IMMEDIATE RESPONSE ACTION PLAN

No. 2 Fuel Oil Release
188 Medford Street (at Mystic Valley Parkway)
Arlington, Massachusetts

DEP Release Tracking Number: 3-31576

CHES Job No.: EO5401971

Prepared for:
J.P. Noonan Transportation, Inc.
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Prepared by:

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42 Longwater Drive Norwell, Massachusetts 02061-9149

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Introduction

At approximately 4:15 PM on May 31, 2013, a 10,000 gallon tanker truck owned by J. P. Noonan Transportation, Inc. (Noonan) of West Bridgewater, Massachusetts overturned at the rotary at Medford Street and Mystic Valley Parkway, in front of 188 Medford Street (Winchester Savings Bank, WSB) in Arlington, Massachusetts. The truck was carrying approximately 10,000 gallons of No. 2 fuel oil, and approximately 9,600 gallons were released to the roadway and sidewalk when the tanker shell ruptured after contacting a fire hydrant and curbing at the edge of the roadway. Some splashing and fire fighting foam caused minimal impact to soil on the bank side of the sidewalk, but the majority of the release flowed along the pavement and into storm water catch basins, which discharge to the Mystic River. As a result, an approximate ½ mile stretch of river, between the Medford Street (High Street) and River Street (Harvard Avenue) bridges, was impacted by the release. A Locus Map is attached as Figure 1, a Site Sketch showing the release area at the rotary is attached as Figure 2, and an Aerial Photograph of the site is presented as Figure 3.

Immediate Response Actions (IRAs) were conducted by Clean Harbors Environmental Services, Inc. (CHES) and Moran Environmental Recovery, LLC (MER) along with the Massachusetts Department of Environmental Protection (DEP), the United States Coast Guard (USCG), the United States Environmental Protection Agency (EPA) and other federal, state and local government agencies. IRA activities included the collection of separate-phase product from the water surface and various remediation efforts including cleaning/removal of impacted pavement, cleaning of the impacted drainage system, removal of impacted soils, and the assessment and subsequent removal of impacted debris and moss/soil/sediments along the Arlington shoreline.

While IRA activities have recovered an extraordinarily high percentage of the released fuel, further response actions are planned to monitor site conditions and the effectiveness of response action completed to date, and to allow further remedial actions as warranted. As such, CHES has prepared this IRA Plan, in accordance with 310 CMR 40.0410, to document the completed response actions and outline proposed IRA activities. The document also presents a conceptual framework for future monitoring and sampling (as necessary) to achieve site closure under the

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Massachusetts Contingency Plan (MCP), 310 CMR 40.0000. Copies of the Release Notification Form (BWSC103) for the release, and IRA Transmittal Form (BWSC105) to be submitted electronically, are presented as Appendix A.

SITE SETTING

The release site includes portions of the Medford Street, Mystic Valley Parkway and Maynard Street roadways, the sidewalk and landscaped area in front of WSB, and approximately ½ mile of the Mystic River between the Medford Street and River Street bridges. The Mystic River is the town boundary between Arlington and Medford, such that the release area is located in both towns. Medford Street becomes High Street, and River Street becomes Harvard Avenue in Medford. Recreational land abuts both sides of the river in the release area. The closest residential property is located immediately west of the initial release location, adjacent to the WSB building.

The upper portion of the site includes portions of Medford Street, Mystic Valley Parkway and Maynard Street, the sidewalk and landscaped area in front of the 188 Medford Street, and a small area in the recreation area on the Arlington side of the Mystic River. The lower or river/shoreline portion of the site consists of the river bank from the drain outfall from the intersection of Maynard Street and Mystic Valley Parkway located just upstream of the Medford Street bridge to the riprap stone abutment at the River Street bridge. There is a water level control schedule for the Mystic River that is maintained by the Massachusetts Department of Conservation and Recreation (DCR) at the Amelia Earhart Dam, located approximately four miles downstream in Somerville, Massachusetts. Generally the water level in the river fluctuates less than six inches daily, and as much at 18 to 24 inches during periods of heavy precipitation. When water levels are not being controlled by releasing water at the dam, there is very little flow in the river in the area of the release.

IMMEDIATE RESPONSE ACTIONS

Background/Initial Activities

Immediately after the accident occurred, the site was quickly secured by the Massachusetts State Police, and the Arlington and Medford Police and Fire Departments. The fire departments and the Massachusetts Department of Fire Safety (DFS) state hazmat team initiated the IRA by placing absorbent materials on portions of the release area and around nearby drainage structures. The DEP was notified of a release by the Arlington Fire Department at approximately 4:25 PM and immediately responded to the site. MER, who was the DEP's on-call emergency response contractor at the time, was requested by DEP to respond to the site. Noonan, upon notification of the release at approximately 4:30 PM, contracted CHES to assist with the IRA, and the Massachusetts Port Authority (Massport) Fire Department was also dispatched to the site and sprayed fire-fighting foam on the release area at the rotary. The DEP's Field Assessment and Support Team (FAST) was mobilized to the site and set up air monitoring stations at various locations around the release area. Test results indicated no risk to the population. Also, spill trailers containing containment and absorbent boom were mobilized from the DEP's Wilmington facility as well as local fire departments. By 8:30 PM, four sets of boom had been deployed across the Mystic River.

Upon arrival on-site, CHES inspected the site which included the pavement and some adjacent soil surfaces at the rotary intersection of Medford Street, Arlington and Mystic Valley Parkway. Approximately 6,200 square feet of pavement surface including the rotary, Mystic Valley Parkway and a small portion of Maynard Street was covered with fire-fighting foam that had been applied to the release. There were also several catch basins and drain manholes located within the rotary and at the intersection of Maynard Street that were within the release area. The released fuel entered the Mystic River from two outfalls from the storm drainage system. It appeared that the majority of the fuel entered the catch basin (CB-4) at the rotary and a relatively small quantity entered the catch basins (CB-1, CB-2 and CB-3) at Maynard Street. The DEP and fire department personnel had containment boom deployed across the river just upstream of the River Street bridge at approximately 6:30 PM. The released fuel had not reached this point in the river that was located approximately 2,500 feet downstream from the Medford Street rotary due to the slow flow in the river at the time.

Once the tanker truck had been righted, CHES removed approximately 400 gallons of fuel from the trailer using a vacuum truck, at which point it was determined that as much as 9,600 gallons of fuel were released as a result of the incident. Additional containment boom had been installed across the river at three additional locations; upstream of the Medford Street bridge (Boom 1), near Palmer Street (Boom 2), near Park Street (Boom 3) in addition to the boom already deployed at River Street (Boom 4). Boom 2 & 3 were set diagonally to direct the fuel towards Arlington and expedite fuel recovery. The location of these and additional boom subsequently deployed, are shown on Figure 3 (Aerial Photograph), and photographs taken during the response are presented as Appendix B.

CHES personnel made contact with and met with representatives of the Arlington and Medford Conservation Commission (ConCom) on behalf of Noonan and received verbal approval for an Emergency Certification pursuant to the Massachusetts Wetland Protection Act M.G.L. c. 131. The certifications were both issued on June 6th.

Product Recovery from the Mystic River

Product recovery from the river was initiated shortly after the truck was righted with a CHES vacuum truck skimming fuel just downstream of Medford Street, and a MER vacuum truck skimming fuel near Park Street (Boom 3). By midnight, there were three additional vacuum trucks on-site (3 CHES and 2 MER for a total of 5 trucks) with two trucks skimming at Boom 2, two trucks skimming at Boom 3 and one vacuum truck skimming at Boom 4. Product recovery continued overnight at these locations. At approximately 9:30 AM on June 1st, the first trucks had been offloaded into a fractionation tank (frac tank) staged on-site, with a total of 11,000 gallons of oil and water including an estimated 1,800 gallons of fuel oil. Early on June 1st, two additional CHES vacuum trucks and a skimmer barge were on-site.

Concurrent with the skimming operations, absorbent pads and boom were used to contain and collect fuel at the containment boom locations. The spent absorbents materials that became saturated with fuel oil were changed out, placed into double polyethylene (poly) bags, replaced with fresh absorbents and then placed into a roll-off contained staged on-site pending disposal. As previously mentioned, the water level in the river is controlled by a draining schedule

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maintained by the DCR at the Amelia Earhart Dam. Because the release occurred on May 31st near 4:00 PM, DCR postponed the scheduled 8:00 PM drain that evening to aid with the fuel oil containment and cleanup. As such, DCR provided a slow drain on June 1st at 9:00 AM and 9:00 PM to enhance the product recovery efforts. Prior to the start of the 9:00 AM drain, additional containment and absorbent boom were installed just downstream of Boom 2 and 3 (Boom 2A & 3A) and at two locations, just downstream of the River Street bridge (Boom 5), and approximately 200 feet further downstream (Boom 6), as a precautionary measure.

During the day on Saturday, June 1st, the skimmer barge was lowered into the river at the River Street bridge and the oil recovery at that location was significantly increased with the barge and increased flow to the containment boom during the controlled drain. Most of the free oil on the water surface had been collected from the water surface before dusk on Saturday. Oil recovery continued through the night into Sunday. On Sunday morning June 2nd, there was no longer any free oil visible on the surface of the Mystic River. Measurement of oil in the two frac tanks indicated that approximately 6,800 gallons of fuel oil had been recovered using the vacuum trucks and skimmer barge. It was also estimated that 1,000 to 1,500 gallons of fuel oil was recovered from the river with the absorbents.

According to the measurements obtained from DCR and the United States Geological Survey (USGS) website for gauging heights at the Amelia Earhart Dam, the water level in the Mystic River was just over 106.00 feet at the time of the release, and had risen to approximately 106.30 overnight on May 31st/June 1st. At the end of the controlled drain on Saturday when the majority of the fuel had been recovered, the water level in the river was 105.70 such that it appears that any shoreline impacts would be mostly contained within s six inch band along the riverbank. Also, it appears that little or no river bed sediments were impacted by the release because all of the free oil was recovered from the water surface before the sediment were exposed during lower water levels.

Two vacuum trucks remained on standby until June 10th as a precaution pending rain forecast for June 8th. The river was monitored for evidence of oil and containment and absorbent boom in the river were maintained. Prior to shipping the oil and water off site for disposal, and after the oil and water had time to settle, the oil was again measured in the frac tanks and it was estimated that approximately 7,200 gallons of fuel oil was contained in the tanks.

Water Sampling

During an assessment in the river by CHES and DEP personnel on June 3rd, CHES collected three water samples at locations downstream (WS-1), in the middle of the site (WS-2) and upstream (WS-3) from the center of the river at a depth of approximately eight to 12 inches below the surface. The sample locations are shown on the Aerial Photograph presented as Figure 3. The samples were submitted to the GeoLabs analytical laboratory (GeoLabs) in Braintree, Massachusetts for extractable petroleum hydrocarbons (EPH) and volatile petroleum hydrocarbons (VPH) with No. 2 fuel oil specific target compound analysis. Split samples were also analyzed in the DEP FAST mobile laboratory.

The EPH and VPH analyses (Table 1) revealed non-detectable (ND, i.e.: below the laboratory detection limit) carbon fraction and target compound concentrations in samples WS-2 and WS-

3. In the remaining sample (WS-1), the C19-C36 aliphatic concentration was 118 micrograms per liter (ug/L), the 2-methylnaphthalene concentration was 5.91 ug/L, the toluene concentration was 2.06 ug/L, the ethylbenzene concentration was 1.23 ug/L and the xylenes concentration was 10.62 ug/L. All of the remaining carbon fraction and target compound concentrations were ND.

CHES collected three additional water samples (WS-1A, WS-2A and WS-3A) from the same locations one week later on June 10th. The samples were analyzed at GeoLabs (Table 1) and revealed no detectable carbon fraction or target compound concentrations in the samples except a xylenes concentration of 9.13 ug/L in WS-1A. These data are all well below the Lowest Ecological Based Criteria used for the derivation of the Method 1 GW-3 Risk Standards. Copies of the laboratory reports are attached in Appendix C.

Pavement Replacement and Cleaning of Impacted Drains

At approximately 10:00 PM on May 31st, a paving subcontractor began to scarify the impacted pavement at the Medford Street/Mystic Valley Parkway rotary, Mystic Valley Parkway and a small portion of Maynard Street that had been impacted by the release. By approximately 10:00 AM the following day, June 1st, the pavement had been scarified and repaved. The repaved area is shown on Figure 2. After completion of the paving, a CHES crew with a vacuum truck inspected all of the drains in the vicinity of the release area for evidence of fuel oil. All oil and/or water present in each structure were removed with the vacuum truck. As indicated on the Site Sketch presented as Figure 2, fuel oil impact was present at three catch basins and one drain manhole at the intersection of Maynard Street and Mystic Valley Parkway (CB1, CB2, CB3 & DMH1), and two catch basins and two drain manholes at the rotary (CB4, CB6, DMH2 & DMH3). Several historic drainage drawings provided by the Arlington Department of Public Works (DPW) indicated that there were two drain outfalls (Drain Outfall 1 & Drain Outfall 2) associated with these impacted drainage structures that discharge to the Mystic River just upstream of the Medford Street bridge. These outfalls were visually confirmed and are shown on Figure 2.

A CHES crew returned on Sunday June 2nd with a vacuum truck and jet rod truck, and removed any residual fuel oil and sediments, and then water washed each structure and the associated piping. Each of the drainage structures appeared intact with either a solid concrete or brick bottom. Prior to water washing the piping that discharged to the river, CHES placed absorbent boom at the two suspected outfall locations. It became apparent during cleaning of the piping that the discharge from the Maynard Street structures went to Drain Outfall 1; however, there was no flow present at Drain Outfall 2 indicating that the discharge pipe from DMH-3 had not yet been identified. As such, calls were placed to the Arlington Town Engineer and DCR Engineering offices to see if additional plans could be obtained and brought to the site for review on Monday June 3rd.

On Monday June 3rd, drawings were provided by DCR that indicated there were two drain outfalls, from the rotary, that discharged to the Mystic River directly underneath the Medford Street bridge, and just downstream of the bridge (shown as drain outfall 3 and 4 on Figure 2). Drain Outfall 4 was identified along the shoreline, but Drain Outfall 3 was not observed even upon close inspection from a boat in the water under the bridge. While working in this area

some moderate to heavy rainfall occurred for a short period of time and some fuel oil was observed on the river surface downstream of the bridge. As such, additional containment and absorbent boom along with absorbent pads were deployed to contain and collect the fuel (see Boom 1A on Figure 3).

The following day, June 4th, while maintaining absorbents inside Boom 1A, a discharge pipe was identified approximately three feet below the water surface on the Arlington side of the bridge. Because the pipe was below the water surface, it was believed fuel oil may have been trapped inside the pipe and would only be discharged during heavy flow such as rainfall events. As such, arrangements were made with the Arlington DPW to discharge hydrant water to the drainage system the following morning to flush the line.

On June 5th with the assistance of the Arlington DPW, CHES conducted the line flushing by introducing hydrant water to CB4. Water was confirmed to flow through DMH2 and DMH3 and exit Drain Outfall 3. Water was introduced slowly at first, and gradually increased to the full hydrant capacity after 15 minutes. The flushing continued for an additional 75 minutes at a flow rate estimated at 350 gallons per minute such that an estimated 28,000 gallons of water had been flushed through the system. The Arlington DPW also mobilized a jet rod truck to the site during the flushing and cleaned the drain line from DMH3 to Drain Outfall 3 several times using an additional 1,000 gallons of water. There was only a small amount of fuel oil observed at the outfall during the first 15 minutes of flushing, estimated to be less than one gallon. At the completion of the flushing there was no oil, petroleum sheen or odors discharging from the outlet pipe.

Shoreline Assessment and Cleanup

Initial Cleanup: On June 4th and 5th, CHES conducted a shoreline assessment and carefully examined the entire shoreline in the site area by foot or by boat to characterize the nature and extent of the impacts to both the Arlington and Medford shorelines. The site area was divided into 100-foot sections that were each flagged starting at station 0000 at the boom upstream of Medford Street (Boom 1) and ending at station 2944 downstream of River Street. Areas of interest such as boom anchor points, collection areas and storm drain outfalls were also noted and flagged. There was no evidence of fuel oil upstream of Medford Street on either the Medford or Arlington shoreline from station 0000 to 0354 (downstream side of the bridge). There was evidence of fuel oil impact on nearly the entire Arlington shoreline from station 0354 to 2682 (River Street) consisting primarily of oiled debris including leaves, brush and trash. There was little or no evidence of fuel impact along the entire Medford shoreline except light odors and sheen in the vicinity of the stone abutments at the Medford Street and River Street bridges where the containment boom was anchored.

Based on the above observations and after obtaining approval from the Arlington ConCom, CHES removed all of the impacted debris along the Arlington shoreline on June 5th, 6th and 7th. All of the debris was removed with hand tools (rakes, shovels and clippers) and placed into double poly bags staged in a roll off container pending disposal. During the cleanup, an inspector followed the cleanup crew and noted areas where oil sheen or odors remained after cleaning. The majority of the shoreline was free of odors and sheen however there were seven areas noted where these conditions existed:

- 1.) station 0354 (Medford Street bridge) to 500 feet;
- 2.) station 0675;
- 3.) station 0885 to 0900;
- 4.) station 1485 (Boom 2 collection area);
- 5.) station 1795;
- 6.) station 1950 (Boom 3 collection area); and
- 7.) station 2657 to 2682 (start of rip rap to River Street bridge).

Based on these observations, CHES filed a Notice of Intent (NOI) with the Arlington ConCom and conducted a site meeting on June 13th proposing the cleanup of approximately 900 discontinuous linear feet of shoreline that would include limited removal of riverbank sediments, sporadic fringing moss, and water washing these areas to flush any remaining trapped fuel and thereby eliminate possible remaining sources of oil sheen and odors. Verbal approval was given by the ConCom during this meeting and the formal NOI was submitted on June 25th. CHES also received approval from DEP to remove the containment boom across the river and open the river to boat traffic on June 10th. Containment and absorbent boom were installed at the seven areas needing remediation, the boom across the river was removed, cleaned, and returned to owners (as applicable), and the river was opened to boat traffic on June 12th. CHES then contacted DCR and made arrangements to conduct the shoreline work when the water level could be dropped low enough to remove the impacted sediments. The location of the re-deployed containment and absorbent boom are shown on the Remediation Plan presented as Figure 4.

<u>Sediment and Moss Removal:</u> CHES returned to the site and removed impacted sediments and moss on June 25th and 26th. All of the debris was removed with hand tools (rakes, shovels and clippers) and collected with a vacuum truck, or placed into poly bags staged in a roll off container pending disposal. At the completion the cleanup, there were no areas noted where oil sheen remained.

Removal of Impacted Soils

CHES excavated soil impacted by the release at four discrete locations on June 2nd, 5th, 6th and 25th. The first area location was along the sidewalk and roadway in front of 188 Medford Street (Winchester Savings Bank Area) where the truck rolled over; the second location was approximately 50 feet to the east where a small quantity of oil breached the curb and impacted grass adjacent to the rotary (Rotary Area); the third location was adjacent to the frac tank staging area where a small quantity of fuel and water leaked from a frac tank during offloading of a vacuum truck (Mystic Valley Park Area); and the fourth location was just above the stone rip rap rock, upstream of the River Street bridge where some fuel oil was present, apparently from removal of spent absorbents and from foot traffic at the onset of the cleanup (River Street Rip Rap Area). The following sections describe the soil removal, confirmatory analysis and/or field screening of soils during soil removal at each area.

<u>Winchester Savings Bank Area</u>: CHES excavated a total of approximately 38 cubic yards of soil at this location on June 5th and 6th after arrangements were made for the Arlington DPW to be available to replace the broken hydrant at the completion of soil removal. The excavation

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was located directly beneath and adjacent to where the truck came to rest, and included portions of the recently repaved roadway, asphalt sidewalk and grass area in front of the WSB building. The excavation included a small grassy area on the bank side of the sidewalk, which may extend onto the bank property. Based on the property boundary shown on a GIS map provided by the town engineer, it appears that most if not all of this small excavation falls within the roadway right-of-way, but it is possible that some of the grassy area excavation may have extended onto bank property. The soils were excavated using both a backhoe and Guzzler vacuum truck.

Soil removal was guided by visual and olfactory evidence of fuel oil supplemented by field screening of the site soils for volatile organic compounds (VOCs) using standard headspace screening methods and a MiniRAE photoionization detector (PID) calibrated to a benzene response factor. The completed excavation was an irregularly shaped area that measured approximately 65 feet long, 12 feet wide and 8-72 inches deep. There were four utilities located within the excavated area that included a sewer line, storm drain line, lateral water line to the damaged hydrant, and an unidentified pipe that was suspected to be an abandoned former pressurized sewer line. Soil removal extended approximately six feet past the inside edge of the sidewalk near bank property, and was discontinued along portions of the roadway due to possible undermining of the pavement. There was one portion of the excavation that extended approximately five feet by five feet into the roadway to allow for the DPW to install new lateral piping from the water main to the hydrant.

During soil removal, 51 discrete soil samples (S-1 through S-51) were collected from the floor and sidewalls/surface soils inside and adjacent to the excavation and field screened for VOCs with the PID. The field screening revealed VOC concentrations at the final excavation limits that ranged from no detectable (i.e. less than 0.1 parts per million, ppm) to 738 ppm in a sample located below the roadway curbing. The surface soil samples were collected from a depth of zero to three inches, the sidewall soil samples were collected from a depths ranging from 6-60 inches, and the floor samples were collected from depths ranging from 8-72 inches. The sampling locations are depicted on Figure 2, the field screening results are summarized in Table 2, and site photographs taken during soil removal are presented in Appendix B.

To further document the petroleum concentrations remaining in site soils, CHES submitted a representative split samples of the two samples with the highest VOC concentrations (S-16 and S-18), and four additional samples (S-25, S-37, S-39 and S-48) to provide geographic coverage of the excavation. The samples were submitted to GeoLabs for EPH and VPH with No. 2 fuel oil specific target compounds analysis.

The EPH analyses (Table 3) revealed C11-C22 aromatic concentrations ranging from ND to 2,120 mg/kg, the C9-C18 aliphatics concentrations ranging from ND to 2,860 mg/kg and C19-C36 aliphatics concentrations ranging from ND to 1,090 mg/kg. The VPH analyses revealed C5-C8 aliphatics concentrations ranging from ND to 33.0 mg/kg, all ND C9-C12 aliphatics concentrations and C9-C10 aromatic concentrations ranging from ND to 593 mg/kg. The EPH target compounds concentrations for naphthalene, 2-methylnaphthale, acenaphthene and phenanthrene ranged from ND to 61.1 mg/kg, and the VPH target compounds concentrations for methyl tert butyl ether, benzene, toluene, ethylbenzene, xylenes and naphthalene ranged from ND to 106.8 mg/kg. The elevated EPH/VPH concentrations were detected in samples

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S-16 and S-18. No significant concentrations were detected in the remaining samples. The laboratory report is attached in Appendix C.

Although somewhat elevated EPH/VPH concentrations remain beneath the roadway, it appears that these concentrations are representative of a diminimus soil volume. Floor samples from the excavation show that the vertical extent of impact was at a maximum depth of 48 inches (sample S-46). Field screening results indicate a similar horizontal extent beneath the roadway, such that it does not appear that further soil removal is warranted.

Rotary Area: After completion of soil removal in front of the bank, CHES removed a small volume of soil adjacent to the curbing along the rotary where a small quantity of fuel oil overflowed the curb at the time of the release. Soil removal was guided by visual and olfactory evidence of staining on the ground surface, and field screening for VOCs with a PID. The completed excavation was an irregularly shaped area that measured approximately 9 feet long, 1-2 feet wide and 6 inches deep. During soil removal, four discrete soil samples (S-52 through S-55) were collected from the floor and surface soils adjacent to the excavation and field screened for VOCs with the PID. The field screening revealed VOC concentrations ranging from 2.0 to 5.0 ppm in the samples. Because the excavation was relatively small and the VOC concentrations were low, no samples were submitted for laboratory analysis, as the field screening data was deemed adequate to characterize this portion of the site. The sampling locations are depicted on Figure 2, the field screening results are summarized in Table 2, and a site photograph taken at the completion of soil removal is presented in Appendix B.

Mystic Valley Park Area: At approximately 12:00 PM on June 1st, staining was observed on the walking path immediately adjacent to and behind one of the three frac tanks that were staged at the site to store fuel and water from the vacuum recovery activities. The stain on the stone dust surface measured approximately 20 feet long and three to eight feet wide. Based on the size of the staining, it was estimated that approximately five gallons of oil/water had leaked from a fitting on the rear of the frac tank. The fitting was immediately repaired and the release area was covered with granular absorbents and polyethylene sheeting. On June 2nd, after one of the vacuum trucks at the site completed removal of the liquids in the drainage structures at the rotary, it was used to collect the spent absorbents and surficial stone dust and some adjacent soils. Because the walking path stone dust was very dense and the adjacent soils contained a lot of root matter, soil removal was postponed until a backhoe was available to loosen up the impacted area. The area was again covered with poly sheeting and secured with caution tape.

CHES returned to this location on June 6th after completion of the excavation of impacted soils at the rotary. The impacted soils were loosened up with a backhoe and collected with a Guzzler vacuum truck. Soil removal was guided by visual and olfactory evidence of staining on the ground surface, and field screening of the site soils for VOCs using a PID. The area was over-excavated to insure that no significant petroleum concentrations remained. The completed excavation measured approximately 35 feet long, 20 feet wide, with a typical depth of 3-4 inches.

At the completion of soil removal, 22 discrete soil samples (SS-1 through SS-22) were collected from the floor, sidewalls and surface soils adjacent to the excavation and field screened for VOCs with the PID. The field screening revealed VOC concentrations ranging

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from 1.2 to 8.3 ppm in the samples. The surface soil samples obtained outside of the excavation to further delineate the extent of impact were collected from a depth of zero to three inches. The sidewall excavation samples were collected from a depth of zero to 20 inches, and the floor samples were collected from depths ranging from three to 24 inches. Along the walking path, only three inches of stone dust were removed when the stone no longer exhibited olfactory evidence of fuel oil (samples SS-10, SS-11, 13 and SS-14). The soil adjacent to the walking path appeared to contain little or no fuel oil, but exhibited elevated PID response. Based on these observations and the close proximity to the Mystic River, these soils were removed until all PID response was less than 10 ppm. Final PID readings ranged from 1.2 to 8.3 ppm. The sampling locations are depicted on Figure 5 (Sampling Plan), the field screening results are summarized in Table 4 and site photographs taken during soil removal are presented in Appendix B.

To further document site conditions, CHES submitted a representative split of the sample with the highest PID response (SS-12) to the GeoLabs for EPH and No. 2 fuel oil specific target compound analysis. The EPH analyses (Table 5) revealed no detectable carbon fraction or target compound concentrations except a low concentration of 0.894 mg/kg for phenanthrene, indicating no further soil removal was warranted. A copy of the laboratory report is attached in Appendix C.

River Street Rip Rap Area: On June 11th, CHES screened soils located above the upstream rip rap stone adjacent to the River Street bridge abutments because occasional petroleum odors were noted in this area. As indicated in Table 6, CHES field screened a total of 25 samples for VOCs with a PID. Six samples were collected from the small pathway on the Medford side, and 17 samples were collected from the pathway on the Arlington side at depths from the ground surface to 2 inches. On the Medford side, field screening of the samples (S-15 through S-20) revealed no detectable or only low VOC concentrations ranging from <0.1 to 2.5 ppm, and no petroleum odors were noted. On the Arlington side (S-1 through S-14 and S-21), the VOC concentrations ranged from <0.1 to 18.7 ppm, and no petroleum odors were noted except for a slight odor in the samples that were located right at the top of the rip rap (S-11, S-12 and S-13) and between the rip rap stone (S-21). Additional samples were collected at a depth of 2-4 inches at these four locations that were also field screened, with the VOC concentrations ranging from <0.1 to 6.5 ppm, with no odors present in the samples. The field screening results are summarized in Table 6.

Based on the above observations, CHES removed a small volume of soil adjacent to the rip rap on June 25th. The excavated area was approximately five feet by five feet and two to three inches deep. CHES also removed the accessible soils and detritus sporadically present within the space present between the large rip rap stones. All of these activities took place on the Arlington shoreline since no evidence of petroleum was detected on the Medford shoreline. Soil removal was guided by olfactory evidence and field screening of the site soils for VOCs with a PID. At the completion of soil/detritus removal, four discrete soil samples were collected from the soils adjacent to the rip rap (SS-11B, SS-12B, SS-13B and SS-24) and three discrete soil/detritus samples were collected from between the rip rap (SS-21B, SS-22 and SS-23). The field screening results ranged from <0.1 to 0.6 ppm, and no odors were present in the samples. Given the low PID response and small area of excavation, confirmatory laboratory

analysis was not deemed warranted. A site photograph taken at this location after soil removal is presented in Appendix B.

Remedial Waste Disposal

A total of 34,796 gallons of fuel oil and water generated from during recovery activities were transported off site by CHES under Uniform Hazardous Waste Manifest protocol via transporter trucks to Clean Harbors of Maine, Inc. in South Portland, Maine, for disposal on June 6th through 10th, 2013. Copies of the liquid disposal documents are included in Appendix D.

A total of 38 cubic yards of spent absorbent materials and oily debris (leaves and brush) were transported off site by CHES under Uniform Hazardous Waste Manifest protocol in roll-off containers to Clean Harbors of Braintree, Inc., in Braintree, Massachusetts for disposal on June 5th and 7th, 2013. Copies of the disposal documents are included in Appendix D.

A total of 19 cubic yards of oily solids (soils, sediments and debris from drainage system and riverbank cleanup), including approximately two cubic yards of soil from the WSB excavation area, were transported off site by CHES under Uniform Hazardous Waste Manifest protocol. The waste was transported via vacuum trucks to Clean Harbors of Braintree, Inc., in Braintree, Massachusetts for disposal on June 2nd, 6th and 26th, 2013. Copies of the disposal documents are included in Appendix D.

Approximately 36 cubic yards (53.65 tons) of soil from the WSB area excavation were transported off site by CHES under DEP Bill of Lading protocol. The soils were shipped in roll-off containers to Environmental Soil Management, Inc., in Loudon New Hampshire for recycling on June 10th and 11th, 2013. Copies of the disposal documents are included in Appendix D.

Two roll-off containers are presently staged at the site and will be used to dispose of spent absorbent materials currently deployed at the site. Documentation of this waste will be included in a subsequent submittal.

Site Inspections

Subsequent to the last shoreline cleanup completed on June 26th, CHES has inspected the river on six occasions during periods of high and low water levels as well as during or after precipitation events. Each of the seven areas with containment and absorbent boom were inspected. The inspections were conducted on July 1st, 10th 12th, 16th, 19th and 23rd, and photographs taken during inspections are presented in Appendix B.

Site conditions have shown a steady improvement, and for the most part, no visual or olfactory evidence of the release remains. However, occasional, sporadic odor has been noted at the River Street bridge abutment and at former Boom Area 3 (1450-1550 containment area). An occasional light sporadic petroleum sheen has also been present in these areas, although less so during recent inspections.

Page 12 of 12

RTN No.: 3-31576

IRA PLAN

Based upon the site conditions observed and response actions completed to date, the potential for imminent hazards and substantial release migration has been mitigated. However, the river portion of the site, particularly the Arlington riverbank, continues to be monitored to confirm the effectiveness of the response actions conducted to date. Site inspections continue to be conducted during periods of both high and low tide, and during or after significant rainfall events, and will continue until no evidence of petroleum sheen and/or petroleum odor is noted, and with concurrence with DEP. Should site conditions continue to show steady improvement, it is anticipated that DEP approval will be requested to remove most of the remaining boom, as warranted, in the coming weeks.

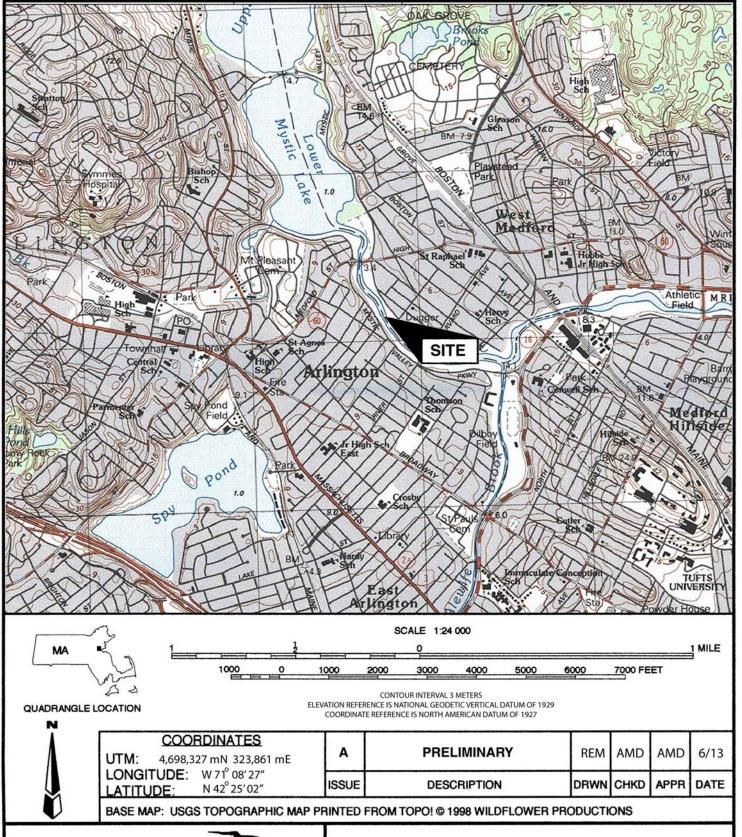
The impacted shoreline has not been sampled for laboratory analysis, as this area is being monitored and being allowed to naturally attenuate. CHES will sample these areas to evaluate any remaining soil and sediment impacts at the site prior to the next IRA submittal. Also, samples will be obtained from similar locations upstream and downstream from the release area to establish local, or background, conditions. It is anticipated that samples will be analyzed for EPH, VPH and total organic carbon. Site data will be compared to established ecological criteria and to background to evaluate whether a condition of significant risk to site biota and habitats exists, and the need for further response actions.

Should site conditions warrant, additional debris, soil and/or sediment may be removed to expedite site recovery. Any remedial waste generated by IRA actions will be properly disposed off site prior to concluding IRA activities. Documentation of such disposal will be provided to the DEP in subsequent IRA submittal(s).

Public involvement activities will be performed in accordance with 310 CMR 40.1400. In addition, CHES will periodically issue status reports to state and local government agencies as well as local citizen groups. Notices of Environmental Sampling and status reports submitted to date are presented as Appendix E.

SCHEDULE

The proposed monitoring and shoreline sampling described herein will be conducted within the next 60 days and documented in an IRA Status or Completion Report in accordance with 310 CMR 40.0000.





