Total/NA	Water	608	247698
480-82004-2	MH-5	Total/NA	Water	608	247698
LCS 480-247698/2-A	Lab Control Sample	Total/NA	Water	608	247698
MB 480-247698/1-A	Method Blank	Total/NA	Water	608	247698

Metals

Prep Batch: 247568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-1	MH-4	Total/NA	Water	200.7	
480-82004-2	MH-5	Total/NA	Water	200.7	
LCS 480-247568/2-A	Lab Control Sample	Total/NA	Water	200.7	
MB 480-247568/1-A	Method Blank	Total/NA	Water	200.7	

Metals (Continued)

Prep Batch: 247820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-1	MH-4	Total/NA	Water	200.8	
480-82004-2	MH-5	Total/NA	Water	200.8	
LCS 480-247820/2-A	Lab Control Sample	Total/NA	Water	200.8	
MB 480-247820/1-A	Method Blank	Total/NA	Water	200.8	

Analysis Batch: 247976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-1	MH-4	Total/NA	Water	200.7 Rev 4.4	247568
480-82004-2	MH-5	Total/NA	Water	200.7 Rev 4.4	247568
LCS 480-247568/2-A	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	247568
MB 480-247568/1-A	Method Blank	Total/NA	Water	200.7 Rev 4.4	247568

Prep Batch: 248221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-1	MH-4	Total/NA	Water	245.1	
480-82004-2	MH-5	Total/NA	Water	245.1	
LCS 480-248221/2-A	Lab Control Sample	Total/NA	Water	245.1	
MB 480-248221/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 248311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-1	MH-4	Total/NA	Water	200.8	247820
480-82004-2	MH-5	Total/NA	Water	200.8	247820
LCS 480-247820/2-A	Lab Control Sample	Total/NA	Water	200.8	247820
MB 480-247820/1-A	Method Blank	Total/NA	Water	200.8	247820

Analysis Batch: 248365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-1	MH-4	Total/NA	Water	245.1	248221
480-82004-2	MH-5	Total/NA	Water	245.1	248221
LCS 480-248221/2-A	Lab Control Sample	Total/NA	Water	245.1	248221
MB 480-248221/1-A	Method Blank	Total/NA	Water	245.1	248221

General Chemistry

Analysis Batch: 247643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-1	MH-4	Total/NA	Water	SM 3500 CR D	
480-82004-2	MH-5	Total/NA	Water	SM 3500 CR D	
480-82004-2 DU	MH-5	Total/NA	Water	SM 3500 CR D	
LCS 480-247643/4	Lab Control Sample	Total/NA	Water	SM 3500 CR D	
MB 480-247643/3	Method Blank	Total/NA	Water	SM 3500 CR D	

Analysis Batch: 247942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-1	MH-4	Total/NA	Water	SM 2540D	
480-82004-1 DU	MH-4	Total/NA	Water	SM 2540D	
LCS 480-247942/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 480-247942/1	Method Blank	Total/NA	Water	SM 2540D	

General Chemistry (Continued)

Prep Batch: 248156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-1	MH-4	Total/NA	Water	Distill/CN	
480-82004-2	MH-5	Total/NA	Water	Distill/CN	
LCS 480-248156/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
MB 480-248156/1-A	Method Blank	Total/NA	Water	Distill/CN	

Prep Batch: 248181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-1	MH-4	Total/NA	Water	Distill/Phenol	
480-82004-1 DU	MH-4	Total/NA	Water	Distill/Phenol	
LCS 480-248181/2-A	Lab Control Sample	Total/NA	Water	Distill/Phenol	
MB 480-248181/1-A	Method Blank	Total/NA	Water	Distill/Phenol	

Analysis Batch: 248256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-1	MH-4	Total/NA	Water	420.4	248181
480-82004-1 DU	MH-4	Total/NA	Water	420.4	248181
LCS 480-248181/2-A	Lab Control Sample	Total/NA	Water	420.4	248181
MB 480-248181/1-A	Method Blank	Total/NA	Water	420.4	248181

Analysis Batch: 248261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-2	MH-5	Total/NA	Water	SM 2540D	
LCS 480-248261/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 480-248261/1	Method Blank	Total/NA	Water	SM 2540D	

Analysis Batch: 248425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-1	MH-4	Total/NA	Water	335.4	248156
480-82004-2	MH-5	Total/NA	Water	335.4	248156
LCS 480-248156/2-A	Lab Control Sample	Total/NA	Water	335.4	248156
MB 480-248156/1-A	Method Blank	Total/NA	Water	335.4	248156

Analysis Batch: 248605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-1	MH-4	Total/NA	Water	SM 3500 CR D	
480-82004-2	MH-5	Total/NA	Water	SM 3500 CR D	

Prep Batch: 248628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-2	MH-5	Total/NA	Water	Distill/Phenol	
480-82004-2 MS	MH-5	Total/NA	Water	Distill/Phenol	
LCS 480-248628/2-A	Lab Control Sample	Total/NA	Water	Distill/Phenol	
MB 480-248628/1-A	Method Blank	Total/NA	Water	Distill/Phenol	

Analysis Batch: 248809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-2	MH-5	Total/NA	Water	420.4	248628
480-82004-2 MS	MH-5	Total/NA	Water	420.4	248628
LCS 480-248628/2-A	Lab Control Sample	Total/NA	Water	420.4	248628
MB 480-248628/1-A	Method Blank	Total/NA	Water	420.4	248628

General Chemistry (Continued)

Prep Batch: 248836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-1	MH-4	Total/NA	Water	1664A	
480-82004-2	MH-5	Total/NA	Water	1664A	
LCS 480-248836/2-A	Lab Control Sample	Total/NA	Water	1664A	
MB 480-248836/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 248837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82004-1	MH-4	Total/NA	Water	1664A	248836
480-82004-2	MH-5	Total/NA	Water	1664A	248836
LCS 480-248836/2-A	Lab Control Sample	Total/NA	Water	1664A	248836
MB 480-248836/1-A	Method Blank	Total/NA	Water	1664A	248836

Lab Chronicle

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82004-1

Client Sample ID: MH-4

Date Collected: 06/10/15 13:35
Date Received: 06/11/15 09:00

Lab Sample ID: 480-82004-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	247706	06/12/15 17:44	SWO	TAL BUF
Total/NA	Prep	3510C			247573	06/11/15 14:05	CPH	TAL BUF
Total/NA	Analysis	8270C LL		1	248366	06/17/15 16:43	DMR	TAL BUF
Total/NA	Prep	3510C			247698	06/12/15 08:19	JLS	TAL BUF
Total/NA	Analysis	608		1	247868	06/12/15 21:57	KS	TAL BUF
Total/NA	Prep	200.7			247568	06/12/15 08:00	TAS	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	247976	06/12/15 16:59	AMH	TAL BUF
Total/NA	Prep	200.8			247820	06/15/15 08:10	TAS	TAL BUF
Total/NA	Analysis	200.8		1	248311	06/15/15 18:34	MTM2	TAL BUF
Total/NA	Prep	245.1			248221	06/16/15 09:30	LRK	TAL BUF
Total/NA	Analysis	245.1		1	248365	06/16/15 13:32	LRK	TAL BUF
Total/NA	Prep	1664A			248836	06/18/15 12:28	MDL	TAL BUF
Total/NA	Analysis	1664A		1	248837	06/18/15 12:37	MDL	TAL BUF
Total/NA	Prep	Distill/CN			248156	06/15/15 16:50	NDB	TAL BUF
Total/NA	Analysis	335.4		1	248425	06/16/15 20:27	JME	TAL BUF
Total/NA	Prep	Distill/Phenol			248181	06/15/15 21:10	CLT	TAL BUF
Total/NA	Analysis	420.4		1	248256	06/16/15 08:11	EKB	TAL BUF
Total/NA	Analysis	SM 2540D		1	247942	06/14/15 07:10	EKB	TAL BUF
Total/NA	Analysis	SM 3500 CR D		1	247643	06/11/15 10:10	EGS	TAL BUF
Total/NA	Analysis	SM 3500 CR D		1	248605	06/17/15 14:13	LMH	TAL BUF

Client Sample ID: MH-5

Date Collected: 06/10/15 13:55
Date Received: 06/11/15 09:00

Lab Sample ID: 480-82004-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	247706	06/12/15 18:06	SWO	TAL BUF
Total/NA	Prep	3510C			247573	06/11/15 14:05	CPH	TAL BUF
Total/NA	Analysis	8270C LL		1	248366	06/17/15 17:13	DMR	TAL BUF
Total/NA	Prep	3510C			247698	06/12/15 08:19	JLS	TAL BUF
Total/NA	Analysis	608		1	247868	06/12/15 21:41	KS	TAL BUF
Total/NA	Prep	200.7			247568	06/12/15 08:00	TAS	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	247976	06/12/15 17:02	AMH	TAL BUF
Total/NA	Prep	200.8			247820	06/15/15 08:10	TAS	TAL BUF
Total/NA	Analysis	200.8		1	248311	06/15/15 18:40	MTM2	TAL BUF
Total/NA	Prep	245.1			248221	06/16/15 09:30	LRK	TAL BUF
Total/NA	Analysis	245.1		1	248365	06/16/15 13:33	LRK	TAL BUF
Total/NA	Prep	1664A			248836	06/18/15 12:28	MDL	TAL BUF
Total/NA	Analysis	1664A		1	248837	06/18/15 12:37	MDL	TAL BUF
Total/NA	Prep	Distill/CN			248156	06/15/15 16:50	NDB	TAL BUF
Total/NA	Analysis	335.4		1	248425	06/16/15 20:30	JME	TAL BUF
Total/NA	Prep	Distill/Phenol			248628	06/17/15 15:37	GMG	TAL BUF
Total/NA	Analysis	420.4		1	248809	06/18/15 10:05	EKB	TAL BUF

Lab Chronicle

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82004-1

Client Sample ID: MH-5

Lab Sample ID: 480-82004-2

Date Collected: 06/10/15 13:55
Matrix: Water
Date Received: 06/11/15 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D		1	248261	06/16/15 09:21	EKB	TAL BUF
Total/NA	Analysis	SM 3500 CR D		1	247643	06/11/15 10:10	EGS	TAL BUF
Total/NA	Analysis	SM 3500 CR D		1	248605	06/17/15 14:13	LMH	TAL BUF

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-82004-3

Date Collected: 06/10/15 06:00
Matrix: Water
Date Received: 06/11/15 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	247706	06/12/15 18:29	SWO	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82004-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Massachusetts	State Program	1	M-NY044	06-30-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260C		Water	Benzene
8260C		Water	Ethylbenzene
8260C		Water	m-Xylene & p-Xylene
8260C		Water	Naphthalene
8260C		Water	o-Xylene
8260C		Water	Toluene
8260C		Water	Total BTEX
8260C		Water	Xylenes, Total
8270C LL	3510C	Water	Bis(2-ethylhexyl) phthalate
8270C LL	3510C	Water	Butyl benzyl phthalate
8270C LL	3510C	Water	Diethyl phthalate
8270C LL	3510C	Water	Dimethyl phthalate
8270C LL	3510C	Water	Di-n-butyl phthalate
8270C LL	3510C	Water	Di-n-octyl phthalate
SM 3500 CR D		Water	Chromium, hexavalent
SM 3500 CR D		Water	Cr (III)

Method Summary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82004-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8270C LL	Semivolatile Organic Compounds by GCMS - Low Levels	SW846	TAL BUF
608	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	TAL BUF
200.7 Rev 4.4	Metals (ICP)	EPA	TAL BUF
200.8	Metals (ICP/MS)	EPA	TAL BUF
245.1	Mercury (CVAA)	EPA	TAL BUF
1664A	HEM and SGT-HEM	1664A	TAL BUF
335.4	Cyanide, Total	MCAWW	TAL BUF
420.4	Phenolics, Total Recoverable	MCAWW	TAL BUF
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL BUF
SM 3500 CR D	Chromium, Hexavalent	SM	TAL BUF
SM 3500 CR D	Chromium, Trivalent	SM	TAL BUF

Protocol References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

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

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

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82004-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-82004-1	MH-4	Water	06/10/15 13:35	06/11/15 09:00
480-82004-2	MH-5	Water	06/10/15 13:55	06/11/15 09:00
480-82004-3	TRIP BLANK	Water	06/10/15 06:00	06/11/15 09:00

TestAmerica Westfield
501 Southampton Road
Westfield MA 01085
Phone: (413) 572-4000 Fax: (303) 467-7247

TestAmerica Boston
240 Bear Hill Road -- Suite 104
Waltham MA 02451
Phone: (781) 466-6900 Fax: (781) 466-6901

Chain of

480-82004 Chain of Custody

America
N ENVIRONMENTAL TESTING

32484

Client Information: ERM	Sample Collector's Name (Please Print Neatly): JGK	Lab PM: Becky Mason	Page: 1 of 1
Client Contact: Joshua Klement	Sample Collector's Phone: 617-646-7800	E-Mail:	
Company: ERM			Job #:
Address: one Beacon St, 5th Floor	Due Date Requested:		
City: Boston, MA 02108	Turnaround Time (TAT) Requested (business days): 5-day TAT		
State and Zip:			
Client's Phone: 617-646-7800	Quote # or Project #: 48012058		
Client's Contact Email: james.allen; matt.daly; joshua.klement@ermcon	PO #:		
Client's Project Name/Number: 0241099	WO #:		
Sample Collection Site Name & Location: PNPS, Plymouth, MA	PWS ID #:		

Analysis Requested

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	3500 Cr6+ Cr3	Metals (200.8/MOD; 200.7/MOD) 245.1	Oil/Grease + TPH 1664A calc	420.4 Total Recoverable Phenolics	8260C BTEX + [illegible]	8270C Low Level SVOC short list	608 - PCB - Priority Pollutant	2540D - TSS	335.4 Total CN	Total Number of Containers (enter total for each line)
Preservation Codes →					N	D	S	S	A	N	N	N	B	
~~Trip Blank~~	~~06/10/15~~	~~06:00~~	G	Z	X	X	X	X	X	X	X	X	X	JGK
MH-4	11	13:35	G	Z	X	X	X	X	X	X	X	X	X	
MH-5	11	13:55	G	Z	X	X	X	X	X	X	X	X	X	
Trip Blank	06/10/15	06:00	G	Z					X					

Preservation Codes:
A - Hydrochloric Acid; B - Sodium Hydroxide; C - Zinc Acetate; D - Nitric Acid; E - Sodium Bisulfite; F - Methanol; H - Ascorbic Acid; J - Deionized Water; M - Hexane; N - No Preservative; P - Sodium Sulfate; Q - Sodium Sulfite; R - Sodium Thiosulfate; S - Sulfuric Acid; Z - other (specify)

Regulatory Programs:
MCP ☐ GW1/S1 ☐ RCP ☐ CT RSR ☐ DEP Form ☐ EDD Required ☐ eDEP Filing ☐ NPDES ☐

SUBCONTRACT POLICY: Unless you provide in-structions to the contrary, or specify which sub-contract labs are or are not to be used, you agree in advance to permit Test-America to use certified, subcontract labs, without any additional notification made by us, as necessary to fulfill your work order.

Special Instructions & Notes:
See quote for selected analyte list and required reporting limits for each lab analysis selected.

Possible Hazard Identification (please check off each that may apply):
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal Requirements (A fee may be assessed if samples are retained longer than 1 month):
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

**** Matrix Types:** A=Air S=Solid/Soil W=Water O=Oil X=Waste (non-water) Z=Other: ~~Storm water~~

▶ **NOTE!! ALL SAMPLES MUST BE TRANSPORTED IN A COOLER, ON ICE !!** ◀

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: Joshua Klement	6-10-15 - 16:35			6/11/15 0900	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: △ Yes △ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

4.0 #1

WI-QA-010 rev 8

Revised 10/29/2014
TAL-8245-360R

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6/18/2015

Login Sample Receipt Checklist

Client: ERM-Northeast

Job Number: 480-82004-1

Login Number: 82004
List Number: 1
Creator: Janish, Carl M

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	erm
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	True	

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-82179-1
Client Project/Site: Monitoring Parameters Analysis

For:
ERM-Northeast
One Beacon Steet
5th Floor
Boston, Massachusetts 02108

Attn: Ms. Heather M Usle

Authorized for release by:
6/19/2015 4:13:28 PM

Becky Mason, Project Manager II
(413)572-4000
becky.mason@testamericainc.com

Table of Contents

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Definitions/Glossary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82179-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82179-1

Job ID: 480-82179-1

Laboratory: TestAmerica Buffalo

Narrative

Receipt
The samples were received on 6/13/2015 2:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.2º C, 0.4º C and 0.6º C.

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

GC/MS Semi VOA
Method 8270D LL: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 480-248229 and analytical batch 480-248921 were outside control limits. Sample matrix interference and non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

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

Metals
Method 200.8: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following samples: MH-L (480-82179-4), (480-82179-I-4-B MS ^), (480-82179-I-4-C MSD), (480-82179-I-4-A PDS) and (480-82179-I-4-A SD ^).

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

General Chemistry
Method 1664A: The method blank for preparation batch 480-248836 and analytical batch 480-248837 contained Hexane Extractable Material above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

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

Detection Summary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82179-1

Client Sample ID: CP-4 — Lab Sample ID: 480-82179-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl phthalate	0.11	J	0.47	0.061	ug/L	1		8270D LL	Total/NA
Cadmium	2.1		1.0	0.50	ug/L	1		200.7 Rev 4.4	Total/NA
Copper	10.7		10.0	1.6	ug/L	1		200.7 Rev 4.4	Total/NA
Iron	1150		50.0	19.3	ug/L	1		200.7 Rev 4.4	Total/NA
Nickel	1.5	J B	10.0	1.3	ug/L	1		200.7 Rev 4.4	Total/NA
Zinc	233		10.0	1.5	ug/L	1		200.7 Rev 4.4	Total/NA
Antimony	1.0		1.0	0.15	ug/L	1		200.8	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	4.4		4.0	4.0	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MH-Q — Lab Sample ID: 480-82179-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl phthalate	0.11	J	0.47	0.061	ug/L	1		8270D LL	Total/NA
Copper	4.1	J	10.0	1.6	ug/L	1		200.7 Rev 4.4	Total/NA
Iron	439		50.0	19.3	ug/L	1		200.7 Rev 4.4	Total/NA
Lead	15.4		5.0	3.0	ug/L	1		200.7 Rev 4.4	Total/NA
Nickel	3.4	J B	10.0	1.3	ug/L	1		200.7 Rev 4.4	Total/NA
Zinc	1520		10.0	1.5	ug/L	1		200.7 Rev 4.4	Total/NA
Antimony	0.34	J	1.0	0.15	ug/L	1		200.8	Total/NA

Client Sample ID: DUP-1 — Lab Sample ID: 480-82179-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl phthalate	0.12	J	0.47	0.061	ug/L	1		8270D LL	Total/NA
Copper	4.6	J	10.0	1.6	ug/L	1		200.7 Rev 4.4	Total/NA
Iron	451		50.0	19.3	ug/L	1		200.7 Rev 4.4	Total/NA
Lead	15.9		5.0	3.0	ug/L	1		200.7 Rev 4.4	Total/NA
Nickel	3.6	J B	10.0	1.3	ug/L	1		200.7 Rev 4.4	Total/NA
Zinc	1540		10.0	1.5	ug/L	1		200.7 Rev 4.4	Total/NA
Antimony	0.33	J	1.0	0.15	ug/L	1		200.8	Total/NA

Client Sample ID: MH-L — Lab Sample ID: 480-82179-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	14.2		10.0	1.6	ug/L	1		200.7 Rev 4.4	Total/NA
Iron	94.4		50.0	19.3	ug/L	1		200.7 Rev 4.4	Total/NA
Lead	3.9	J	5.0	3.0	ug/L	1		200.7 Rev 4.4	Total/NA
Nickel	2.9	J B	10.0	1.3	ug/L	1		200.7 Rev 4.4	Total/NA
Zinc	27.1		10.0	1.5	ug/L	1		200.7 Rev 4.4	Total/NA
Antimony	0.51	J	2.0	0.30	ug/L	2		200.8	Total/NA
Cyanide, Total	0.0053	J	0.010	0.0050	mg/L	1		335.4	Total/NA
Phenolics, Total Recoverable	17.1		10.0	5.0	ug/L	1		420.4	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-82179-5

No Detections.