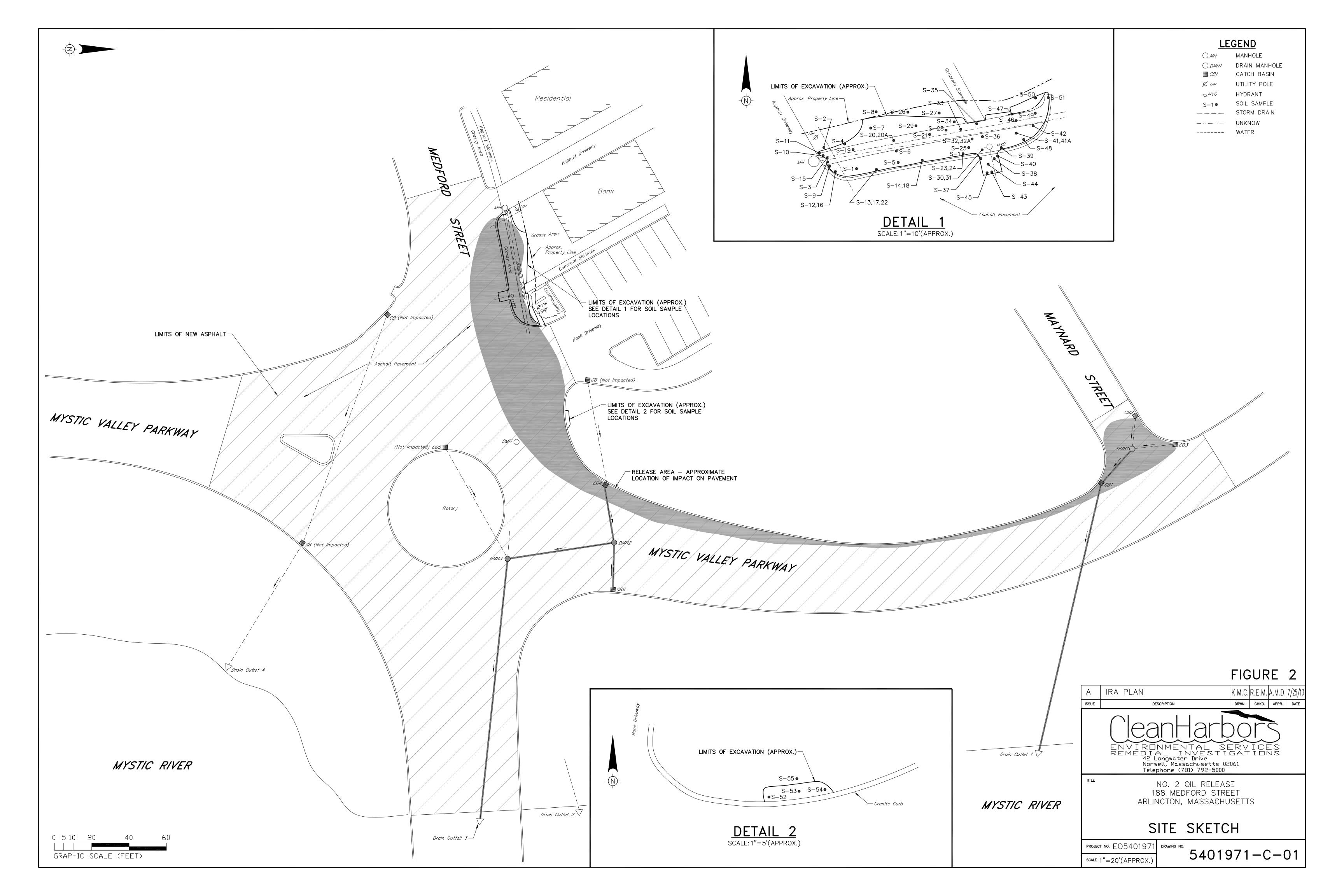
Environmental Services®

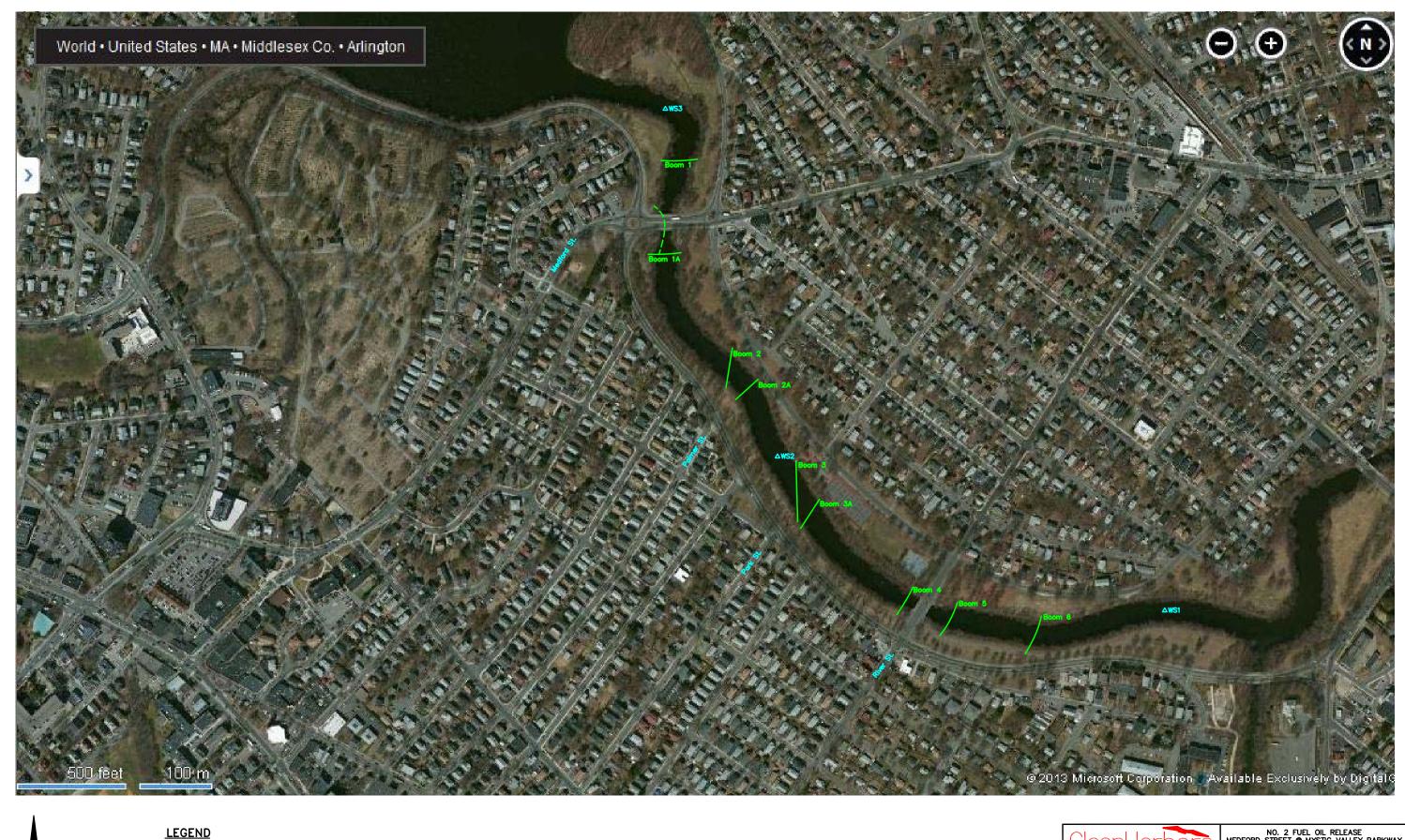
42 Longwater Drive Norwell, Massachusetts 02061 No. 2 Fuel Oil Release 188 Medford Street (at Mystic Valley Parkway) Arlington, Massachusetts

LOCUS MAP

JOB NO.: EO5401971 SCALE: AS SHOWN DWG. NO.

FIGURE 1





CONTAINMENT BOOM

FIGURE 3

A IRA PLAN

K.M.C. R.E.M. S.J.A. 7/25/13 DRWN, CHKD, APPR, DATE

NO. 2 FUEL OIL RELEASE MEDFORD STREET @ MYSTIC VALLEY PARKWAY ARLINGTON, MASSACHUSETTS

AERIAL PHOTOGRAPH

PROJECT NO. E05401971
SOLE AS NOTED

DWG. NO. 5401971 — C — 0.3





Legend: ——— = Area where shoreline will be water washed and/or impacted moss may be removed

> = Area where limited sediments and/or soils may be removed

Figure 4

А	IRA Plan	K.M.C.	R.E.M.	S.J.A.	6/17/13
ISSUE	DESCRIPTION	DRWN.	CHKD.	APPR.	DATE
	NO 2 FUEL OIL BEL				



42 Longwater Drive Norwell, Massachusetts 02061 Telephone (781) 792-5000

NO. 2 FUEL OIL RELEASE MEDFORD STREET @ MYSTIC VALLEY PARKWAY ARLINGTON, MASSACHUSETTS

REMEDIATION PLAN

PROJECT NO. E05401971 DWG. NO. 5401971-C-02

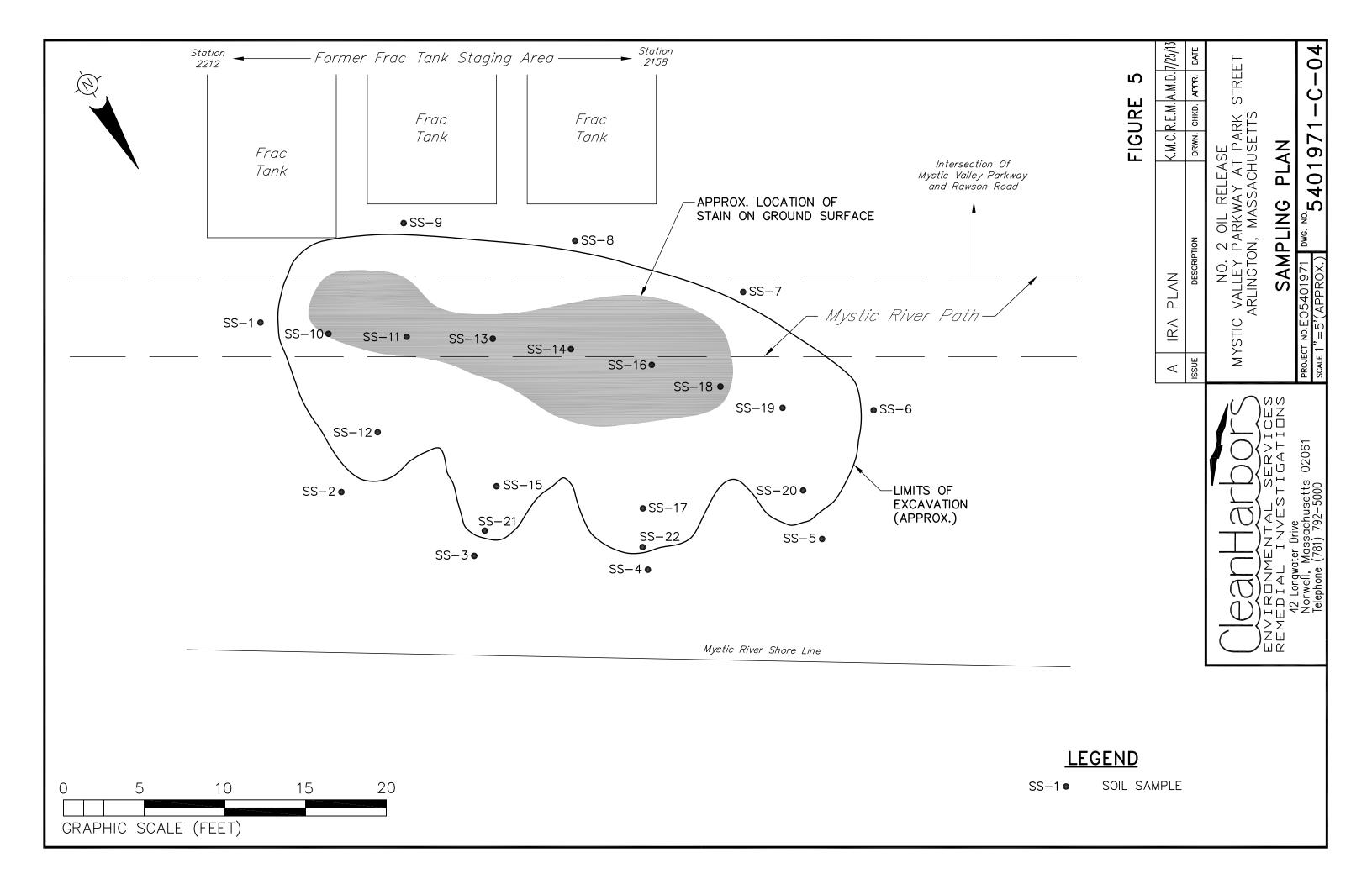


Table 1 Laboratory Analysis of Surface Water Samples 188 Medford Street (at Mystic Valley Parkway), Arlington, MA

Sample Dates: June 3 & 10, 2013

Sample ID	WS-1	WS-1A	WS-2	WS-2A	WS-3	WS-3A	Lowest Ecological Criteria*
Sample Date:	6/3/2013	6/10/2013	6/3/2013	6/10/2013	6/3/2013	6/10/2013	
	(Downstream)	(Downstream)	(Middle)	(Middle)	(Upstream)	(Upstream)	_
EPH (ug/l)							
C11-C22 Aromatics	ND(103)	ND(103)	ND(101)	ND(103)	ND(101)	ND(102)	5
C9-C18 Aliphatics	ND(103)	ND(103)	ND(101)	ND(103)	ND(101)	ND(102)	1,800
C19-C36 Aliphatics	118	ND(103)	ND(101)	ND(103)	ND(101)	ND(102)	2,100
Naphthalene	ND(1.03)	ND(1.03)	ND(1.01)	ND(1.03)	ND(1.01)	ND(1.02)	72
2-Methylnaphthalene	5.91	ND(1.03)	ND(1.01)	ND(1.03)	ND(1.01)	ND(1.02)	70
Acenaphthene	ND(1.03)	ND(1.03)	ND(1.01)	ND(1.03)	ND(1.01)	ND(1.02)	23
Phenanthrene	ND(1.03)	ND(1.03)	ND(1.01)	ND(1.03)	ND(1.01)	ND(1.02)	38
VPH (ug/l)							
C5-C8 Aliphatics	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	250
C9-C12 Aliphatics	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	1,800
C9-C10 Aromatics	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	540
Methyl Tert Butyl Ether	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	100,000
Benzene	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	460
Toluene	2.06	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	1,400
Ethylbenzene	1.23	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	181
Xylenes	10.62	9.13	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	200
Naphthalene	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	72

EPH = extractable petroleum hydrocarbons, VPH = volatile petroleum hydrocarbons, ND = not detected above the reporting limit (in parentheses) ug/l = micrograms per liter (parts per billion)

^{* =} Lowest Ecologically Based Criteria from derivation of GW-3 Standards

Table 2 Field Screening of Excavation Soil Samples 188 Medford Street and Rotary Areas, Arlington, MA

Sample Dates: June 5 & 6, 2013

Sample ID	Sample Date:	Sample Depth	VOC Results	Notes/Observations:
Winchester Bank Exca	avation	(inches)	(ppm)	
S-1	6/5/2013	36	8.7	floor
S-2	6/5/2013	0-3	1.5	surface outside of dead grass area
S-3	6/5/2013	8	2.1	floor under sidewalk
S-4	6/5/2013	12	12.9	wall
S-5	6/5/2013	36	5.4	wall
S-6	6/5/2013	8	0.9	floor under sidewalk
S-7	6/5/2013	12	5.4	wall
S-8	6/5/2013	0-3	< 0.1	surface outside of excavation
S-9	6/5/2013	18	452	below end of curb at manhole
S-10	6/5/2013	0-3	0.3	floor under sidewalk and driveway
S-11	6/5/2013	6-8	4.2	below curb and landscaping transition
S-12	6/5/2013	30	227	floor
S-13	6/5/2013	36	664	floor
S-14	6/5/2013	40	1.1	floor
S-15	6/5/2013	0-3	4.7	wall under sidewalk at manhole
S-16*	6/5/2013	24-30	783	wall below curb
S-17	6/5/2013	28-36	534	wall below curb
S-18*	6/5/2013	36-40	738	wall below curb
S-19	6/5/2013	18-30	3.0	wall on Savings Bank side of deepest trench
S-20	6/5/2013	24-36	19.7	wall on Savings Bank side of deepest trench
S-20A	6/5/2013	24-36	10.3	wall on Savings Bank side of deepest trench
S-21	6/5/2013	36-40	9.0	wall on Savings Bank side of deepest trench
S-22	6/5/2013	24-36	10.3	wall below curb
S-23	6/5/2013	20-26	186	wall below curb
S-24	6/5/2013	34-40	2.8	wall below curb
S-25*	6/5/2013	40	4.0	floor below curb wall
S-26	6/5/2013	0-3	0.7	surface outside of dead grass area
S-27	6/5/2013	0-3	0.3	surface outside of dead grass area
S-28	6/5/2013	24	8.9	floor under sidewalk
S-29	6/5/2013	12	6.0	floor under dead grass area
S-30	6/5/2013	20-26	480	wall below curb
S-31	6/5/2013	34-40	402	wall below curb
S-32	6/5/2013	40	24.1	floor below curb wall
S-32A	6/5/2013	46	19.8	floor below curb wall
S-3277 S-33	6/5/2013	30	7.2	floor under sidewalk
S-34	6/5/2013	12	4.5	floor under dead grass area
S-35	6/6/2013	24	3.6	wall
S-36	6/6/2013	72	39.2	floor
S-37*	6/6/2013	24	1.6	4" behind former curb location (curb removed)
S-38	6/6/2013	64	1.2	floor
S-39*	6/6/2013	24	16.2	wall below curb
S-40	6/6/2013	24	0.7	floor
S-41	6/6/2013	24	87. <i>4</i>	floor
S-41A	6/6/2013	36	3.6	floor
S-42	6/6/2013	24	4.2	floor under sidewalk
S-43	6/6/2013	36-42	0.7	11
S-44	6/6/2013	60	87.2	wall floor
S-44 S-45	6/6/2013	60	12.3	wall
S-46	6/6/2013	48	3.4	floor under sidewalk
S-47		12	0.7	floor
S-47 S-48*	6/6/2013 6/6/2013	20-26	0.7 79	wall
S-49	6/6/2013	48	2.7	floor
		48 48		floor
S-50	6/6/2013		9.7	
S-51 Rotary Excavation	6/6/2013	20-26	414	wall below curb
S-52	6/6/2013	6	2.0	floor
S-53	6/6/2013	6	4.1	floor
S-54	6/6/2013	6	5.0	floor
S-55	6/6/2013	0-3	2.9	surface outside of dead grass area
5-33	0, 0, 2013	U-J	2.7	sarrase outside of dedd grass area

Notes: Italicized font denotes soil was removed during subsequent soil removal.

^{* =} sample submitted for laboratory analysis VOCs = volatile organic compounds measured with a MiniRAE photoionization detector calibrated to a Benzene response ppm = parts per million

Table 3
Field Screening and Laboratory Analysis of Excavation Soil Samples
188 Medford Street (at Mystic Valley Parkway), Arlington, MA

Sample Dates: June 5 & 6, 2013

Sample ID	S-16	S-18	S-25	S-37	S-39	S-48	Me	thod 1 Risk Standa	rds*
Depth (inches)	24-30	36-40	40	24	24	20-26	S-1/GW-3	S-2/GW-3	S-3/GW-3
Date:	6/5/2013	6/5/2013	6/5/2013	6/6/2013	6/6/2013	6/6/2013			
VOCs (ppm)	783	738	4.0	1.6	16.2	79.0			
EPH (mg/kg)									
C11-C22 Aromatics	2,120	1,220	ND(16.5)	ND(17.6)	ND(16.3)	ND(17.0)	1,000	3,000	5,000
C9-C18 Aliphatics	2,860	2,720	ND(16.5)	ND(17.6)	24.4	ND(17.0)	1,000	3,000	5,000
C19-C36 Aliphatics	1,090	942	ND(16.5)	ND(17.6)	ND(16.3)	ND(17.0)	3,000	5,000	5,000
Naphthalene	24.3	10.9	ND(0.110)	0.168	ND(0.109)	ND(0.114)	40 / 500	40 / 1,000	40 / 3,000
2-Methylnaphthalene	61.1	30.6	ND(0.110)	0.566	0.486	0.568	80 / 300	80 / 500	80 / 500
Acenaphthene	ND(0.128)	ND(0.114)	ND(0.110)	ND(0.118)	ND(0.109)	ND(0.114)	1,000	3,000	5,000
Phenanthrene	8.04	5.43	ND(0.110)	ND(0.118)	0.113	0.156	500	1,000	3,000
VPH (mg/kg)									
C5-C8 Aliphatics	33.0	26.2	ND(11.0)	ND(11.8)	ND(10.9)	ND(11.4)	100	500	500
C9-C12 Aliphatics	ND(12.8)	ND(11.4)	ND(11.0)	ND(11.8)	ND(10.9)	ND(11.4)	1,000	3,000	5,000
C9-C10 Aromatics	488	593	ND(11.0)	ND(11.8)	ND(10.9)	ND(11.4)	100	3,000	500
Methyl Tert Butyl Ether	ND(0.128)	ND(0.114)	ND(0.110)	ND(0.118)	ND(0.109)	ND(0.114)	100	100 / 500	100 / 500
Benzene	ND(0.128)	ND(0.114)	ND(0.110)	ND(0.118)	ND(0.109)	ND(0.114)	30	200	700 / 900
Toluene	17.9	16.2	ND(0.110)	ND(0.118)	ND(0.109)	ND(0.114)	500	1,000	2,000 / 3,000
Ethylbenzene	29.1	23.7	0.143	ND(0.118)	ND(0.109)	2.07	500	1,000	1,000 / 3,000
Xylenes	106.8	89.3	1.164	0.694	ND(0.109)	0.670	300 / 500	300 / 1,000	300 / 3,000
Naphthalene	ND(0.128)	ND(0.114)	ND(0.110)	ND(0.118)	0.610	ND(0.114)	40 / 500	40 / 1000	40 / 3000

VOCs = volatile organic compounds measured with a MiniRAE photoionization detector calibrated to a Benzene response

EPH = extractable petroleum hydrocarbons, VPH = volatile petroleum hydrocarbons, NA = not analyzed

ppm = parts per million

mg/kg = milligrams per kilogram

Concentrations in **Bold** were above cleanup standards

^{* =} Method 1 risk standards for S-1 and S-3 soil in a GW-3 groundwater area

Table 4
Field Screening of Excavation Soil Samples
Mystic Valley Parkway and Park Street, Arlington, MA

Sample Dates: June 6, 2013

Sample ID	Sample Date:	Sample Depth	VOC Results	Notes/Observations:
		(inches)	(ppm)	
SS-1	6/6/2013	0-3	1.5	surface from outside excavation
SS-2	6/6/2013	0-3	2.3	surface from outside excavation
SS-3	6/6/2013	0-3	3.3	surface from outside excavation
SS-4	6/6/2013	0-3	2.8	surface from outside excavation
SS-5	6/6/2013	0-3	2.6	surface from outside excavation
SS-6	6/6/2013	0-3	1.7	surface from outside excavation
SS-7	6/6/2013	0-3	1.3	surface from outside excavation
SS-8	6/6/2013	0-3	1.6	surface from outside excavation
SS-9	6/6/2013	0-3	1.3	surface from outside excavation
SS-10	6/6/2013	3-4	1.2	floor
SS-11	6/6/2013	3-4	1.4	floor
SS-12*	6/6/2013	10-12	8.3	floor
SS-13	6/6/2013	3-4	1.7	floor
SS-14	6/6/2013	3-4	1.9	floor
SS-15	6/6/2013	14-18	1.7	floor
SS-16	6/6/2013	3-4	2.9	floor
SS-17	6/6/2013	20-24	3.8	floor
SS-18	6/6/2013	3-4	2.5	floor
SS-19	6/6/2013	3-4	2.3	floor
SS-20	6/6/2013	3-4	5.0	floor
SS-21	6/6/2013	0-14	3.7	wall
SS-22	6/6/2013	0-20	6.7	wall

^{* =} sample submitted for laboratory analysis

VOCs = volatile organic compounds measured with a MiniRAE photoionization detector calibrated to a Benzene response ppm = parts per million

Table 5
Field Screening and Laboratory Analysis of Excavation Soil Sample
Mystic Valley Park at Park Street, Arlington, MA

Sample Date: June 6, 2013

Sample ID	SS-12		Method 1 Risk Standards*	•
Depth (inches)	40	S-1/GW-3	S-2/GW-3	S-3/GW-3
VOCs (ppm)	8.3			
EPH (mg/kg)				
C11-C22 Aromatics	ND(16.3)	1,000	3,000	5,000
C9-C18 Aliphatics	ND(16.3)	1,000	3,000	5,000
C19-C36 Aliphatics	ND(16.3)	3,000	5,000	5,000
Naphthalene	ND(0.109)	500	1,000	3,000
2-Methylnaphthalene	ND(0.109)	300	500	500
Acenaphthene	ND(0.109)	1,000	3,000	5,000
Phenanthrene	0.255	500	1,000	3,000

VOCs = volatile organic compounds measured with a MiniRAE photoionization detector calibrated to a Benzene response

EPH = extractable petroleum hydrocarbons

ppm = parts per million

mg/kg = milligrams per kilogram

^{* =} Method 1 risk standards for S-1, S-2 and S-3 soil in a GW-3 groundwater area

Table 6
Field Screening of Site Soil Samples
Mystic Valley Parkway and River Street, Arlington, MA

Sample Dates: June 11 & 25, 2013

Sample ID	Sample Date:	Sample Depth	VOC Results	Notes/Observations
		(inches)	(ppm)	
SS-1	6/11/2013	0-2	<0.1	no odor
SS-2	6/11/2013	0-2	< 0.1	no odor
SS-3	6/11/2013	0-2	< 0.1	no odor
SS-4	6/11/2013	0-2	< 0.1	no odor
SS-5	6/11/2013	0-2	< 0.1	no odor
SS-6	6/11/2013	0-2	< 0.1	no odor
SS-7	6/11/2013	0-2	< 0.1	no odor
SS-8	6/11/2013	0-2	< 0.1	no odor
SS-9	6/11/2013	0-2	< 0.1	no odor
SS-10	6/11/2013	0-2	< 0.1	no odor
SS-11	6/11/2013	0-2	0.6	slight odor
SS-11A	6/11/2013	2-4	< 0.1	no odor
SS-12	6/11/2013	0-2	10.2	slight odor
SS-12A	6/11/2013	2-4	0.5	no odor
SS-13	6/11/2013	0-2	6.9	slight odor
SS-14	6/11/2013	0-2	< 0.1	no odor
SS-15	6/11/2013	0-2	0.3	no odor
SS-16	6/11/2013	0-2	< 0.1	no odor
SS-17	6/11/2013	0-2	< 0.1	no odor
SS-18	6/11/2013	0-2	0.1	no odor
SS-19	6/11/2013	0-2	< 0.1	no odor
SS-20	6/11/2013	0-2	2.5	no odor
SS-13A	6/11/2013	2-4	< 0.1	no odor
SS-21	6/11/2013	0-2	18.7	slight odor
SS-21A	6/11/2013	2-4	6.2	no odor
SS-11B	6/25/2013	3-4	< 0.1	no odor
SS-12B	6/25/2013	3-4	< 0.1	no odor
SS-13B	6/25/2013	3-4	< 0.1	no odor
SS-21B	6/25/2013	3-4	0.6	no odor
SS-22	6/25/2013	3-4	0.4	no odor
SS-23	6/25/2013	3-4	0.1	no odor
SS-24	6/25/2013	3-4	< 0.1	no odor

Notes: Italicized font denotes soil was removed during subsequent soil removal.

 $VOCs = volatile \ organic \ compounds \ measured \ with \ a \ MiniRAE \ photoionization \ detector \ calibrated \ to \ a \ Benzene \ response \ ppm = parts \ per \ million$

^{* =} sample submitted for laboratory analysis



Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

RELEASE NOTIFICATION & NOTIFICATION RETRACTION FORM

Pursuant to 310 CMR 40.0335 and 310 CMR 40.0371 (Subpart C)

В	۷	۷	S	С	1	0	3
---	---	---	---	---	---	---	---

Release Tracking Number

A. RELEASE OR THREAT OF RELEASE LOCA	ATION:					
Release Name/Location Aid: INTERSE	CTION WITH MYST	IC VALLEY PKWY	,			
2. Street Address: 188 MEDFORD STRI	EET					
3. City/Town: ARLINGTON		4. ZIP Code:				
5. UTM Coordinates: a. UTM N: 469832	7 b. UTM E:	323861		Identify Location	of Release	
B. THIS FORM IS BEING USED TO: (check of	one)					
1. Submit a Release Notification						
2. Submit a Revised Release Notificat	tion					
3. Submit a Retraction of a Previously documentation required pursuant to 31	I0 CMR 40.0335 (Sec	tion C is not required)	_	upporting	
(All sections of this tra			herwise	e noted above)		
C. INFORMATION DESCRIBING THE RELEAS		EASE (TOR):				
1. Date and time of Oral Notification, if appli	cable: 05/31/2013	dd/yyyy	Time:	04:25	AM	√ PM
2. Date and time you obtained knowledge of		05/31/2013 mm/dd/yyyy	Time:	05:00 hh:mm	AM [√ PM
3. Date and time release or TOR occurred, i	f known: 05/31/2013	ım/dd/yyyy	Time:	04:15 hh:mm	AM [√ PM
Check all Notification Thresholds that apply (for more information see 310 CMR 40.0310		at of Release:				
4. 2 HOUR REPORTING CONDITIONS	5. 72 HOUR REPORT	ING CONDITIONS	6.	120 DAY REPOR	TING CONE	OITIONS
✓ a. Sudden Release		Non-Aqueous			of Hazardo	us
b. Threat of Sudden Release	Phase Liquid (or Greater than				er Exceedin	
c. Oil Sheen on Surface Water		nd Storage Tank		·	Concentra	
d. Poses Imminent Hazard	└─ (UST) Release			b. Release Exceeding	of Oil to So Reportable	il
e. Could Pose Imminent Hazard	c. Threat of U	ST Release			ion(s) and A 2 Cubic Yard	_
f. Release Detected in Private Well	d. Release to near Water Su e. Release to near School o	ipply Groundwater			of Oil to er Exceedir Concentra	-
g. Release to Storm Drain h. Sanitary Sewer Release (Imminent Hazard Only)		Release Migration		Phase Liqu	ace Non-Aq id (NAPL) E than 1/8 Incl I/2 Inch	Equal to

Revised: 02/10/2006 Page 1 of 3



Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC103

Release Tracking Number

21576

RELEASE NOTIFICATION & NOTIFICATION

Pursuant to 310 CMR 40.		MR 40.037	1 (Subpart C)	L	3 - 31376
C. INFORMATION DESCRIBING THE RELEASE	OR THREAT OF	F RELEASE	(TOR): (cont.)		
7. List below the Oils (O) or Hazardous Materi (RQ) by the greatest amount.	als (HM) that ex	ceed their F	Reportable Concer	ntration (RC)	or Reportable Quantity
O or HM Released	CAS Number, if known	O or HM	Amount or Concentration	Units	RCs Exceeded, if Applicable (RCS-1, RCS-2, RCGW-1, RCGW-2)
NO. 2 FUEL OIL		0	9600.00	GAL	N/A
8. Check here if a list of additional Oil ar D. PERSON REQUIRED TO NOTIFY:	ıd Hazardous M	laterials sub	ject to reporting is	attached.	
1. Check all that apply: a. change in co	ontact name	b. ch	ange of address		change in the person ifying
2. Name of Organization: JP NOONAN TR	ANSPORTATI	ON INC		1100	nymg
3. Contact First Name: BOB		4. La	ast Name: DUPU	IS	
5. Street: PO BOX 400 415 WEST ST			6. Title: SAFETY	DIRECTOR	₹
7. City/Town: WEST BRIDGEWATER		8. \$	State: MA	9. ZIP Cod	de: 02379-1030
10. Telephone: (508) 588-8026	11. Ext.:		12. FAX:		
13. Check here if attaching names and a other than an owner who is submitting the				y the Release	e or Threat of Release,
E. RELATIONSHIP OF PERSON TO RELEASE (OR THREAT OF I	RELEASE:			
1. RP or PRP a. Owner	b. Operator	c. Gene		Transporter	
e. Other RP or PRP	Specify: NON	N-SPECIFI	ED PRP		
2. Fiduciary, Secured Lender or Municip	ality with Exemp	ot Status (as	defined by M.G.L.	c. 21E, s. 2)	
3. Agency or Public Utility on a Right of V	Vay (as defined l	by M.G.L. c.	21E, s. 5(j))		
4. Any Other Person Otherwise Required	d to Notify	Specify Rel	ationship:		

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Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC103

Release Tracking Number

3

31576

RELEASE NOTIFICATION & NOTIFICATION RETRACTION FORM

Pursuant to 310 CMR 40.0335 and 310 CMR 40.0371 (Subpart C) F. CERTIFICATION OF PERSON REQUIRED TO NOTIFY: , attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information. 2. By: AGENT 3. Title: Signature JP NOONAN TRANSPORTATION INC 5. Date: (Name of person or entity recorded in Section D) mm/dd/yyyy 6. Check here if the address of the person providing certification is different from address recorded in Section D. **42 LONGWATER DRIVE** 7. Street: **NORWELL** MA 02061-9149 10. ZIP Code: 8. City/Town: 9. State: 13. FAX: (781) 871-0690 (781) 792-5819 11. Telephone: 12. Ext.: YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE. Date Stamp (DEP USE ONLY:)

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Owner of Property Affected by the Release

RTN No.:3-31576 BWSC103 Section D (13)

Property Owners:

Winchester Savings Bank 661 Main Street Winchester, Massachusetts 01890

Town of Arlington 51 Grove Street Arlington, Massachusetts 02476

City of Medford 85 George P. Hassett Drive Medford, Massachusetts 02155

Massachusetts Department of Conservation and Recreation 251 Causeway Street, Suite 900 Boston, Massachusetts 02114-2104



Massachusetts Department of Environmental Protection *Bureau of Waste Site Cleanup*

BWSC105

IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL

Release Tracking Number

3 - 31576

FORM Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

A. RELEASE OR THREAT OF RELEASE LOCATION:
1. Release Name/Location Aid: INTERSECTION WITH MYSTIC VALLEY PKWY
2. Street Address: 188 MEDFORD STREET
3. City/Town: ARLINGTON 4. ZIP Code:
5. UTM Coordinates: a. UTM N: 4698327 b. UTM E: 323861
6. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site. a. Tier IA b. Tier IB c. Tier IC d. Tier II
7. Check here if this location is Adequately Regulated, pursuant to 310 CMR 40.0110-0114. Specify Program (check one):
a. CERCLA b. HSWA Corrective Action c. Solid Waste Management d. RCRA State Program (21C Facilities)
B. THIS FORM IS BEING USED TO: (check all that apply)
List Submittal Date of Initial IRA Written Plan (if previously submitted):
(mm/dd/yyyy) ✓ 2. Submit an Initial IRA Plan.
3. Submit a Modified IRA Plan of a previously submitted written IRA Plan.
4. Submit an Imminent Hazard Evaluation. (check one)
a. An Imminent Hazard exists in connection with this Release or Threat of Release.
b. An Imminent Hazard does not exist in connection with this Release or Threat of Release.
c. It is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release, and further assessment activities will be undertaken.
d. It is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release. However, response actions will address those conditions that could pose an Imminent Hazard.
5. Submit a request to Terminate an Active Remedial System or Response Action(s) Taken to Address an Imminent Hazard.
6. Submit an IRA Status Report.
7. Submit a Remedial Monitoring Report . (This report can only be submitted through eDEP.)
a. Type of Report: (check one) 📗 i. Initial Report 🔲 ii. Interim Report 🔲 iii. Final Report
b. Frequency of Submittal: (check all that apply)
i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.
ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.
iii. A Remedial Monitoring Report(s) submitted concurrent with a IRA Status Report.
c. Number of Remedial Systems and/or Monitoring Programs:
A separate BWSC105A, IRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.