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-82179-6

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample ID: CP-4

Date Collected: 06/11/15 09:20
Date Received: 06/13/15 02:55

Lab Sample ID: 480-82179-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			06/16/15 03:47	1
Toluene	ND		1.0	0.51	ug/L			06/16/15 03:47	1
Ethylbenzene	ND		1.0	0.74	ug/L			06/16/15 03:47	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			06/16/15 03:47	1
o-Xylene	ND		1.0	0.76	ug/L			06/16/15 03:47	1
Xylenes, Total	ND		2.0	0.66	ug/L			06/16/15 03:47	1
Total BTEX	ND		2.0	1.0	ug/L			06/16/15 03:47	1
Naphthalene	ND		1.0	0.43	ug/L			06/16/15 03:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*71 - 126*		*06/16/15 03:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*66 - 137*		*06/16/15 03:47*	*1*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*06/16/15 03:47*	*1*
Dibromofluoromethane (Surr)	*100*		*60 - 140*		*06/16/15 03:47*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND	F1	4.7	0.40	ug/L		06/16/15 08:39	06/19/15 01:08	1
Butyl benzyl phthalate	ND		2.8	0.15	ug/L		06/16/15 08:39	06/19/15 01:08	1
Diethyl phthalate	**0.11**	**J**	0.47	0.061	ug/L		06/16/15 08:39	06/19/15 01:08	1
Dimethyl phthalate	ND		0.47	0.054	ug/L		06/16/15 08:39	06/19/15 01:08	1
Di-n-butyl phthalate	ND		1.9	0.33	ug/L		06/16/15 08:39	06/19/15 01:08	1
Di-n-octyl phthalate	ND	F1	4.7	0.19	ug/L		06/16/15 08:39	06/19/15 01:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*110*		*39 - 146*	*06/16/15 08:39*	*06/19/15 01:08*	*1*
2-Fluorobiphenyl	*72*		*37 - 120*	*06/16/15 08:39*	*06/19/15 01:08*	*1*
2-Fluorophenol (Surr)	*34*		*18 - 120*	*06/16/15 08:39*	*06/19/15 01:08*	*1*
Nitrobenzene-d5 (Surr)	*60*		*34 - 132*	*06/16/15 08:39*	*06/19/15 01:08*	*1*
Phenol-d5 (Surr)	*22*		*11 - 120*	*06/16/15 08:39*	*06/19/15 01:08*	*1*
p-Terphenyl-d14	*95*		*58 - 147*	*06/16/15 08:39*	*06/19/15 01:08*	*1*

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.057	0.036	ug/L		06/16/15 08:53	06/17/15 02:45	1
PCB-1221	ND		0.057	0.036	ug/L		06/16/15 08:53	06/17/15 02:45	1
PCB-1232	ND		0.057	0.036	ug/L		06/16/15 08:53	06/17/15 02:45	1
PCB-1242	ND		0.057	0.036	ug/L		06/16/15 08:53	06/17/15 02:45	1
PCB-1248	ND		0.057	0.036	ug/L		06/16/15 08:53	06/17/15 02:45	1
PCB-1254	ND		0.057	0.029	ug/L		06/16/15 08:53	06/17/15 02:45	1
PCB-1260	ND		0.057	0.029	ug/L		06/16/15 08:53	06/17/15 02:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*39*		*26 - 135*	*06/16/15 08:53*	*06/17/15 02:45*	*1*
Tetrachloro-m-xylene	*95*		*27 - 159*	*06/16/15 08:53*	*06/17/15 02:45*	*1*

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10.0	5.6	ug/L		06/15/15 11:35	06/16/15 10:58	1
Cadmium	**2.1**		1.0	0.50	ug/L		06/15/15 11:35	06/16/15 10:58	1
Copper	**10.7**		10.0	1.6	ug/L		06/15/15 11:35	06/16/15 10:58	1

Client Sample ID: CP-4

Date Collected: 06/11/15 09:20
Date Received: 06/13/15 02:55

Lab Sample ID: 480-82179-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**1150**		50.0	19.3	ug/L		06/15/15 11:35	06/16/15 10:58	1
Lead	ND		5.0	3.0	ug/L		06/15/15 11:35	06/16/15 10:58	1
Nickel	**1.5**	**J B**	10.0	1.3	ug/L		06/15/15 11:35	06/16/15 10:58	1
Selenium	ND		15.0	8.7	ug/L		06/15/15 11:35	06/16/15 10:58	1
Silver	ND		3.0	1.7	ug/L		06/15/15 11:35	06/16/15 10:58	1
Zinc	**233**		10.0	1.5	ug/L		06/15/15 11:35	06/16/15 10:58	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**1.0**		1.0	0.15	ug/L		06/15/15 10:30	06/16/15 19:44	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.12	ug/L		06/15/15 09:50	06/15/15 14:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (1664A)	ND		4.9	1.9	mg/L		06/18/15 12:28	06/18/15 12:37	1
Cyanide, Total	ND		0.010	0.0050	mg/L		06/16/15 11:10	06/17/15 09:31	1
Phenolics, Total Recoverable	ND		10.0	5.0	ug/L		06/15/15 13:16	06/16/15 07:47	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**4.4**		4.0	4.0	mg/L			06/16/15 09:21	1

Client Sample ID: MH-Q

Date Collected: 06/12/15 09:45
Date Received: 06/13/15 02:55

Lab Sample ID: 480-82179-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			06/16/15 04:09	1
Toluene	ND		1.0	0.51	ug/L			06/16/15 04:09	1
Ethylbenzene	ND		1.0	0.74	ug/L			06/16/15 04:09	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			06/16/15 04:09	1
o-Xylene	ND		1.0	0.76	ug/L			06/16/15 04:09	1
Xylenes, Total	ND		2.0	0.66	ug/L			06/16/15 04:09	1
Total BTEX	ND		2.0	1.0	ug/L			06/16/15 04:09	1
Naphthalene	ND		1.0	0.43	ug/L			06/16/15 04:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*108*		*71 - 126*		*06/16/15 04:09*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*66 - 137*		*06/16/15 04:09*	*1*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*		*06/16/15 04:09*	*1*
Dibromofluoromethane (Surr)	*101*		*60 - 140*		*06/16/15 04:09*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		4.7	0.40	ug/L		06/16/15 08:39	06/19/15 03:38	1
Butyl benzyl phthalate	ND		2.8	0.15	ug/L		06/16/15 08:39	06/19/15 03:38	1
Diethyl phthalate	**0.11**	**J**	0.47	0.061	ug/L		06/16/15 08:39	06/19/15 03:38	1
Dimethyl phthalate	ND		0.47	0.054	ug/L		06/16/15 08:39	06/19/15 03:38	1

Client Sample ID: MH-Q

Date Collected: 06/12/15 09:45
Date Received: 06/13/15 02:55

Lab Sample ID: 480-82179-2

Matrix: Water

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		1.9	0.33	ug/L		06/16/15 08:39	06/19/15 03:38	1
Di-n-octyl phthalate	ND		4.7	0.19	ug/L		06/16/15 08:39	06/19/15 03:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*103*		*39 - 146*	*06/16/15 08:39*	*06/19/15 03:38*	*1*
2-Fluorobiphenyl	*70*		*37 - 120*	*06/16/15 08:39*	*06/19/15 03:38*	*1*
2-Fluorophenol (Surr)	*34*		*18 - 120*	*06/16/15 08:39*	*06/19/15 03:38*	*1*
Nitrobenzene-d5 (Surr)	*60*		*34 - 132*	*06/16/15 08:39*	*06/19/15 03:38*	*1*
Phenol-d5 (Surr)	*22*		*11 - 120*	*06/16/15 08:39*	*06/19/15 03:38*	*1*
p-Terphenyl-d14	*92*		*58 - 147*	*06/16/15 08:39*	*06/19/15 03:38*	*1*

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.056	0.035	ug/L		06/16/15 08:53	06/17/15 03:01	1
PCB-1221	ND		0.056	0.035	ug/L		06/16/15 08:53	06/17/15 03:01	1
PCB-1232	ND		0.056	0.035	ug/L		06/16/15 08:53	06/17/15 03:01	1
PCB-1242	ND		0.056	0.035	ug/L		06/16/15 08:53	06/17/15 03:01	1
PCB-1248	ND		0.056	0.035	ug/L		06/16/15 08:53	06/17/15 03:01	1
PCB-1254	ND		0.056	0.029	ug/L		06/16/15 08:53	06/17/15 03:01	1
PCB-1260	ND		0.056	0.029	ug/L		06/16/15 08:53	06/17/15 03:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*48*		*26 - 135*	*06/16/15 08:53*	*06/17/15 03:01*	*1*
Tetrachloro-m-xylene	*99*		*27 - 159*	*06/16/15 08:53*	*06/17/15 03:01*	*1*

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10.0	5.6	ug/L		06/15/15 11:35	06/16/15 11:01	1
Cadmium	ND		1.0	0.50	ug/L		06/15/15 11:35	06/16/15 11:01	1
Copper	**4.1**	**J**	10.0	1.6	ug/L		06/15/15 11:35	06/16/15 11:01	1
Iron	**439**		50.0	19.3	ug/L		06/15/15 11:35	06/16/15 11:01	1
Lead	**15.4**		5.0	3.0	ug/L		06/15/15 11:35	06/16/15 11:01	1
Nickel	**3.4**	**J B**	10.0	1.3	ug/L		06/15/15 11:35	06/16/15 11:01	1
Selenium	ND		15.0	8.7	ug/L		06/15/15 11:35	06/16/15 11:01	1
Silver	ND		3.0	1.7	ug/L		06/15/15 11:35	06/16/15 11:01	1
Zinc	**1520**		10.0	1.5	ug/L		06/15/15 11:35	06/16/15 11:01	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.34**	**J**	1.0	0.15	ug/L		06/15/15 10:30	06/16/15 19:50	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.12	ug/L		06/15/15 09:50	06/15/15 14:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (1664A)	ND		4.9	1.9	mg/L		06/18/15 12:28	06/18/15 12:37	1
Cyanide, Total	ND		0.010	0.0050	mg/L		06/16/15 11:10	06/17/15 09:34	1
Phenolics, Total Recoverable	ND		10.0	5.0	ug/L		06/15/15 13:16	06/16/15 07:53	1

Client Sample ID: MH-Q

Date Collected: 06/12/15 09:45
Date Received: 06/13/15 02:55

Lab Sample ID: 480-82179-2
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND		0.010	0.0050	mg/L			06/13/15 09:15	1
Cr (III)	ND		0.010	0.0060	mg/L			06/17/15 14:12	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	4.0	mg/L			06/16/15 09:21	1

Client Sample ID: DUP-1

Date Collected: 06/12/15 09:30
Date Received: 06/13/15 02:55

Lab Sample ID: 480-82179-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			06/16/15 04:32	1
Toluene	ND		1.0	0.51	ug/L			06/16/15 04:32	1
Ethylbenzene	ND		1.0	0.74	ug/L			06/16/15 04:32	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			06/16/15 04:32	1
o-Xylene	ND		1.0	0.76	ug/L			06/16/15 04:32	1
Xylenes, Total	ND		2.0	0.66	ug/L			06/16/15 04:32	1
Total BTEX	ND		2.0	1.0	ug/L			06/16/15 04:32	1
Naphthalene	ND		1.0	0.43	ug/L			06/16/15 04:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*71 - 126*		*06/16/15 04:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*66 - 137*		*06/16/15 04:32*	*1*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*06/16/15 04:32*	*1*
Dibromofluoromethane (Surr)	*101*		*60 - 140*		*06/16/15 04:32*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		4.7	0.40	ug/L		06/16/15 08:39	06/19/15 04:08	1
Butyl benzyl phthalate	ND		2.8	0.15	ug/L		06/16/15 08:39	06/19/15 04:08	1
Diethyl phthalate	**0.12**	**J**	0.47	0.061	ug/L		06/16/15 08:39	06/19/15 04:08	1
Dimethyl phthalate	ND		0.47	0.054	ug/L		06/16/15 08:39	06/19/15 04:08	1
Di-n-butyl phthalate	ND		1.9	0.33	ug/L		06/16/15 08:39	06/19/15 04:08	1
Di-n-octyl phthalate	ND		4.7	0.19	ug/L		06/16/15 08:39	06/19/15 04:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*113*		*39 - 146*	*06/16/15 08:39*	*06/19/15 04:08*	*1*
2-Fluorobiphenyl	*74*		*37 - 120*	*06/16/15 08:39*	*06/19/15 04:08*	*1*
2-Fluorophenol (Surr)	*36*		*18 - 120*	*06/16/15 08:39*	*06/19/15 04:08*	*1*
Nitrobenzene-d5 (Surr)	*62*		*34 - 132*	*06/16/15 08:39*	*06/19/15 04:08*	*1*
Phenol-d5 (Surr)	*23*		*11 - 120*	*06/16/15 08:39*	*06/19/15 04:08*	*1*
p-Terphenyl-d14	*99*		*58 - 147*	*06/16/15 08:39*	*06/19/15 04:08*	*1*

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.057	0.036	ug/L		06/16/15 08:53	06/17/15 03:17	1
PCB-1221	ND		0.057	0.036	ug/L		06/16/15 08:53	06/17/15 03:17	1
PCB-1232	ND		0.057	0.036	ug/L		06/16/15 08:53	06/17/15 03:17	1
PCB-1242	ND		0.057	0.036	ug/L		06/16/15 08:53	06/17/15 03:17	1
PCB-1248	ND		0.057	0.036	ug/L		06/16/15 08:53	06/17/15 03:17	1

Client Sample ID: DUP-1

Date Collected: 06/12/15 09:30
Date Received: 06/13/15 02:55

Lab Sample ID: 480-82179-3
Matrix: Water

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1254	ND		0.057	0.029	ug/L		06/16/15 08:53	06/17/15 03:17	1
PCB-1260	ND		0.057	0.029	ug/L		06/16/15 08:53	06/17/15 03:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*52*		*26 - 135*	*06/16/15 08:53*	*06/17/15 03:17*	*1*
Tetrachloro-m-xylene	*87*		*27 - 159*	*06/16/15 08:53*	*06/17/15 03:17*	*1*

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10.0	5.6	ug/L		06/15/15 11:35	06/16/15 11:04	1
Cadmium	ND		1.0	0.50	ug/L		06/15/15 11:35	06/16/15 11:04	1
Copper	**4.6**	**J**	10.0	1.6	ug/L		06/15/15 11:35	06/16/15 11:04	1
Iron	**451**		50.0	19.3	ug/L		06/15/15 11:35	06/16/15 11:04	1
Lead	**15.9**		5.0	3.0	ug/L		06/15/15 11:35	06/16/15 11:04	1
Nickel	**3.6**	**J B**	10.0	1.3	ug/L		06/15/15 11:35	06/16/15 11:04	1
Selenium	ND		15.0	8.7	ug/L		06/15/15 11:35	06/16/15 11:04	1
Silver	ND		3.0	1.7	ug/L		06/15/15 11:35	06/16/15 11:04	1
Zinc	**1540**		10.0	1.5	ug/L		06/15/15 11:35	06/16/15 11:04	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.33**	**J**	1.0	0.15	ug/L		06/15/15 10:30	06/16/15 19:56	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.12	ug/L		06/15/15 09:50	06/15/15 14:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (1664A)	ND		4.9	1.9	mg/L		06/18/15 12:28	06/18/15 12:37	1
Cyanide, Total	ND		0.010	0.0050	mg/L		06/16/15 11:10	06/17/15 09:37	1
Phenolics, Total Recoverable	ND		10.0	5.0	ug/L		06/15/15 13:16	06/16/15 07:53	1
Chromium, hexavalent	ND		0.010	0.0050	mg/L			06/13/15 09:15	1
Cr (III)	ND		0.010	0.0060	mg/L			06/17/15 14:12	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	4.0	mg/L			06/16/15 09:21	1

Client Sample ID: MH-L

Date Collected: 06/12/15 13:10
Date Received: 06/13/15 02:55

Lab Sample ID: 480-82179-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			06/16/15 04:55	1
Toluene	ND		1.0	0.51	ug/L			06/16/15 04:55	1
Ethylbenzene	ND		1.0	0.74	ug/L			06/16/15 04:55	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			06/16/15 04:55	1
o-Xylene	ND		1.0	0.76	ug/L			06/16/15 04:55	1
Xylenes, Total	ND		2.0	0.66	ug/L			06/16/15 04:55	1
Total BTEX	ND		2.0	1.0	ug/L			06/16/15 04:55	1

Client Sample ID: MH-L
Date Collected: 06/12/15 13:10
Date Received: 06/13/15 02:55

Lab Sample ID: 480-82179-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	0.43	ug/L			06/16/15 04:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*71 - 126*		*06/16/15 04:55*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*66 - 137*		*06/16/15 04:55*	*1*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*06/16/15 04:55*	*1*
Dibromofluoromethane (Surr)	*104*		*60 - 140*		*06/16/15 04:55*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		4.7	0.40	ug/L		06/16/15 08:39	06/19/15 03:08	1
Butyl benzyl phthalate	ND		2.8	0.15	ug/L		06/16/15 08:39	06/19/15 03:08	1
Diethyl phthalate	ND		0.47	0.060	ug/L		06/16/15 08:39	06/19/15 03:08	1
Dimethyl phthalate	ND		0.47	0.054	ug/L		06/16/15 08:39	06/19/15 03:08	1
Di-n-butyl phthalate	ND		1.9	0.33	ug/L		06/16/15 08:39	06/19/15 03:08	1
Di-n-octyl phthalate	ND		4.7	0.19	ug/L		06/16/15 08:39	06/19/15 03:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*85*		*39 - 146*	*06/16/15 08:39*	*06/19/15 03:08*	*1*
2-Fluorobiphenyl	*49*		*37 - 120*	*06/16/15 08:39*	*06/19/15 03:08*	*1*
2-Fluorophenol (Surr)	*20*		*18 - 120*	*06/16/15 08:39*	*06/19/15 03:08*	*1*
Nitrobenzene-d5 (Surr)	*40*		*34 - 132*	*06/16/15 08:39*	*06/19/15 03:08*	*1*
Phenol-d5 (Surr)	*15*		*11 - 120*	*06/16/15 08:39*	*06/19/15 03:08*	*1*
p-Terphenyl-d14	*74*		*58 - 147*	*06/16/15 08:39*	*06/19/15 03:08*	*1*

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.057	0.036	ug/L		06/16/15 08:53	06/16/15 23:03	1
PCB-1221	ND		0.057	0.036	ug/L		06/16/15 08:53	06/16/15 23:03	1
PCB-1232	ND		0.057	0.036	ug/L		06/16/15 08:53	06/16/15 23:03	1
PCB-1242	ND		0.057	0.036	ug/L		06/16/15 08:53	06/16/15 23:03	1
PCB-1248	ND		0.057	0.036	ug/L		06/16/15 08:53	06/16/15 23:03	1
PCB-1254	ND		0.057	0.029	ug/L		06/16/15 08:53	06/16/15 23:03	1
PCB-1260	ND		0.057	0.029	ug/L		06/16/15 08:53	06/16/15 23:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*50*		*26 - 135*	*06/16/15 08:53*	*06/16/15 23:03*	*1*
Tetrachloro-m-xylene	*86*		*27 - 159*	*06/16/15 08:53*	*06/16/15 23:03*	*1*

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10.0	5.6	ug/L		06/15/15 11:35	06/16/15 11:07	1
Cadmium	ND		1.0	0.50	ug/L		06/15/15 11:35	06/16/15 11:07	1
Copper	**14.2**		10.0	1.6	ug/L		06/15/15 11:35	06/16/15 11:07	1
Iron	**94.4**		50.0	19.3	ug/L		06/15/15 11:35	06/16/15 11:07	1
Lead	**3.9**	**J**	5.0	3.0	ug/L		06/15/15 11:35	06/16/15 11:07	1
Nickel	**2.9**	**J B**	10.0	1.3	ug/L		06/15/15 11:35	06/16/15 11:07	1
Selenium	ND		15.0	8.7	ug/L		06/15/15 11:35	06/16/15 11:07	1
Silver	ND		3.0	1.7	ug/L		06/15/15 11:35	06/16/15 11:07	1
Zinc	**27.1**		10.0	1.5	ug/L		06/15/15 11:35	06/16/15 11:07	1

Client Sample ID: MH-L

Lab Sample ID: 480-82179-4
Date Collected: 06/12/15 13:10
Matrix: Water
Date Received: 06/13/15 02:55

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.51**	**J**	2.0	0.30	ug/L		06/15/15 10:30	06/16/15 20:02	2

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.12	ug/L		06/15/15 09:50	06/15/15 14:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (1664A)	ND		4.9	1.9	mg/L		06/18/15 12:28	06/18/15 12:37	1
Cyanide, Total	**0.0053**	**J**	0.010	0.0050	mg/L		06/16/15 11:10	06/17/15 09:38	1
Phenolics, Total Recoverable	**17.1**		10.0	5.0	ug/L		06/15/15 13:16	06/16/15 07:53	1
Chromium, hexavalent	ND	F1	0.010	0.0050	mg/L			06/13/15 09:15	1
Cr (III)	ND		0.010	0.0060	mg/L			06/17/15 14:12	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	4.0	mg/L			06/16/15 09:21	1

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-82179-5
Date Collected: 06/11/15 15:00
Matrix: Water
Date Received: 06/13/15 02:55

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			06/16/15 05:18	1
Toluene	ND		1.0	0.51	ug/L			06/16/15 05:18	1
Ethylbenzene	ND		1.0	0.74	ug/L			06/16/15 05:18	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			06/16/15 05:18	1
1,2-Dimethylbenzene	ND		1.0	0.76	ug/L			06/16/15 05:18	1
Xylenes, Total	ND		2.0	0.66	ug/L			06/16/15 05:18	1
Total BTEX	ND		2.0	1.0	ug/L			06/16/15 05:18	1
Naphthalene	ND		1.0	0.43	ug/L			06/16/15 05:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*71 - 126*		*06/16/15 05:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*66 - 137*		*06/16/15 05:18*	*1*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*06/16/15 05:18*	*1*
Dibromofluoromethane (Surr)	*104*		*60 - 140*		*06/16/15 05:18*	*1*

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-82179-6
Date Collected: 06/10/15 05:00
Matrix: Water
Date Received: 06/13/15 02:55

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			06/16/15 05:41	1
Toluene	ND		1.0	0.51	ug/L			06/16/15 05:41	1
Ethylbenzene	ND		1.0	0.74	ug/L			06/16/15 05:41	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			06/16/15 05:41	1
1,2-Dimethylbenzene	ND		1.0	0.76	ug/L			06/16/15 05:41	1
Xylenes, Total	ND		2.0	0.66	ug/L			06/16/15 05:41	1
Total BTEX	ND		2.0	1.0	ug/L			06/16/15 05:41	1

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82179-1

Client Sample ID: TRIP BLANK
Date Collected: 06/10/15 05:00
Date Received: 06/13/15 02:55