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Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC105

IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL FORM Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number 31576

B. THIS FORM IS BEING USED TO (cont.): (check all that apply)					
8. Submit an IRA Completion Statement.					
a. Check here if future response actions addressing this Release or Threat of Release notification condition will be conducted as part of the Response Actions planned or ongoing at a Site that has already been Tier Classified under a different Release Tracking Number (RTN). When linking RTNs, rescoring via the NRS is required if there is a reasonable likelihood that the addition of the new RTN(s) would change the classification of the site.					
b. Provide Release Tracking Number of Tier Classified Site (Primary RTN):					
These additional response actions must occur according to the deadlines applicable to the Primary RTN. Use the Primary RTN when making all future submittals for the site unless specifically relating to this Immediate Response Action.					
9. Submit a Revised IRA Completion Statement.					
(All sections of this transmittal form must be filled out unless otherwise noted above)					
C. RELEASE OR THREAT OF RELEASE CONDITIONS THAT WARRANT IRA:					
Identify Media Impacted and Receptors Affected: (check all that apply)					
a. Air b. Basement c. Critical Exposure Pathway d. Groundwater e. Residence					
✓ f. Paved Surface g. Private Well h. Public Water Supply i. School √ j. Sediments					
k. Soil I. Storm Drain m. Surface Water n. Unknown o. Wetland p. Zone 2					
q. Others Specify:					
2. Identify Oils and Hazardous Materials Released: (check all that apply)					
a. Oils b. Chlorinated Solvents c. Heavy Metals					
d. Others Specify:					
D. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply, for volumes list cumulative amounts)					
1. Assessment and/or Monitoring Only 2. Temporary Covers or Caps					
✓ 3. Deployment of Absorbent or Containment Materials✓ 4. Temporary Water Supplies					
5. Structure Venting System 6. Temporary Evacuation or Relocation of Residents					
7. Product or NAPL Recovery 8. Fencing and Sign Posting					
9. Groundwater Treatment Systems 10. Soil Vapor Extraction					
11. Bioremediation 12. Air Sparging					

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Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC105

IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL FORM Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number 31576

). DI	ESCRIPTION OF RESPONS 13. Excavation of Contan		: (check all that a	pply, for	volumes list cumulative ar	mounts)	
_	✓ a. Re-use, Recycling	រ or Treatment	i. On Site	Estimat	ed volume in cubic yards		
			✓ ii. Off Site	Estimat	ed volume in cubic yards	36	
	iia. Receiving Facility:	ESMI OF NH		Town:	LOUDON	State:	NH
	iib. Receiving Facility:			Town:		State:	
	iii. Describe: THERM	IAL PROCESSING	G				
	b. Store		i. On Site	Estimat	ed volume in cubic yards		
			ii. Off Site		ed volume in cubic yards		
	iia Dagai dag Facility				-		
	c. Landfill			_Iown:		State:	
	C. Landilli		i. Cover	Estima	ted volume in cubic yards		
	Receiving Facility:			Town:		State:	
	5 ,					c	
	Danak dan Fasilik d	LEAN HARBORS		_	ted volume in cubic yards RAINTREE		MA
	Receiving Facility:] I OWL		State:	
	14. Removal of Drums, T		3:				\neg
	a. Describe Quantity and	Amount:					
	[1_			
	b. Receiving Facility:			」Town:		State:	
	c. Receiving Facility:			⊐Town:		State:	
√	15. Removal of Other Co		APDS SOIL SET	IMENT	S AND DEBRIS FROM	DRAINAGE SY	/STEM
	a. Specify Type and Volui	AND RIVER			LONS OF OIL AND WA		
	b. Receiving Facility:	EAN HARBORS			BRAINTREE	01.1	BA A
	b. Receiving Facility.	EAN HARBORS		」Town:	SOUTH PORTLAND	State:	ME
	c. receiving racility.			JTown:	SOUTHFORTLAND	State:	IVIL
✓	16. Other Response Acti	ons:					
	Describe: 38 CUBIC YA	ARDS OF OILY DE	EBRIS AND SPE	ENT AB	SORBENTS SHIPPED	TO CHES BRA	INTREE _
	47. Has of law queties Ta						<u>+</u>
Ш	17. Use of Innovative Tec	onnologies:					
	Describe:						



Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC105

IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL

Release Tracking Number

FORM Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

3	-	31576
3	-	31576

E. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

- > if Section B of this form indicates that an **Immediate Response Action Plan** is being submitted, the response action(s) that is(are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is(are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;
- > if Section B of this form indicates that an **Imminent Hazard Evaluation** is being submitted, this Imminent Hazard Evaluation was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and the assessment activity(ies) undertaken to support this Imminent Hazard Evaluation comply(ies) with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000;
- > if Section B of this form indicates that an **Immediate Response Action Status Report** and/or a **Remedial Monitoring Report** is(are) being submitted, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;
- > if Section B of this form indicates that an Immediate Response Action Completion Statement or a request to Terminate an Active Remedial System or Response Action(s) Taken to Address an Imminent Hazard is being submitted, the response action(s) that is(are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is(are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 8959	
2. First Name: ANTHONY M	3. Last Name: DELTUFO
4. Telephone: (781) 792-5819	5. Ext.: 6. FAX: (781) 792-5938
7. Signature:	
8. Date: (mm/dd/yyyy)	9. LSP Stamp:

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Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC105

IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL FORM Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number

3	_	31576

F. PERSON UNDERTAKING IRA:
1. Check all that apply: a. change in contact name b. change of address c. change in the person undertaking response actions
2. Name of Organization: JP NOONAN TRANSPORTATION INC
3. Contact First Name: BOB 4. Last Name: DUPUIS
DO DOY 400 445 WEST ST
5. Street: 6. Title: SAFETY DIRECTOR
7. City/Town: WEST BRIDGEWATER 8. State: MA 9. ZIP Code: 02379-1030
10. Telephone: (508) 588-8026 11. Ext.: 12. FAX:
G. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON UNDERTAKING IRA:
1. RP or PRP a. Owner b. Operator c. Generator d. Transporter
e. Other RP or PRP Specify: NON-SPECIFIED PRP
e. Other RP of PRP Opecity.
2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)
3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))
4. Any Other Person Undertaking IRA Specify Relationship:
H. REQUIRED ATTACHMENT AND SUBMITTALS:
1. Check here if any Remediation Waste, generated as a result of this IRA, will be stored, treated, managed, recycled or reused at the site following submission of the IRA Completion Statement. If this box is checked, you must submit one of the following plans, along with the appropriate transmittal form.
a. A Release Abatement Measure (RAM) Plan (BWSC106) b. Phase IV Remedy Implementation Plan (BWSC108)
2. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.
3. Check here to certify that the Chief Municipal Officer and the Local Board of Health were notified of the implementation of an Immediate Response Action taken to control, prevent, abate or eliminate an Imminent Hazard.
4. Check here to certify that the Chief Municipal Officer and the Local Board of Health were notified of the submittal of a Completion Statement for an Immediate Response Action taken to control, prevent, abate or eliminate an Imminent Hazard.
5. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to the DEP Regional Office.
6. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

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Massachusetts Department of Environmental Protection *Bureau of Waste Site Cleanup*

BWSC105

IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL

Release Tracking Number

3 - 31576

FORM Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

CERTIFICATION OF PERSON UNDERTAKING IRA:				
1. I, examined and am familiar with the information contained transmittal form, (ii) that, based on my inquiry of those is material information contained in this submittal is, to the that I am fully authorized to make this attestation on behality on whose behalf this submittal is made am/is aw possible fines and imprisonment, for willfully submitting	ed in this submittal, including individuals immediately resp e best of my knowledge and nalf of the entity legally resporare that there are significant	g any and a consible for belief, true insible for t penalties,	obtaining the information, the e, accurate and complete, and (iii) his submittal. I/the person or including, but not limited to,	
2. By: Signature		3. Title:	AGENT	
Signature				
1. For: JP NOONAN TRANSPORTATION INC		5. Date:		
(Name of person or entity records	ed in Section F)		(mm/dd/yyyy)	
6. Check here if the address of the person providing certification is different from address recorded in Section F. 7. Street: 8. City/Town: NORWELL 9. State: 10. ZIP Code: 11. Telephone: 12. Ext.: 13. FAX: 142 LONGWATER DRIVE 15. Lity/Town address recorded in Section F. 16. Address recorded in Section F. 17. Street: 18. City/Town: 19. State: 10. ZIP Code: 10. ZIP Code: 11. Telephone: 12. Ext.: 13. FAX: 14. Telephone: 15. City/Town address recorded in Section F. 16. Check here if the address of the person providing certification is different from address recorded in Section F. 17. Street: 18. City/Town: 19. State: 10. ZIP Code: 10. ZIP Code: 10. ZIP Code: 11. Telephone: 12. Ext.: 13. FAX: 14. City/Town: 15. City/Town: 16. City/Town: 17. Street: 18. City/Town: 19. State: 19. State: 19. State: 10. ZIP Code: 10. ZIP Code: 10. ZIP Code: 10. ZIP Code: 11. Telephone: 12. Ext.: 13. FAX: 14. City/Town: 15. City/Town: 16. City/Town: 17. Street: 17. Street: 18. City/Town: 19. State: 19. State: 19. State: 19. State: 19. State: 19. State: 10. ZIP Code: 11. Telephone: 11. Telephone: 12. Ext.: 13. FAX: 14. City/Town: 15. City/Town: 16. City/Town: 17. Street: 17. Street: 18. City/Town: 19. State: 19. City/Town: 19. City/To				
YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.				
Date Stamp (DEP USE ONLY:)				

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J.P. NOONAN TRANSPORTATION, INC.

415 WEST STREET · P.O. BOX 400 WEST BRIDGEWATER, MA 02379-0400

TEL (508) 588-8026 FAX (508) 587-2876

September 6, 2011

Mr. Anthony M. DelTufo, LSP Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061

Re: Agent Authorization for DEP Submittals

Dear Mr. DelTufo:

On behalf of J.P. Noonan Transportation, Inc. (J.P. Noonan), I authorize Clean Harbors Environmental Services, Inc. (CHES) representatives to sign Massachusetts Department of Environmental Protection (DEP) Bureau of Waste Site Cleanup (BWSC) transmittal forms, bills of lading and/or uniform hazardous waste manifests, as Agent for J.P. Noonan, when I am unable to do so. This authorization is in accordance with Section 310 CMR 40.0009(2) of the Massachusetts Contingency Plan. I also authorize CHES to make electronic submittals of DEP documents. I understand that J.P. Noonan remains fully liable under federal and state laws and regulations with regard to Certifications of Person Undertaking Response Actions contained in the DEP transmittal forms as the generator and responsible party, and that CHES would be signing solely for our convenience.

Authorized Representative

Sincerely

DIRECTOR OF SAFETS



Photograph 1: View of roll over site at Medford Street and Mystic Valley Parkway rotary. Photograph taken on May 31, 2013.



Photograph 2: View of No. 2 fuel oil on the Mystic River below the Medford Street bridge. Photograph taken on May 31, 2013.



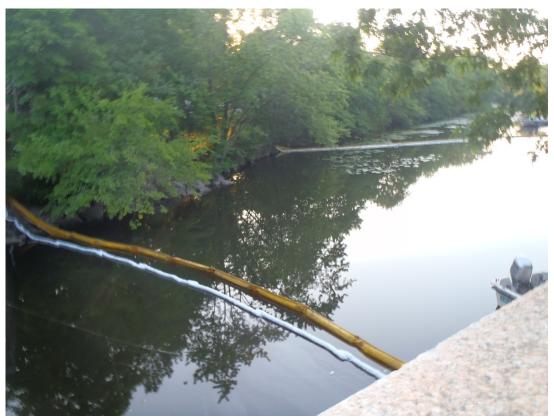
Photograph 3: View of product recovery activities in Mystic River downstream of the Medford Street bridge. Photograph taken on May 31, 2013.



Photograph 4: View of containment boom deployed in Mystic River between Medford Street and River Street bridges. Photograph taken on May 31, 2013.



Photograph 5: View of containment boom deployed in Mystic River above River Street bridge. Photograph taken on June 1, 2013.



Photograph 6: View of containment boom deployed in Mystic River below River Street bridge. Photograph taken on June 1, 2013.



Photograph 7: View of product recovery activities in Mystic River at containment boom. Photograph taken on June 1, 2013.



Photograph 8: View of product recovery activities in Mystic River at River Street bridge. Photograph taken on June 1, 2013.





Photograph 10: View of product recovery activities in Mystic River at containment boom. Photograph taken on June 2, 2013.



Photograph 11: View of Medford Shoreline below Medford Street bridge during Shoreline Assessment. Photograph taken on June 4, 2013.



Photograph 12: View of Arlington Shoreline between Medford Street and River Street bridge during Shoreline Assessment. Photograph taken on June 4, 2013.



Photograph 13: View of roll over site at Medford Street and Mystic Valley Parkway rotary after repaving. Photograph taken on June 5, 2013.



Photograph 14: View of absorbent and containment boom at Medford Street bridge during flushing of drain line. Photograph taken on June 5, 2013.



Photograph 15: View of absorbent and containment boom at Medford Street bridge during water washing and shoreline cleanup. Photograph taken on June 5, 2013.



Photograph 16: View of absorbent and containment boom at Arlington shoreline during water washing and shoreline cleanup. Photograph taken on June 6, 2013.



Photograph 17: View of completed excavation in front of Winchester Savings Bank. Photograph taken on June 6, 2013.



Photograph 18: View of completed excavation adjacent to rotary. Photograph taken on June 6, 2013.



Photograph 19: View of completed excavation at Mystic Valley Park walking path. Photograph taken on June 6, 2013.



Photograph 20: View of station 1450-1550 (Boom 2 Collection Area, 1485') during removal of impacted sediments/moss and water washing. Photograph taken on June 25. 2013.



Photograph 21: View of station 1750-1850 (Area 1795') during removal of impacted sediments/moss and water washing. Photograph taken on June 25. 2013.



Photograph 22: View of station 1900-2000 (Boom 3 Collection Area, 1950') during removal of impacted sediments/moss and water washing. Photograph taken on June 25. 2013.



Photograph 29: View of absorbent and containment boom at station 1900-2000 (Boom 3 Collection Area, 1950'). Photograph taken on July 10, 2013.



Photograph 30: View of absorbent and containment boom at station 2657 to 2682 (rip rap to River Street bridge). Photograph taken on July 10, 2013.



Photograph 23: View of station 850-950 (Area 885 to 900') during removal of impacted sediments/moss and water washing. Photograph taken on June 26. 2013.



Photograph 24: View of station 0625-1725 (Area 675') during removal of impacted sediments/moss and water washing. Photograph taken on June 26. 2013.



Photograph 25: View of station 0354 to 500 (Medford Street bridge) during removal of impacted sediments/moss and water washing. Photograph taken on June 26. 2013.



Photograph 26: View of completed excavation at rip rap above River Street bridge. Photograph taken on June 26, 2013.



Photograph 27: View of absorbent and containment boom at Station 0354-0500 (Medford Street bridge). Photograph taken on July 10, 2013.



Photograph 28: View of absorbent and containment boom at station 1450-1550 (Boom 2 Collection Area, 1485'). Photograph taken on July 10, 2013.

Monday, June 17, 2013

Rich MacCarthy Clean Harbors 42 Longwater Drive Norwell, MA 02061 GeoLabs, Inc. 45 Johnson Lane Braintree MA Tele: 781 848 7844 Fax: 781 848 7811

TEL: (781) 792-5822 FAX: (781) 792-5938

Project:

Location:

Noonan-Arlington

Order No.: 1306012

Dear Rich MacCarthy:

GeoLabs, Inc. received 3 sample(s) on 6/4/2013 for the analyses presented in the following report.

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

Report is being re-issued with additional comments on Case Narrative. Analytical methods and results meet requirements of 310CMR 40.1056(J) as per MADEP Compendium of Analytical Methods (CAM).

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

David Mick

Sincerely.

Laboratory Director

For current certifications, please visit our website at Certifications:

CT (PH-0148) - MA (M-MA015) - NH (2508) - RI (LA000252) Accredited in Accordance with

. 1 € 1 € 1 N E	MassDEP Analytical Protocol Certification Form							
Laboratory Na	ame: GeoLabs, In	1C.		Projec		Child Many		
Project Locati	ion: Noonan-Arlin	igton		RTN:				
This form prov	vides certification	for the followi	ing dat	a set: 1306012 (001-0	003)			
Matrices:	⊠ Ground	dwater/Surface			□ Drinking Water □	Air 🖂	Other week	
· r	7 (oneon all triat a	pply below):	<u> </u>		J Dilliming vacci L	All L	Utner-wasi	tewater
8260 VOC CAM II A 🔲	CAM III B	MassDEP VPI CAM IV A	X	8081 Pesicides CAM V B	7196 Hex Cr CAM VI B		MassDEP A	APH
8270 SVOC CAM II B 🔲	7010 Metals CAM III C	MassDEP EPH CAM IV B	H 区	8151 Herbicides CAM V C □	8330 Explosives CAM VIII A □		TO-15 VOC CAM IX B	গ
6010 Metals CAM III A □	6020 Metals CAM III D 🔲	8082 PCB CAM V A		9014 Total Cyanide/PAC CAM VI A □	6860 Perchlorate CAM VIII B			
Affirmative Re	esponses to Qui	estions A thr	ough I	F are required for "P	resumptive Certainty"	" status		
A	Were all samples a properly preserved	received in a co d (including tem	ondition nperatur me	n consistent with those de tre) in the field or laborate ethod holding times?	lescribed on the Chain of tory, and prepared/analyze	Custody, ed within	☑ Yes	□ No
В	Were the analytica	al method(s) an	ıd all as pr	ssociated QC requirement rotocol(s) followed?	ents specified in the select	ed CAM	⊠ Yes	□ No
С	Were all required (protocol(s)	corrective action implemented for	ns and or all ide	analytical response action	ions specified in the select andard non-conformances	ted CAM	⊠ Yes	□ No
D	Does the laborator Assurance and Q	y report compluality Control C	y with a Suidelin	ıll reporting requirement ies for the Acquisition ar	is specified in CAM VII A, and Reporting of Analtyical	"Quality Data"?	⊠ Yes	□ No
E	VPH, EPH, APH a. VPH, EPH	and TO-15 only I, and APH Meth	y: thods on	nlv: Was each method co	conducted without signification of signification	ont	⊠ Yes	□ No
							☐ Yes	□ No
					list reported for each meth			<u> </u>
	Cvaluated in a li	ianoratory rigita	auve und	ICIUDINO All "No" responsa	non-conformances identi- ses to Questions A through	.L -\	⊠ Yes	□ No
G G	Were the repor	ting limits at or	below a	all CAM reporting limits :	tive Certainty" status specified in the selected C	~^^ T		
				protocol(s)2	ay not necessarily meet		⊠ Yes	□ No
	representativ	eness requirer	ments c	aescripea in 310 CMR i	40. 1056 (2) (k) and W9(C-07-250	usablility ar	nd
<u>H</u>	Were all QC	performance s	standar	ds as specified in the C/	AM protocol(s) achieved?	,		⊠ No¹
All negative re	Were results repr	orted for the co	mplete	analyte list specified in	the selected CAM protoco	ol(s)?	□ Yes	⊠ No¹
the undersigne	ed. attest under th	addresseu III	an au	tached laboratory narra	<i>ative.</i> I upon my personal inqu			
nose responsib	ble for obtaining the e and belief, accur	ie informátion,	, the ma	yor perjury that, baseu aterial contained in this	d upon my personal inquis analytical report is, to	iry of the best	t	
Signature:	1 Janie	11VL	<i>I_</i>	Position	n: Laboratory Directo			
Printed Name:_	David Mick			Date:	June 17, 2013	<u>-</u>		

Date: 17-Jun-13

CLIENT:

Clean Harbors

Project:

Lab Order:

1306012

CASE NARRATIVE

Physical Condition of Samples

The project was received by the laboratory in satisfactory condition. The sample(s) were received undamaged, in appropriate containers with the correct preservation, with the following exception: Samples were unpreserved, but brought directly from the field.

Project Documentation

The project was accompanied by satisfactory Chain of Custody documentation.

Analysis of Sample(s)

Carbon ranges and diesel targets only analyzed via MADEP EPH method, per client request.

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

VPH LCSD RPD % Recovery for Naphthalene is outside of recovery limits.

SIGNATURE:

PRINTED NAME: David Mick

LAB DIRECTOR

DATE: 06/17/13

CLIENT:

Clean Harbors

Project:

Lab Order:

1306012

CASE NARRATIVE

EPH Methods

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

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

C11-C22 Aromatic Hydrocarbons exclude concentrations of Target PAH Analytes

CERTIFICATION:

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

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

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/17/13

CLIENT:

Clean Harbors

Project:

Lab Order:

1306012

CASE NARRATIVE

VPH Methods

Method for Ranges: MADEP VPH 04-1.1

Method for Target Analytes: MADEP VPH 04-1.1

Soil sample(s) were received in MeOH and soil was completely covered by MeOH.

Soil sample(s) ratio 1:1 +/- 25%

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

C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range. (MTBE, Benzene, Toluene)

C9-C12 Aliphatic Hydrocarbons exclude concentration of Target Analytes eluting in that range (Ethylbenzene, m&p-Xylenes, o-Xylene) AND concentration of C9-C10 Aromatic Hydrocarbons.

CERTIFICATION

Were all QA/QC procedures REQUIRED by the VPH Method followed? YES Were all QA/QC performance/acceptance standards achieved? NO (See Case Narrative) Were any significant modifications made to the VPH method, as specified in Sec. 11.3? NO

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

SIGNATURE:

POSITION: LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/17/13

Reported Date: 17-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306012

Client Sample ID: WS-1

Collection Date: 6/3/2013 4:00:00 PM

Project: Lab ID:

Date Received: 6/4/2013

Lab ID:	1206012-001			Date 1	Received:	6/4/2013
	1306012-001				Matrix:	WATE
	100				-	
Inalyses		Result	Det. Limit Qua	l Units		DF

Analyses	Result	Det. Limit (Qual Unit	s DF	Date Analyzed
EPH RANGES - MADEP EPH					Analyst: KG
Prep Method:	(eph_Wpr)	Pre	ep Date:	6/4/2013 8:59:14 AM	-
Adjusted C11-C22 Aromatics	ND	103	μg/L		6/7/2013
C09-C18 Aliphatics	ND	103	μg/L	1	·=- · · •
C19-C36 Aliphatics	118	103	μg/L	1	6/7/2013
Unadjusted C11-C22 Aromatics	ND	103	µg/L	1	6/7/2013
Surr: 1-Chlorooctadecane	52.3	40-140	%REC	1 1	6/7/2013
Surr: o-Terphenyl	77.8	40-140	%REC	•	6/7/2013 6/7/2013

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method:	(eph_Wpr)	Pre	p Date:	6/4/2013 8:59:14 AM	
Naphthalene	ND	1.03	μg/L		0/0/00/10 10 10 10
2-Methylnaphthalene	5.91	1.03	. •		6/6/2013 12:09:00 PM
Acenaphthene			μg/L	1	6/6/2013 12:09:00 PM
Phenanthrene	ND	1.03	μg/L	1	6/6/2013 12:09:00 PM
	ND	1.03	μg/L	1	6/6/2013 12:09:00 PM
Total PAH Target Concentration	5.91	1.03	μg/L	1	6/6/2013 12:09:00 PM
Surr: 2,2-Difluorobiphenyl	51.2	40-140	%REC	1	
Surr: 2-Fluorobiphenyl	54.3	40-140		'	6/6/2013 12:09:00 PM
• •	04.0	70-140	%REC	• 1	6/6/2013 12:09:00 PM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Pre	Date:		
C9-C10 Aromatic Hydrocarbons	ND	100	µg/L		
Unadjusted C5-C8 Aliphatic	ND	100		1	6/6/2013 12:33:00 PM
Hydrocarbons		100	µg/L	1	6/6/2013 12:33:00 PM
Unadjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/6/2013 12:33:00 PM
Methyl Tert-Butyl Ether	ND	1.00	μg/L	4	0/0/00/10
Benzene	ND	1.00		1	6/6/2013 12:33:00 PM
Toluene	· ·		μg/L	1	6/6/2013 12:33:00 PM
Ethylbenzene	2.06	1.00	μg/L	1	6/6/2013 12:33:00 PM
	1.23	1.00	μg/L	1	6/6/2013 12:33:00 PM
m,p-Xylene	3.16	1.00	μg/L	1	6/6/2013 12:33:00 PM
o-Xylene	7.46	1.00	μg/L		
Naphthalene	ND	1.00		1	6/6/2013 12:33:00 PM
Adjusted C5-C8 Aliphatic			µg/L	1	6/6/2013 12:33:00 PM
Hydrocarbons	ND	100	μg/Ľ	1	6/6/2013 12:33:00 PM

Qualifiers:

- В Analyte detected in the associated Method Blank E
 - Value above quantitation range
- Analyte detected below quantitation limits
- Spike Recovery outside recovery limits

- BRL Below Reporting Limit
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Reported Date: 17-Jun-13

CLIENT:

Clean Harbors

1306012

Client Sample ID: WS-1

Lab Order:

Collection Date: 6/3/2013 4:00:00 PM

Project:

Lab ID:

1306012-001

Date Received: 6/4/2013

Matrix: WATER

Analyses	Result	Det. Limit Q	ual Units	DF	Date Analyzed
VPH - MADEP VPH					Analyst: ZC
Prep Method:		Pre	Date:		
Adjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/6/2013 12:33:00 PM
Surr: 2,5-Dibromotoluene FID	119	70-130	%REC	1	6/6/2013 12:33:00 PM
Surr: 2,5-Dibromotoluene PID	85.0	70-130	%REC	1	6/6/2013 12:33:00 PM

Qualifiers:

Analyte detected in the associated Method Blank

BRL Below Reporting Limit

Е Value above quantitation range

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

Spike Recovery outside recovery limits

Reported Date: 17-Jun-13

CLIENT:

Clean Harbors

1306012

Client Sample ID: WS-2

Lab Order:

Collection Date: 6/3/2013 4:28:00 PM

Project:

Date Received: 6/4/2013

Lab ID:

1306012-002

Matrix: WATER

Analyses	lyses Result Det. Limit Qual Units		ts DF	Date Analyzed	
EPH RANGES - MADEP EPH					Analyst: KG
Prep Method:	(eph_Wpr)	F	rep Date:	6/4/2013 8:59:14 AM	
Adjusted C11-C22 Aromatics	ND	101	μg/L	1	6/7/2013
C09-C18 Aliphatics	ND	101	μg/L	1	6/7/2013
C19-C36 Aliphatics	N D	101	μg/L	1	6/7/2013
Unadjusted C11-C22 Aromatics	ND	101	µg/L	1	6/7/2013
Surr: 1-Chlorooctadecane	72.7	40-140	%RE	C 1	6/7/2013
Surr: o-Terphenyl	76.9	40-140	%RE	C 1	6/7/2013

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method	: (eph_Wpr)	Pre	p Date:	6/4/2013 8:59:14 AM	
Naphthalene	ND	1.01	μg/L	1	6/6/2013 12:47:00 PM
2-Methylnaphthalene	ND	1.01	μg/L	1	6/6/2013 12:47:00 PM
Acenaphthene	ND	1.01	μg/L	1	6/6/2013 12:47:00 PM
Phenanthrene	ND	1.01	μg/L	1	6/6/2013 12:47:00 PM
Total PAH Target Concentration	ND	1.01	μg/L	1	6/6/2013 12:47:00 PM
Surr: 2,2-Difluorobiphenyl	52.1	40-140	%REC	1	6/6/2013 12:47:00 PM
Surr: 2-Fluorobiphenyl	57.1	40 -140	%REC	1	6/6/2013 12:47:00 PM

VPH - MADEP VPH Analyst: ZC

Prep Method:		Prep	Date:		
C9-C10 Aromatic Hydrocarbons	ND	100	μg/L	1	6/6/2013 1:21:00 AM
Unadjusted C5-C8 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/6/2013 1:21:00 AM
Unadjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/6/2013 1:21:00 AM
Methyl Tert-Butyl Ether	ND	1.00	µg/L	1	6/6/2013 1:21:00 AM
Benzene	ND	1.00	μg/L	1	6/6/2013 1:21:00 AM
Toluene	ND	1.00	μg/L	1	6/6/2013 1:21:00 AM
Ethylbenzene	ND	1.00	μg/L	1	6/6/2013 1:21:00 AM
m,p-Xylene	ND	1.00	μg/L	1	6/6/2013 1:21:00 AM
o-Xylene	ND	1.00	μg/L	1	6/6/2013 1;21:00 AM
Naphthalene	ND	1.00	μg/L	1	6/6/2013 1:21:00 AM
Adjusted C5-C8 Aliphatic Hydrocarbons	ND	100	μg/L	. 1	6/6/2013 1:21:00 AM

Qualifiers:

- Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- Spike Recovery outside recovery limits

- BRL Below Reporting Limit
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Reported Date: 17-Jun-13

CLIENT:

Clean Harbors

Client Sample ID: WS-2

Lab Order:

1306012

Collection Date: 6/3/2013 4:28:00 PM

Project:

luciost.

Date Received: 6/4/2013

Lab ID:

1306012-002

Matrix: WATER

Analyses	Result	Det. Limit Q	ual Units	DF	Date Analyzed
VPH - MADEP VPH					Analyst: ZC
Prep Method:		Prep	Date:		
Adjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μ g/L	1	6/6/2013 1:21:00 AM
Surr: 2,5-Dibromotoluene FID	128	70-130	%REC	1	6/6/2013 1:21:00 AM
Surr: 2,5-Dibromotoluene PID	87.5	70-130	%REC	1	6/6/2013 1:21:00 AM

Qualifiers: B Analyte detected in the associated Method Blank

BRL Below Reporting Limit

E Value above quantitation range

H Holding times for preparation or analysis exceeded

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

Reported Date: 17-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306012

Project: Lab ID:

1306012-003

Client Sample ID: WS-3

Collection Date: 6/3/2013 5:07:00 PM

Date Received: 6/4/2013

Matrix: WATER

Analyses	Result	Det. Limit Qual Units D			Date Analyzed
EPH RANGES - MADEP EPH			-		Analyst: KG
Prep Method:	(eph_Wpr)	Pre	p Date:	6/4/2013 8:59:14 AM	
Adjusted C11-C22 Aromatics	ND	101	 μg/L	1	6/7/2013
C09-C18 Aliphatics	ND	101	μg/L	1	6/7/2013
C19-C36 Aliphatics	ND	101	μg/L	1	6/7/2013
Unadjusted C11-C22 Aromatics	ND	101	µg/L	1	6/7/2013
Surr: 1-Chlorooctadecane	60.4	40-140	%REC	; 1	6/7/2013
Surr: o-Terphenyl	65.6	40-140	%REC	•	6/7/2013

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method	i: (eph_Wpr)	Pre	p Date:	6/4/2013 8:59:14 AM	
Naphthalene	ND	1.01	µg/L	1	6/6/2013 1:25:00 PM
2-Methylnaphthalene	ND	1.01	μg/L	, 1	6/6/2013 1:25:00 PM
Acenaphthene	ND	1.01	μg/L	1	6/6/2013 1:25:00 PM
Phenanthrene	ND	1.01	μg/L	1	6/6/2013 1:25:00 PM
Total PAH Target Concentration	ND	1.01	μg/L	1	6/6/2013 1:25:00 PM
Surr: 2,2-Difluorobiphenyl	55.6	40-140	%REC	1	6/6/2013 1:25:00 PM
Surr: 2-Fluorobiphenyl	53.8	40-140	%REC	1	6/6/2013 1:25:00 PM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Prep	Date:		
C9-C10 Aromatic Hydrocarbons	ND	100	μg/L	1	6/6/2013 2:08:00 AM
Unadjusted C5-C8 Aliphatic Hydrocarbons	ND	100	µg/L	1	6/6/2013 2:08:00 AM
Unadjusted C9-C12 Aliphatic Hydrocarbons	ND	100	µg/L	1	6/6/2013 2:08:00 AM
Methyl Tert-Butyl Ether	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
Benzene	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
Toluene	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
Ethylbenzene	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
m,p-Xylene	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
o-Xylene	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
Naphthalene	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
Adjusted C5-C8 Aliphatic Hydrocarbons	ND	100	µg/L	1	6/6/2013 2:08:00 AM

Qualifiers:

- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Spike Recovery outside recovery limits

BRL Below Reporting Limit

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 17-Jun-13

CLIENT:

Clean Harbors

Lab Order:

Client Sample ID: WS-3

1306012

Collection Date: 6/3/2013 5:07:00 PM

Project:

Lab ID:

1306012-003

Date Received: 6/4/2013

Matrix: WATER

Analyses	Result	Det. Limit Q	ual Units	DF	Date Analyzed
VPH - MADEP VPH					Analyst: ZC
Prep Method:		Prep	Date:		
Adjusted C9-C12 Aliphatic Hydrocarbons	ND	100	µg/L	1	6/6/2013 2:08:00 AM
Surr: 2,5-Dibromotoluene FID	109	70-130	%REC	1	6/6/2013 2:08:00 AM
Surr: 2,5-Dibromotoluene PID	82.8	70-130	%REC	1	6/6/2013 2:08:00 AM

Qualifiers:

Analyte detected in the associated Method Blank

BRL Below Reporting Limit

Е Value above quantitation range

Holding times for preparation or analysis exceeded

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike Recovery outside recovery limits

ANALYTICAL QC SUMMARY REPORT

Clean Harbors CLIENT:

1306012 Work Order:

Project:

TestCode: EPHP_W_DIESEL

henyl	Sample ID: MB-22404	Samo Dino: MBI K		die Gilde	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			11				
POL SPK value SPK Ref Val %REC LowLimit HighLimit Hi		Carry year. Milet	200	7.A LL LL . A I	JE CHIES. JEG/L		Prep U		m	RunNo: 5050(
ND 1.00 1.		Batch ID: 22401	Test	No: MADEP EP	H_ (eph_Wpr)		Analysis Da		m	SeqNo: 57340	<u> </u>	
ND 1,00 1,	Analyte	Result	Pol		SPK Ref Vai	%REC		HighLimit	RPD Ref Val		PDLimit	Qual
ND 1.00 1	Naphthalene	QV.	1.00						!			
ND 1.00 1.	2-Methylnaphthalene	QN	1.00									
ND 1.00 1.	Acenaphthene	Q	1.00									
100 1.00 1	Phenanthrene	2	1.00									
10.72 0 25 0 42.9 40 140 140 140 12.01 0 25 0 48.0 40 140 140 12.01 12.0	Total PAH Target Concentration	QN	1.00									
12.01 12.0	Surr: 2,2-Difluorobiphenyl	10.72	0	25	0	42.9	40	140				
255-22401 SampType: LCS TestCode: EPHP_W_DIE Units: µg/L Prep Date: 6/4/20 6/4/20 ZZZZ Batch ID: 22401 TestNo: MADEP EPH_(eph_Wpr) Analysis Date: 6/4/20 6/6/20 Analysis Date: 6/4/20 6/6/20 Palene 20.77 1.00 50 0 41.5 40 140 Palene 23.32 1.00 50 0 46.6 40 140 Place piphenyl 11.72 0 25 0 46.9 40 140 Place piphenyl 12.73 0 25 0 60.9 40 140 Place piphenyl 12.73 0 25 0 60.9 40 140 Place piphenyl 12.73 0 25 0 60.9 40 140 Place piphenyl 12.73 0 25 0 60.9 40 40 140 Place piphenyl 12.73 1.00 50 50 50.9 40 140 P	Surr. 2-Fluorobiphenyl	12.01	0	. 25	0	48.0	4	140				
22222 Batch ID: 22401 TestNo: MADEP EPH (eph Wpr) SPK Ref Val %REC LowLinit High Limit halene 20.77 1.00 50 0 44.5 40 140 halene 23.32 1.00 50 0 46.6 40 140 halene 23.32 1.00 50 0 46.6 40 140 10-robiphenyl 11.72 0 25 0 46.9 40 140 10-robiphenyl 12.73 0 25 0 46.9 40 140 12-rot SampType: LCSD TestCode: EPHP_W_DIE: Uphr. PMPT Php. PmP MpT 40 140 12-rot Sesult Pod.	Sample ID: LCS-22401	SampType: LCS	TestCo	de: EPHP_W_D	IE Units: µg/L		Prep Da	Ш		RunNo: 50506		
PQL SPK value SPK Ref Val %REC LowLinnit HighLinnit High		Batch ID: 22401	Test	No: MADEP EPI	(eph_Wpr)		Analysis Da		•	SeqNo: 57340	_	
140 140	Analyte	Result	PQL		SPK Ref Val	%REC	LowLimit		RPD Ref Val		PDLimit	Oual
1.00 50 0 46.6 40 140	Naphthalene	20.77	1.00	20	0	41.5	40	140				
100 50 0 53.1 40 1	2-Methylnaphthalene	23.32	1.00	50	0	46.6	40	140				
1.00 50 0 77.1 40 140 140 140 140 140 14.72 0 25 0 46.9 40 140 140 140 140 140 14.72 0 25 0 46.9 40 140	Acenaphthene	26.57	1.00	20	0	53.1	40	140				
11.72 0 25 0 46.9 40 140 140 140 15.73 0 25 0 60.9 40 140 140 140 12.73 0 25 0 60.9 40 140 140 12.2401	Phenanthrene	38.55	1.00	90	0	77.1	40	140				
SampType: LCSD TestCode: EPHP_W_DIE Units: µg/L Rnalysis Date: G/4/20 Frep Date: G/4/20	Surr: 2,2-Difluorobiphenyl	11.72	0	25	0	46.9	40	140				
SD-22401 SampType: LCSD TestCode: EPHP_W_DIE Units: µg/L Prep Date: 6/4/20 722 Batch ID: 22401 TestNo: MADEP EPH_ (eph_Wpr) Analysis Date: 6/5/20 Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit PQL SPK value SPK Ref Val %REC LowLimit HighLimit HighLimit PRL Below Reporting Limit 25.52 1.00 50 0 51.0 40 140 J Analyte detected below quantitation limits R Value above quantitation range H R S Spike Recovery outside recovery limits ND Not Detected at the Reporting Limit R R	Surr: 2-Fluorobiphenyl	12.73	0	25	0	50.9	40	140				
ZZZ Batch ID: 22401 TestNo: MADEP EPH_ (eph_Wpr) Analysis Date: 6/5/20 6/5/20	Sample ID: LCSD-22401	SampType: LCSD	TestCo	de: EPHP_W_D	IE Units: μg/L		Prep Da	II .		RunNo: 50506		
Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit HighL		Batch ID: 22401	Test	NO: MADEP EP	ا_ (eph_Wpr)		Analysis Da			SeqNo: 57340;	01	
140 140	Analyte	Result	PQL		SPK Ref Val	%REC	LowLimit		RPD Ref Val		PDLimit	Qual
ralene 25.52 1.00 50 0 51.0 40 140 28.37 1.00 50 0 56.7 40 140 BRL Below Reporting Limit E Value above quantitation range H J Analyte detected below quantitation limits ND Not Detected at the Reporting Limit R S pike Recovery outside recovery limits R R	Naphthalene	22.59	1.00	20	0	45.2	40	140	20.77	8.39	5	
BRL Below Reporting Limit J Analyte detected below quantitation limits S Spike Recovery outside recovery limits	2-Methylnaphthalene	25.52	1.00	20	0	51.0	40	140	23.32	9.01	20 05	
BRL Below Reporting Limit J Analyte detected below quantitation limits ND Not Detected at the Reporting Limit R Spike Recovery outside recovery limits	Acenaphthene	28.37	1.00	20	0	26.7	40	140	26.57	6.55	20	
Analyte detected below quantitation limits ND Not Detected at the Reporting Limit Recovery outside recovery limits	BRL	ing Limit		,	ove quantitation rar	ıge			olding times for p.	reparation or analy	sis exceeded	
Spike Recovery outside recovery limits		ted below quantitation limits			cted at the Reportin	g Limit			D outside recove	ry limits		
		ry outside recovery limits										

GeoLabs, Inc.

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

Work Order:

1306012 Project:

Qual 0 0 %RPD RPDLimit SeqNo: 573402 RunNo: 50506 0 0 4.71 38.55 0 0 LowLimit HighLimit RPD Ref Val Prep Date: 6/4/2013 Analysis Date: 6/5/2013 64 64 64 64 4 4 4 %REC 80.8 49.6 50.6 TestCode: EPHP_W_DIE Units: µg/L TestNo: MADEP EPH_ (eph_Wpr) 000 SPK value SPK Ref Val Б 1.00 00 Result 12.64 40.41 12.41 SampType: LCSD Batch ID: 22401 Surr: 2,2-Difluorobiphenyl Sample ID: LCSD-22401 Surr: 2-Fluorobiphenyl Client ID: ZZZZZ Phenanthrene Analyte

TestCode: EPHP_W_DIESEL

Holding times for preparation or analysis exceeded RPD outside recovery limits H & Not Detected at the Reporting Limit Value above quantitation range ы В Analyte detected below quantitation limits Spike Recovery outside recovery limits BRL Below Reporting Limit - s Qualifiers:

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

Clean Harbors 1306012 CLIENT:

Work Order: Project:

TestCode: epht_w

				11							
Sample ID: MB-22401	SampType: mblk	TestCo	TestCode: epht_w	Units: µg/L		Prep Date:	E: 6/4/2013		RunNo. 50494	70	
Client ID: ZZZZ	Batch ID: 22401	Test	No: MADEP EI	TestNo: MADEP EPH (eph_Wpr)		Analysis Date:			SeqNo: 573366	986	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RF	RPD Ref Val	%RPD	RPD! imit	Ğ
Adjusted C11-C22 Aromatics	QN	100									3
C09-C18 Aliphatics	S	100									
C19-C36 Aliphatics	Q	100									
Unadjusted C11-C22 Aromatics	Q	100									
Surr: 1-Chlorooctadecane	60.63	0	100	0	909	40	140				
Surr: o-Terphenyl	66.70	0	100	0	66.7	40	140				
Sample ID: LCS-22401	SampType: Lcs	TestCo	TestCode: epht_w	Units: µg/L		Prep Date:	6/4/2013		RinNo: 50494		
Client ID: ZZZZZ	Batch ID: 22401	Test	TestNo: MADEP EPH	_	7	Analysis Date:			SeqNo: 573367	29	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RP	RPD Ref Val	%RPD	PDD! imit	و
C09-C18 Aliphatics	2	92	100	C	20.05	\$					Kaai
C19-C36 Aliphatics	Q	100	100	· c	0.00	?	<u> </u>				
Unadjusted C11-C22 Aromatics	Q	100	100	· c	40.0	ş	5 6				
Surr: 1-Chlorooctadecane	58.92	0	100) C	ָ ק ק	9 5	5 5				
Surr: o-Terphenyl	65.93	0	100	0	65.9	5 4	5 4				
l #:	SampType: Lcsd	TestCoc	TestCode: epht_w	Units: µg/L	e	Prep Date:	6/4/2013		RunNo: 50494		
Client ID: ZZZZZ	Batch ID: 22401	Testh	TestNo: MADEP EPH	H (eph_Wpr)	•	Analysis Date:	6/4/2013		SeqNo: 573368	. 89	
Analyte	Result	Pal	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RP	RPD Ref Val	%RPD	RPDLimit	Oual
C09-C18 Aliphatics	QN	100	100	0	57.3	40	140	50.00	ĺ		
C19-C36 Aliphatics	Q	100	100	0	47.8	40	140	70.32	o c	Q 6	
Unadjusted C11-C22 Aromatics	g	100	100	0	64.9	40	047	40 82	.	9 8	
Surr: 1-Chlorooctadecane	59.71	0	100	0	59.7	5. 4	140	50. 50.	> 0	G (
Surr: o-Terphenyl	82.41	0	100	0	82.4	. 4	140) C	o c	> c	
								•	•	•	
		ļ									

45 Johnson Lane \sim Braintree MA 02184 \sim 781 848 7814 \sim 781 848 7811 GeoLabs, Inc.

Holding times for preparation or analysis exceeded

RPD outside recovery limits

H &

E Value above quantitation range
ND Not Detected at the Reporting Limit

Analyte detected below quantitation limits Spike Recovery outside recovery limits

BRL Below Reporting Limit

Qualifiers:

1306012 Work Order:

Project:

TestCode: VPH_W2

Sample ID: MBLK	SampType: MBLK	TestCo	TestCode: VPH_W2	Units: na/L		Prep Date:	i		PunNo. 50547		
Client ID: ZZZZZ	Batch ID: R50547	Test	TestNo: VPH	•		Analysis Date:	e: 6/6/2013		SeaNo: 573130		
Analyte	Result	Pal	SPK value	SPK Ref Val	%REC	LowLimit	ah! imit	RPD Ref Val	ממ עמפייי		-
1,2.4-Trimethylbenzene	CN	00					ļ			ירווווו עמשו	<u> </u>
2,2,4-Trimethylpentane		9.5									
2-Methylpentane	Q N	00.1									
n-Butylcyclohexane	2	1.00									
n-Decane	Q	1.00									
n-Nonane	QN.	1.00									
n-Pentane	QN	1.00									
C9-C10 Aromatic Hydrocarbons		100									
Unadjusted C5-C8 Aliphatic Hydrocarbo		100									
Unadjusted C9-C12 Aliphatic Hydrocarb		100									
Methyl Tert-Butyl Ether		1.00									
Benzene	QN	1.00									
Toluene	Q	1.00									
Ethylbenzene	QN	1.00									
m,p-Xylene	QN	1.00									
o-Xylene	QN	1.00									
Naphthalene	QN	1.00									
Adjusted C5-C8 Aliphatic Hydrocarbons	rocarbons	100									
Adjusted C9-C12 Aliphatic Hydrocarbon		100									
Surr: 2,5-Dibromotoluene FID	ID 89.04	0	100	0	0.68	20	130				
Surr: 2,5-Dibromotoluene PID	PID 88.42	0	100	0	88.4	2 2	130				
I ∺	SampType: LCS	TestCo	TestCode: VPH_W2	Units: µg/L		Prep Date:			RunNo: 50547		
Client ID: ZZZZ	Batch ID: R50547	Test	TestNo: VPH		Q	Analysis Date: 6/5/2013	: 6/5/2013		SeqNo: 573128		_
Analyte	Result	Pal	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD	RPD Ref Vai	%RPD RPDLimit	imit Qual	_ .
1,2,4-Trimethylbenzene	81.52	1.00	100	0	81.5	20	130			1	7
Qualifiers: BRL Below Rep	Below Reporting Limit Analyte detected below quantitation limits	r (ts	E Value al ND Not Det	Value above quantitation range Not Detected at the Reporting Limit	ge g Limit		H Holding R RPD or	Holding times for preparatio RPD outside recovery limits	Holding times for preparation or analysis exceeded RPD outside recovery limits	xceeded	
o Spike Kec	Spike Recovery outside recovery limits										

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

Analyte detected below quantitation limits Spike Recovery outside recovery limits

1306012 Work Order:

Project:

TestCode: VPH_W2

Sample ID: LCS	SampType: LCS	TestCo	TestCode: VPH W2	Hair said							
ļ			1	Oilles. pugne		riep Date	ns.		KunNo: 50547	547	
Client ID: ZZZZ	Batch ID: R50547	Test	TestNo: VPH			Analysis Date:	e: 6/5/2013	3	SeqNo: 573128	3128	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2,4-Trimethylpentane	87.10	1.00	100	0.16	86.9	02	130				
2-Methylpentane	82.67	1.00	100	0	82.7	02	130				
n-Butylcyclohexane	84.08	1.00	100	0	84.1	70	130				
n-Decane	82.01	1.00	100	0.0149	82.0	20	130				
n-Nonane	85.69	1.00	100	0.01028	85.7) 06	130				
n-Pentane	89.62	1.00	100	0	89.6	20	130				
C9-C10 Aromatic Hydrocarbons	88.39	50.0	100	0	88.4	20	130				
Unadjusted C5-C8 Aliphatic Hydrocarbo	rbo 209.0	100	300	0	69.7	02	130				
Unadjusted C9-C12 Aliphatic Hydrocarb	arb 218.4	100	300	0	72.8	20	130				
Methyl Tert-Butyl Ether	80.62	1.00	100	0	80.6	02	130				
Benzene	80.49	1.00	100	0	80.5	202	130				
Toluene	81.02	1.00	100	0	81.0	202	130				
Ethylbenzene	89.64	1.00	100	0	89.6	20	130				
m,p-Xylene	151.6	1.00	200	0.1	75.7	202	130				
o-Xylene	88.52	1.00	100	0	88.5	70	130				
Naphthalene	91.16	1.00	100	0	91.2	70	130				
Surr: 2,5-Dibromotoluene FID	81.07	0	100	0	81.1	70	130				
Surr: 2,5-Dibromotoluene PID	101.3	0	100	0	101	70	130				
CSD	SampType: LCSD	TestCor	TestCode: VPH_W2	Units: µg/L		Prep Date:			RunNo: 50547	47	
Client ID: ZZZZ	Batch ID: R50547	Test	TestNo: VPH		-	Analysis Date:	: 6/6/2013	~	SeqNo: 573129	129	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	84.90	1.00	100	0	84.9	70	130	81.52	4.06	25	
2,2,4-Trimethylpentane	91.91	1.00	100	0.16	91.8	70	130	87.1	5.37	3 8	
2-Methylpentane	87.62	1.00	100	0	87.6	70	130	82.67	5.81	3 15	
n-Butylcyclohexane	80.35	1.00	100	0	80.4	70	130	84.08	4.54	5 2	
Qualifiers: BRL Below Reporting Limit	Limit		E Value	Value above quantitation range	9		1 1	olding the factors			
J Analyte detected b	Analyte detected below quantitation limits		_	**************************************				morning united for preparation of analysis exceeded	reparation or an	alysis exceede	.
Word Date of the S	CION quantifation mints			NOT DETECTED AT THE REPORTING LIMIT	g Limit		R R	RPD outside recovery limits	ry limits		

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

J Analyte detected below quantitation limits Spike Recovery outside recovery limits

1306012 Work Order: Project:

TestCode: VPH_W2

Client ID: ZZZZZ Batch ID: R50547 Analyte Result n-Decane 85.78 n-Nonane 83.02 n-Pentane 96.16 C9-C10 Aromatic Hydrocarbons 88.64 Unadjusted C5-C8 Aliphatic Hydrocarbo 222.3 Unadjusted C9-C12 Aliphatic Hydrocarb 216.4 Methyl Tert-Butyl Ether 84.73 Benzene 86.46 Ethylbenzene 88.98	PQL 1.00	No: VPH			מבים בים	<u>ت</u> ه		RIDIO CONTRA	27.7	
ocarbons natic Hydrocarbo ohatic Hydrocarb				`	Analysis Da	Analysis Date: 6/6/2013	က	SeqNo: 573129	3129	
ocarbons natic Hydrocarbo ohatic Hydrocarb		SPK value	SPK Ref Val	%REC	LowLimit	LowLimit HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
ocarbons natic Hydrocarbo ohatic Hydrocarb	•	100	0.0149	85.8	70	130	82.04	4 49	2,5	
ocarbons natic Hydrocarbo ohatic Hydrocarb		100	0.01028	83.0	က	130	85.69	3.17	3 2	
ocarbons natic Hydrocarbo ohatic Hydrocarb		100	0	96.2	70	130	89.62	7.04	25	
natic Hydrocarbo	ur)	100	0	88.6	70	130	88.39	0.282	25	
onatic hydrocarb		300	0	74.1	70	130	209	6.18	25	
		300	0	72.1	70	130	218.4	0.920	25	
	•	100	0	84.7	70	130	80.62	4.97	25	
		100	0	87.8	20	130	80.49	8.68	52	
	_	100	0	86.5	70	130	81.02	6.50	25	
ouelyX-a m	_	100	0	89.0	20	130	89.64	0.739	25	
	_	200	0.1	72.8	70	130	151.6	3.96	25	
000	•	100	0	89.7	70	130	88.52	1.30	25	
	119.2 1.00	100	0	119	70	130	91.16	26.7	25	œ
	84.61 0	100	0	84.6	20	130	0	0	0	
	86.55 0	100	0	86.6	70	130	0	0	0	

Holding times for preparation or analysis exceeded RPD outside recovery limits H R E Value above quantitation range ND Not Detected at the Reporting Limit J Analyte detected below quantitation limits
S Spike Recovery outside recovery limits Spike Recovery outside recovery limits BRL Below Reporting Limit Qualifiers;

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

Special Instructions Special Instructions CHM Compliant Englished Reserved EDH - CS Requirements: circle choice (s) CT RCP Methods CT RCP (Bassonship Confidence Destroyle)		Geolabs SAMPLE NUMBER SOL3 - 001 OD 2 V OD 3 V V V V V V V V V V V V V	SS	Date/Time 6/4/13 4:50
ndling: circle choice Done Not Needed Lab to do Lab to do Lab to do Cab to do	6189 0640	D B B B B B B B B B B B B B B B B B B B	Received on Ice Preservatives 1 = Hc 2 = HN03	Received by:
Filtration	Phone: 6 Fax. 78 Pax. 78 Phone: 6 Ph	CONTAINER E P < 1 M	Receive A = Air OT = Other	Let 4 13 Let 4
CUSTOL invironmental Labo Braintree, MA 1 • f 781.848. om	Format: 5/7-days Fxcel Who-s Agents	S SAMPLE LOCATION / ID M W S - I M W S - Z M W S - Z	DW = Drinking Water S = Soil SL = Sludge 0 = Oil	Date Lety ANN YOU - WE APPRECIATE YOUR RISANESS
GeoLabs, Inc. GeoLabs, Inc. Environment 45 Johnson Lane, B p 781.848.7844 • www.geolabs.com	Note the	COLLECTION COLLEC	er eer	Relinquished by: Second Sec

Thursday, June 20, 2013

Rich MacCarthy Clean Harbors 42 Longwater Drive Norwell, MA 02061

TEL: (781) 792-5822 FAX: (781) 792-5938

Project:

EO5401971

Location:

Noonan-Arlington

Order No.: 1306097

GeoLabs, Inc.

Braintree MA 02184

Tele: 781 848 7844

Fax: 781 848 7811

GeoLabs, Inc. 45 Johnson Lane

Dear Rich MacCarthy:

GeoLabs, Inc. received 3 sample(s) on 6/11/2013 for the analyses presented in the following report.

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

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

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

Sincerely,

David Mick

Laboratory Director

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

> CT (PH-0148) - MA (M-MA015) - NH (2508) - RI (LA000252) Accredited in Accordance with NELAC

- 1470 H.		*MassDE	P Ana	lytical Protocol Ce	ntification Form		- Marie 1	
Laboratory Na	ame: GeoLabs, In	1C.		Projec	ot#: EO 5401971		The state of the s	Ya-L. W-wa
Project Location	on: 1306097 (001	1-003)		RTN:				
This form prov	vides certification	for the following	ng data	a set: 1305102-001				
Matrices:	☐ Ground	water/Surface	Water	r □ Soil/Sediment □	☐ Drinking Water ☐	Air ⊠	Other	
	ol (check all that a							
8260 VOC CAM II A 🔲	CAM III B	MassDEP VPI CAM IV A	×	8081 Pesicides CAM V B □	7196 Hex Cr CAM VI B □		MassDEP A	APH
8270 SVOC CAM II B 🔲	7010 Metals CAM III C □	MassDEP EPI CAM IV B	H	8151 Herbicides CAM V C	8330 Explosives CAM VIII A 🖂		TO-15 VOC CAM IX B)
6010 Metals CAM III A □	6020 Metals CAM III D	8082 PCB CAM V A		9014 Total Cyanide/PAC CAM VI A □	6860 Perchlorate CAM VIII B □			
Affirmative R	esponses to Qu	estions A thr	ough F	F are required for "P	resumptive Certainty'	" status		
A	Were all samples properly preserved	received in a co d (including tem	ondition nperatur me	n consistent with those dure) in the field or laboratethod holding times?	described on the Chain of tory, and prepared/analyz	Custody, ed within	⊠ Yes	□ No
В	Were the analytic	al method(s) ar	nd all as pr	ssociated QC requireme rotocol(s) followed?	ents specified in the selec	ted CAM	⊠ Yes	□No
С	Were all required protocol(s)	corrective actio implemented f	ns and or all ide	analytical response acti entified performance sta	ions specified in the select andard non-conformances	oted CAM s?	⊠ Yes	□ No
D	Does the laborato Assurance and C	ry report compl luality Control (ly with a Guidelin	all reporting requirement les for the Acquisition ar	ts specified in CAM VII A, nd Reporting of Analtyical	"Quality I Data"?	⊠ Yes	□ No
E	VPH, EPH, APH and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications.) ☑ Yes ☐ No							
	b. APH and TC)-15 Methods o	nly: Wa	is the complete analyte	list reported for each met	hod?	□ Yes	□ No
	evaluated in a	laboratory narra	ative (in	ncluding all "No" respons	d non-conformances ident ses to Questions A throug	ah F\ I	⊠ Yes	□ No
	Questions G, H,	, and I below	are rec	quired for "Presump	otive Certainty" status	1		
G				protocol(s)?		İ	⊠ Yes	□ No ¹
	<u>er Note:</u> Data that representati	: achieve "Pres veness require	sumptiv ements	re Certainty" status ma described in 310 CMR	ay not necessarily meet ? 40. 1056 (2) (k) and WS	the data C-07-350	usablility a).	nd
Н					CAM protocol(s) achieved		☐ Yes	⊠ No¹
l					the selected CAM protoc	col(s)?	□ Yes	⊠ No¹
				tached laboratory narr				
those responsib	ned, attest under the ble for obtaining t ge and belief, accu	he information	ı, the m	s of perjury that, based aterial contained in th	d upon my personal inq is analytical report is, to	uiry of the bes	t	
Signature:	David	Mil		Positio	on: Laboratory Directo	or		<u> </u>
Printed Name:	David Mick			Date: _	June 20, 2013			

Date: 20-Jun-13

CLIENT:

Clean Harbors

Project:

EO5401971

Lab Order:

1306097

CASE NARRATIVE

Physical Condition of Samples

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

Project Documentation

The project was accompanied by satisfactory Chain of Custody documentation.

Analysis of Sample(s)

EPH carbon ranges and diesel targets only reported via method MADEP EPH, per client request.

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

EPHP LCS & LCSD % Recovery for Naphthalene is outside of recovery limits. EPHT LCSD % Recovery for Unadjusted C11-C22 Aromatics is outside of recovery limits.

Can While

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/20/13

CLIENT:

Clean Harbors

Project:

EO5401971

Lab Order:

1306097

CASE NARRATIVE

EPH Methods

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

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

C11-C22 Aromatic Hydrocarbons exclude concentrations of Target PAH Analytes

CERTIFICATION:

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

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

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/20/13

CLIENT:

Clean Harbors

Project:

EO5401971

Lab Order:

1306097

CASE NARRATIVE

VPH Methods

Method for Ranges: MADEP VPH 04-1.1

Method for Target Analytes: MADEP VPH 04-1.1

Soil sample(s) were received in MeOH and soil was completely covered by MeOH.

Soil sample(s) ratio 1:1 +/- 25%

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

C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range. (MTBE, Benzene, Toluene)

C9-C12 Aliphatic Hydrocarbons exclude concentration of Target Analytes eluting in that range (Ethylbenzene, m&p-Xylenes, o-Xylene) AND concentration of C9-C10 Aromatic Hydrocarbons.

CERTIFICATION

Were all QA/QC procedures REQUIRED by the VPH Method followed? YES Were all QA/QC performance/acceptance standards achieved? YES Were any significant modifications made to the VPH method, as specified in Sec. 11.3? NO

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

SIGNATURE:

POSITION: LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/20/13

Reported Date: .20-Jun-13

CLIENT:	
---------	--

Clean Harbors

Lab Order:

1306097

Project:

Lab ID:

EO5401971

1306097-001

Client Sample ID: WS-1A

Collection Date: 6/10/2013 10:00:00 AM

Date Received: 6/11/2013

Matrix: OTHER

Analyses	Result Det. Limit Qual Units	DF	Date Analyzed	
EPH RANGES - MADEP EPH			Analyst: KG	

Prep Method: (eph_Wpr)		Prep	Prep Date: 6/17/2013 8:43:10		AM
Adjusted C11-C22 Aromatics	ND	103	 μg/L	1	6/17/2013
C09-C18 Aliphatics	ND	103	μg/L	1	6/17/2013
C19-C36 Aliphatics	ND	103	μg/L	1	6/17/2013
Unadjusted C11-C22 Aromatics	ND	103	μg/L	1	6/17/2013
Surr: 1-Chlorooctadecane	67.0	40-140	%REC	1	6/17/2013
Surr: o-Terphenyl	70.9	40-140	%REC	1	6/17/2013

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method	l: (eph_Wpr)	Prej	Date:	6/17/2013 8:43:10 AM	
Naphthalene	ND	1.03	μg/L	1	1/6/2006 2:39:00 AM
2-Methylnaphthalene	ND	1.03	μg/L	1	1/6/2006 2:39:00 AM
Acenaphthene	ND	1.03	μg/L	1	1/6/2006 2:39:00 AM
Phenanthrene	ND	1.03	μg/L	1	1/6/2006 2:39:00 AM
Total PAH Target Concentration	ND	1.03	μg/L	1	1/6/2006 2:39:00 AM
Surr: 2,2-Difluorobiphenyl	55.3	40-140	%REC	1	1/6/2006 2:39:00 AM
Surr: 2-Fluorobiphenyl	65.5	40-140	%REC	1	1/6/2006 2:39:00 AM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Pre	Date:		
C9-C10 Aromatic Hydrocarbons	ND	100	 μg/L	1	6/12/2013 8:04:00 AM
Unadjusted C5-C8 Aliphatic Hydrocarbons	ND	100	µg/∟	1	6/12/2013 8:04:00 AM
Unadjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/12/2013 8:04:00 AM
Methyl Tert-Butyl Ether	ND	1.00	μg/L	1	6/12/2013 8:04:00 AM
Benzene	ND	1.00	μg/L	1	6/12/2013 8:04:00 AM
Toluene	ND	1.00	μg/L	1	6/12/2013 8:04:00 AM
Ethylbenzene	ND	1.00	μg/L	1	6/12/2013 8:04:00 AM
m,p-Xylene	2.63	1.00	μg/L	1	6/12/2013 8:04:00 AM
o-Xylene	6.50	1.00	μg/L	1	6/12/2013 8:04:00 AM
Naphthalene	ND	1.00	μg/L	1	6/12/2013 8:04:00 AM
Adjusted C5-C8 Aliphatic Hydrocarbons	ND	100	µg/L	1	6/12/2013 8:04:00 AM

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits
- S Spike Recovery outside recovery limits

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 20-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306097

Project:

EO5401971

Lab ID:

1306097-001

Client Sample ID: WS-1A

Collection Date: 6/10/2013 10:00:00 AM

Date Received: 6/11/2013

Matrix: OTHER

Analyses	Result Det. Limit Qual Units			DF	Date Analyzed	
VPH - MADEP VPH					Analyst: ZC	
Prep Method:		Prep Date:				
Adjusted C9-C12 Aliphatic Hydrocarbons	ND	100	µg/L	1	6/12/2013 8:04:00 AM	
Surr: 2,5-Dibromotoluene FID	95.2	70-130	%REC	1	6/12/2013 8:04:00 AM	
Surr: 2,5-Dibromotoluene PID	80.1	70-130	%REC	1	6/12/2013 8:04:00 AM	

Qualifiers:

- Analyte detected in the associated Method Blank В
- E Value above quantitation range
- Analyte detected below quantitation limits
- Spike Recovery outside recovery limits

BRL Below Reporting Limit

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 20-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306097

EO5401971

Project: Lab ID:

1306097-002

Client Sample ID: WS-2A

Collection Date: 6/10/2013 10:30:00 AM **Date Received:** 6/11/2013

Matrix: OTHER

<u>Ana</u>	yses	Result	Det. Limit	Qual Ur	nits	DF	Date Analyzed

EPH RANGES - MADEP EPH

Prep Method: (eph_Wpr)		Prej	Date: 6/17/2	013 8:43:10	AM
Adjusted C11-C22 Aromatics	ND	103	μg/L	1	6/17/2013
C09-C18 Aliphatics	ND	103	μg/L	1	6/17/2013
C19-C36 Aliphatics	ND	103	μg/L	1	6/17/2013
Unadjusted C11-C22 Aromatics	ND	103	μg/L	1	6/17/2013
Surr: 1-Chlorooctadecane	62.6	40-140	%REC	1	6/17/2013
Surr: o-Terphenyl	71.9	40-140	%REC	1	6/17/2013

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Analyst: KG

Prep Method	l: (eph_Wpr)	Prej	p Date:	6/17/2013 8:43:10 AM	
Naphthalene	ND	1.03	μg/L	1	1/6/2006 3:16:00 AM
2-Methylnaphthalene	ND	1.03	μg/L	1	1/6/2006 3:16:00 AM
Acenaphthene	ND	1.03	μg/L	1	1/6/2006 3:16:00 AM
Phenanthrene	ND	1.03	μg/L	1	1/6/2006 3:16:00 AM
Total PAH Target Concentration	ND	1.03	μg/L	1	1/6/2006 3:16:00 AM
Surr: 2,2-Difluorobiphenyl	53.0	40-140	%REC	1	1/6/2006 3:16:00 AM
Surr: 2-Fluorobiphenyl	65.0	40-140	%REC	1	1/6/2006 3:16:00 AM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Prep	Date:		
C9-C10 Aromatic Hydrocarbons	ND	100	μg/L	1	6/12/2013 8:45:00 AM
Unadjusted C5-C8 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/12/2013 8:45:00 AM
Unadjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/12/2013 8:45:00 AM
Methyl Tert-Butyl Ether	ND	1.00	μg/L	1	6/12/2013 8:45:00 AM
Benzene	ND	1.00	μg/L	1	6/12/2013 8:45:00 AM
Toluene	ND	1.00	μg/L	1	6/12/2013 8:45:00 AM
Ethylbenzene	ND	1.00	µg/L	1	6/12/2013 8:45:00 AM
m,p-Xylene	ND	1.00	μg/L	1	6/12/2013 8:45:00 AM
o-Xylene	ND	1.00	μg/L	1	6/12/2013 8:45:00 AM
Naphthalene	ND	1.00	μg/L	1	6/12/2013 8:45:00 AM
Adjusted C5-C8 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/12/2013 8:45:00 AM

Qualifiers:

- Analyte detected in the associated Method Blank
- Value above quantitation range Ė
- Analyte detected below quantitation limits
- Spike Recovery outside recovery limits

- BRL Below Reporting Limit
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Reported Date: 20-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306097

1300097

Project: Lab ID: EO5401971 1306097-002 Client Sample ID: WS-2A

Collection Date: 6/10/2013 10:30:00 AM

Date Received: 6/11/2013

Matrix: OTHER

Analyses	Result Det. Limit Qual Units			DF	Date Analyzed	
VPH - MADEP VPH					Analyst: ZC	
Prep Method:	Prep Date:					
Adjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/12/2013 8:45:00 AM	
Surr: 2,5-Dibromotoluene FID	82.1	70-130	%REC	1	6/12/2013 8:45:00 AM	
Surr: 2,5-Dibromotoluene PID	81.6	70-130	%REC	1	6/12/2013 8:45:00 AM	

Qualifiers:

Analyte detected in the associated Method Blank

BRL Below Reporting Limit

E Value above quantitation range

H Holding times for preparation or analysis exceeded

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

Reported Date: 20-Jun-13

CLIENT:	
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Clean Harbors

Lab Order:

1306097

EO5401971

Project: Lab ID:

1306097-003

Client Sample ID: WS-3A Collection Date: 6/10/2013 11:00:00 AM

Date Received: 6/11/2013

Matrix: OTHER

Analyses	Result	Det. Limit Qual Units	DF	Date Analyzed
EPH RANGES - MADEP EPH				Analyst: KG

EPH RANGES - MADEP EPH

Prep Method:	(eph_Wpr)	Prep	Date: 6/17/2	013 8:43:10	AM
Adjusted C11-C22 Aromatics	ND	102	μg/L	1	6/17/2013
C09-C18 Aliphatics	ND	102	μg/L	1	6/17/2013
C19-C36 Aliphatics	ND	102	μg/L	1	6/17/2013
Unadjusted C11-C22 Aromatics	ND	102	μg/L	1	6/17/2013
Surr: 1-Chlorooctadecane	65.3	40-140	%REC	1	6/17/2013
Surr: o-Terphenyl	82.2	40-140	%REC	1	6/17/2013

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method	i: (eph_Wpr)	Pre	Date:	6/17/2013 8:43:10 AM	
Naphthalene	ND	1.02	μg/L	1	1/6/2006 3:49:00 AM
2-Methylnaphthalene	ND	1.02	μg/L	1	1/6/2006 3:49:00 AM
Acenaphthene	ND	1.02	μg/L	1	1/6/2006 3:49:00 AM
Phenanthrene	ND	1.02	μg/L	1	1/6/2006 3:49:00 AM
Total PAH Target Concentration	ND	1.02	μg/L	1	1/6/2006 3:49:00 AM
Surr: 2,2-Difluorobiphenyl	52.8	40-140	%REC	1	1/6/2006 3:49:00 AM
Surr: 2-Fluorobiphenyl	59.2	40-140	%REC	1	1/6/2006 3:49:00 AM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Pre	Date:		
C9-C10 Aromatic Hydrocarbons	ND	100	μg/L	1	6/12/2013 9:27:00 AM
Unadjusted C5-C8 Aliphatic Hydrocarbons	ND	100	µg/L	1	6/12/2013 9:27:00 AM
Unadjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/12/2013 9:27:00 AM
Methyl Tert-Butyl Ether	ND	1.00	μg/L	1	6/12/2013 9:27:00 AM
Benzene	ND	1.00	μg/L	1	6/12/2013 9:27:00 AM
Toluene	ND	1.00	μg/L	1	6/12/2013 9:27:00 AM
Ethylbenzene	ND	1.00	µg/L	1	6/12/2013 9:27:00 AM
m,p-Xylene	ND	1.00	μg/L	1	6/12/2013 9:27:00 AM
o-Xylene	ND	1.00	μg/L	1	6/12/2013 9:27:00 AM
Naphthalene	ND	1.00	µg/L	4	6/12/2013 9:27:00 AM
Adjusted C5-C8 Aliphatic Hydrocarbons	ND	100	µg/L	1	6/12/2013 9:27:00 AM

Qualifiers:

- Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits
- Spike Recovery outside recovery limits

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 20-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306097

Project:

EO5401971

Lab ID:

1306097-003

Client Sample ID: WS-3A

Collection Date: 6/10/2013 11:00:00 AM

Date Received: 6/11/2013

Matrix: OTHER

Analyses	Result	Det. Limit Q	ual Units	DF	Date Analyzed
VPH - MADEP VPH			-		Analyst: ZC
Prep Method:		Prep	Date:		
Adjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/12/2013 9:27:00 AM
Surr: 2,5-Dibromotoluene FID	83.2	70-130	%REC	1	6/12/2013 9:27:00 AM
Surr: 2,5-Dibromotoluene PID	81.4	70-130	%REC	1	6/12/2013 9:27:00 AM

Qualifiers:

Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

S Spike Recovery outside recovery limits

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

ANALYTICAL QC SUMMARY REPORT

Clean Harbors CLIENT:

1306097 Work Order:

E05401971 Project:

TestCode: EPHP_W_DIESEL

Date: 20-Jun-13

sample IU: mb-22473	SampType: MBLK	TestCo	de: EPHP_W_L	TestCode: EPHP_W_DIE Units: µg/L		Prep Date:	Prep Date: 6/17/2013	RunNo: 50724	
Client ID: ZZZZZ	Batch ID: 22473	Test	TestNo: MADEP FPH (enh Wpr)	H (enh Worl)		Analysis Date: 4/8/2006	4/8/2006	Cookles	
			i i	/		and yell parc.	10,200	Sedito: 3/4956	
Analyte	Result	POL	SPK value SPK Ref Val	SPK Ref Val	%REC	LowLimit H	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Naphthalene	QN	1.00	<u> </u>						
2-Methylnaphthalene	QN	1.00							
Acenaphthene	QN	1.00							
Phenanthrene	Q	1.00							
Total PAH Target Concentration	S	1.00							
Surr: 2,2-Difluorobiphenyl	13.69	0	25	0	54.8	40	140		
Surr: 2-Fluorobiphenyl	15.74	0	25	0	63.0	40	140		
Sample ID: Ics-22473	SampType: LCS	TestCo	de: EPHP_W_D	TestCode: EPHP_W_DIE Units: µg/L		Prep Date: 6/17/2013	6/17/2013	RunNo: 50724	
Client ID: ZZZZZ	Batch ID: 22473	Test	TestNo: MADEP EPH_ (eph_Wpr)	H_ (eph_Wpr)	•	Analysis Date: 1/6/2006	1/6/2006	SeqNo: 574957	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC		LowLimit HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Naphthalene	17.50	1.00	20	0	35.0	40	140		ď
2-Methylnaphthalene	24.44	1.00	50	0	48.9	40	140		•
Acenaphthene	26.63	1.00	90	0	53.3	40	140		
Phenanthrene	35.77	1.00	50	0	71.5	40	140		
Total PAH Target Concentration	104.3	1.00				•	?		