Lab Sample ID: 480-82179-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	0.43	ug/L			06/16/15 05:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*71 - 126*		*06/16/15 05:41*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*66 - 137*		*06/16/15 05:41*	*1*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*06/16/15 05:41*	*1*
Dibromofluoromethane (Surr)	*103*		*60 - 140*		*06/16/15 05:41*	*1*

Surrogate Summary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82179-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	12DCE	BFB	DBFM
Lab Sample ID	Client Sample ID	(71-126)	(66-137)	(73-120)	(60-140)
480-82179-1	CP-4	97	104	95	100
480-82179-2	MH-Q	108	104	105	101
480-82179-3	DUP-1	98	103	96	101
480-82179-4	MH-L	96	107	95	104
480-82179-5	TRIP BLANK	97	105	96	104
480-82179-6	TRIP BLANK	97	106	95	103
LCS 480-248180/5	Lab Control Sample	122	111	116	110
MB 480-248180/7	Method Blank	96	102	95	99

Surrogate Legend

TOL = Toluene-d8 (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPH
Lab Sample ID	Client Sample ID	(39-146)	(37-120)	(18-120)	(34-132)	(11-120)	(58-147)
480-82179-1	CP-4	110	72	34	60	22	95
480-82179-1 MS	CP-4	113	85	59	74	46	96
480-82179-1 MSD	CP-4	116	89	65	83	48	96
480-82179-2	MH-Q	103	70	34	60	22	92
480-82179-3	DUP-1	113	74	36	62	23	99
480-82179-4	MH-L	85	49	20	40	15	74
LCS 480-248229/2-A	Lab Control Sample	115	91	53	86	35	102
MB 480-248229/1-A	Method Blank	102	78	42	68	29	94

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = p-Terphenyl-d14

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB1	TCX1
Lab Sample ID	Client Sample ID	(26-135)	(27-159)
480-82179-1	CP-4	39	95
480-82179-2	MH-Q	48	99
480-82179-3	DUP-1	52	87
480-82179-4	MH-L	50	86
480-82179-4 MS	MH-L	74	94
480-82179-4 MSD	MH-L	70	96

Surrogate Summary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82179-1

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	DCB1 (26-135)	TCX1 (27-159)								
LCS 480-248241/2-A	Lab Control Sample	55	87								
MB 480-248241/1-A	Method Blank	63	99								

Surrogate Legend

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-248180/7
Matrix: Water
Analysis Batch: 248180

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			06/15/15 23:37	1
Toluene	ND		1.0	0.51	ug/L			06/15/15 23:37	1
Ethylbenzene	ND		1.0	0.74	ug/L			06/15/15 23:37	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			06/15/15 23:37	1
1,2-Dimethylbenzene	ND		1.0	0.76	ug/L			06/15/15 23:37	1
o-Xylene	ND		1.0	0.76	ug/L			06/15/15 23:37	1
Xylenes, Total	ND		2.0	0.66	ug/L			06/15/15 23:37	1
Total BTEX	ND		2.0	1.0	ug/L			06/15/15 23:37	1
Naphthalene	ND		1.0	0.43	ug/L			06/15/15 23:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*71 - 126*		*06/15/15 23:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*		*06/15/15 23:37*	*1*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*06/15/15 23:37*	*1*
Dibromofluoromethane (Surr)	*99*		*60 - 140*		*06/15/15 23:37*	*1*

Lab Sample ID: LCS 480-248180/5
Matrix: Water
Analysis Batch: 248180

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	27.0		ug/L		108	71 - 124
Toluene	25.0	29.8		ug/L		119	80 - 122
Ethylbenzene	25.0	25.1		ug/L		101	77 - 123
m-Xylene & p-Xylene	25.0	26.6		ug/L		106	76 - 122
1,2-Dimethylbenzene	25.0	25.5		ug/L		102	76 - 122
o-Xylene	25.0	25.5		ug/L		102	76 - 122
Naphthalene	25.0	25.2		ug/L		101	66 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*122*		*71 - 126*
1,2-Dichloroethane-d4 (Surr)	*111*		*66 - 137*
4-Bromofluorobenzene (Surr)	*116*		*73 - 120*
Dibromofluoromethane (Surr)	*110*		*60 - 140*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 480-248229/1-A
Matrix: Water
Analysis Batch: 248921

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248229

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		5.0	0.42	ug/L		06/16/15 08:39	06/18/15 23:08	1
Butyl benzyl phthalate	ND		3.0	0.16	ug/L		06/16/15 08:39	06/18/15 23:08	1
Diethyl phthalate	ND		0.50	0.064	ug/L		06/16/15 08:39	06/18/15 23:08	1
Dimethyl phthalate	ND		0.50	0.057	ug/L		06/16/15 08:39	06/18/15 23:08	1
Di-n-butyl phthalate	ND		2.0	0.35	ug/L		06/16/15 08:39	06/18/15 23:08	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: MB 480-248229/1-A
Matrix: Water
Analysis Batch: 248921

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248229

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate	ND		5.0	0.20	ug/L		06/16/15 08:39	06/18/15 23:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*102*		*39 - 146*	*06/16/15 08:39*	*06/18/15 23:08*	*1*
2-Fluorobiphenyl	*78*		*37 - 120*	*06/16/15 08:39*	*06/18/15 23:08*	*1*
2-Fluorophenol (Surr)	*42*		*18 - 120*	*06/16/15 08:39*	*06/18/15 23:08*	*1*
Nitrobenzene-d5 (Surr)	*68*		*34 - 132*	*06/16/15 08:39*	*06/18/15 23:08*	*1*
Phenol-d5 (Surr)	*29*		*11 - 120*	*06/16/15 08:39*	*06/18/15 23:08*	*1*
p-Terphenyl-d14	*94*		*58 - 147*	*06/16/15 08:39*	*06/18/15 23:08*	*1*

Lab Sample ID: LCS 480-248229/2-A
Matrix: Water
Analysis Batch: 248921

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248229

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bis(2-ethylhexyl) phthalate	4.00	3.52	J	ug/L		88	69 - 136
Butyl benzyl phthalate	4.00	3.44		ug/L		86	58 - 164
Diethyl phthalate	4.00	3.75		ug/L		94	57 - 145
Dimethyl phthalate	4.00	3.84		ug/L		96	55 - 136
Di-n-butyl phthalate	4.00	3.79		ug/L		95	59 - 172
Di-n-octyl phthalate	4.00	3.42	J	ug/L		86	76 - 141

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*115*		*39 - 146*
2-Fluorobiphenyl	*91*		*37 - 120*
2-Fluorophenol (Surr)	*53*		*18 - 120*
Nitrobenzene-d5 (Surr)	*86*		*34 - 132*
Phenol-d5 (Surr)	*35*		*11 - 120*
p-Terphenyl-d14	*102*		*58 - 147*

Lab Sample ID: 480-82179-1 MS
Matrix: Water
Analysis Batch: 248921

Client Sample ID: CP-4
Prep Type: Total/NA
Prep Batch: 248229

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bis(2-ethylhexyl) phthalate	ND	F1	7.41	4.74	J F1	ug/L		64	69 - 136
Butyl benzyl phthalate	ND		7.41	6.31		ug/L		85	71 - 130
Diethyl phthalate	0.11	J	7.41	6.62		ug/L		88	67 - 127
Dimethyl phthalate	ND		7.41	6.79		ug/L		92	64 - 130
Di-n-butyl phthalate	ND		7.41	6.78		ug/L		91	72 - 130
Di-n-octyl phthalate	ND	F1	7.41	4.44	J F1	ug/L		60	76 - 141

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*113*		*39 - 146*
2-Fluorobiphenyl	*85*		*37 - 120*
2-Fluorophenol (Surr)	*59*		*18 - 120*
Nitrobenzene-d5 (Surr)	*74*		*34 - 132*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: 480-82179-1 MS
Matrix: Water
Analysis Batch: 248921

Client Sample ID: CP-4
Prep Type: Total/NA
Prep Batch: 248229

Surrogate	MS %Recovery	MS Qualifier	Limits
Phenol-d5 (Surr)	*46*		*11 - 120*
p-Terphenyl-d14	*96*		*58 - 147*

Lab Sample ID: 480-82179-1 MSD
Matrix: Water
Analysis Batch: 248921

Client Sample ID: CP-4
Prep Type: Total/NA
Prep Batch: 248229

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bis(2-ethylhexyl) phthalate	ND	F1	7.41	4.42	J F1	ug/L		60	69 - 136	7	15
Butyl benzyl phthalate	ND		7.41	6.17		ug/L		83	71 - 130	2	16
Diethyl phthalate	0.11	J	7.41	6.64		ug/L		88	67 - 127	0	15
Dimethyl phthalate	ND		7.41	6.75		ug/L		91	64 - 130	0	15
Di-n-butyl phthalate	ND		7.41	6.89		ug/L		93	72 - 130	2	15
Di-n-octyl phthalate	ND	F1	7.41	4.27	J F1	ug/L		58	76 - 141	4	16

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	*116*		*39 - 146*
2-Fluorobiphenyl	*89*		*37 - 120*
2-Fluorophenol (Surr)	*65*		*18 - 120*
Nitrobenzene-d5 (Surr)	*83*		*34 - 132*
Phenol-d5 (Surr)	*48*		*11 - 120*
p-Terphenyl-d14	*96*		*58 - 147*

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 480-248241/1-A
Matrix: Water
Analysis Batch: 248383

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248241

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.060	0.038	ug/L		06/16/15 08:53	06/16/15 22:00	1
PCB-1221	ND		0.060	0.038	ug/L		06/16/15 08:53	06/16/15 22:00	1
PCB-1232	ND		0.060	0.038	ug/L		06/16/15 08:53	06/16/15 22:00	1
PCB-1242	ND		0.060	0.038	ug/L		06/16/15 08:53	06/16/15 22:00	1
PCB-1248	ND		0.060	0.038	ug/L		06/16/15 08:53	06/16/15 22:00	1
PCB-1254	ND		0.060	0.031	ug/L		06/16/15 08:53	06/16/15 22:00	1
PCB-1260	ND		0.060	0.031	ug/L		06/16/15 08:53	06/16/15 22:00	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	*63*		*26 - 135*	*06/16/15 08:53*	*06/16/15 22:00*	*1*
Tetrachloro-m-xylene	*99*		*27 - 159*	*06/16/15 08:53*	*06/16/15 22:00*	*1*

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Lab Sample ID: LCS 480-248241/2-A
Matrix: Water
Analysis Batch: 248383

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248241

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			1.00	0.982		ug/L		98	40 - 142		
PCB-1260			1.00	0.868		ug/L		87	67 - 148		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*55*		*26 - 135*
Tetrachloro-m-xylene	*87*		*27 - 159*

Lab Sample ID: 480-82179-4 MS
Matrix: Water
Analysis Batch: 248383

Client Sample ID: MH-L
Prep Type: Total/NA
Prep Batch: 248241

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016	ND		1.87	1.87		ug/L		100	36 - 160		
PCB-1260	ND		1.87	1.53		ug/L		82	21 - 163		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*74*		*26 - 135*
Tetrachloro-m-xylene	*94*		*27 - 159*

Lab Sample ID: 480-82179-4 MSD
Matrix: Water
Analysis Batch: 248383

Client Sample ID: MH-L
Prep Type: Total/NA
Prep Batch: 248241

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND		1.87	1.98		ug/L		106	36 - 160	6	30
PCB-1260	ND		1.87	1.53		ug/L		82	21 - 163	0	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*70*		*26 - 135*
Tetrachloro-m-xylene	*96*		*27 - 159*

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 480-248000/1-A
Matrix: Water
Analysis Batch: 248348

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248000

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10.0	5.6	ug/L		06/15/15 11:35	06/16/15 10:53	1
Cadmium	ND		1.0	0.50	ug/L		06/15/15 11:35	06/16/15 10:53	1
Copper	ND		10.0	1.6	ug/L		06/15/15 11:35	06/16/15 10:53	1
Iron	ND		50.0	19.3	ug/L		06/15/15 11:35	06/16/15 10:53	1
Lead	ND		5.0	3.0	ug/L		06/15/15 11:35	06/16/15 10:53	1
Nickel	1.69	J	10.0	1.3	ug/L		06/15/15 11:35	06/16/15 10:53	1
Selenium	ND		15.0	8.7	ug/L		06/15/15 11:35	06/16/15 10:53	1
Silver	ND		3.0	1.7	ug/L		06/15/15 11:35	06/16/15 10:53	1
Zinc	ND		10.0	1.5	ug/L		06/15/15 11:35	06/16/15 10:53	1

Lab Sample ID: LCS 480-248000/2-A
Matrix: Water
Analysis Batch: 248348

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248000

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	200	188.2		ug/L		94	85 - 115
Cadmium	200	190.0		ug/L		95	85 - 115
Copper	200	188.6		ug/L		94	85 - 115
Iron	10000	9459		ug/L		95	85 - 115
Lead	200	186.1		ug/L		93	85 - 115
Nickel	200	185.9		ug/L		93	85 - 115
Selenium	200	195.6		ug/L		98	85 - 115
Silver	50.0	49.29		ug/L		99	85 - 115
Zinc	200	192.7		ug/L		96	85 - 115

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 480-247999/1-A
Matrix: Water
Analysis Batch: 248575

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247999

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.15	ug/L		06/15/15 10:30	06/16/15 18:55	1

Lab Sample ID: LCS 480-247999/2-A
Matrix: Water
Analysis Batch: 248575

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 247999

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	20.0	21.40		ug/L		107	85 - 115

Lab Sample ID: 480-82179-4 MS
Matrix: Water
Analysis Batch: 248575

Client Sample ID: MH-L
Prep Type: Total/NA
Prep Batch: 247999

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.51	J	20.0	23.78		ug/L		116	70 - 130

Lab Sample ID: 480-82179-4 MSD
Matrix: Water
Analysis Batch: 248575

Client Sample ID: MH-L
Prep Type: Total/NA
Prep Batch: 247999

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.51	J	20.0	22.99		ug/L		112	70 - 130	3	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 480-248021/1-A
Matrix: Water
Analysis Batch: 248126

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248021

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.12	ug/L		06/15/15 09:50	06/15/15 14:32	1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 480-248021/2-A
Matrix: Water
Analysis Batch: 248126

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248021

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	6.67	6.90		ug/L		103	85 - 115

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 480-248836/1-A
Matrix: Water
Analysis Batch: 248837

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248836

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (1664A)	ND		5.0	1.9	mg/L		06/18/15 12:28	06/18/15 12:37	1

Lab Sample ID: LCS 480-248836/2-A
Matrix: Water
Analysis Batch: 248837

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248836

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Petroleum Hydrocarbons (1664A)	20.0	13.90		mg/L		69	64 - 132

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 480-248306/1-A
Matrix: Water
Analysis Batch: 248571

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248306

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0050	mg/L		06/16/15 11:10	06/17/15 09:28	1

Lab Sample ID: LCS 480-248306/2-A
Matrix: Water
Analysis Batch: 248571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248306

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.250	0.258		mg/L		103	90 - 110

Lab Sample ID: 480-82179-1 MS
Matrix: Water
Analysis Batch: 248571

Client Sample ID: CP-4
Prep Type: Total/NA
Prep Batch: 248306

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND		0.100	0.108		mg/L		108	90 - 110

Lab Sample ID: 480-82179-2 DU
Matrix: Water
Analysis Batch: 248571

Client Sample ID: MH-Q
Prep Type: Total/NA
Prep Batch: 248306

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cyanide, Total	ND		ND		mg/L		NC	15

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82179-1

Method: 420.4 - Phenolics, Total Recoverable

Lab Sample ID: MB 480-248085/1-A
Matrix: Water
Analysis Batch: 248256

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248085

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenolics, Total Recoverable	ND		10.0	5.0	ug/L		06/15/15 13:16	06/16/15 06:41	1

Lab Sample ID: LCS 480-248085/2-A
Matrix: Water
Analysis Batch: 248256

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248085

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenolics, Total Recoverable	100	101.7		ug/L		102	90 - 110

Lab Sample ID: 480-82179-1 MS
Matrix: Water
Analysis Batch: 248256

Client Sample ID: CP-4
Prep Type: Total/NA
Prep Batch: 248085

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenolics, Total Recoverable	ND		100	98.66		ug/L		99	90 - 110

Lab Sample ID: 480-82179-2 DU
Matrix: Water
Analysis Batch: 248256

Client Sample ID: MH-Q
Prep Type: Total/NA
Prep Batch: 248085

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Phenolics, Total Recoverable	ND		ND		ug/L		NC	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 480-248261/1
Matrix: Water
Analysis Batch: 248261

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	4.0	mg/L			06/16/15 09:21	1

Lab Sample ID: LCS 480-248261/2
Matrix: Water
Analysis Batch: 248261

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	249	252.0		mg/L		101	88 - 110

Lab Sample ID: 480-82179-4 DU
Matrix: Water
Analysis Batch: 248261

Client Sample ID: MH-L
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	ND		ND		mg/L		NC	15

Method: SM 3500 CR D - Chromium, Hexavalent

Lab Sample ID: MB 480-247936/3
Matrix: Water
Analysis Batch: 247936

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND		0.010	0.0050	mg/L			06/13/15 09:15	1

Lab Sample ID: LCS 480-247936/4
Matrix: Water
Analysis Batch: 247936

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chromium, hexavalent			0.0500	0.0526		mg/L		105	85 - 115		

Lab Sample ID: 480-82179-4 MS
Matrix: Water
Analysis Batch: 247936

Client Sample ID: MH-L
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chromium, hexavalent	ND	F1	0.0500	0.0581	F1	mg/L		116	85 - 115		

Lab Sample ID: 480-82179-2 DU
Matrix: Water
Analysis Batch: 247936

Client Sample ID: MH-Q
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chromium, hexavalent	ND			ND		mg/L				NC	15

QC Association Summary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82179-1

GC/MS VOA

Analysis Batch: 248180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-1	CP-4	Total/NA	Water	8260C	
480-82179-2	MH-Q	Total/NA	Water	8260C	
480-82179-3	DUP-1	Total/NA	Water	8260C	
480-82179-4	MH-L	Total/NA	Water	8260C	
480-82179-5	TRIP BLANK	Total/NA	Water	8260C	
480-82179-6	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-248180/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-248180/7	Method Blank	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 248229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-1	CP-4	Total/NA	Water	3510C	
480-82179-1 MS	CP-4	Total/NA	Water	3510C	
480-82179-1 MSD	CP-4	Total/NA	Water	3510C	
480-82179-2	MH-Q	Total/NA	Water	3510C	
480-82179-3	DUP-1	Total/NA	Water	3510C	
480-82179-4	MH-L	Total/NA	Water	3510C	
LCS 480-248229/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 480-248229/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 248921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-1	CP-4	Total/NA	Water	8270D LL	248229
480-82179-1 MS	CP-4	Total/NA	Water	8270D LL	248229
480-82179-1 MSD	CP-4	Total/NA	Water	8270D LL	248229
480-82179-2	MH-Q	Total/NA	Water	8270D LL	248229
480-82179-3	DUP-1	Total/NA	Water	8270D LL	248229
480-82179-4	MH-L	Total/NA	Water	8270D LL	248229
LCS 480-248229/2-A	Lab Control Sample	Total/NA	Water	8270D LL	248229
MB 480-248229/1-A	Method Blank	Total/NA	Water	8270D LL	248229

GC Semi VOA

Prep Batch: 248241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-1	CP-4	Total/NA	Water	3510C	
480-82179-2	MH-Q	Total/NA	Water	3510C	
480-82179-3	DUP-1	Total/NA	Water	3510C	
480-82179-4	MH-L	Total/NA	Water	3510C	
480-82179-4 MS	MH-L	Total/NA	Water	3510C	
480-82179-4 MSD	MH-L	Total/NA	Water	3510C	
LCS 480-248241/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 480-248241/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 248383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-1	CP-4	Total/NA	Water	608	248241
480-82179-2	MH-Q	Total/NA	Water	608	248241

GC Semi VOA (Continued)

Analysis Batch: 248383 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-3	DUP-1	Total/NA	Water	608	248241
480-82179-4	MH-L	Total/NA	Water	608	248241
480-82179-4 MS	MH-L	Total/NA	Water	608	248241
480-82179-4 MSD	MH-L	Total/NA	Water	608	248241
LCS 480-248241/2-A	Lab Control Sample	Total/NA	Water	608	248241
MB 480-248241/1-A	Method Blank	Total/NA	Water	608	248241

Metals

Prep Batch: 247999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-1	CP-4	Total/NA	Water	200.8	
480-82179-2	MH-Q	Total/NA	Water	200.8	
480-82179-3	DUP-1	Total/NA	Water	200.8	
480-82179-4	MH-L	Total/NA	Water	200.8	
480-82179-4 MS	MH-L	Total/NA	Water	200.8	
480-82179-4 MSD	MH-L	Total/NA	Water	200.8	
LCS 480-247999/2-A	Lab Control Sample	Total/NA	Water	200.8	
MB 480-247999/1-A	Method Blank	Total/NA	Water	200.8	

Prep Batch: 248000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-1	CP-4	Total/NA	Water	200.7	
480-82179-2	MH-Q	Total/NA	Water	200.7	
480-82179-3	DUP-1	Total/NA	Water	200.7	
480-82179-4	MH-L	Total/NA	Water	200.7	
LCS 480-248000/2-A	Lab Control Sample	Total/NA	Water	200.7	
MB 480-248000/1-A	Method Blank	Total/NA	Water	200.7	

Prep Batch: 248021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-1	CP-4	Total/NA	Water	245.1	
480-82179-2	MH-Q	Total/NA	Water	245.1	
480-82179-3	DUP-1	Total/NA	Water	245.1	
480-82179-4	MH-L	Total/NA	Water	245.1	
LCS 480-248021/2-A	Lab Control Sample	Total/NA	Water	245.1	
MB 480-248021/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 248126