Surr: 2,2-Difluorobiphenyl Surr: 2-Fluorobiphenyl	14.97	00	25	0	59.9	40	140	
Sample ID: Ics1-22473 Client ID: ZZZZZ	SampType: LCSD Batch ID: 22473	TestCod TestN	e: EPHP_W_ o: MADEP EI	TestCode: EPHP_W_DIE Units: µg/L TestNo: MADEP EPH_ (eph_Wpr)		Prep Date Analysis Date	Prep Date: 6/17/2013 Analysis Date: 1/6/2006	RunNo: 50724 SeqNo: 574958
	Result	PoL	SPK value	SPK value SPK Ref Val	%REC	LowLimit	%REC LowLimit HighLimit RPD Ref Val	/al %RPD RPDLimit Qual
Naphthalene 2-Methylnaphthalene	17.04	1.00	50	0	34.1	40	140	S
BRL Below Reporting Limit J Analyte detected below S Spike Recovery outside	Below Reporting Limit Analyte detected below quantitation limits Spike Recovery outside recovery limits		E Value	E Value above quantitation range ND Not Detected at the Reporting Limit	nge ng Limit		H Holding time R RPD outside	Holding times for preparation or analysis exceeded RPD outside recovery limits

Surr: 2,2-Difluorobiphenyl

GeoLabs, Inc.

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

Project: EO5401971	1						TestCode:]	TestCode: EPHP_W_DIESEL	
Sample ID: Ics1-22473 Client ID: ZZZZZ	SampType: LCSD Batch ID: 22473	TestCc Test	TestCode: EPHP_W_DIE Units: µg/l. TestNo: MADEP EPH_ (eph_Wpr)	Units: µg/l_ eph_Wpr)		Prep Date: 6/17/201: Analysis Date: 1/6/2006	Prep Date: 6/17/2013 Mysis Date: 1/6/2006	RunNo: 50724 SeqNo: 574958	
Analyte	Result	PQL	SPK value SPK Ref Val	Ref Val	%REC	LowLimit	%REC LowLimit HighLimit RPD Ref Val	%RPD RPD! imit	<u>.</u>
Acenaphthene Phenanthrene	22.97	1.00	S 2	0 (45.9	40	140	- 1	
Total PAH Target Concentration	91.36	1.00	OG.	o	60.7	40	140		
Surr: 2,2-Difluorobiphenyl	14.79	0	25	0	59.2	40	140		
Surr: 2-Fluorobiphenyi	16.97	0	25	0	67.9	40	140		
Sample ID: LCS1-22473	SampType: LCSD	TestCo	TestCode: EPHP_W_DIE Units: µg/L	Units: µg/L		Prep Date:	6/17/2013	RunNo: 50768	
Client ID: ZZZZZ	Batch ID: 22473	Test	TestNo: MADEP EPH_ (eph_Wpr)	eph_Wpr)	•	Analysis Date: 1/7/2006	177/2006	SeqNo: 575266	
Analyte	Result	PQL	SPK value SPK	SPK Ref Val	%REC	LowLimit	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit	Jeno
Naphthalene	29.55	1.00	50	0	59.1	40	140		
2-Methylnaphthalene	32.38	1.00	20	0	64.8	. 40	140		
Acenaphthene	33.05	1.00	20	0	66.1	40	140		
Phenanthrene	38.99	1.00	20	0	78.0	40	140		
Total PAH Target Concentration	134.0	1.00					•		
Surr: 2,2-Difluorobiphenyl	15.88	0	25	0	63.5	40	140		
Surr: 2-Fluorobiphenyl	18.16	0	25	0	72.6	40	140		

Clean Harbors

1306097 EO5401971

Work Order: CLIENT:

Project:

Holding times for preparation or analysis exceeded RPD outside recovery limits H R E Value above quantitation range ND Not Detected at the Reporting Limit Analyte detected below quantitation limits Spike Recovery outside recovery limits BRL Below Reporting Limit Qualifiers:

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

Project: E05401971	71						TestCode:		epht_w		
Sample ID: MB-22473	SampType: mblk	TestCoc	TestCode: epht_w	Units: µg/L		Prep Date:	e: 6/17/2013		BunNo. E0206		
Client ID: ZZZZZ	Batch ID: 22473	Testh	lo: MADEP ER	TestNo: MADEP EPH (eph_Wpr)		Analysis Date:			SeqNo: 574828	828	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	ef Val	%RPD	RPDLimit	Oual
Adjusted C11-C22 Aromatics	ON	100		;							
C09-C18 Aliphatics	QN	100									
C19-C36 Aliphatics	Q	100									
Unadjusted C11-C22 Aromatics	Ð	100									
Surr: 1-Chlorooctadecane	52.51	0	100	0	52 5	ΨV	140				
Surr: o-Terphenyl	62.20	0	100	0	62.2	5 4	140				
Sample ID: LCS-22473	SampType: Lcs	TestCod	TestCode: epht w	Units: ua/L		Prep Date:	S/47/2013		Man 6		
Client ID: ZZZZZ	Batch ID: 99479	H		· ·				_	AUTINO: 50/06	٩	
	Datcii ID. 224/3	lestN	O: MADEP EF	lestino: MADEP EPH (eph_Wpr)		Analysis Date:	E: 6/17/2013	0,	SeqNo: 574829	329	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	f Val	%RPD	RPDLimit	Oua
C09-C18 Aliphatics	QN	100	100	0	50.7	40	140				
C19-C36 Aliphatics	QN	100	100	c	53.7	2 5	+ +				
Unadjusted C11-C22 Aromatics	QX	100	5	o c		5 5	140				
Surr: 1-Chlorooctadecane	67 81		8 5	> 0	44.2	4 :	140				
Sirr o-Tembery	0.00) (3	5	87.8	40	140				
Carl. O' Telphierry	80.10	0	100	0	80.1	40	140				
Sample ID: LCS1-22473	SampType: Lcsd	TestCode	TestCode: epht_w	Units: µg/L		Prep Date:	6/17/2013	"	BunNo. 60706		
Client ID: ZZZZZ	Batch ID: 22473	TestN	TestNo: MADEP EPH	_		Analysis Date:		. w	SeqNo: 574830	. e	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	f Val	70d%		Č
C09-C18 Aliphatics	QN	100	100	C	46.5			30 03	- 1		CU al
C19-C36 Aliphatics	Q	9	100		2 6	\$ \$		000	> •	52	
Unadjusted C11-C22 Aromatics	Q	90	001	o c	20.00	5 6		53.68	0	22	
Surr: 1-Chlorooctadecane	51.61		00.00	o c	3 6	9 4		42.16	0	25	တ
Sur: o-Tembenyl	. 02. 33		2 5	5	0.10	40	140	0	0	0	
	00.70	>	100	0	9.99	4	140	0	0	0	
Qualifiers: BRL Below Reporting Limit	ing Limit		E Value al	Value above quantitation range	nge		H Holding tim	les for pren	Holding times for menaration or analysis	Lacores city	
J Analyte detect	Analyte detected below quantitation limits		ND Not Det	Not Detected at the Reporting Limit	ng Limit			dard for car	Lativii di alla	iyars exceede	5
S Spike Recover	Spike Recovery outside recovery limits				110 F		N N'D outside recovery limits	e recovery i	imits		

Clean Harbors

1306097 EO5401971

Work Order: CLIENT:

Project:

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

Spike Recovery outside recovery limits

Clean Harbors CLIENT:

1306097 Work Order:

E05401971 Project:

TestCode: VPH_W2

Sample ID: MBLK	SampType: MBLK	TestCo	TestCode: VPH W2	Units: no/l		Pren Date			BunNo: 50664	
Client ID: 2222	Detail 10.	, F		l D L					Topos Communication	
	Batch ID: R50661	lest	lestNo: VPH		∢	Analysis Date:	6/12/2013	-	SeqNo: 574234	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit R	RPD Ref Val	%RPD RPDLimit	t Qual
1,2,4-Trimethylbenzene	QN	1.00								
2,2,4-Trimethylpentane	Q	1.00								
2-Methylpentane	QN	1.00								
n-Butyfcyclohexane	Q	1.00								
n-Decane	Q	1.00								
n-Nonane	ON	1.00								
n-Pentane	Q	1.00								
C9-C10 Aromatic Hydrocarbons	QN	100								
Unadjusted C5-C8 Aliphatic Hydrocarbo		100								
Unadjusted C9-C12 Aliphatic Hydrocarb		9								
Methyl Tert-Butyl Ether	Q	1.00								
Benzene	Q	1.00								
Toluene	QN	1.00								
Ethylbenzene	Q	1.0								
m,p-Xylene	2	1.00								
o-Xylene	QN	1.00								
Naphthalene	QN	1.00								
Adjusted C5-C8 Aliphatic Hydrocarbons	QN suoqu	100								
Adjusted C9-C12 Aliphatic Hydrocarbon	arbon ND	100								
Surr: 2,5-Dibromotoluene FID	96.83	0	100	0	96.8	70	130			
Surr: 2,5-Dibromotoluene PID	86.83	0	100	0	86.8	70	130			
Sample ID: LCS	SampType: LCS	TestCo	TestCode: VPH_W2	Units: µg/L		Prep Date:			RunNo: 50661	
Client ID: ZZZZZ	Batch ID: R50661	Test	TestNo: VPH		∢	Analysis Date. 6/12/2013	6/12/2013	•	SeqNo: 574232	
Analyte	Result	Pol	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit R	RPD Ref Vai	%RPD RPDLimit	Qual
1,2,4-Trimethylbenzene	80.55	1.00	100	0	80.6	70	130			
Qualifiers: BRL Below Reporting Limit	ng Limit			Value above quantitation range	98		H Ho	Iding times for p	Holding times for preparation or analysis exceeded	eded
J Analyte detecte	Analyte detected below quantitation limits		ND Not De	Not Detected at the Reporting Limit	5 Limit		R RP	RPD outside recovery limits	ry limits	
	Spike Recovery outside recovery limits									

GeoLabs, Inc.

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

Clean Harbors Work Order: CLIENT:

1306097 EO5401971 Project:

TestCode: VPH_W2

Sample ID: LCS Sa	SampType: LCS	TestCoo	TestCode: VPH_W2	Units: µg/L		Prep Date:	i		RunNo: 50661		
Client ID: ZZZZZ E	Batch ID: R50661	Test	TestNo: VPH			Analysis Dat	Analysis Date: 6/12/2013	_	SeqNo: 574232		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit	-imit Qual	n
2,2,4-Trimethylpentane	97.61	1.00	100	0.08	97.5	02	130				
2-Methylpentane	97.73	1.00	100	0	97.7	02	130				
n-Butylcyclohexane	126.4	1.00	100	0	126	2.02	130				
n-Decane	123.5	1.00	100	0	123	2 2	130				
n-Nonane	116.4	1.00	100	0	116	8	130				
n-Pentane	102.5	1.00	100	0	103	02	130				
C9-C10 Aromatic Hydrocarbons	QN	100	100	0	88.3	0/	130				
Unadjusted C5-C8 Aliphatic Hydrocarbo	bo 240.7	100	300	0	80.2	02	130				
Unadjusted C9-C12 Aliphatic Hydrocarb	trb 343.2	100	300	0	114	02	130				
Methyl Tert-Butyl Ether	80.42	1.00	100	0	80.4	0/	130				
Benzene	83.26	1.00	100	0	83.3	20	130				
Toluene	80.22	1.00	100	0.1	80.1	02	130				
Ethylbenzene	82.70	1.00	100	0.15	82.6	02	130				
m,p-Xylene	164.9	1.00	200	0.1	82.4	20	130				
o-Xylene	91.06	1.00	100	0	91.1	20	130				
Naphthalene	107.4	1.00	100	0	107	2 2	130				
Adjusted C5-C8 Aliphatic Hydrocarbons	QN sı	100			į	2	3				
Adjusted C9-C12 Aliphatic Hydrocarbon	ON NO	100									
Surr: 2,5-Dibromotoluene FID	88	0	100	0	89.2	02	130				
Surr: 2,5-Dibromotoluene PID	83.74	0	100	0	83.7	2.2	130				
Sample ID: LCSD Sar	SampType: LCSD	TestCod	TestCode: VPH W2	Units: na/l		Pren Date			O SANCE		
			l	i b		2			ruilling, suppl		

Sample ID: LCSD	SampType: LCSD	TestCode:	FestCode: VPH_W2	Units: µg/L		Prep Date:	.e.		RunNo: 50661	661	
Client ID: ZZZZZ	Batch ID: R50661	TestNo: VPH	VPH		*	Analysis Dat	Analysis Date: 6/12/2013	13	SeqNo: 574233	4233	
Analyte	Result	POL	SPK value	SPK value SPK Ref Val	%REC	LowLimit	HighLimit	%REC LowLimit HighLimit RPD Ref Val	%RPD	%RPD RPDLimit Qual	Qual
1,2,4-Trimethylbenzene 2,2,4-Trimethylpentane	80.71 99.06	1.00	100	0.08	80.7	70	130	80.55 97.61	0.198	25	
Qualifiers: BRL Below Reporting Limit J Analyte detected below S Spike Recovery outside	Below Reporting Limit Analyte detected below quantitation limits Spike Recovery outside recovery limits		E Value	E Value above quantitation range ND Not Detected at the Reporting Limit	ge g Limit		H W	Holding times for preparation or analysis exceeded RPD outside recovery limits	preparation or a	malysis exceed	pa

45 Johnson Lane \sim Braintree MA 02184 \sim 781 848 7811 GeoLabs, Inc.

Clean Harbors EO5401971 1306097 Work Order: CLIENT: Project:

TestCode: VPH_W2

Sample ID: 1 Cen											
	samp lype: LCSD	TestCo	TestCode: VPH_W2	Units: ng/L		Prep Date:	œ.		RunMo: 50654	732	
Client ID: 22222		1)		1 L	į		NOTING OF	-00	
	Batch ID: R50661	Test	TestNo: VPH		•	Analysis Date:	e: 6/12/2013	<u>5</u>	SeqNo: 574233	1233	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	GRPD	fimi loda	2
2-Methylpentane	97.94	1 00	5			i	- 1				S C C C C C C C C C C C C C C C C C C C
n-Butvicyclohexane	7 0007		3 5	>		5	130	97.73	0.215	25	
n-Decane	123.4	1.00	100	0	123	70	130	126.4	2.46	25	
	127.0	1.00	100	0	127	20	130	123.5	2.81	25	
	118.6	1.00	100	0	119	30	130	1164	1 86	3 40	
n-Pentane	103.0	1.00	100	0	103	22	130	102.5	0.20	2 4	
C9-C10 Aromatic Hydrocarbons	Q	100	100	0	88.3	2	130	88 32	0.440	C2	
Unadjusted C5-C8 Aliphatic Hydrocarbo	rbo 242.2	100	300	c	1 Va	9 9	5 6	20:00	0.0113	Q7	
Unadjusted C9-C12 Aliphatic Hydrocarh		5	000	•	20.	2	20	240.7	0.642	25	
Methyl Tert-Butyl Ether		2 5	900	5	119	9	130	343.2	4.02	25	
Benzene	82.03	9.	100	0	82.0	2	130	80.42	1.98	25	
	81.96	9.	100	0	82.0	20	130	83.26	1.57	25	
	86.54	1.00	100	0.1	86.4	2	130	80.22	7.58	, c	
Eurlylbenzene	89.74	1.00	100	0.15	89.6	20	130	7 2 8	8 17	3 6	
m,p-Xylene	180.5	1.00	200	0.1	9N 2	2	130	10.40	- 6	C7	
o-Xylene	82 74	4			7.7	2	2	104.9	9.08	22	
Naphthalana	t 64.5	9	3	5	82.7	20	130	91.06	9.57	25	
Surr 2 & Dibrom del	1.5.1	00.1	100	0	113	70	130	107.4	5.19	25	
	83.67	0	100	0	83.7	70	130	0	c	} <	
Sull: 2,3-Dipromotoluene PID	88.66	0	100	0	88.7	70	130	0	· c	o c	
								•	•	>	

H Holding times for many	P DDD arteids propagation or analysis exceeded	site of the recovery limits
E Value above quantitation range	ND Not Detected at the Reporting Limit	
BRL Below Reporting Limit	J Analyte detected below quantitation limits	S Spike Recovery outside recovery limits
Qualifiers:		

45 Johnson Lane \sim Braintree MA 02184 \sim 781 848 7814 \sim 781 848 7811 GeoLabs, Inc.

iE (OF (witon					Lab Use Only		38UTA -1 ≪ Œ	EMPER	_									g 0 = Other stic			1 1, 20	NICOLIII	J(MA-009)
/ PAGE	Special Instructions			oice (s)	CT RCP (Reasonable Confidence Protocols)	ı - Criteria		Noonan Arl	E0540A71				Analysis Requested	 												Containers: A = Amber B = Bag G = Glass P = Plastic S = Summa V = Vna	-	Date / Time	/11/9	12/11/2	(MA-00 R1 II AONOSES)
130609	Specia			Requirements: circle choice (s)	CT RCP (Reasonable	State / Fed Program - Criteria		Project: NE	Ċ	Invoice to *:	23 25 25 25 25 25 25 25 25 25 25 25 25 25		16h	P		12891 Hat	∄	>	>	>						5 = NaOH $7 = Other$ $6 = MEOH$	10		Mar	17	ST (PH-0148)
					' Methods	DEP	Other	279				Preserative			GeoLabs SAMPLE NUMBER			6097-001	500	002	7					3 = H2SO4 4 = Na2S2O3	Fur	1	an for	70	cost.
andling: circle choice	Filtration Done	Not Needed			GW-1		00C	181.792.5							no:	τ ω Ε α.									Received on Ice	1 = Hcl 2 = HN03	Received hv	nananau	1	4.70 (4	ienns. Fayment due within 3U days unless other arrangements are made. Patst due balances subject to inferest and collection. Note: Homeowners and Law Firms routs pay when dropping off samples. We accept cash, check and credit cards.
Ē			Preservation	Data Delivery: circle choice (s)	email	i		Phone:	Fax:	email:			CONTAINER	ø:	- × v	>	,	744 5 or		* * *					Beceive	ther	Date / Time	11 12	+ .	1/3	er arrangements are made. Par st pay when dropping off samp
CHAIN OF CUSTODY RECORD	nental Laboratories	Braintree, MA 02184	101:040:101	Data Deliver	. Tax	rormat:	EACE I	1	2	-11					SAMPLE LOCATION / ID		i	· 00	2 S 2 A	NS 34						$S = Soil \qquad A = Air$ $0 = Oil \qquad OT = Other$	Date	9	1 1	1/9	t due within 30 days unless oth omeowners and Law Firms who
CHAIN OF CL	GeoLabs, Inc. Environmental Laboratories	45 Johnson Lane, Braintree, MA 02184 p 781.848.7844 • f 781 848 7811		Turnaround: circle one	3-day	5 / 7-days	7:10	₹ ~	1	1 mes 0			- 1	ωď	æ, :≥a_		,	X	-	>	,					DW = Drinking Water SL = Studge		· X		V	
(5	Ξ,	GeoLabs, Inc. 4		Turnar	1-day	2-day	Oliont	Address: 42	Ιİ	Contact:			COLLECTION	0	∑			+	2807	W 00					Matrix Codes:	GW = Ground Water WW = Waste Water	Relinquished by:		1	2010730 J&P.C. of CR 09/22/10	

Tuesday, June 18, 2013

Rich MacCarthy Clean Harbors 42 Longwater Drive Norwell, MA 02061

TEL: (781) 792-5822 FAX: (781) 792-5938

Project:

Noonan - Arlington

Location:

Order No.: 1306067

GeoLabs, Inc.

Braintree MA 02184

Tele: 781 848 7844

Fax: 781 848 7811

GeoLabs, Inc. 45 Johnson Lane

Dear Rich MacCarthy:

GeoLabs, Inc. received 6 sample(s) on 6/7/2013 for the analyses presented in the following report.

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

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

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

Sincerely

David Mick

Laboratory Director

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

> CT (PH-0148) - MA (M-MA015) - NH (2508) - RI (LA000252) Accredited in Accordance with NELAC

N. 2. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	The second	MassDE	P Ana	lýtical Protócol Ce	rtificátion Form	()		
Laboratory Na	ame: GeoLabs, In	1C.	Harri.	Projec	xt #:	A Company of the Comp	Constitution of the Consti	
Project Location	on: Noonan- Arlir	ngton		RTN:				
This form prov	/ides certification	for the followi	ng data	a set: 1306067 (001-0	006)			
Matrices:	☐ Ground\	water/Surface		· · · · · · · · · · · · · · · · · · ·	☐ Drinking Water ☐	Air 🗆	Other-wast	ewater
	ol (check all that a	apply below):						
	CAM III B	MassDEP VPI CAM IV A	X	8081 Pesicides CAM V B	7196 Hex Cr CAM VI B □		MassDEP A CAM IX A	APH
8270 SVOC CAM II B 🔲	7010 Metals CAM III C	MassDEP EPH CAM IV B	H 図	8151 Herbicides CAM V C	8330 Explosives CAM VIII A □		TO-15 VOC CAM IX B	٦ <u></u>
6010 Metals CAM III A □	6020 Metals CAM III D 🔲	8082 PCB CAM V A		9014 Total Cyanide/PAC CAM VI A □	6860 Perchlorate CAM VIII B □			
Affirmative R	esponses to Qu	estions A thr	ough l	F are required for "P	resumptive Certainty"	" status		
А	Were all samples properly preserved	received in a co d (including tem	ondition nperatur me	n consistent with those dure) in the field or laboratethod holding times?	described on the Chain of tory, and prepared/analyze	Custody, zed within	⊠ Yes	□ No
В	Were the analytic	al method(s) ar	nd all as pr	ssociated QC requireme rotocol(s) followed?	ents specified in the select	ted CAM	⊠ Yes	□ No
С	Were all required protocol(s)	corrective actio	ns and	analytical response acti entified performance sta	ions specified in the selec andard non-conformances	xted CAM s?	⊠ Yes	□ No
D	Does the laborato Assurance and C	ry report compl Juality Control (ly with a Guidelin	ll reporting requirement nes for the Acquisition a	ts specified in CAM VII A, nd Reporting of Analtyical	"Quality Data"?	⊠ Yes	□ No
E	VPH, EPH, APH a. VPH, EPH modification(s	H, and APH Met	thods or	nly: Was each method c dual method(s) for a list	conducted without signification	ant ns.)	⊠ Yes	□No
	b. APH and TC)-15 Methods o	nly: Wa	as the complete analyte	list reported for each metl	ihod?	□ Yes	□ No
	evaluated in a	laboratory narra	ative (in	ncluding all "No" respons	d non-conformances identi ses to Questions A throug	nh E)	⊠ Yes	□No
	Questions G, H,	, and I below	are rec	quired for "Presump	otive Certainty" status specified in the selected (
G Data Use				protocol(s)?			⊠ Yes	□ No
·	representativ	veness require	ements	described in 310 CMR	ay not necessarily meet R 40. 1056 (2) (k) and WS	C-07-350	usablility ar).	nd
<u>H</u>	Were all Q	C performance	standa	rds as specified in the C	CAM protocol(s) achieved?	?		⊠ No¹
1 All pogative ru	Were results rep	ported for the co	omplete	analyte list specified in	the selected CAM protoc	ol(s)?	□ Yes	⊠ No¹
				tached laboratory narr				
those responsib	ble for obtaining the and belief, accurate	he information	i, the ma	s of perjury that, based aterial contained in thi	d upon my personal inquis analytical report is, to	uiry of the best	t	
Signature:	a larry	My	h	Positio	n: Laboratory Directo	or		
Printed Name <u>:</u>	David Mick		<u> </u>	Date: _	June 18, 2013			

Date: 18-Jun-13

CLIENT:

Clean Harbors

Project:

Noonan - Arlington

Lab Order:

1306067

CASE NARRATIVE

Physical Condition of Samples

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

Project Documentation

The project was accompanied by satisfactory Chain of Custody documentation.

Analysis of Sample(s)

EPH carbon ranges and diesel targets only reported via MADEP EPH, per client request.

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

EPHP- Samples 001 and 002- Naphthalene is reported with an 'E' value.

EPHT- Sample 002- surrogates are diluted out of sample.

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/18/13

CLIENT:

Clean Harbors

Project:

Noonan - Arlington

Lab Order:

1306067

CASE NARRATIVE

EPH Methods

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

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

C11-C22 Aromatic Hydrocarbons exclude concentrations of Target PAH Analytes

CERTIFICATION:

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

Were all performance/acceptance standards achieved? YES

Were any significant modifications made to the EPH method? NO

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

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/18/13

CLIENT:

Clean Harbors

Project:

Noonan - Arlington

Lab Order:

1306067

CASE NARRATIVE

VPH Methods

Method for Ranges: MADEP VPH 04-1.1

Method for Target Analytes: MADEP VPH 04-1.1

Soil sample(s) were received in MeOH and soil was completely covered by MeOH.

Soil sample(s) ratio 1:1 +/- 25%

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

C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range. (MTBE, Benzene, Toluene)

C9-C12 Aliphatic Hydrocarbons exclude concentration of Target Analytes eluting in that range (Ethylbenzene, m&p-Xylenes, o-Xylene) AND concentration of C9-C10 Aromatic Hydrocarbons.

CERTIFICATION

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

Were all QA/QC performance/acceptance standards achieved? YES

Were any significant modifications made to the VPH method, as specified in Sec. 11.3? NO

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

SIGNATURE:

POSITION: LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/18/13

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

Client Sample ID: S-16

Lab Order:

1306067

Collection Date: 6/5/2013 11:00:00 AM

DF

Project:

Noonan - Arlington

Date Received: 6/7/2013

Lab ID:

Analyses

1306067-001

Matrix: SOIL

Analyses	Result	Det. Limit	Qual	Units	
		-			

Date Analyzed

EPH RANGES - MADE	EP EPH
-------------------	--------

Analyst:	KG
----------	----

Prep Method:	(eph_Spr)	Pre	Date: 6/10/201	3 2:57:17 I	PM .
Adjusted C11-C22 Aromatics	2120	192	mg/Kg-dry	10	6/12/2013
C09-C18 Aliphatics	2860	962	mg/Kg-dry	50	6/12/2013
C19-C36 Aliphatics	1090	192	mg/Kg-dry	10	6/12/2013
Unadjusted C11-C22 Aromatics	2210	192	mg/Kg-dry	10	6/12/2013
Surr: 1-Chlorooctadecane	59.1	40-140	%REC	1	6/12/2013
Surr: o-Terphenyl	79.6	40-140	%REC	1	6/12/2013

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method:	(eph_Spr)	P	rep D	ate: 6/10/201	3 2:57:17 PM	
Naphthalene	24.3	0.128	7.00	mg/Kg-dry	1	6/12/2013 9:30:00 PM
2-Methylnaphthalene	61.1	0.128	E	mg/Kg-dry	1	6/12/2013 9:30:00 PM
Acenaphthene	ND	0.128		mg/Kg-dry	1	6/12/2013 9:30:00 PM
Phenanthrene	8.04	0.128		mg/Kg-dry	1	6/12/2013 9:30:00 PM
Total PAH Target Concentration	93.4	0.128		mg/Kg-dry	1	6/12/2013 9:30:00 PM
Surr: 2,2-Difluorobiphenyl	55.6	40-140		%REC	1	6/12/2013 9:30:00 PM
Surr: 2-Fluorobiphenyl	48.4	40-140		%REC	1	6/12/2013 9:30:00 PM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Prej	Date:		
Unadjusted C5-C8 Aliphatic HC	50.9	12.8	mg/Kg-dry	1	6/13/2013 2:32:00 AM
Unadjusted C9-C12 Aliphatic HC	328	128	mg/Kg-dry	10	6/13/2013 1:04:00 AM
Methyl Tert-Butyl Ether	ND	0.128	mg/Kg-dry	1	6/13/2013 2:32:00 AM
Benzene	ND	0.128	mg/Kg-dry	1	6/13/2013 2:32:00 AM
Toluene	17.9	0.128	mg/Kg-dry	1	6/13/2013 2:32:00 AM
Ethylbenzene	29.1	0.128	mg/Kg-dry	1	6/13/2013 2:32:00 AM
m,p-Xylene	64.1	1.28	mg/Kg-dry	10	6/13/2013 1:04:00 AM
o-Xylene	42.7	1.28	mg/Kg-dry	10	6/13/2013 1:04:00 AM
Naphthalene	ND	0.128	mg/Kg-dry	1	6/13/2013 2:32:00 AM
C9-C10 Aromatic Hydrocarbons	488	128	mg/Kg-dry	10	6/13/2013 1:04:00 AM
Adjusted C5-C8 Aliphatic HC	33.0	12.8	mg/Kg-dry	1	6/13/2013 2:32:00 AM
Adjusted C9-C12 Aliphatic HC	ND	12.8	mg/Kg-dry	1	6/13/2013 2:32:00 AM
Surr: 2,5-Dibromotoluene FID	93.1	70-130	%REC	10	6/13/2013 1:04:00 AM

Qualifiers:

- В Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- BRL Below Reporting Limit
- Analyte detected below quantitation limits
- Holding times for preparation or analysis exceeded
- Spike Recovery outside recovery limits
- ND Not Detected at the Reporting Limit

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

1306067

Client Sample ID: S-16

Lab Order:

Collection Date: 6/5/2013 11:00:00 AM

Project:

Noonan - Arlington

Date Received: 6/7/2013

Lab ID:

1306067-001

Matrix: SOIL

Analyses	Result	Det. Limit Q	ual Units	DF	Date Analyzed
VPH - MADEP VPH					Analyst: ZC
Prep Method:		Prep	Date:		
Surr: 2,5-Dibromotoluene FID	108	70-130	%REC	1	6/13/2013 2:32:00 AM
Surr: 2,5-Dibromotoluene PID	84.6	70-130	%REC	10	6/13/2013 1:04:00 AM
Surr: 2,5-Dibromotoluene PID	120	70-130	%REC	1	6/13/2013 2:32:00 AM

Qualifiers:

В

Analyte detected in the associated Method Blank

BRL Below Reporting Limit

E Value above quantitation range

Holding times for preparation or analysis exceeded

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike Recovery outside recovery limits

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

1306067

Lab Order: Project:

Lab ID:

Analyses

Noonan - Arlington

1306067-002

Client Sample ID: S-18

Collection Date: 6/5/2013 12:00:00 PM

Date Received: 6/7/2013

Matrix: SOIL

EPH RANGES - MADEP EPH

Det. Limit Qual Units Result

DF

Date Analyzed

Analyst: KG

Prep Method:	(eph_Spr)	P	rep D	ate: 6/10/201	3 2:57:17	PM
Adjusted C11-C22 Aromatics	1220	170		mg/Kg-dry	10	6/12/2013
C09-C18 Aliphatics	2720	852		mg/Kg-dry	50	6/12/2013
C19-C36 Aliphatics	942	170		mg/Kg-drv	10	6/12/2013
Unadjusted C11-C22 Aromatics	1270	170		mg/Kg-dry	10	6/12/2013
Surr: 1-Chlorooctadecane	0	40 -140	s	%REC	10	6/12/2013
Surr: o-Terphenyl	0	40-140	s	%REC	10	6/12/2013

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method	: (eph_Spr)	Pre	Date:	6/10/201	3 2:57:17 PM	
Naphthalene	10.9	0.114		/Kg-dry	1	6/12/2012 10:07:00 Date
2-Methylnaphthalene	30.6		_	/Kg-dry	1	6/12/2013 10:07:00 PM
Acenaphthene	ND	0.114	\$	/Kg-dry /Kg-dry	4	6/12/2013 10:07:00 PM
Phenanthrene	5.43	0.114	-	/Kg-dry /Kg-dry		6/12/2013 10:07:00 PM
Total PAH Target Concentration	46.9	0.114	-	- ,		6/12/2013 10:07:00 PM
Surr: 2,2-Difluorobiphenyl	54.6	40-140		/Kg-dry :EC		6/12/2013 10:07:00 PM
Surr: 2-Fluorobiphenyl	49.8	40-140				6/12/2013 10:07:00 PM
' '	+3.u	40-140	7017	EC	1	6/12/2013 10:07:00 PM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Pre	p Date:		
Unadjusted C5-C8 Aliphatic HC	42,4	11.4	mg/Kg-dry	1	6/13/2013 3:15:00 AM
Unadjusted C9-C12 Aliphatic HC	485	114	mg/Kg-dry	10	6/13/2013 1:48:00 AM
Methyl Tert-Butyl Ether	ND	0.114	mg/Kg-dry	1	6/13/2013 3:15:00 AM
Benzene	ND	0.114	mg/Kg-dry	1	6/13/2013 3:15:00 AM
Toluene	16.2	0.114	mg/Kg-dry	1	6/13/2013 3:15:00 AM
Ethylbenzene	23.7	0.114	mg/Kg-dry	1	6/13/2013 3:15:00 AM
m,p-Xylene	58.8	1.14	mg/Kg-dry	10	6/13/2013 1:48:00 AM
o-Xylene	30.5	0.114	mg/Kg-dry	1	6/13/2013 3:15:00 AM
Naphthalene	ND	0.114	mg/Kg-dry	1	6/13/2013 3:15:00 AM
C9-C10 Aromatic Hydrocarbons	593	114	mg/Kg-dry	10	6/13/2013 1:48:00 AM
Adjusted C5-C8 Aliphatic HC	26.2	11.4	mg/Kg-dry	1	6/13/2013 3:15:00 AM
Adjusted C9-C12 Aliphatic HC	ND	11.4	mg/Kg-dry	1	6/13/2013 3:15:00 AM
Surr: 2,5-Dibromotoluene FID	86.2	70-130	%REC	10	6/13/2013 1:48:00 AM

Qualifiers:

- Analyte detected in the associated Method Blank В
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- Spike Recovery outside recovery limits

- BRL Below Reporting Limit
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Reported Date: 18-Jun-13

CLIENT: Lab Order:

Clean Harbors

1306067

Project:

Noonan - Arlington

Lab ID:

1306067-002

Client Sample ID: S-18

Collection Date: 6/5/2013 12:00:00 PM

Date Received: 6/7/2013

Matrix: SOIL

Analyses	Result	Det. Limit	Qua	l Units	DF	Date Analyzed
VPH - MADEP VPH				···	-	Analyst: ZC
Prep Method:		Р	rep D	ate:		
Surr: 2,5-Dibromotoluene FID	218	70-130	S	%REC	1	6/13/2013 3:15:00 AM
Surr: 2,5-Dibromotoluene PID	87.2	70-130		%REC	10	6/13/2013 1:48:00 AM
Surr: 2,5-Dibromotoluene PID	118	70-130		%REC	1	6/13/2013 3:15:00 AM

Qualifiers:	В	Analyte detected in the associated Method Blank	BRL	Below Reporting Limit
	E	Value above quantitation range		Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits		Not Detected at the Reporting Limit
	S	Spike Recovery outside recovery limits		at the Roporting Limit

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

Client Sample ID: S-25

Lab Order:

1306067

Collection Date: 6/5/2013 4:30:00 PM

Project:

Noonan - Arlington

Date Received: 6/7/2013

Lab ID:

Analyses

1306067-003

Matrix: SOIL

DF

FPH	RAN	GES -	MAD	ED EDH

Date Analyzed

Analyst: KG

Prep Method: (Prep Date: 6/10/2013 2:57:17 PM				
Adjusted C11-C22 Aromatics	ND	16.5	mg/Kg-dry	1	6/12/2013
C09-C18 Aliphatics	ND	16.5	mg/Kg-dry	1	6/12/2013
C19-C36 Aliphatics	ND	16.5	mg/Kg-dry	1	6/12/2013
Unadjusted C11-C22 Aromatics	ND	16.5	mg/Kg-dry	1	6/12/2013
Surr: 1-Chlorooctadecane	61.8	40-140	%REC	1	6/12/2013
Surr: o-Terphenyl	68.6	40-140	%REC	1	6/12/2013

Det. Limit Qual Units

Result

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method	: (eph_Spr)	Prep	Date: 6/10/201	3 2:57:17 PM	
Naphthalene	ND	0.110	mg/Kg-dry	1	6/12/2013 10:44:00 PM
2-Methylnaphthalene	ND	0.110	mg/Kg-dry	1	6/12/2013 10:44:00 PM
Acenaphthene	ND	0.110	mg/Kg-dry	1	6/12/2013 10:44:00 PM
Phenanthrene	ND	0.110	mg/Kg-dry	1	6/12/2013 10:44:00 PM
Total PAH Target Concentration	ND	0.110	mg/Kg-dry	1	6/12/2013 10:44:00 PM
Surr: 2,2-Difluorobiphenyl	52.1	40-140	%REC	1	6/12/2013 10:44:00 PM
Surr: 2-Fluorobiphenyl	57.4	40-140	%REC	1	6/12/2013 10:44:00 PM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Prep	Date:		
Unadjusted C5-C8 Aliphatic HC	ND	11.0	mg/Kg-dry	1	6/12/2013 10:09:00 AM
Unadjusted C9-C12 Aliphatic HC	ND	11.0	mg/Kg-dry	1	6/12/2013 10:09:00 AM
Methyl Tert-Butyl Ether	ND	0.110	mg/Kg-dry	1	6/12/2013 10:09:00 AM
Benzene	ND	0.110	mg/Kg-dry	1	6/12/2013 10:09:00 AM
Toluene	ND	0.110	mg/Kg-dry	1	6/12/2013 10:09:00 AM
Ethylbenzene	0.143	0.110	mg/Kg-dry	1	6/12/2013 10:09:00 AM
m,p-Xylene	0.375	0.110	mg/Kg-dry	1	6/12/2013 10:09:00 AM
o-Xylene	0.789	0.110	mg/Kg-dry	1	6/12/2013 10:09:00 AM
Naphthalene	ND	0.110	mg/Kg-dry	1	6/12/2013 10:09:00 AM
C9-C10 Aromatic Hydrocarbons	ND	11.0	mg/Kg-dry	1	6/12/2013 10:09:00 AM
Adjusted C5-C8 Aliphatic HC	ND	11.0	mg/Kg-dry	1	6/12/2013 10:09:00 AM
Adjusted C9-C12 Aliphatic HC	ND	11.0	mg/Kg-dry	1	6/12/2013 10:09:00 AM
Surr: 2,5-Dibromotoluene FiD	90.2	70-130	%REC	1	6/12/2013 10:09:00 AM

Qualifiers:

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

E Value above quantitation range

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

S Spike Recovery outside recovery limits

Surr: 2,5-Dibromotoluene PID

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306067

Project:

Analyses

Noonan - Arlington

Lab ID:

1306067-003

Client Sample ID: S-25

Collection Date: 6/5/2013 4:30:00 PM

Date Received: 6/7/2013

Matrix: SOIL

VPH - MADEP VPH

Result Det. Limit Qual Units

DF Date Analyzed

Prep Date:

Prep Method:

89.8

70-130

%REC

6/12/2013 10:09:00 AM

Analyst: ZC

Qualifiers:

В

Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

S Spike Recovery outside recovery limits

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

Client Sample ID: S-37

Lab Order:

1306067

Collection Date: 6/5/2013 2:00:00 PM

Project:

Noonan - Arlington

Date Received: 6/7/2013

Lab ID:

1306067-004

Matrix: SOIL

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
EPH RANGES - MADEP EPH						Analyst: KG

Prep Method:	(eph_Spr)	Prep	Date: 6/10/201	3 2:57:17	PM	
Adjusted C11-C22 Aromatics	ND	17.6	mg/Kg-dry	1	6/12/2013	
C09-C18 Aliphatics	ND	17.6	mg/Kg-dry	1	6/12/2013	
C19-C36 Aliphatics	ND	17.6	mg/Kg-dry	1	6/12/2013	
Unadjusted C11-C22 Aromatics	ND	17.6	mg/Kg-dry	1	6/12/2013	
Surr: 1-Chlorooctadecane	42.1	40-140	%REC	1	6/12/2013	
Surr: o-Terphenyl	67.5	40-140	%REC	1	6/12/2013	

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method	i: (eph_Spr)	Pre	Date: 6/10/201	3 2:57:17 PM	A .
Naphthalene	0.168	0.118	mg/Kg-dry	1	6/12/2013 11:21:00 PM
2-Methylnaphthalene	0.566	0.118	mg/Kg-dry	1	6/12/2013 11:21:00 PM
Acenaphthene	ND	0.118	mg/Kg-dry	1	6/12/2013 11:21:00 PM
Phenanthrene	ND	0.118	mg/Kg-dry	1	6/12/2013 11:21:00 PM
Total PAH Target Concentration	0.734	0.118	mg/Kg-dry	1	6/12/2013 11:21:00 PM
Surr: 2,2-Difluorobiphenyl	49.9	40-140	%REC	1	6/12/2013 11:21:00 PM
Surr: 2-Fluorobiphenyl	55.2	40-140	%REC	1	6/12/2013 11:21:00 PM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Prep	Date:		
Unadjusted C5-C8 Aliphatic HC	ND	11.8	mg/Kg-dry	1	6/12/2013 10:52:00 AM
Unadjusted C9-C12 Aliphatic HC	ND	11.8	mg/Kg-dry	1	6/12/2013 10:52:00 AM
Methyl Tert-Butyl Ether	ND	0.118	mg/Kg-dry	1	6/12/2013 10:52:00 AM
Benzene	ND	0.118	mg/Kg-dry	1	6/12/2013 10:52:00 AM
Toluene	ND	0.118	mg/Kg-dry	1	6/12/2013 10:52:00 AM
Ethylbenzene	ND	0.118	mg/Kg-dry	1	6/12/2013 10:52:00 AM
m,p-Xylene	ND	0.118	mg/Kg-dry	1	6/12/2013 10:52:00 AM
o-Xylene	0.694	0.118	mg/Kg-dry	1	6/12/2013 10:52:00 AM
Naphthalene	ND	0.118	mg/Kg-dry	1	6/12/2013 10:52:00 AM
C9-C10 Aromatic Hydrocarbons	ND	11.8	mg/Kg-dry	1	6/12/2013 10:52:00 AM
Adjusted C5-C8 Aliphatic HC	ND	11.8	mg/Kg-dry	1	6/12/2013 10:52:00 AM
Adjusted C9-C12 Aliphatic HC	ND	11.8	mg/Kg-dry	1	6/12/2013 10:52:00 AM
Surr: 2,5-Dibromotoluene FID	88.0	70-130	%REC	1	6/12/2013 10:52:00 AM

Qualifiers:

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

E Value above quantitation range

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

S Spike Recovery outside recovery limits

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306067

Noonan - Arlington

Project: Lab ID:

1306067-004

Prep Method:

Client Sample ID: S-37

Collection Date: 6/5/2013 2:00:00 PM

Date Received: 6/7/2013

Matrix: SOIL

Analyses

VPH - MADEP VPH

Result Det. Limit Qual Units

DF Date Analyzed

Analyst: ZC

Prep Date:

Surr: 2,5-Dibromotoluene PID

83.2

70-130

%REC

6/12/2013 10:52:00 AM

Qualifiers:

Analyte detected in the associated Method Blank

Value above quantitation range

Analyte detected below quantitation limits

S Spike Recovery outside recovery limits

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

Client Sample ID: S-39

Lab Order:

1306067

Collection Date: 6/5/2013 2:30:00 PM

DF

Project:

Noonan - Arlington

Date Received: 6/7/2013

Lab ID:

Analyses

1306067-005

Matrix: SOIL

EPH	RANGES	- MADEP	EPH

Date Analyzed Analyst: **KG**

Prep Method:	(eph_Spr)	Prep	Date: 6/10/201	3 2:57:17	PM
Adjusted C11-C22 Aromatics	ND	16.3	mg/Kg-dry	1	6/12/2013
C09-C18 Aliphatics	24.4	16.3	mg/Kg-dry	1	6/12/2013
C19-C36 Aliphatics	ND	16.3	mg/Kg-dry	1	6/12/2013
Unadjusted C11-C22 Aromatics	ND	16.3	mg/Kg-dry	1	6/12/2013
Surr: 1-Chlorooctadecane	40.1	40-140	%REC	1	6/12/2013
Surr: o-Terphenyl	74.7	40-140	%REC	1	6/12/2013

Det. Limit Qual Units

Result

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method:	(eph_Spr)	Prej	Date: 6/10/201	3 2:57:17	PM
Naphthalene	ND	0.109	mg/Kg-dry	1	6/12/2013 11:58:00 PM
2-Methylnaphthalene	0.486	0.109	mg/Kg-dry	1	6/12/2013 11:58:00 PM
Acenaphthene	ND	0.109	mg/Kg-dry	1	6/12/2013 11:58:00 PM
Phenanthrene	0.113	0.109	mg/Kg-dry	1	6/12/2013 11:58:00 PM
Total PAH Target Concentration	0.599	0.109	mg/Kg-dry	1	6/12/2013 11:58:00 PM
Surr: 2,2-Difluorobiphenyl	40.0	40-140	%REC	1	6/12/2013 11:58:00 PM
Surr: 2-Fluorobiphenyl	41.3	40-140	%REC	1	6/12/2013 11:58:00 PM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Prej	p Date:		
Unadjusted C5-C8 Aliphatic HC	ND	10.9	mg/Kg-dry	1	6/12/2013 11:36:00 AM
Unadjusted C9-C12 Aliphatic HC	ND	10.9	mg/Kg-dry	1	6/12/2013 11:36:00 AM
Methyl Tert-Butyl Ether	ND	0.109	mg/Kg-dry	1	6/12/2013 11:36:00 AM
Benzene	ND	0.109	mg/Kg-dry	1	6/12/2013 11:36:00 AM
Toluene	ND	0.109	mg/Kg-dry	1	6/12/2013 11:36:00 AM
Ethylbenzene	ND	0.109	mg/Kg-dry	1	6/12/2013 11:36:00 AM
m,p-Xylene	ND	0.109	mg/Kg-dry	1	6/12/2013 11:36:00 AM
o-Xylene	ND	0.109	mg/Kg-dry	1	6/12/2013 11:36:00 AM
Naphthalene	0.610	0.109	mg/Kg-dry	1	6/12/2013 11:36:00 AM
C9-C10 Aromatic Hydrocarbons	ND	10.9	mg/Kg-dry	1	6/12/2013 11:36:00 AM
Adjusted C5-C8 Aliphatic HC	ND	10.9	mg/Kg-dry	1	6/12/2013 11:36:00 AM
Adjusted C9-C12 Aliphatic HC	ND	10.9	mg/Kg-dry	1	6/12/2013 11:36:00 AM
Surr: 2,5-Dibromotoluene FID	85.9	70-130	%REC	1	6/12/2013 11:36:00 AM

Qualifiers:

- Analyte detected in the associated Method Blank
- E Value above quantitation range

- BRL Below Reporting Limit
- Analyte detected below quantitation limits
- Н Holding times for preparation or analysis exceeded
- Spike Recovery outside recovery limits

ND Not Detected at the Reporting Limit

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306067

Project:

Noonan - Arlington

Lab ID:

1306067-005

Client Sample ID: S-39

nent Sample ID: 3-39

Collection Date: 6/5/2013 2:30:00 PM **Date Received:** 6/7/2013

Matrix: SOIL

Analyses

VPH - MADEP VPH

Result De

Det. Limit Qual Units

DF

Date Analyzed

Analyst: ZC

Prep Method:

Prep Date:

Surr: 2,5-Dibromotoluene PID

85.6

70-130

%REC

6/12/2013 11:36:00 AM

Qualifiers:

B Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

S Spike Recovery outside recovery limits

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

Client Sample ID: S-48

Lab Order:

1306067

Project:

Noonan - Arlington

Collection Date: 6/5/2013 3:30:00 PM Date Received: 6/7/2013

Lab ID:

1306067-006

Matrix: SOIL

Result Analyses Det. Limit Qual Units DF

Date Analyzed

EPH RANGES - MADEP EPH

Prep Method:	eph_Spr)	Prep	Date: 6/10/201	3 2:57:17	PM
Adjusted C11-C22 Aromatics	ND	17.0	mg/Kg-dry	1	6/12/2013
C09-C18 Aliphatics	ND	17.0	mg/Kg-dry	1	6/12/2013
C19-C36 Aliphatics	ND	17.0	mg/Kg-dry	1	6/12/2013
Unadjusted C11-C22 Aromatics	ND	17.0	mg/Kg-dry	1	6/12/2013
Surr: 1-Chlorooctadecane	58.8	40-140	%REC	1	6/12/2013
Surr: o-Terphenyl	77.9	40-140	%REC	1	6/12/2013

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Analyst: KG

Prep Method:	(eph_Spr)	Pre	Date: 6/10/201	3 2:57:17	PM
Naphthalene	ND	0.114	mg/Kg-dry	1	6/13/2013 12:34:00 AM
2-Methylnaphthalene	0.568	0.114	mg/Kg-dry	1	6/13/2013 12:34:00 AM
Acenaphthene	ND	0.114	mg/Kg-dry	1	6/13/2013 12:34:00 AM
Phenanthrene	0.156	0.114	mg/Kg-dry	1	6/13/2013 12:34:00 AM
Total PAH Target Concentration	0.724	0.114	mg/Kg-dry	1	6/13/2013 12:34:00 AM
Surr: 2,2-Difluorobiphenyl	48.2	40-140	%REC	1	6/13/2013 12:34:00 AM
Surr: 2-Fluorobiphenyl	53.8	40-140	%REC	1	6/13/2013 12:34:00 AM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Prej	Date:		
Unadjusted C5-C8 Aliphatic HC	ND	11.4	mg/Kg-dry	1	6/13/2013 12:20:00 PM
Unadjusted C9-C12 Aliphatic HC	ND	11.4	mg/Kg-dry	1	6/13/2013 12:20:00 PM
Methyl Tert-Butyl Ether	ND	0.114	mg/Kg-dry	1	6/13/2013 12:20:00 PM
Benzene	ND	0.114	mg/Kg-dry	1	6/13/2013 12:20:00 PM
Toluene	ND	0.114	mg/Kg-dry	1	6/13/2013 12:20:00 PM
Ethylbenzene	2.07	0.114	mg/Kg-dry	1	6/13/2013 12:20:00 PM
m,p-Xylene	ND	0.114	mg/Kg-dry	1	6/13/2013 12:20:00 PM
o-Xylene	0.670	0.114	mg/Kg-dry	1	6/13/2013 12:20:00 PM
Naphthalene	ND	0.114	mg/Kg-dry	1	6/13/2013 12:20:00 PM
C9-C10 Aromatic Hydrocarbons	ND	11.4	mg/Kg-dry	1	6/13/2013 12:20:00 PM
Adjusted C5-C8 Aliphatic HC	ND	11.4	mg/Kg-dry	1	6/13/2013 12:20:00 PM
Adjusted C9-C12 Aliphatic HC	ND	11.4	mg/Kg-dry	1	6/13/2013 12:20:00 PM
Surr: 2,5-Dibromotoluene FID	87.5	70-130	%REC	1	6/13/2013 12:20:00 PM

Qualifiers:

- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Spike Recovery outside recovery limits

- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

1306067

Lab Order: Project: Noonan - Arlington

Lab ID:

1306067-006

Client Sample ID: S-48

Collection Date: 6/5/2013 3:30:00 PM

Date Received: 6/7/2013

Matrix: SOIL

1

Analyses VPH - MADEP VPH Result Det. Limit Qual Units DF **Date Analyzed**

Prep Method:

Prep Date:

Surr: 2,5-Dibromotoluene PID

83.6

70-130

%REC

6/13/2013 12:20:00 PM

Analyst: ZC

Qualifiers:

Analyte detected in the associated Method Blank

Е Value above quantitation range

Analyte detected below quantitation limits

Spike Recovery outside recovery limits

BRL Below Reporting Limit

Η Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

ANALYTICAL QC SUMMARY REPORT

Date: 18-Jun-13

TestCode: epht_s

Clean Harbors CLIENT:

1306067 Work Order: Noonan - Arlington Project:

Comple ID: 14D Course										
٠.	SampType: mblk	TestCoc	TestCode: epht_s	Units: mg/Kg		Prep Date:	te: 6/10/2013	RunNo: 50626	50626	<u> </u>
Client ID: ZZZZZ	Batch ID: 22432	Test	TestNo: MADEP EPH	PH (eph_Spr)		Analysis Date:	le: 6/12/2013	SedNo: 574374	574374	
Analyte	Result	Рог	SPK value	SPK Ref Val	7 1 1 1 1 1	tieri Pro-				
				ı	/OLEC	LOWLIIII	nignicilin APD Ket val	val %KPD	PDLimit	Qual
Adjusted C11-C22 Aromatics	QN	15.0								
C09-C18 Aliphatics	QN	15.0								
C19-C36 Aliphatics	QN	15.0								
Unadjusted C11-C22 Aromatics	QN	15.0								
Surr: 1-Chlorooctadecane	5.411	0	10	c	1 72	Ψ.	27			
Surr: o-Terphenyl	9.352	0	10		93.5	\$ 4	140			
Sample ID: LCS-22432	SampType: Lcs	TestCod	TestCode: epht_s	Units: mg/Kg		Prep Date:	e: 6/10/2013	BunNo: 60636	2020	
Client ID: ZZZZZ	Batch ID: 22432	TestN	TestNo: MADEP EPH	_		Analysis Date:		SeqNo: 574372	574372	
Analyte	Result	PQ	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val		T. T. C.	<u>.</u>
C09-C18 Aliphatics	QV	15.0	5		203	Ş				Kual
C19-C36 Aliphatics	2) (2 9	o	20.3	40	140			
Tradinated O44 O22 America		15.0	10	0	68.4	40	140			
Oliadjusted CTT-C22 Aromatics	Q	15.0	10	0	81.0	40	140			
Surr 1-Uniorooctadecane	6.124	0	10	0	61.2	4	140			
Surr. o- I erpnenyl	12.26	0	10	0	123	40	140			
Sample ID: LCS#2-22432	SampType: Lcsd	TestCod	TestCode: epht s	Units: ma/Ka	j j	Prep Date:	6/40/2013	O Change		
Client ID: ZZZZZ	Batch ID: 22/32	Tooth						DAMINO. DODGE	97900	
	Date: 12. 44.54		J. MADEP E	Testing: IMADEP EPH (eph_Spr)		Analysis Date:	e: 6/12/2013	SeqNo: 574373	574373	_
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	al %RPD	RPDI imit	<u> </u>
C09-C18 Aliphatics	QN	15.0	9	c	65.2	É	0.00			
C19-C36 Aliphatics	QN	15.0	10	0	70.6	5 4	140 6 926			
Unadjusted C11-C22 Aromatics	QN	15.0	10		43.1	9 €				
Surr: 1-Chlorooctadecane	5 107	c		•	2	†	140 8.095		0 25	
Surr o-Temberyl	5 1) (2 :	>	51.1	4	140	0	0	
can compare the	7.149	0	6	0	71.5	9	140	0	0 0	
Qualifiers: BRL Below Reporting Limit	ing Limit		E Value	Value above quantitation range	95		H Holding times	for preparation of	1000	
J Analyte detect	Analyte detected below quantitation limits		ND Not De	Not Detected at the Reporting Limit	. I :			received the propagation of analysis exceeded	analysis exceed	pa
S Spike Recover	Spike Recovery outside recovery limits						K KFD outside recovery limits	ecovery limits		

GeoLabs, Inc.

45 Johnson Lane \sim Braintree MA 02184 \sim 781 848 7844 \sim 781 848 7811

Clean Harbors	
CLIENT:	

1306067 Work Order:

Noonan - Arlington Project:

TestCode: VPH S2

Sample ID: MBLK	SampType: MBLK	TestCo	TestCode: VPH_S2	Units: mg/Kg		Prep Date:			RunNo: 50664	4	
Client ID: ZZZZZ	Batch ID: R50664	Test	TestNo: VPH			Analysis Date: 6/12/2013	6/12/201	m	SeqNo: 574266	566	
Analyte	Result	PoL	SPK value	SPK Ref Val	%REC	%REC LowLimit HighLimit RPD Ref Val	ghLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	QV	0.100						-			
2,2,4-Trimethylpentane	Q	0.100									
2-Methylpentane	Ð	0.100									
n-Butylcyclohexane	Ð	0.100									
n-Decane	Q	0.100									
n-Nonane	QN	0.100									
n-Pentane	QN	0.100									
Unadjusted C5-C8 Aliphatic HC	QN	10.0									
Unadjusted C9-C12 Aliphatic HC		10.0									
Methyl Tert-Butyl Ether	2	0.100									
Benzene	ND	0.100									
Toluene	QN	0.100									
Ethylbenzene	Q	0.100									
m,p-Xylene	QN	0.100									
o-Xylene	Q	0.100									
Naphthalene	QN	0.100									
C9-C10 Aromatic Hydrocarbons	Q	10.0									
Surr: 2,5-Dibromotoluene FID	96.83	0	100	0	96.8	20	130				
Surr: 2,5-Dibromotoluene PID	86.83	0	100	0	86.8	0,2	130				
Sample ID: LCS	SampType: LCS	TestCoc	TestCode: VPH S2	Units: ma/Ka		Prep Date:			RunNo: 50664		2

Holding times for preparation or analysis exceeded RPD outside recovery limits 130 130 R H 2 2 3 97.6 97.7 E Value above quantitation range ND Not Detected at the Reporting Limit 0.008 5 5 5 0.100 Analyte detected below quantitation limits Spike Recovery outside recovery limits 97.73 BRL Below Reporting Limit r s 2-Methylpentane Qualifiers:

Qual

%RPD RPDLimit

%REC LowLimit HighLimit RPD Ref Val

SPK value SPK Ref Val

g

Result

0.100

80.55 97.61

1,2,4-Trimethylbenzene 2,2,4-Trimethylpentane

Analyte

80.6

Analysis Date: 6/12/2013

Prep Date:

Units: mg/Kg

TestCode: VPH_S2 TestNo: VPH

Batch ID: R50664

Client ID: ZZZZZ

SeqNo: 574264 RunNo: 50664

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

Clean Harbors CLIENT:

1306067 Work Order:

Noonan - Arlington Project:

TestCode: VPH_S2

1											
sample ID: LCS	SampType: LCS	TestCo	TestCode: VPH_S2	Units: mg/Kg		Prep Date:	2.5		RunNo: 50664	64	
Client ID: ZZZZZ	Batch ID: R50664	Test	TestNo: VPH			Analysis Date:	6/12/2013	13	SeaNo: 574264	264	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HiahLimit	RPD Ref Val	uda%	: <u>:</u> !	į
o Charles and the Charles						-1		in a 15 1	מוצומ		(Kual
II-butylcyclonexane	126.4	0.100	190	0	126	20	130				
n-Decane	123.5	0.100	100	0	123	20	130				
n-Nonane	116.4	0.100	100	0	116	30	130				
n-Pentane	102.5	0.100	100	0	103	2 2	130				
Unadjusted C5-C8 Aliphatic HC	240.7	10.0	300	0	80.2	2 2	130				
Unadjusted C9-C12 Aliphatic HC	343.2	10.0	300	0	114	2 2	5 5				
Methyl Tert-Butyl Ether	80.42	0.100	100	0	80.4	2 2	<u>8</u>				
Benzene	83.26	0.100	100	0	83.3	2. 2	5 5				
Toluene	80.22	0.100	100	0.01	80.2	2 6	3 5				
Ethylbenzene	82.70	0.100	100	0.015	82.7	2 2	5 5				
m,p-Xylene	164.9	0.100	200		82.4	2 2	5 5				
o-Xylene	91.06	0.100	100	0	91.1	2. 2	5 5				
Naphthalene	107.4	0.100	100	0	10,7	2. 2	3 5				
C9-C10 Aromatic Hydrocarbons	88.32	10.0	100		88	2. 2.	3 5				
Surr: 2,5-Dibromotoluene FID	89.21	0	100		0 08	2 6	3 5				
Surr: 2,5-Dibromotoluene PID	83.74	C	100			- 1	3 5				
		>	801	0	83./	70	130				
Sample ID: LCSD	SampType: LCSD	TestCo	TestCode: VPH_S2	Units: mg/Kg		Prep Date:			RunNo: 50664	7.	
Client ID: ZZZZZ	Batch ID: R50664	Test	TestNo: VPH		1	Analysis Date:	6/12/2013	23	SeqNo: 574265	. 92	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	RPD	RPD! imit	
1,2,4-Trimethylbenzene	80.71	0.100	100	 	80.7	5	130	C			5
2,2,4-Trimethylpentane	90:06	0.100	100	8000	9 9	2 5	5 5	o 0	.	52	
2-Methylpentane	97 94	0.100	5 5		- 6	o (2 5	o •	5	22	
n-Butylcyclohexane	103.10	100	3 5	> (8.78	0 1	130	0	0	25	
n-Decana	1.027	0 0	3	>	123	70	130	0	0	25	
None	127.0	0.100	100	0	127	70	130	0	0	25	
בוסומנות	118.6	0.100	100	0	119	တ္တ	130	0	0	25	
						i					
Qualifiers: BRL Below Reporting Limit	ting Limit			Value above quantitation range			Н	Holding times for preparation or analysis exceeded	reparation or ana	lysis exceeded	
J Analyte detect	Analyte detected below quantitation limits		ND Not De	Not Detected at the Reporting Limit	imit		8	RPD outside recovery	n, limite		
S Spike Recover	Spike Recovery outside recovery limits			9				outside iccove	ry mills		
	a) dustas receively minus										

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

Clean Harbors CLIENT:

1306067 Work Order:

Noonan - Arlington Project:

TestCode: VPH_S2

Sample ID: LCSD	SampType: 1 CSD	TeefCo	TestCode: VBM 63	I Inite: manife.	5						
	and odd dime	2000	76 LUA .97	OIIIIS. MOING		Frep Date:	Ċħ		KunNo: 50664	64	
Client ID: ZZZZZ	Batch ID: R50664	Testl	TestNo: VPH			Analysis Dat	Analysis Date: 6/12/2013		SeqNo: 574265	265	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	LowLimit HighLimit RPE	RPD Ref Val	%RPD	RPDLimit	Qual
n-Pentane	103.0	0.100	100	0	103	6	130	0	0	25	
Unadjusted C5-C8 Aliphatic HC	242.2	10.0	300	0	80.7	70	130	0	0	S	
Unadjusted C9-C12 Aliphatic HC	357.3	10.0	300	0	119	70	130	0	0	25	
Methyl Tert-Butyl Ether	82.03	0.100	100	0	82.0	70	130	0	0	25	
Benzene	81.96	0.100	100	0	82.0	70	130	0	0	25	
Toluene	86.54	0.100	100	0.01	86.5	70	130	0	0	25	
Ethylbenzene	89.74	0.100	100	0.015	89.7	70	130	0	0	25	
m,p-Xylene	180.5	0.100	200	0	90.3	70	130	0	0	52	
o-Xylene	82.74	0.100	100	0	82.7	70	130	0	0	25	
Naphthalene	113.1	0.100	100	0	113	70	130	0	0	25	
C9-C10 Aromatic Hydrocarbons	88.33	10.0	100	0	88.3	70	130	0	0	25	
Surr: 2,5-Dibromotoluene FID	83.67	0	100	0	83.7	70	130	0	0	0	
Surr: 2,5-Dibromotoluene PID	88.66	0	100	0	88.7	70	130	0	0	0	

Holding times for preparation or analysis exceeded RPD outside recovery limits H K E Value above quantitation range

ND Not Detected at the Reporting Limit Analyte detected below quantitation limits Spike Recovery outside recovery limits BRL Below Reporting Limit Qualifiers:

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OF /				Lab Use Only	anutanaqmat ¬∢∞ ⊳∓	<u>_</u>						0 = Other				(9)
PAGE	cols)	in tar		Requested								: B = Bag P = Plastic V = Voa				NH (2508) MA (MA-015) RI (LA000252)
YUUU'' Special Instructions	e (s) infidence Proto criteria	-4r/		Analysis Rec								Containers: A = Amber G = Glass S = Summa	Nate / Time	Sale Control		Zα
Special Ir	rements: circle choice (s) CT RCP (Reasonable Confidence Protocols) State / Fed Program - Criteria	Project: Nacham Project PO:		An	- In					-		7 = Other		5-13		
Gong	Requirements: circle choice (s) CT RCP (Reasonable Confid State / Fed Program - Crite	Project: 74 Project PO:	e e	(/	HUN HOTO	7	7	7 7	7	7		5 = NaOH 6 = MEOH	l e			CT (PH-0148)
14M 0	MCP Methods DEP Other	twee Co	Preserative:		Y.E. NUMBER	10	202	57	10			3 = H2S04 (4 = Na2S203 (6	R		4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	NET 30 Days. A rattoreny"s fees
	DEP Other	2822 0690	d.		GeoLabs SAMPLE NUMBER	0-191	7	38				Preservatives 1 = Hcl 3 = 2 = HNO3 4 =	Received by:	B		late payment charge of 1.5% per mont or 18% per year, together with expenses above and beyond collection costs, inclyding attoreny"s fees and beyond NET 30 days.
Sample Handling: circle choice Filtration Done Not Needed Lab to do Preservation Lab to do Y/	GW-1 S-1 QC	21-792-		-	O 2 2 4 20	1	7 7	7	7	7			- - -		00.00	nd beyond collect yond NET 30 days
Sample Handlir Filtration Preservation	() (P.S.	222		Z I	XX-X	511	V	a	N	8		Received on Ice		5161	s baromar at llia	expenses above a
	circle choice (s)	Phone: 73 Fax: 78 email: <i>mad</i>		CONTAINER	F > 0. W		16/1	42.5	147	No.		ther	/,Time	130	All discounting	ar, together with
V RECC atories 2.184 811	Data Delivery: circle choice (s) Fax email Format: Excel	120			PLE ON / 10						·	oil A = Air ii OT = Other	Date /	11/9	OLIA RUSINESS	ont or 18% per ye
CUSTODY I ironmental Laboratorie Braintree, MA 0218 ⁴ • f 781.848.7811 m	Da Fax Form Excel	4 0 %			SAMPLE LOCATION / ID	97-5	200	N-3	5-36	87-3		ter S = Soil 0 = Oil			F APPRECIATE Y	rge of 1.5% per m al
CHAIN OF CUSTODY RECORD GeoLabs, Inc. Environmental Laboratories 45 Johnson Lane, Braintree, MA 02184 p 781.848.7844 • f 781.848.7811 www.geolabs.com	oircle one 3-day 5 / 7-days	enghara eff MA	-		v ≼ ≅ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	4	W\ \			>		DW = Drinking Water SL = Sludge		M	THANK YOU - W	late payment cha
GHA GeoLak nc. 45 John p 781.8 www.ge	Turnaround: circle one 3-day 5 / 7-days	Kan a		COLLECTION	F- — ≅ m	1100	200	1400	05.h1	1530		ater ter	d by:		of CR.09/22/10	
Georgabs, In	1-day 2-day	Contact: A.Z.		٥	20 E T A B B	6/5	12	6/2	000	0/6		Matrix Codes: GW = Ground Water WW = Waste Water	Relinquished by:	Tank I	2010730.J&P.C	

ANALYTICAL REPORT

Tuesday, June 18, 2013

Rich MacCarthy Clean Harbors 42 Longwater Drive Norwell, MA 02061

TEL: (781) 792-5822 FAX: (781) 792-5938

Project:

Noonan Park

Location:

Order No.: 1306066

GeoLabs, Inc. 45 Johnson Lane

Braintree MA 02184

Tele: 781 848 7844

Fax: 781 848 7811

Dear Rich MacCarthy:

GeoLabs, Inc. received 1 sample(s) on 6/7/2013 for the analyses presented in the following report.