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-1	CP-4	Total/NA	Water	245.1	248021
480-82179-2	MH-Q	Total/NA	Water	245.1	248021
480-82179-3	DUP-1	Total/NA	Water	245.1	248021
480-82179-4	MH-L	Total/NA	Water	245.1	248021
LCS 480-248021/2-A	Lab Control Sample	Total/NA	Water	245.1	248021
MB 480-248021/1-A	Method Blank	Total/NA	Water	245.1	248021

Analysis Batch: 248348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-1	CP-4	Total/NA	Water	200.7 Rev 4.4	248000

Metals (Continued)

Analysis Batch: 248348 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-2	MH-Q	Total/NA	Water	200.7 Rev 4.4	248000
480-82179-3	DUP-1	Total/NA	Water	200.7 Rev 4.4	248000
480-82179-4	MH-L	Total/NA	Water	200.7 Rev 4.4	248000
LCS 480-248000/2-A	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	248000
MB 480-248000/1-A	Method Blank	Total/NA	Water	200.7 Rev 4.4	248000

Analysis Batch: 248575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-1	CP-4	Total/NA	Water	200.8	247999
480-82179-2	MH-Q	Total/NA	Water	200.8	247999
480-82179-3	DUP-1	Total/NA	Water	200.8	247999
480-82179-4	MH-L	Total/NA	Water	200.8	247999
480-82179-4 MS	MH-L	Total/NA	Water	200.8	247999
480-82179-4 MSD	MH-L	Total/NA	Water	200.8	247999
LCS 480-247999/2-A	Lab Control Sample	Total/NA	Water	200.8	247999
MB 480-247999/1-A	Method Blank	Total/NA	Water	200.8	247999

General Chemistry

Analysis Batch: 247936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-2	MH-Q	Total/NA	Water	SM 3500 CR D	
480-82179-2 DU	MH-Q	Total/NA	Water	SM 3500 CR D	
480-82179-3	DUP-1	Total/NA	Water	SM 3500 CR D	
480-82179-4	MH-L	Total/NA	Water	SM 3500 CR D	
480-82179-4 MS	MH-L	Total/NA	Water	SM 3500 CR D	
LCS 480-247936/4	Lab Control Sample	Total/NA	Water	SM 3500 CR D	
MB 480-247936/3	Method Blank	Total/NA	Water	SM 3500 CR D	

Prep Batch: 248085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-1	CP-4	Total/NA	Water	Distill/Phenol	
480-82179-1 MS	CP-4	Total/NA	Water	Distill/Phenol	
480-82179-2	MH-Q	Total/NA	Water	Distill/Phenol	
480-82179-2 DU	MH-Q	Total/NA	Water	Distill/Phenol	
480-82179-3	DUP-1	Total/NA	Water	Distill/Phenol	
480-82179-4	MH-L	Total/NA	Water	Distill/Phenol	
LCS 480-248085/2-A	Lab Control Sample	Total/NA	Water	Distill/Phenol	
MB 480-248085/1-A	Method Blank	Total/NA	Water	Distill/Phenol	

Analysis Batch: 248256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-1	CP-4	Total/NA	Water	420.4	248085
480-82179-1 MS	CP-4	Total/NA	Water	420.4	248085
480-82179-2	MH-Q	Total/NA	Water	420.4	248085
480-82179-2 DU	MH-Q	Total/NA	Water	420.4	248085
480-82179-3	DUP-1	Total/NA	Water	420.4	248085
480-82179-4	MH-L	Total/NA	Water	420.4	248085
LCS 480-248085/2-A	Lab Control Sample	Total/NA	Water	420.4	248085
MB 480-248085/1-A	Method Blank	Total/NA	Water	420.4	248085

General Chemistry (Continued)

Analysis Batch: 248261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-1	CP-4	Total/NA	Water	SM 2540D	
480-82179-2	MH-Q	Total/NA	Water	SM 2540D	
480-82179-3	DUP-1	Total/NA	Water	SM 2540D	
480-82179-4	MH-L	Total/NA	Water	SM 2540D	
480-82179-4 DU	MH-L	Total/NA	Water	SM 2540D	
LCS 480-248261/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 480-248261/1	Method Blank	Total/NA	Water	SM 2540D	

Prep Batch: 248306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-1	CP-4	Total/NA	Water	Distill/CN	
480-82179-1 MS	CP-4	Total/NA	Water	Distill/CN	
480-82179-2	MH-Q	Total/NA	Water	Distill/CN	
480-82179-2 DU	MH-Q	Total/NA	Water	Distill/CN	
480-82179-3	DUP-1	Total/NA	Water	Distill/CN	
480-82179-4	MH-L	Total/NA	Water	Distill/CN	
LCS 480-248306/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
MB 480-248306/1-A	Method Blank	Total/NA	Water	Distill/CN	

Analysis Batch: 248571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-1	CP-4	Total/NA	Water	335.4	248306
480-82179-1 MS	CP-4	Total/NA	Water	335.4	248306
480-82179-2	MH-Q	Total/NA	Water	335.4	248306
480-82179-2 DU	MH-Q	Total/NA	Water	335.4	248306
480-82179-3	DUP-1	Total/NA	Water	335.4	248306
480-82179-4	MH-L	Total/NA	Water	335.4	248306
LCS 480-248306/2-A	Lab Control Sample	Total/NA	Water	335.4	248306
MB 480-248306/1-A	Method Blank	Total/NA	Water	335.4	248306

Analysis Batch: 248605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-2	MH-Q	Total/NA	Water	SM 3500 CR D	
480-82179-3	DUP-1	Total/NA	Water	SM 3500 CR D	
480-82179-4	MH-L	Total/NA	Water	SM 3500 CR D	

Prep Batch: 248836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-1	CP-4	Total/NA	Water	1664A	
480-82179-2	MH-Q	Total/NA	Water	1664A	
480-82179-3	DUP-1	Total/NA	Water	1664A	
480-82179-4	MH-L	Total/NA	Water	1664A	
LCS 480-248836/2-A	Lab Control Sample	Total/NA	Water	1664A	
MB 480-248836/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 248837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-82179-1	CP-4	Total/NA	Water	1664A	248836
480-82179-2	MH-Q	Total/NA	Water	1664A	248836
480-82179-3	DUP-1	Total/NA	Water	1664A	248836
480-82179-4	MH-L	Total/NA	Water	1664A	248836

General Chemistry (Continued)

Analysis Batch: 248837 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-248836/2-A	Lab Control Sample	Total/NA	Water	1664A	248836
MB 480-248836/1-A	Method Blank	Total/NA	Water	1664A	248836

Lab Chronicle

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82179-1

Client Sample ID: CP-4

Lab Sample ID: 480-82179-1

Date Collected: 06/11/15 09:20

Matrix: Water

Date Received: 06/13/15 02:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	248180	06/16/15 03:47	LJF	TAL BUF
Total/NA	Prep	3510C			248229	06/16/15 08:39	MCZ	TAL BUF
Total/NA	Analysis	8270D LL		1	248921	06/19/15 01:08	LMW	TAL BUF
Total/NA	Prep	3510C			248241	06/16/15 08:53	MCZ	TAL BUF
Total/NA	Analysis	608		1	248383	06/17/15 02:45	KS	TAL BUF
Total/NA	Prep	200.7			248000	06/15/15 11:35	TAS	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	248348	06/16/15 10:58	LMH	TAL BUF
Total/NA	Prep	200.8			247999	06/15/15 10:30	TAS	TAL BUF
Total/NA	Analysis	200.8		1	248575	06/16/15 19:44	MTM2	TAL BUF
Total/NA	Prep	245.1			248021	06/15/15 09:50	LRK	TAL BUF
Total/NA	Analysis	245.1		1	248126	06/15/15 14:52	LRK	TAL BUF
Total/NA	Prep	1664A			248836	06/18/15 12:28	MDL	TAL BUF
Total/NA	Analysis	1664A		1	248837	06/18/15 12:37	MDL	TAL BUF
Total/NA	Prep	Distill/CN			248306	06/16/15 11:10	NDB	TAL BUF
Total/NA	Analysis	335.4		1	248571	06/17/15 09:31	NCH	TAL BUF
Total/NA	Prep	Distill/Phenol			248085	06/15/15 13:16	GMG	TAL BUF
Total/NA	Analysis	420.4		1	248256	06/16/15 07:47	EKB	TAL BUF
Total/NA	Analysis	SM 2540D		1	248261	06/16/15 09:21	EKB	TAL BUF

Client Sample ID: MH-Q

Lab Sample ID: 480-82179-2

Date Collected: 06/12/15 09:45

Matrix: Water

Date Received: 06/13/15 02:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	248180	06/16/15 04:09	LJF	TAL BUF
Total/NA	Prep	3510C			248229	06/16/15 08:39	MCZ	TAL BUF
Total/NA	Analysis	8270D LL		1	248921	06/19/15 03:38	LMW	TAL BUF
Total/NA	Prep	3510C			248241	06/16/15 08:53	MCZ	TAL BUF
Total/NA	Analysis	608		1	248383	06/17/15 03:01	KS	TAL BUF
Total/NA	Prep	200.7			248000	06/15/15 11:35	TAS	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	248348	06/16/15 11:01	LMH	TAL BUF
Total/NA	Prep	200.8			247999	06/15/15 10:30	TAS	TAL BUF
Total/NA	Analysis	200.8		1	248575	06/16/15 19:50	MTM2	TAL BUF
Total/NA	Prep	245.1			248021	06/15/15 09:50	LRK	TAL BUF
Total/NA	Analysis	245.1		1	248126	06/15/15 14:54	LRK	TAL BUF
Total/NA	Prep	1664A			248836	06/18/15 12:28	MDL	TAL BUF
Total/NA	Analysis	1664A		1	248837	06/18/15 12:37	MDL	TAL BUF
Total/NA	Prep	Distill/CN			248306	06/16/15 11:10	NDB	TAL BUF
Total/NA	Analysis	335.4		1	248571	06/17/15 09:34	NCH	TAL BUF
Total/NA	Prep	Distill/Phenol			248085	06/15/15 13:16	GMG	TAL BUF
Total/NA	Analysis	420.4		1	248256	06/16/15 07:53	EKB	TAL BUF
Total/NA	Analysis	SM 2540D		1	248261	06/16/15 09:21	EKB	TAL BUF
Total/NA	Analysis	SM 3500 CR D		1	247936	06/13/15 09:15	EGS	TAL BUF

Client Sample ID: MH-Q

Date Collected: 06/12/15 09:45
Date Received: 06/13/15 02:55

Lab Sample ID: 480-82179-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 3500 CR D		1	248605	06/17/15 14:12	LMH	TAL BUF

Client Sample ID: DUP-1

Date Collected: 06/12/15 09:30
Date Received: 06/13/15 02:55

Lab Sample ID: 480-82179-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	248180	06/16/15 04:32	LJF	TAL BUF
Total/NA	Prep	3510C			248229	06/16/15 08:39	MCZ	TAL BUF
Total/NA	Analysis	8270D LL		1	248921	06/19/15 04:08	LMW	TAL BUF
Total/NA	Prep	3510C			248241	06/16/15 08:53	MCZ	TAL BUF
Total/NA	Analysis	608		1	248383	06/17/15 03:17	KS	TAL BUF
Total/NA	Prep	200.7			248000	06/15/15 11:35	TAS	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	248348	06/16/15 11:04	LMH	TAL BUF
Total/NA	Prep	200.8			247999	06/15/15 10:30	TAS	TAL BUF
Total/NA	Analysis	200.8		1	248575	06/16/15 19:56	MTM2	TAL BUF
Total/NA	Prep	245.1			248021	06/15/15 09:50	LRK	TAL BUF
Total/NA	Analysis	245.1		1	248126	06/15/15 14:55	LRK	TAL BUF
Total/NA	Prep	1664A			248836	06/18/15 12:28	MDL	TAL BUF
Total/NA	Analysis	1664A		1	248837	06/18/15 12:37	MDL	TAL BUF
Total/NA	Prep	Distill/CN			248306	06/16/15 11:10	NDB	TAL BUF
Total/NA	Analysis	335.4		1	248571	06/17/15 09:37	NCH	TAL BUF
Total/NA	Prep	Distill/Phenol			248085	06/15/15 13:16	GMG	TAL BUF
Total/NA	Analysis	420.4		1	248256	06/16/15 07:53	EKB	TAL BUF
Total/NA	Analysis	SM 2540D		1	248261	06/16/15 09:21	EKB	TAL BUF
Total/NA	Analysis	SM 3500 CR D		1	247936	06/13/15 09:15	EGS	TAL BUF
Total/NA	Analysis	SM 3500 CR D		1	248605	06/17/15 14:12	LMH	TAL BUF

Client Sample ID: MH-L

Date Collected: 06/12/15 13:10
Date Received: 06/13/15 02:55

Lab Sample ID: 480-82179-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	248180	06/16/15 04:55	LJF	TAL BUF
Total/NA	Prep	3510C			248229	06/16/15 08:39	MCZ	TAL BUF
Total/NA	Analysis	8270D LL		1	248921	06/19/15 03:08	LMW	TAL BUF
Total/NA	Prep	3510C			248241	06/16/15 08:53	MCZ	TAL BUF
Total/NA	Analysis	608		1	248383	06/16/15 23:03	KS	TAL BUF
Total/NA	Prep	200.7			248000	06/15/15 11:35	TAS	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	248348	06/16/15 11:07	LMH	TAL BUF
Total/NA	Prep	200.8			247999	06/15/15 10:30	TAS	TAL BUF
Total/NA	Analysis	200.8		2	248575	06/16/15 20:02	MTM2	TAL BUF
Total/NA	Prep	245.1			248021	06/15/15 09:50	LRK	TAL BUF

Lab Chronicle

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82179-1

Client Sample ID: MH-L

Lab Sample ID: 480-82179-4

Date Collected: 06/12/15 13:10

Matrix: Water

Date Received: 06/13/15 02:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	245.1		1	248126	06/15/15 14:57	LRK	TAL BUF
Total/NA	Prep	1664A			248836	06/18/15 12:28	MDL	TAL BUF
Total/NA	Analysis	1664A		1	248837	06/18/15 12:37	MDL	TAL BUF
Total/NA	Prep	Distill/CN			248306	06/16/15 11:10	NDB	TAL BUF
Total/NA	Analysis	335.4		1	248571	06/17/15 09:38	NCH	TAL BUF
Total/NA	Prep	Distill/Phenol			248085	06/15/15 13:16	GMG	TAL BUF
Total/NA	Analysis	420.4		1	248256	06/16/15 07:53	EKB	TAL BUF
Total/NA	Analysis	SM 2540D		1	248261	06/16/15 09:21	EKB	TAL BUF
Total/NA	Analysis	SM 3500 CR D		1	247936	06/13/15 09:15	EGS	TAL BUF
Total/NA	Analysis	SM 3500 CR D		1	248605	06/17/15 14:12	LMH	TAL BUF

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-82179-5

Date Collected: 06/11/15 15:00

Matrix: Water

Date Received: 06/13/15 02:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	248180	06/16/15 05:18	LJF	TAL BUF

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-82179-6

Date Collected: 06/10/15 05:00

Matrix: Water

Date Received: 06/13/15 02:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	248180	06/16/15 05:41	LJF	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82179-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Massachusetts	State Program	1	M-NY044	06-30-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260C		Water	1,2-Dimethylbenzene
8260C		Water	Benzene
8260C		Water	Ethylbenzene
8260C		Water	m-Xylene & p-Xylene
8260C		Water	Naphthalene
8260C		Water	o-Xylene
8260C		Water	Toluene
8260C		Water	Total BTEX
8260C		Water	Xylenes, Total
8270D LL	3510C	Water	Bis(2-ethylhexyl) phthalate
8270D LL	3510C	Water	Butyl benzyl phthalate
8270D LL	3510C	Water	Diethyl phthalate
8270D LL	3510C	Water	Dimethyl phthalate
8270D LL	3510C	Water	Di-n-butyl phthalate
8270D LL	3510C	Water	Di-n-octyl phthalate
SM 3500 CR D		Water	Chromium, hexavalent
SM 3500 CR D		Water	Cr (III)

Method Summary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82179-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL BUF
608	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	TAL BUF
200.7 Rev 4.4	Metals (ICP)	EPA	TAL BUF
200.8	Metals (ICP/MS)	EPA	TAL BUF
245.1	Mercury (CVAA)	EPA	TAL BUF
1664A	HEM and SGT-HEM	1664A	TAL BUF
335.4	Cyanide, Total	MCAWW	TAL BUF
420.4	Phenolics, Total Recoverable	MCAWW	TAL BUF
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL BUF
SM 3500 CR D	Chromium, Hexavalent	SM	TAL BUF
SM 3500 CR D	Chromium, Trivalent	SM	TAL BUF

Protocol References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

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

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

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: ERM-Northeast
Project/Site: Monitoring Parameters Analysis

TestAmerica Job ID: 480-82179-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-82179-1	CP-4	Water	06/11/15 09:20	06/13/15 02:55
480-82179-2	MH-Q	Water	06/12/15 09:45	06/13/15 02:55
480-82179-3	DUP-1	Water	06/12/15 09:30	06/13/15 02:55
480-82179-4	MH-L	Water	06/12/15 13:10	06/13/15 02:55
480-82179-5	TRIP BLANK	Water	06/11/15 15:00	06/13/15 02:55
480-82179-6	TRIP BLANK	Water	06/10/15 05:00	06/13/15 02:55

TestAmerica Westfield
501 Southampton Road
Westfield MA 01085
Phone: (413) 572-4000 Fax: (303) 467-7247

TestAmerica Boston
240 Bear Hill Road -- Suite 104
Waltham MA 02451
Phone: (781) 466-6900 Fax: (781) 466-6901

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information: ERM	Sample Collector's Name (Please Print Neatly): JGK	Lab PM: Becky Mason	Lab COC Barcode Label	COC No: 32485
Client Contact: Joshua Klement	Sample Collector's Phone: 617-646-7800	E-Mail:		Page: 1 of 2
Company: ~~ERM~~ ERM				Job #:
Address: One Beacon St, 5th Floor	Due Date Requested:			
City: Boston, MA 02108	Turnaround Time (TAT) Requested (business days): 5-day TAT			
State and Zip:				
Client's Phone: 617-646-7800	Quote # or Project #: 48012058			
Client's Contact Email: james.allen; matt.daly; joshua.klement @ERM.com	PO #:			
Client's Project Name/Number: 0241099	WO #:			
Sample Collection Site Name & Location: PWPS, Plymouth MA	PWS ID #:			

Analysis Requested

Preservation Codes:
A - Hydrochloric Acid; B - Sodium Hydroxide; C - Zinc Acetate; D - Nitric Acid; E - Sodium Bisulfite; F - Methanol; H - Ascorbic Acid; J - Deionized Water; M - Hexane; N - No Preservative; P - Sodium Sulfate; Q - Sodium Sulfite; R - Sodium Thiosulfate; S - Sulfuric Acid; Z - other (specify)

Regulatory Programs: MCP ☐ GW1/S1 ☐ RCP ☐ CT RSR ☐ DEP Form ☐ EDD Required ☐ eDEP Filing ☐ NPDES ☐

SUBCONTRACT POLICY: Unless you provide instructions to the contrary, or specify which sub-contract labs are or are not to be used, you agree in advance to permit Test-America to use certified, subcontract labs, without any additional notification made by us, as necessary to fulfill your work order.

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	3500 Cr6+Cr3	Antimony, Arsenic, Cadmium, Copper, Lead, Mercury, Nickel, Selenium, Silver, Zinc, Iron	TPH via 1664	8260C BTEX+Naphthalene	420.4 Total Recoverable Phenols	8270C Total Phthalates, Bis(2-Ethylhexyl)Phthalate	608 - Priority Pollutant PCBs (Total)	2540-TSS	Total Cn	Hold	3500-Cr6+Cr3 Hold	Total Number of Containers (enter total for each line)
Preservation Codes →					N	D	S	K	S	N	N	N	B			↓
CP-4	06/11/15	09:26	G	2		X	X	X	X	X	X	X	X		X	14
MH-Q	06/12/15	09:45	G	2	X	X	X	X	X	X	X	X	X			14
DUP-1	06/12/15	09:30	G	2	X	X	X	X	X	X	X	X	X			14
MH-L	06/12/15	13:10	G	2	X	X	X	X	X	X	X	X	X			14
Trip Blank	06/11/15	15:00	G					X								2
Trip Blank	06/10/15	06:00	G					X								

480-82179 Chain of Custody

Special Instructions & Notes:

Possible Hazard Identification (please check off each that may apply):
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal Requirements (A fee may be assessed if samples are retained longer than 1 month) :
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

** **Matrix Types:** A=Air S=Solid/Soil W=Water O=Oil X=Waste (non-water) Z=Other: Stormwater

▶ NOTE!! ALL SAMPLES MUST BE TRANSPORTED IN A COOLER, ON ICE !! ◀

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: Joshua Klement	6-12-15 15:30	6-12-15 15:30		6/13/15 15:30	TA
Relinquished by:	6/13/15 17:00	TA	Received by:	6/13/15 0245	TAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: △ Yes △ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.6, 0.4, 0.2 #1

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6/19/2015

WI-QA-010 rev 8

Revised 10/29/2014
TAL-8245-360R

Login Sample Receipt Checklist

Client: ERM-Northeast

Job Number: 480-82179-1

Login Number: 82179
List Number: 1
Creator: Williams, Christopher S

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	ERM
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	True	

Pilgrim Nuclear Power Station — Storm Drain System [print SWD1] and Selected Manholes

□ - manholes sampled