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

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

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

Sincerely,

David Mick

Laboratory Director

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

Certifications:

CT (PH-0148) - MA (M-MA015) - NH (2508) - RI (LA000252) Accredited in Accordance with NELAC

	Taring in	MassDEP A	nalytical Protocol Co	ertification Form	- 1	N. 1948 1 233.00				
	me: GeoLabs, In		Projec		<u> </u>		apar several control			
	on: Noonan-Parl		RTN:		<u></u>					
This form prov	/ides certification	for the following d	ata set: 1306066-001							
Matrices:			ter 🗵 Soil/Sediment	☐ Drinking Water ☐	Air 🗆	Other week	lourater			
CAM Protoco	I (check all that a	pply below):	<u> </u>	Difficing Water	<u> </u>	Other-wast	<u>ewater</u>			
8260 VOC CAM II A	7470/7471 Hg CAM III B □	MassDEP VPH CAM IV A □	8081 Pesicides CAM V B	7196 Hex Cr CAM VI B		MassDEP A	APH			
8270 SVOC CAM II B 🔲	7010 Metals CAM III C 🗆	MassDEP EPH CAM IV B ⊠	8151 Herbicides CAM V C	8330 Explosives CAM VIII A □		TO-15 VOC CAM IX B	7			
6010 Metals CAM III A 🛛	6020 Metals CAM III D	8082 PCB CAM V A 🗆	9014 Total Cyanide/PAC CAM VI A □	6860 Perchlorate CAM VIII B □						
Affirmative R	esponses to Que	estions A through	h F are required for "P	resumptive Certainty"	' status					
А	Were all samples properly preserved	received in a conditi d (including tempera	ion consistent with those outure) in the field or labora method holding times?	described on the Chain of tory, and prepared/analyze	Custody, ed within	⊠ Yes	□ No			
В	Were the analytic	al method(s) and all	associated QC requirement protocol(s) followed?	ents specified in the select	ted CAM	⊠ Yes	□ No			
С	Were all required protocol(s)	corrective actions ar implemented for all	nd analytical response act identified performance st	ions specified in the select andard non-conformances	ted CAM	⊠ Yes	□ No			
D	Does the laborato Assurance and C	ry report comply wit luality Control Guide	h all reporting requiremen elines for the Acquisition a	ts specified in CAM VII A, nd Reporting of Analtyical	"Quality Data"?	⊠ Yes	□No			
E	E VPH, EPH, APH and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications.) □ Yes □ No									
	b. APH and TC)-15 Methods only: \	Was the complete analyte	list reported for each met	hod?	☐ Yes	□ No			
F	evaluated in a	laboratory narrative	(including all "No" respon	d non-conformances identi ses to Questions A throug	ıh.E\ İ	⊠ Yes	□ No			
	Were the renor	and I below are	required for "Presump	ptive Certainty" status specified in the selected (2414					
G			protocol(s)?		i	⊠ Yes	□ No			
	representativ	<u>/eness requiremen</u>	ts described in 310 CMF	ay not necessarily meet R 40. 1056 (2) (k) and WS	C-07-350	usablility a).	nd			
Н	Were all Q	C performance stan	dards as specified in the (CAM protocol(s) achieved?	?	⊠ Yes	□ No ¹			
<u> </u>	Were results rep	orted for the comple	ete analyte list specified ir	the selected CAM protoc	ol(s)?	☐ Yes	⊠ No¹			
			attached laboratory nar							
those responsib	ole for obtaining ti	ne pains and penal ne information, the rate and complete.	material contained in th	d upon my personal inquis analytical report is, to	uiry of the bes	t				
Signature:	1 Cerry	Muk	Position	on: Laboratory Directo	or					
Printed Name:	David Mick		Date:	June 18, 2013						

Date: 18-Jun-13

CLIENT:

Clean Harbors

Project:

Noonan Park

Lab Order:

1306066

CASE NARRATIVE

Physical Condition of Samples

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

Project Documentation

The project was accompanied by satisfactory Chain of Custody documentation.

Analysis of Sample(s)

EPH carbon ranges and diesel targets only reported via MADEP EPH, per client request.

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

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/18/13

CLIENT:

Clean Harbors

Project:

Noonan Park

Lab Order:

1306066

CASE NARRATIVE

EPH Methods

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

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

C11-C22 Aromatic Hydrocarbons exclude concentrations of Target PAH Analytes

CERTIFICATION:

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

Were all performance/acceptance standards achieved? YES

Were any significant modifications made to the EPH method? NO

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

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/18/13

ANALYTICAL REPORT

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

Lab Order: 1306066

Noonan Park

Project: Lab ID:

1306066-001

Client Sample ID: SS-12

Collection Date: 6/6/2013 6:00:00 PM

Date Received: 6/7/2013

Matrix: SOIL

Analyst: KG

Analyst: Jsi

Analyses Result Det. Limit Qual Units DF Date Analyzed

EPH RANGES - MADEP EPH

Prep Method:	(eph_Spr)	Prep	Date: 6/10/201	3 2:57:17	PM	
Adjusted C11-C22 Aromatics	ND	16.3	mg/Kg-dry	1	6/12/2013	,
C09-C18 Aliphatics	ND	16.3	mg/Kg-dry	1	6/12/2013	
C19-C36 Aliphatics	ND	16.3	mg/Kg-dry	1	6/12/2013	
Unadjusted C11-C22 Aromatics	ND	16.3	mg/Kg-dry	1	6/12/2013	
Surr: 1-Chlorooctadecane	63.9	40-140	%REC	1	6/12/2013	
Surr: o-Terphenyl	88.2	40-140	%REC	1	6/12/2013	

EPH TARGET ANALYTES - MADEP EPH

Prep Method:	(eph_Spr)	Prep	Date: 6/10/201	3 2:57:17	PM
Naphthalene	ND	0.109	mg/Kg-dry	1	6/13/2013 1:11:00 AM
2-Methylnaphthalene	ND	0.109	mg/Kg-dry	1	6/13/2013 1:11:00 AM
Acenaphthene	ND	0.109	mg/Kg-dry	1	6/13/2013 1:11:00 AM
Phenanthrene	0.255	0.109	mg/Kg-dry	1	6/13/2013 1:11:00 AM
Total PAH Target Concentration	0.255	0.109	mg/Kg-dry	1	6/13/2013 1:11:00 AM
Surr: 2,2-Difluorobiphenyl	50.9	40-140	%REC	1	6/13/2013 1:11:00 AM
Surr: 2-Fluorobiphenyl	55.5	40-140	%REC	1	6/13/2013 1:11:00 AM

Qualifiers:

Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

S Spike Recovery outside recovery limits

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

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

ANALYTICAL QC SUMMARY REPORT

Date: 18-Jun-13

TestCode: epht_s

CLIENT: Clean Harbors

Work Order: 1306066

Project: Noonan Park

Oual %RPD RPDLimit SeqNo: 574371 SeqNo: 574372 RunNo: 50626 RunNo: 50626 LowLimit HighLimit RPD Ref Val Prep Date: 6/10/2013 Analysis Date: 6/12/2013 Analysis Date: 6/12/2013 6/10/2013 64 64 64 Prep Date: **4 4** %REC 93.5 54. Units: mg/Kg Units: mg/Kg TestNo: MADEP EPH (eph_Spr) TestNo: MADEP EPH (eph_Spr) 0 0 SPK value SPK Ref Val 5 5 TestCode: epht_s TestCode: epht_s Б 15.0 15.0 15.0 15.0 0 0 Result 9999 5.411 9.352 Batch ID: 22432 Batch ID: 22432 SampType: mblk SampType: Lcs Unadjusted C11-C22 Aromatics Adjusted C11-C22 Aromatics Surr: 1-Chlorooctadecane Sample ID: LCS-22432 Sample ID: MB-22432 Surr: o-Terphenyl C09-C18 Aliphatics C19-C36 Aliphatics 77777 Client ID: ZZZZZ Client ID: Analyte

Qual

%RPD RPDLimit

LowLimit HighLimit RPD Ref Val

%REC

SPK Ref Val

SPK value

PQ 15.0

Result

04 04 04 04 04 14 04

4 4 4

68.4

58.3

81.0

0000

5 5 5 5

0 0

6.124 12.26

15.0 15.0

일 일 일

Unadjusted C11-C22 Aromatics

C09-C18 Aliphatics C19-C36 Aliphatics

Analyte

Surr: 1-Chlorooctadecane

Surr: o-Terphenyl

61.2

123

140 140

5 6

Sample ID: LCS#2-22432 Sa	SampType: Lcsd	TestCod	TestCode: epht_s	Units: mg/Kg		Prep Dat	Prep Date: 6/10/2013	13	RunNo: 50626		
Client ID: ZZZZZ	Batch ID: 22432	TestN	lo: MADEP E	TestNo: MADEP EPH (eph_Spr)	1	Analysis Date: 6/12/2013	e: 6/12/20	13	SeqNo: 574373	1373	
Analyte	Result	Pol	SPK value	SPK value SPK Ref Val	%REC	LowLimit	HighLimit	%REC LowLimit HighLimit RPD Ref Val	%RPD	%RPD RPDLimit Qual	Qua
C09-C18 Aliphatics	QN	15.0	10	0	65.2	40	140	5.826		25	
C19-C36 Aliphatics	QN	15.0	10	0	70.6	4	140	6.836	· c	3 %	
Unadjusted C11-C22 Aromatics	QN	15.0	10	0	43.1	4	140	8.095	0	3 %	
Surr: 1-Chlorooctadecane	5.107	0	10	0	51.1	40	140	0	0	3	
Surr: o-Terphenyl	7.149	0	4	0	71.5	40	140	0	0	0	
Oualifiers: BRL Below Reporting Limit J Analyte detected below S Spike Recovery outside	Below Reporting Limit Analyte detected below quantitation limits Spike Recovery outside recovery limits	 	E Value	Value above quantitation range Not Detected at the Reporting Limit	e. Limit		H F	H Holding times for preparation or analysis exceeded R RPD outside recovery limits	oreparation or ar	nalysis exceede	pe

GeoLabs, Inc.

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

OF /				Lab Use Only TEMPERATURE B A A L	.9		0 = Other			-015)
PAGE	(s	VK		Rednested			B = Bag P = Plastic V = Voa			NH (2508) MA (MA-015) RI (LA000252)
Special Instructions	e (s) onfidence Protocol Criteria	m - f		Analysis Requ			Containers: A = Amber G = Glass S = Summa	Date / Time		NH.
16	Requirements: circle choice (s) CT RCP (Reasonable Confidence Protocols) State / Fed Program - Criteria	Project: - Nocitals Project PO:		Ar			7 = Other	2/-		(8)
4M Con	Requireme CT R State	Pro Pro	((300 P) HJ 3			5 = NaOH 6 = MEOH		g	A CT (PH-0148)
CAR	WCP Methods DEP Other	1690 2 hubor, car	Preserative:	GeoLabs SAMPLE NUMBER	100-07		ives 3 = H2SO4 4 = Na2S2O3	W.		2010730.J&P.C of CR.09/22/10 THANK YOU - WE APPRECIATE YOUR BUSINESS Ail discounting will be removed after 90 days - All Payment terms are NET 30 Days. A late payment charge of 1.5% per mont or 18% per year, together with expenses above and beyond collection costs, inclyding attoreny's fees and court costs, will be applied to balances that go beyond NET 30 days.
choice ded lo Y/N				GeoLab	200		Preservatives 1 = Hc 2 = HN03	Received by		* All Payment to collection costs, 30 days.
Handling: circle choice Done Not Needed Lab to do tion Lab to do Y / N	GW-1 S-1 QC	Phone: 781 - 793 - Fax: 781 - 871 - email: maccarchy@a	-	0	<i>j</i> 2		1 (ce			ifter 90 days and beyond eyond NET
Handlir r ation		18/2	-	∑ < ⊢ c − ×	N		Received on Ice	161	}	removed a ses above s that go be
Sample Har Filtration Preservation	choice (s)	ii: ha	PONTAINED	DD4Z-H->	-		Rec	(3)	Ţ	ting will be with expen to balance
Q	izle si	Phone: Fax: email: 4	In our	- ≻ a, ш	8	_	er	Time //3 (4/1 discoun together se applied
CHAIN OF CUSTODY RECORD GeoLabs, Inc. Environmental Laboratories 45 Johnson Lane, Braintree, MA 02184 p 781.848.7844 • f 781.848.7811 www.geolabs.com	Data Delivery: circle choice (s) ax remail conat: col col col col col col col co	all all all all all all all all all all		<u> </u>	6		A = Air OT = Other	Date / 7	† 	R BUSINESS of 18% per year sourt costs, will the
CHAIN OF CUSTODY R GeoLabs, Inc. Environmental Laboratories 45 Johnson Lane, Braintree, MA 02184 p 781.848.7844 • f 781.848.7811 www.geolabs.com	Data I Fax Format: Excel	0004		SAMPLE LOCATION / ID	33		S = Soil 0 = Oil			PRECIATE YOU 1.5% per mont and c
Environmen Environmen he, Braintre 44 • f 78	es Carte	Marke Car					DW = Drinking Water SL = Sludge	24		(YOU - WE AP
CHAIN OF C GeoLabs, Inc. Envira 45 Johnson Lane, Bt p 781.848.7844 • www.geolabs.com	circle one 3-day 5/7-days	Men		S ≪ ₹ € ¬ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	22		DW = Drinkin SL = Sludge	126		/10 THANI late pay
Geol. Geol. 45 Joh p 781 www.	Turnaround: circle one 3-day	A ich	0110	E M → ↑	1081		des: id Water 3 Water	shed by:		5 of CR.09/22
Geofahs, II	1-day 2-day	Client: C/c		2013	9/0		Matrix Codes: GW = Ground Water WW = Waste Water	Relinquished by:		2010730.J&P.C

Di.	con print or hard. (Farmy decisioned for our or after 40 classes, and the	7 C 2 A 4 a h	(* am)	TR	#2	118	.		
1	UNIFORM HAZARDOUS 1. Generator ID Number WASTE MANIFEST MP 508 587 104 6	: :	Emergency Respons		4. Manifest	Fracking I	m Approved lumber 934	_	2050-0039 -LE
	5. Generator's Name and Mailing Address J. P. NOOVAN TRANSPORTATION 415 WEST ST. WEST BRIDE WATER MA. 02379 Generator's Phone: (508) 588-8026 ATTN: BOB D. Po.	Ge	nerator's Site Address MYSTIC YA ARIINGTON	s (if different to	nan mailing address	DF•R	o st.	- '	
	6. Transporter 1 Company Name CICAN HARBORS ENVIRONMENTAL SER 7. Transporter 2 Company Name		۷.		U.S. EPAID N U.S. EPAID N	039	3 822	50	
	8. Designated Facility Name and Site Address CICAN HARBORS ENV. RONNENTAL SERV 37 RUMMERY RO. SOUTH FORTIAND ME 04106 Facility's Phone: 207 772 2201	liees tre,			U.S. EPAID N		7218	2	
	ga. 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Num and Packing Group (if any))	nber,	10. Conta	iners .	11. Total Quantity	12. Unit Wt./Vol.	T	Waste Code	**
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	16. GENERATOR'S/OFFEROR'S CERTIFICATION: hereby declare that the contents o	of this consignment are fo	ally and accurately de	scribed above	by the proper ship	pping name	a, and are clas	sified, pack	aged,
	marked and labeled/placarded, and are in all respects in proper condition for transport Exporter, I certify that the contents of this consignment conform to the terms of the attal I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a Generators/Offeror's Printed/Typed Name ON BEHALF OF J.P. PROPER BULL CAPTURE OF BRAND	ached EPA Acknowledgr a large quantity generato	nent of Consent. r) or (b) (if j.am a.esma	_	_	t export st	Mor		Year
-	16. International Shipments Import to U.S. Transporter signature (for exports only):	Export from U.S.	Port	-				4 186	13
1	17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name	Signatur	Date leavi		A 14 A		Mon		Year
	Transporter 2 Printed/Typad Name 18. Discrepancy	Signatur	e	V 212			Mon		Year
	18a. Discrepancy Indication Space Quantity Type		Residue Manifest Reference	Number:	Partial Reje	ction		Full Reje	ction
	18b. Alternate Facility (or Generator) Facility's Phone:				U.S. EPAID N.	ımber			
	 Signature of Alternate Facility (or Generator) Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste) 	treatment, disposal, and	recycling systems)		-		Mor	nth Day	Year
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Form Approved, OMB No. 2050-0039 Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 2. Page 1 of 3. Emergency Response Phone 1. Generator ID Number UNIFORM HAZARDOUS MP5085871046 (800)483-3718 **WASTE MANIFEST** Generator's Site Address (if different than mailing address) Geogrator's Name and Mailing Address
IP Noonan Transportation
415 West Street
West Bridgemater, MA 02379 Mystic Valley Plany & Medford Street Arlington, MA 02474 Generator's Phone: (508) 587-1046 U.S. EPA ID Number MAD039322250 Clean Harbors Environmental Services Inc U.S. EPA ID Number 7. Transporter 2 Company Name 8. Designated Facility Name and Site Address
Clean Harbors Env Services Inc U.S. EPA ID Number MED980872182 37 Rumery Road South Portland, ME 04106 (207) 772-2201 10. Containers 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, 11. Total 13. Waste Codes Wt./Vol. Quantity and Packing Group (if any)) Type НМ 0, NON DOT REGULATED MATERIAL, (WATER, OIL) MA98 14. Special Handling Instructions and Additional Information 1.CH640184 Reccurately described above by the proper shipping name, and are classified, packaged, adional and national governmental regulations. It export shipment and I am the Primary 15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are full marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable interne ignment conform to the terms of the attached EPA Acker Exporter, I certify that the contents of this con I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (ii) (if I am a small quantity generator) is true. 2a/Offeror's Printed/Typed Name port from U.S. Port of entry/exit: Date leaving U.S.: mature (for exports only): r Acknowledgment of Receipt of Materials Transoc 18. Discrepancy 18a, Discrepancy Indication Space Residue Partial Rejection Full Rejection Quantity Manifest Reference Number: U.S. EPA ID Number 18b. Alternate Facility (or Generator) Facility's Phone: 18c. Signature of Alternate Facility (or Generator) 19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) 20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 180 Printed/Typed Name EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

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Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC112

BILL OF LADING (pursuant to 310 CMR 40.0030)

A. LOCATION OF SITE OR DISPOSAL SITE WHERE REMEDIATION WASTE WAS GENERATED:
1. Release Name/Location Aid: INTERSECTION WITH MYSTIC VALLEY PKWY
2. Street Address 188 MEDFORD STREET
2. Street Address: Lite MEDI OND STREET
3. City/Town: ARLINGTON 4. Zip Code:
5. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site:
a. Tier 1A b. Tier 1B b. Tier 1C d. Tier II
6. If applicable provide the Permit Number:
B. THIS FORM IS BEING USED TO: (check one: B1-B4):
1. Submit a Bill of Lading (BOL) to transport Remediation Waste to Temporary Storage or a Receiving Facility. Response Actions associated with this BOL (check all that apply):
a. Immediate Response Action (IRA)
b. Release Abatement Measure (RAM) f Limited Removal Action (LRA): (must be retained pursuant to 310 CMR
c. Downgradient Property Status (DPS) 40.0034(6); can't be submitted via eDEP)
d. Utility Release Abatement Measure (URAM) g. Other
 2. Submit an Attestation of Completion of Shipment to Temporary Storage (Sections C, F and J are not required): 3. Submit an Attestation of Completion of Shipment to a Receiving Facility (Sections C, F and J are not required): 4. Certify that Remediation Waste Was Not Shipped, and the Bill of Lading is Void. (Sections C, D, E, and F are not required) 5. Date Bill of Lading submitted to the Department:
6. Period of Generation Associated with this Bill of Lading (mm/dd/yyyy) to 6/10/2013 (mm/dd/yyyy)
(All sections of this transmittal form must be filled out unless otherwise noted) The Bill of Lading is not considered complete until the Attestation of Completion of Shipment is received by the Department.
C. DESCRIPTION OF WASTE AND WASTE SOURCE: 1. Contaminated Media /Debris (check all that apply):



Massachusetts Department of Environmental Protection

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Release Tracking Number

BILL OF LADING (pursuant to 310 CMR 40.0030)

C. DESCRIPTION OF WASTE AND WASTE SOURCE (CONT.):
3. Containerized Waste (check all that apply):
a. Tank Bottoms/Sludges b. Containers c. Drums d. Engineered Impoundments
e. Other:
4. Estimated Quantity: Tons Cu. Yds. Gallons
5. Contaminant Source (check one):
a. Transportation Accident b. Underground Storage Tank c. Brownfields Redevelopment
d. Other:
6. Type of Contaminant (check all that apply):
a. Gasoline b. Diesel Fuel C. #2 Fuel Oil d. #4 Fuel Oil e. #6 Fuel Oil f. Jet Fuel
g. Waste Oil h. Kerosene i. Chlorinated Solvents j. Urban Fill k. Other:
7. Constituents of Concern (check all that apply):
a. As b. Cd c. Cr d. Pb e. Hg √ f. EPH/TPH g. VPH
h. PCBs i. VOCs j. SVOCs k. Other:
8. If applicable, check the box for the Reportable Concentration Category of the site:
a. RCS-1 b. RCS-2 c. RCGW-1 d. RCGW-2
9. Remediation Waste Characterization Documentation (check at least one):
a. Site History Information b. Sampling Analytical Methods and Procedures c. Laboratory Data
d. Field Screening Data e. Characterization Documentation previously submitted to the Department
i. Date submitted: ii. Type of Documentation:
(mm/dd/yyyy)
D. TRANSPORTER OR COMMON CARRIER INFORMATION:
1. Transporter/Common Carrier Name: CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.
2. Contact First Name: FRANK 3. Last Name: PHILLION
4. Street: 609 PLEASANT STREET 5. Title: SUPERVISOR
6. City/Town: WEYMOUTH 7. State: MA 8. Zip Code: 02189-0000
9. Telephone: (781) 803-4132 10. Ext: 11. Fax:



Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

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- 31576

E. RECEIVING FACILITY/TEMPORARY STORAGE LOCATION:
1. Operator/Facility Name ENVIRONMENTAL SOIL MANAGEMENT, INC.
2. Contact First Name: STEPHEN 3. Last Name: RAPER
4. Street: 67 INTERNATIONAL DRIVE 5. Title: COMPLIANCE MANAGER
6. City/Town: LOUDON 7. State: NH 8. Zip Code: 03307-0000
9. Telephone: (603) 783-0228 10. Ext: 11. Fax: (603) 783-0104
12. Type of Facility: (Check one)
a. Temporary Storage i. Period of Temporary Storage: to to
ii. Reason for Temporary Storage:
b. Asphalt Batch/Hot Mix . c. Landfill/Disposal . d. Landfill/Structural Fill . e. Landfill/Daily Cover
f. Asphalt Batch/Cold Mix 🗸 g. Thermal Processing 🗌 h. Incinerator 📗 i. Other:
13. Division of Hazardous Waste/Class A Permit Number:
14. Division of Solid Waste Permit Number: DES-SW-SP-96-002
15. EPA Identification Number: NH5986485852
F. LSP SIGNATURE AND STAMP: I attest under the pains and penalties of perjury that I have personally examined and am familiar with this submittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief, the assessment action(s) undertaken to characterize the Remediation Waste which is (are) the subject of this submittal for acceptance at the facility identified in this submittal comply with applicable provisions of 310 CMR 40.0000, and such facility is permitted to accept Remediation Waste having the characteristics described in this submittal.
I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.
1. LSP #: 8959
2. First Name: ANTHONY M 3. Last Name: DELTUFO
4. Telephone: (781) 792-5819 5. Ext. 6. FAX: (781) 792-5938 Electronic
7. Signature: ANTHONY M DELTUFO 8. Date: 6/6/2013
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Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC112

BILL OF LADING (pursuant to 310 CMR 40.0030)

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G. PERSON SUBMITTING BILL OF LADING:	shange in person
1. Check all that apply: a. change in contact hame b. change in contact ham b. change in change in contact ham b. change in	change in person undertaking response actions
2. Name of Organization: J.P. NOONAN TRANSPORTATION, INC.	
3. Contact First Name: ROBERT 4. Last Name: DUPUIS	
5. Street: 415 WEST STREET 6. Title: SAFETY DI	RECTOR
7. City/Town: WEST BRIDGEWATER 8. State: MA 9. Zip Code:	02379-0000
10. Telephone: (508) 588-8026 11. Ext: 12. Fax:	
H. RELATIONSHIP TO SITE OF PERSON SUBMITTING BILL OF LADING:	ck here to change relationship
1. RP or PRP: a. Owner b. Operator c. Generator d. Transporter	
e. Other RP or PRP Specify:	0)-
2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c.21E, s.2	2):
3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c.21E, s.5(j))	
4. Any Other person Undertaking Response Actions: Specify Relationship:	
I. REQUIRED ATTACHMENTS AND SUBMITTALS :	
 Check here if the Response Action(s) on which this opinion is based, if any, are (were) subpermit(s) and/or approvals issued by DEP or EPA. If the box is checked, you must attach a sapplicable provisions thereof. 	state mont lachtarying and
2. Check here if any non-updatable information provided on this form is incorrect, e. g. proper BWSC.eDEP@state.ma.us	rty address. Send corrections to
3. Check here to certify that the LSP Opinion containing the material facts, data, and other in	formation is attached.
J. CERTIFICATION OF PERSON SUBMITTING BILL OF LADING :	
ANTHONY DELTIEO attest under the pains and penalties or pe	erjury (i) that I have personally
1.1,	cuments accompanying this
transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible to obtain	curate and complete, and (iii)
I	Subitition if the person of
entity on whose behalf this submittal is made am/is aware that there are significant penalties, inclu- possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information	unig, but not inition to,
2. By: ANTHONY DELTUFO 3. Title: AGENT	
6/6/2013	
4. For J.P. NOONAN TRANSPORTATION, INC. (Name of person or entity recorded in Section H) 5. Date: 6/6/2013	(mm/dd/yyyy)

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Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

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BILL OF LADING (pursuant to 310 CMR 40.0030)

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J. CERTIFICATION OF PERSON SUBMITTING BILL OF LADING (cont.):
6. Check here if the address of the person providing certification is different from address recorded in Section H.
7. Street: 42 LONGWATER DRIVE
8. City/Town: NORWELL 9. State: MA 10. Zip Code: 02061-9149
11. Telephone: (781) 792-5819 12. Ext. 13. Fax: (781) 871-0690
YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.
Date Stamp (MassDEP USE ONLY):
Received by DEP on 6/6/2013 4:14:37 PM



J.P. NOONAN TRANSPORTATION, INC.

415 WEST STREET · P.O. BOX 400 WEST BRIDGEWATER, MA 02379-0400

TEL (508) 588-8026 FAX (508) 587-2876

September 6, 2011

Mr. Anthony M. DelTufo, LSP Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061

Re: Agent Authorization for DEP Submittals

Dear Mr. DelTufo:

On behalf of J.P. Noonan Transportation, Inc. (J.P. Noonan), I authorize Clean Harbors Environmental Services, Inc. (CHES) representatives to sign Massachusetts Department of Environmental Protection (DEP) Bureau of Waste Site Cleanup (BWSC) transmittal forms, bills of lading and/or uniform hazardous waste manifests, as Agent for J.P. Noonan, when I am unable to do so. This authorization is in accordance with Section 310 CMR 40.0009(2) of the Massachusetts Contingency Plan. I also authorize CHES to make electronic submittals of DEP documents. I understand that J.P. Noonan remains fully liable under federal and state laws and regulations with regard to Certifications of Person Undertaking Response Actions contained in the DEP transmittal forms as the generator and responsible party, and that CHES would be signing solely for our convenience.

Authorized Representative

m'at.

Sincerely

OF SAFETY



Remedial Investigations
42 Longwater Drive

Norwell, MA 02061 (781) 792-5000

http://www.cleanharbors.com/

BILL OF LADING SUPPORT DOCUMENTATION

No. 2 FUEL OIL RELEASE MYSTIC VALLEY PARKWAY AT MEDFORD STREET ARLINGTON, MASSACHUSETTS

DEP Release Tracking Number: 3-31576

Background

On May 31, 2013, Clean Harbors Environmental Services, Inc. (CHES) was contracted by J.P. Noonan. Transportation, Inc. (JP Noonan) to perform an Immediate Response Action (IRA) after a release of virgin No. 2 fuel oil from a tanker truck at the intersection of Mystic Valley Parkway and Medford Street in Arlington, Massachusetts (site). The truck overturned at the rotary at the intersection of the two streets, spilling its load of fuel oil. The IRA involved the recovery of oil from the Mystic River, the use of absorbent material to contain the release and the removal of soils and other media that were impacted by the release. Verbal approval has been received from MADEP to remove up to 50 cubic yards of soil during the IRA. The site is located within a residential area and, as such, no contaminants are suspected at the site other than the released virgin No. 2 fuel oil. As such, the soils are suitable for shipment to the Environmental Soil Management, Inc. (ESMI) thermal processing facility located in Loudon, New Hampshire for treatment and recycling.

Remediation Waste Characterization

Soils have been characterized as being impacted by virgin No. 2 fuel oil due to a spill which occurred due to a traffic accident involving a tanker truck carrying a load of No. 2 fuel oil.

Statement of Provisions

The spill occurred as the result of an traffic accident involving a tanker truck, and verbal approval was obtained from MADEP to complete the IRA activities described herein.



Massachusetts Department of Environmental Protection

Bureau of Waste Site Cleanup

BWSC112

BILL OF LADING (pursuant to 310 CMR 40.0030)

A. LOCATION OF SITE OR DISPOSAL SITE WHERE REMEDIATION WASTE WAS GENERATED:
Release Name/Location Aid: INTERSECTION WITH MYSTIC VALLEY PKWY
188 MEDFORD STREET
2. Street Address:L
3. City/Town: ARLINGTON 4. Zip Code:
5. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site:
a. Tier 1A b. Tier 1B b. Tier 1C d. Tier II
6. If applicable provide the Permit Number:
B. THIS FORM IS BEING USED TO: (check one: B1-B4):
Submit a Bill of Lading (BOL) to transport Remediation Waste to Temporary Storage or a Receiving Facility. Response Actions associated with this BOL (check all that apply):
a. Immediate Response Action (IRA)
b. Release Abatement Measure (RAM) f Limited Removal Action (LRA): (must be retained pursuant to 310 CMR
c. Downgradient Property Status (DPS) 40.0034(6); can't be submitted via eDEP)
d. Utility Release Abatement Measure (URAM) g. Other
 2. Submit an Attestation of Completion of Shipment to Temporary Storage (Sections C, F and J are not required): ✓ 3. Submit an Attestation of Completion of Shipment to a Receiving Facility (Sections C, F and J are not required): ✓ 4. Certify that Remediation Waste Was Not Shipped, and the Bill of Lading is Void. (Sections C, D, E, and F are not required) 5. Date Bill of Lading submitted to the Department: 6/6/2013 4:14:37 F (mm/dd/yyyy)
6. Period of Generation Associated with this Bill of Lading 6/1/2013 to 6/10/2013 (mm/dd/yyyy)
(All sections of this transmittal form must be filled out unless otherwise noted) The Bill of Lading is not considered complete until the Attestation of Completion of Shipment is received by the Department.
C. DESCRIPTION OF WASTE AND WASTE SOURCE: 1. Contaminated Media /Debris (check all that apply): a. Soil b. Groundwater c. Surface Water d. Sediment e. Vegetation or Organic Debris f. Demolition/Construction Waste g. Inorganic Absorbent Materials h. Other:
a. Inorganic Absorbent Materials b. Other:



Massachusetts Department of Environmental Protection

Bureau of Waste Site Cleanup

BILL OF LADING (pursuant to 310 CMR 40.0030)

BWSC112

Release Tracking Number

- 31576

C. DESCRIPTION OF WASTE AND WASTE SOURCE (cont.):
3. Containerized Waste (check all that apply):
a. Tank Bottoms/Sludges b. Containers c. Drums d. Engineered Impoundments
e. Other:
4. Estimated Quantity: Tons Cu. Yds. Gallons
5. Contaminant Source (check one):
a. Transportation Accident 🔲 b. Underground Storage Tank 🔲 c. Brownfields Redevelopment
d. Other:
6. Type of Contaminant (check all that apply):
a. Gasoline b. Diesel Fuel c. #2 Fuel Oil d. #4 Fuel Oil e. #6 Fuel Oil f. Jet Fuel
g. Waste Oil h. Kerosene i. Chlorinated Solvents j. Urban Fill k. Other:
7. Constituents of Concern (check all that apply):
a. As b. Cd c. Cr d. Pb e. Hg f. EPH/TPH g. VPH
h. PCBs i. VOCs j. SVOCs k. Other:
8. If applicable, check the box for the Reportable Concentration Category of the site: a. RCS-1 b. RCS-2 c. RCGW-1 d. RCGW-2
9. Remediation Waste Characterization Documentation (check at least one):
a. Site History Information b. Sampling Analytical Methods and Procedures c. Laboratory Data
d. Field Screening Data e. Characterization Documentation previously submitted to the Department
i. Date submitted: ii. Type of Documentation:

D. TRANSPORTER OR COMMON CARRIER INFORMATION:

2. Contact First Name: FRANK 3. Last Name: PHILLION	
4. Street: 609 PLEASANT STREET 5. Title: SUPERVISO	DR

6. City/Town: WEYMOUTH 7. State: MA 8. Zip Code: 02189-0000
9. Telephone: (781) 803-4132 10. Ext: 11. Fax:



Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC112

Release Tracking Number

3	-	31576
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BILL OF LADING (pursuant to 310 CMR 40.0030)

RECEIVING FACILITY/TEMPORARY STORAGE LOCATION:
1. Operator/Facility Name ENVIRONMENTAL SOIL MANAGEMENT, INC.
2. Contact First Name: STEPHEN 3. Last Name: RAPER
4. Street: 67 INTERNATIONAL DRIVE 5. Title: COMPLIANCE MANAGER
6. City/Town: LOUDON 7. State: NH 8. Zip Code: 03307-0000
9. Telephone: (603) 783-0228 10. Ext: 11. Fax:
12. Type of Facility: (Check one)
a. Temporary Storage i. Period of Temporary Storage: to (mm/dd/yyyy) (mm/dd/yyyy)
ii. Reason for Temporary Storage:
b. Asphalt Batch/Hot Mix c. Landfill/Disposal d. Landfill/Structural Fill e. Landfill/Daily Cover
f. Asphalt Batch/Cold Mix 🗸 g. Thermal Processing 🔲 h. Incinerator 🔲 i. Other:
13. Division of Hazardous Waste/Class A Permit Number:
14. Division of Solid Waste Permit Number: DES-SW-SP-96-002
15. EPA Identification Number: NH5986485852
F. LSP SIGNATURE AND STAMP: I attest under the pains and penalties of perjury that I have personally examined and am familiar with this submittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief, the assessment action(s) undertaken to characterize the Remediation Waste which is (are) the subject of this submittal for acceptance at the facility identified in this submittal comply with applicable provisions of 310 CMR 40.0000, and such facility is permitted to accept Remediation Waste having the characteristics described in this submittal. I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete. 1. LSP #: 2. First Name: 3. Last Name: 4. Telephone: 5. Ext. 6. FAX: 7. Signature: 9. LSP Stamp:
(mm/dd/yyyy)



Revised: 03/10/2010

Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC112

BILL OF LADING (pursuant to 310 CMR 40.0030)

3 -	31576
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G. PERSON SUBMITTING BILL OF LADING:
Check all that apply: a. change in contact name b. Change of address c. change in person undertaking response actions
2. Name of Organization: JP NOONAN TRANSPORTATION INC
3. Contact First Name: BOB 4. Last Name: DUPUIS
5. Street: PO BOX 400 415 WEST ST 6. Title: DAFETY MANAGER
7. City/Town: WEST BRIDGEWATER 8. State: MA 9. Zip Code: 02379-1030
10. Telephone: (508) 588-8026 11. Ext: 12. Fax:
H. RELATIONSHIP TO SITE OF PERSON SUBMITTING BILL OF LADING: Check here to change relationship
✓ 1. RP or PRP: a. Owner b. Operator c. Generator d. Transporter
e. Other RP or PRP Specify: NON-SPECIFIED PRP
2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c.21E, s.2):
3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c.21E, s.5(j))
4. Any Other person Undertaking Response Actions: Specify Relationship:
I. REQUIRED ATTACHMENTS AND SUBMITTALS :
1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approvals issued by DEP or EPA. If the box is checked, you must attach a statement identifying the applicable provisions thereof.
2. Check here if any non-updatable information provided on this form is incorrect, e. g. property address. Send corrections to BWSC.eDEP@state.ma.us
3. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.
J. CERTIFICATION OF PERSON SUBMITTING BILL OF LADING :
1. I,
2. By:
4. For 5. Date:
(Name of person or entity recorded in Section H) (mm/dd/yyyy)

Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC112

BILL OF LADING (pursuant to 310 CMR 40.0030)

3 -	31576
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J. CERTIFICATION OF PERSON SUBMITTING BILL OF LADING (cont.) :
6. Check here if the address of the person providing certification is different from address recorded in Section H.
7. Street:
8. City/Town: 9. State: 10. Zip Code:
11. Telephone: 12. Exti 13. Fax:
YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.
Date Stamp (MassDEP USE ONLY):
Received by DEP on 7/3/2013 10:39:20 AM

Massachusetts Department of Environmental Protection

Bureau of Waste Site Cleanup

BWSC112A

BILL OF LADING (pursuant to 310 CMR 40.0030)

SUMMARY	OF SHIPMENT SHEET 1	OF 1	3 - 31576
A. SUMMARY OF SHIPMENT	(To be filled out by the receiving	g facility upon receipt of Remediati	on Waste):
Date of Shipment: (mm/dd/yyyy)	Date of Receipt: (mm/dd/yyyy)	3. Number of Loads Shipped:	4. Daily Volume Shipped: yds³ √tons gals
6/10/2013	6/10/2013	2.00	36.99
6/11/2013	6/11/2013	1.00	16.66

6/10/2013	6/10/2013	2.00	36.99
6/11/2013	6/11/2013	1.00	16.66
5. Totals Recorded on this Summary of Shipment Sheet:		3.00	53.65
B. Check here if additional BWSC112A BOL Summary Sheets are needed.			



Revised: 03/10/2010

Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC112B

Release Tracking Number

- 31576

BILL OF LADING (pursuant to 310 CMR 40.0030) SUMMARY SHEET SIGNATURE PAGE

A. ACKNOWLEDGEMENT OF RECEIPT OF REMEDIAT	ION WASTE AT RECEIVIN	G FACILITY OR TEMPORARY STORAGE:		
1.I, STEPHEN RAPER		penalties or perjury (i) that I have personally		
examined and am familiar with the information contained transmittal form, (ii) that, based on my inquiry of those in	ndividuals immediately respond	onsible for obtaining the information, the		
material information contained in this submittal is, to the that I am fully authorized to make this attestation on beh	best of my knowledge and	belief, true, accurate and complete, and (iii)		
entity on whose behalf this submittal is made am/is awa	re that there are significant	penalties, including, but not limited to,		
possible fines and imprisonment, for willfully submitting	ialse, maccurate, or incomp	ete information.		
2. By: STEPHEN RAPER	3. Title:	COMPLIANCE MANAGER		
4. For: ESMI	5. Date	7/1/2013		
C. Data of Final Chinmont accordated with this Bill of Lad	ina: 6/11/2013	(mm/dd/yyyy)		
6. Date of Final Shipment associated with this Bill of Ladi	(mm/dd/yyyy			
B. ACKNOWLEDGEMENT OF SHIPMENT AND RECEI	DT OF DEMEDIATION WAS	STE BY DERSON CONDUCTING RESPONSE		
ACTIONS ASSOCIATED WITH THIS BILL OF LADING:	FI OF ALMIEDIATION WA	TE BY TENGON CONDOCTING TIEST CHOE		
1.1, ANTHONY DELTUFO		(2) 11 - 11 12 - 12 - 12 - 12 - 12 - 12 -		
examined and am familiar with the information contained		penalties or perjury (i) that I have personally any and all documents accompanying this		
transmittal form, (ii) that, based on my inquiry of those in material information contained in this submittal is, to the	dividuals immediately respo	nsible for obtaining the information, the		
that I am fully authorized to make this attestation on behi	alf of the entity legally respo	nsible for this submittal. I/the person or		
entity on whose behalf this submittal is made am/is awar possible fines and imprisonment, for willfully submitting f	e that there are significant p	enalties, including, but not limited to,		
ANTHONY DELTHEO	aise, maccurate, or meomph	ACENT		
z. by.				
4. For: JP NOONAN TRANSPORTATION INC	5. Date			
(Name of person or entity recorded in Section G (mm/dd/yyyy)				
6. Check here if the address of the person providing of	ertification is different from	address recorded in BWSC112 Section H.		
7. Street: 42 LONGWATER DRIVE				
8. City/Town: NORWELL	9. State	10. Zip Code: 02061-9149		
11. Telephone: (781) 792-5819		Fax: (781) 871-0690		
14. Check here if attaching optional supporting document	nentation such as copies of	Load Information Summary Sheets		



Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061-9149 Phone: 781-792-5000

Fax: 781-792-5938 www.cleanharbors.com

July 25, 2013

Mr. Adam W. Chapdelaine Arlington Town Manager 730 Massachusetts Avenue Arlington, Massachusetts 02476

Mr. Edward M. Lambert Jr., Commissioner Mass Department of Conservation and Recreation 251 Causeway Street, Suite 900 Boston, Massachusetts 02114-2104

Re: Informational Notice of Environmental Sampling and Laboratory Report Transmittal

No. 2 Fuel Oil Release

188 Medford Street at Mystic Valley Parkway

Arlington, Massachusetts

DEP Release Tracking No.: 3-31576

Dear Sirs:

On behalf of J.P. Noonan Transportation, Inc., Clean Harbors Environmental Services, Inc. (CHES) is submitting this Notice of Environmental Sampling (BWSC123) and transmittal of laboratory data. On May 31, 2013, a release of approximately 9,600 gallons of No. 2 fuel oil occurred at the above-referenced location due to a truck rollover. Clean Harbors Environmental Services, Inc. (CHES) conducted Immediate Response Actions in accordance with the Massachusetts Contingency Plan (MCP). These actions included cleaning the pavement and storm water drainage system, recovery of fuel from the Mystic River, surface water sampling and removal of impacted soils adjacent to the roadway and at locations adjacent to the river between the Medford Street and River Street bridges.

The attached preliminary Site Sketch, Aerial Photograph and Sampling Plan show the sample locations, and copies of the laboratory analytical results are attached. Further discussion regarding the analytical results will be available in the Immediate Response Action (IRA) Plan, to be submitted electronically to the Massachusetts Department of Environmental Protection (DEP) on or before July 30, 2013. The IRA Plan can be downloaded from the DEP website at http://public.dep.state.ma.us/wsc_viewer/main.aspx by entering the DEP Release Tracking Number referenced above. No action other than the receipt of this letter is necessary by your office.

If you have any questions regarding this notice, please feel free to contact the undersigned at 781-792-5822.

Sincerely, Richard E. MacCanthy

Senior Remedial Engineer

Cc:

Cori Beckwith (via email) Town of Arlington ConCom, 730 Mass Ave., Arlington, MA 02476

Alicia Hunt (via email) City of Medford ConCom 85 George P. Hassett Dr., Medford, MA 02155

Bob Dupuis (via email) 415 West Street West Bridgewater, MA 02379

Project file EO5401971

NOTICE OF ENVIRONMENTAL SAMPLING



As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

3	
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31576

		0 01010
A. The address of the disposal site related to	this Notice and Release Tracking Nur	mber (provided above):
Street Address: 188 Medford Street	1 AMARIAN CONTRACTOR	
City/Town: Arlington	Zip Code: <u>02474-3114</u>	
B. This notice is being provided to the following	ng party:	
Name: Town of Arlington		
2. Street Address: 730 Massachusetts Avenue		
City/Town: Arlington	Zip Code: <u>02476</u>	
C. This notice is being given to inform its reci	pient (the party listed in Section B):	
1. That environmental sampling will be/ha	s been conducted at property owned by	the recipient of this notice.
2. Of the results of environmental sampling	g conducted at property owned by the r	ecipient of this notice.
3. Check to indicate if the analytical resul		cked, the analytical results from
D. Location of the property where the environ	mental sampling will be/has been cor	nducted:
Street Address: 188 Medford Street	HARDWAY SHIP	
City/Town: Arlington 2	Zip Code: <u>02474-3114</u>	
2. MCP phase of work during which the sampling	will be/has been conducted:	
☑ Immediate Response Action	Phase III Feasibility Evaluation	_
☐ Release Abatement Measure ☐ Utility-related Abatement Measure	Phase IV Remedy Implementation Phase V/Remedy Operation Statu	
☐ Phase I Initial Site Investigation ☐ Phase II Comprehensive Site Assessment	Post-Class C Operation, Maintena Other	ance and Monitoring
Description of property where sampling will be/	(specify)	
☐ residential ☐ commerical ☐ i		7l∩ther roadwav
Description of the sampling locations and types		(specify)
4. Description of the sampling locations and types	s (e.g., soil, groundwater) to the extent h	thown at the time of this hotice.
Soil Samples collected in front of Bank building in landscaped	areas along sidewalk, under sidewalk and in grass	sy area along curb east of Bank driveway.
E O what is formed in the late the second	1.1	
E. Contact information related to the party proceedings Contact Name: Bob Dupuis	viding this notice:	
Street Address: 415 West Street		
City/Town: West Bridgewater, MA	Zip Code: 02379	
Telephone: (508) 588-8026	Email:	

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

NOTICE OF ENVIRONMENTAL SAMPLING



As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

31576

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):
Street Address: 188 Medford Street
City/Town: Arlington Zip Code: 02474-3114
B. This notice is being provided to the following party:
1. Name: Edward Lambert
2. Street Address: 251 Causeway Street, Suite 900
City/Town: Boston Zip Code: 02114-2104
C. This notice is being given to inform its recipient (the party listed in Section B):
1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.
2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
√ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)
D. Location of the property where the environmental sampling will be/has been conducted:
1. Street Address: 188 Medford Street
City/Town: Arlington Zip Code: 02474-3114
2. MCP phase of work during which the sampling will be/has been conducted:
 ✓ Immediate Response Action ☐ Release Abatement Measure ☐ Utility-related Abatement Measure ☐ Phase I Remedy Implementation Plan ☐ Phase V/Remedy Operation Status ☐ Phase I Initial Site Investigation ☐ Phase I Comprehensive Site Assessment ☐ Other ☐ (specify)
3. Description of property where sampling will be/has been conducted:
residential commerical industrial school/playground Other road and parkway (specify)
4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.
Soil Samples collected in front of Bank building in landscaped areas along sidewalk, under sidewalk, and along river between Medford and River Street bridges.
E. Contact information related to the party providing this notice: Contact Name: Bob Dupuis
Street Address: 415 West Street
City/Town: West Bridgewater, MA Zip Code: 02379
Telephone: (508) 588-8026

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

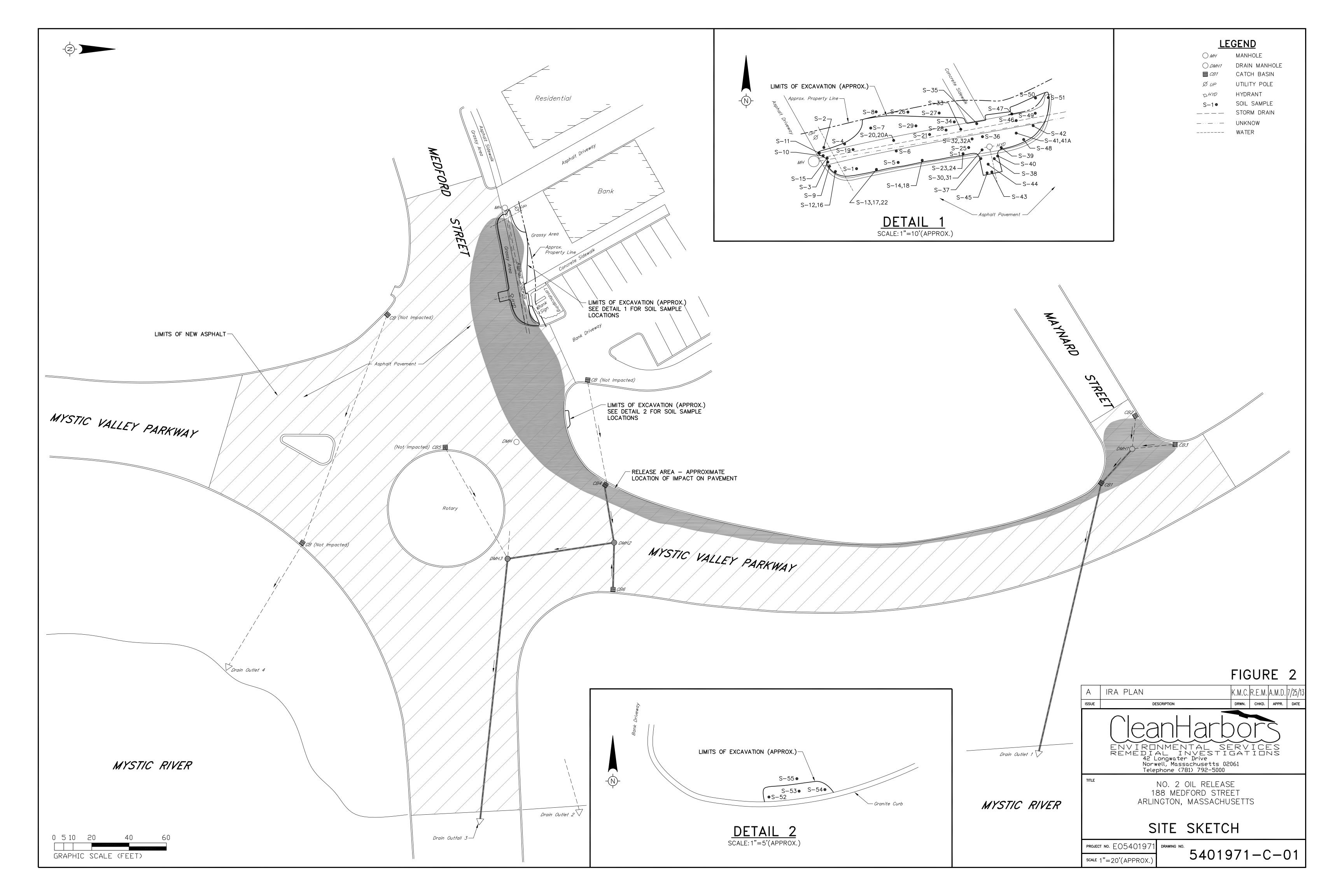
When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

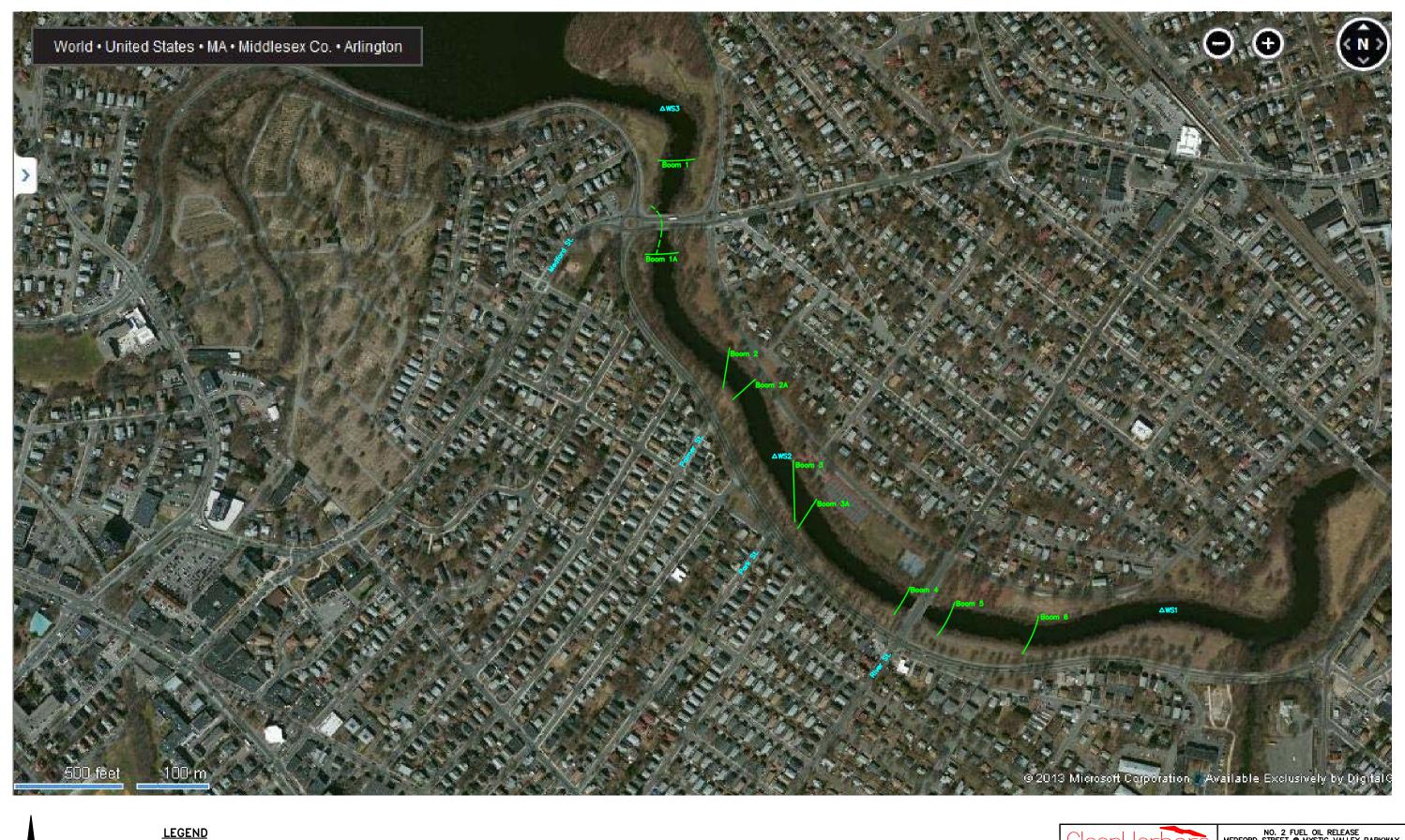
Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.





CONTAINMENT BOOM

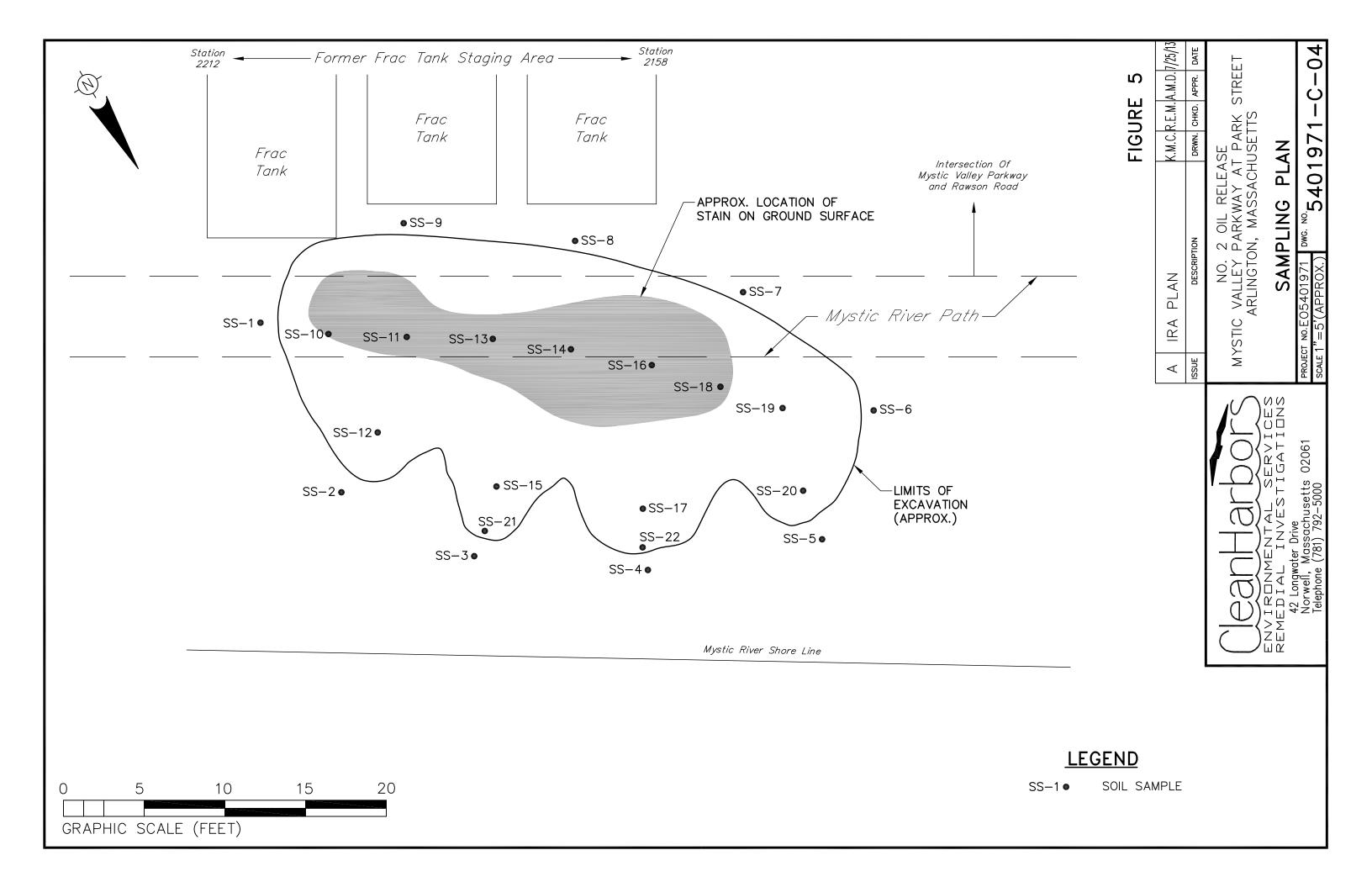
FIGURE 3 K.M.C. R.E.M. S.J.A. 7/25/13 DRWN, CHKD, APPR, DATE A IRA PLAN

NO. 2 FUEL OIL RELEASE MEDFORD STREET @ MYSTIC VALLEY PARKWAY ARLINGTON, MASSACHUSETTS

AERIAL PHOTOGRAPH

PROJECT NO. E05401971
SOLE AS NOTED

DWG. NO. 5401971 — C — 0.3



Monday, June 17, 2013

Rich MacCarthy Clean Harbors 42 Longwater Drive Norwell, MA 02061 GeoLabs, Inc. 45 Johnson Lane Braintree MA Tele: 781 848 7844 Fax: 781 848 7811

TEL: (781) 792-5822 FAX: (781) 792-5938

Project:

Location:

Noonan-Arlington

Order No.: 1306012

Dear Rich MacCarthy:

GeoLabs, Inc. received 3 sample(s) on 6/4/2013 for the analyses presented in the following report.

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

Report is being re-issued with additional comments on Case Narrative. Analytical methods and results meet requirements of 310CMR 40.1056(J) as per MADEP Compendium of Analytical Methods (CAM).

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

David Mick

Sincerely.

Laboratory Director

For current certifications, please visit our website at Certifications:

CT (PH-0148) - MA (M-MA015) - NH (2508) - RI (LA000252) Accredited in Accordance with

. 1 € 1 € 1 N E	MassDEP Analytical Protocol Certification Form							
Laboratory Na	ame: GeoLabs, In	1C.		Projec		Child Many		
Project Locati	ion: Noonan-Arlin	igton		RTN:				
This form prov	vides certification	for the followi	ing dat	a set: 1306012 (001-0	003)			
Matrices:	⊠ Ground	dwater/Surface			□ Drinking Water □	Air 🖂	Other week	
· r	7 (oneon all triat a	pply below):	<u> </u>		J Dilliming vacci L	All L	Utner-wasi	tewater
8260 VOC CAM II A 🔲	CAM III B	MassDEP VPI CAM IV A	X	8081 Pesicides CAM V B	7196 Hex Cr CAM VI B		MassDEP A	APH
8270 SVOC CAM II B 🔲	7010 Metals CAM III C	MassDEP EPH CAM IV B	H 区	8151 Herbicides CAM V C □	8330 Explosives CAM VIII A □		TO-15 VOC CAM IX B	গ
6010 Metals CAM III A □	6020 Metals CAM III D 🔲	8082 PCB CAM V A		9014 Total Cyanide/PAC CAM VI A □	6860 Perchlorate CAM VIII B			
Affirmative Re	esponses to Qui	estions A thr	ough I	F are required for "P	resumptive Certainty"	" status		
A	Were all samples a properly preserved	received in a co d (including tem	ondition nperatur me	n consistent with those de tre) in the field or laborate ethod holding times?	lescribed on the Chain of tory, and prepared/analyze	Custody, ed within	☑ Yes	□ No
В	Were the analytica	al method(s) an	ıd all as pr	ssociated QC requirement rotocol(s) followed?	ents specified in the select	ed CAM	⊠ Yes	□ No
С	Were all required (protocol(s)	corrective action implemented for	ns and or all ide	analytical response action	ions specified in the select andard non-conformances	ted CAM	⊠ Yes	□ No
D	Does the laborator Assurance and Q	y report compluality Control C	y with a Suidelin	ıll reporting requirement ies for the Acquisition ar	is specified in CAM VII A, and Reporting of Analtyical	"Quality Data"?	⊠ Yes	□ No
E	VPH, EPH, APH a. VPH, EPH	and TO-15 only I, and APH Meth	y: thods on	nlv: Was each method co	conducted without signification of signification	ont	⊠ Yes	□ No
							☐ Yes	□ No
					list reported for each meth			<u> </u>
	Cvaluated in a li	ianoratory rigita	auve und	ICIUOINO All "No" responsa	non-conformances identi- ses to Questions A through	.L -\	⊠ Yes	□ No
G G	Were the repor	ting limits at or	below a	all CAM reporting limits :	tive Certainty" status specified in the selected C	~^^ T		
				protocol(s)2	ay not necessarily meet		⊠ Yes	□ No
	representativ	eness requirer	ments c	aescripea in 310 CMR i	40. 1056 (2) (k) and W9(C-07-250	usablility ar	nd
<u>H</u>	Were all QC	performance s	standar	ds as specified in the C/	AM protocol(s) achieved?	,		⊠ No¹
All negative re	Were results repr	orted for the co	mplete	analyte list specified in	the selected CAM protoco	ol(s)?	□ Yes	⊠ No¹
the undersigne	ed. attest under th	addresseu III	an au	tached laboratory narra	<i>ative.</i> I upon my personal inqu			
nose responsib	ble for obtaining the e and belief, accur	ie informátion,	, the ma	yor perjury that, baseu aterial contained in this	d upon my personal inquis analytical report is, to	iry of the best	t	
Signature:	1 Janie	/ 1Vh	<i>I_</i>	Position	n: Laboratory Directo			
Printed Name:_	David Mick			Date:	June 17, 2013	<u>-</u>		

Date: 17-Jun-13

CLIENT:

Clean Harbors

Project:

Lab Order:

1306012

CASE NARRATIVE

Physical Condition of Samples

The project was received by the laboratory in satisfactory condition. The sample(s) were received undamaged, in appropriate containers with the correct preservation, with the following exception: Samples were unpreserved, but brought directly from the field.

Project Documentation

The project was accompanied by satisfactory Chain of Custody documentation.

Analysis of Sample(s)

Carbon ranges and diesel targets only analyzed via MADEP EPH method, per client request.

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

VPH LCSD RPD % Recovery for Naphthalene is outside of recovery limits.

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/17/13

CLIENT:

Clean Harbors

Project:

Lab Order:

1306012

CASE NARRATIVE

EPH Methods

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

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

C11-C22 Aromatic Hydrocarbons exclude concentrations of Target PAH Analytes

CERTIFICATION:

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

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

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/17/13

CLIENT:

Clean Harbors

Project:

Lab Order:

1306012

CASE NARRATIVE

VPH Methods

Method for Ranges: MADEP VPH 04-1.1

Method for Target Analytes: MADEP VPH 04-1.1

Soil sample(s) were received in MeOH and soil was completely covered by MeOH.

Soil sample(s) ratio 1:1 +/- 25%

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

C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range. (MTBE, Benzene, Toluene)

C9-C12 Aliphatic Hydrocarbons exclude concentration of Target Analytes eluting in that range (Ethylbenzene, m&p-Xylenes, o-Xylene) AND concentration of C9-C10 Aromatic Hydrocarbons.

CERTIFICATION

Were all QA/QC procedures REQUIRED by the VPH Method followed? YES Were all QA/QC performance/acceptance standards achieved? NO (See Case Narrative) Were any significant modifications made to the VPH method, as specified in Sec. 11.3? NO

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

SIGNATURE:

POSITION: LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/17/13

Reported Date: 17-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306012

Client Sample ID: WS-1

Collection Date: 6/3/2013 4:00:00 PM

Project: Lab ID:

Analyses

Date Received: 6/4/2013

%REC

1306012-001 Matrix: WATER

Analyses	Result	Det. Limit Q	ual Units	<u>D</u> F	Date Analyzed	
EPH RANGES - MADEP EPH					Analyst: KG	
Prep Method:	(eph_Wpr)	Pre	p Date:	6/4/2013 8:59:14 AM		
Adjusted C11-C22 Aromatics	ND	103	μg/L		6/7/2013	
C09-C18 Aliphatics	ND	103	µg/L	1	6/7/2013	
C19-C36 Aliphatics	118	103	μg/L	1	6/7/2013	
Unadjusted C11-C22 Aromatics	ND	103	μg/L	1	6/7/2013	
Surr: 1-Chlorooctadecane	52.3	40-140	%REC	1	6/7/2013	

40-140

77.8

Result Det. Limit Qual Units

EPH TARGET ANALYTES - MADEP EPH

Surr: o-Terphenyl

Analyst: Jsi

6/7/2013

6/7/2013

Prep Method	: (eph_Wpr)	Pre	p Date:	6/4/2013 8:59:14 AM	
Naphthalene	ND	1.03	μg/L		C/C/2010 10 00 00 00
2-Methylnaphthalene	5.91	1.03	µg/L	1	6/6/2013 12:09:00 PM 6/6/2013 12:09:00 PM
Acenaphthene	ND	1.03	μg/L	1	6/6/2013 12:09:00 PM
Phenanthrene Total RAH Torget Company (1)	ND	1.03	μg/L	1	6/6/2013 12:09:00 PM
Total PAH Target Concentration Surr: 2,2-Difluorobiphenyl	5.91	1.03	μg/L	1	6/6/2013 12:09:00 PM
Surr: 2-Fluorobiphenyl	51.2 54.3	40-140	%REC	'	6/6/2013 12:09:00 PM
· · · · · · · · · · · · · · · · · · ·	54.5	40-140	%REC	1	6/6/2013 12:09:00 PM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Pre	Date:		
C9-C10 Aromatic Hydrocarbons	ND	100	µg/L		6/6/2013 12:33:00 PM
Unadjusted C5-C8 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/6/2013 12:33:00 PM
Unadjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/6/2013 12:33:00 PM
Methyl Tert-Butyl Ether	ND	1.00	μg/L	1	6/6/2013 12:33:00 PM
Benzene	ND	1.00	μg/L	1	6/6/2013 12:33:00 PM
Toluene	2.06	1.00	μg/L	1	6/6/2013 12:33:00 PM
Ethylbenzene	1.23	1.00	μg/L	1	6/6/2013 12:33:00 PM
m,p-Xylene	3.16	1.00	μg/L	1	6/6/2013 12:33:00 PM
o-Xylene	7.46	1.00	μg/L	1	6/6/2013 12:33:00 PM
Naphthalene	ND	1.00	μg/L	1	6/6/2013 12:33:00 PM
Adjusted C5-C8 Aliphatic Hydrocarbons	ND	100	µg/L	1	6/6/2013 12:33:00 PM

Qualifiers:

- В Analyte detected in the associated Method Blank

BRL Below Reporting Limit

- Value above quantitation range E Analyte detected below quantitation limits
- Holding times for preparation or analysis exceeded

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

Reported Date: 17-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306012

Project:

Lab ID:

1306012-001

Client Sample ID: WS-1

Collection Date: 6/3/2013 4:00:00 PM

Date Received: 6/4/2013

Matrix: WATER

Analyses	Result	Det. Limit Q	ual Units	DF	Date Analyzed
VPH - MADEP VPH					Analyst: ZC
Prep Method:		Pre	Date:		
Adjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/6/2013 12:33:00 PM
Surr: 2,5-Dibromotoluene FID	119	70-130	%REC	1	6/6/2013 12:33:00 PM
Surr: 2,5-Dibromotoluene PID	85.0	70-130	%REC	1	6/6/2013 12:33:00 PM

Qualifiers:

Analyte detected in the associated Method Blank

Value above quantitation range

Е Analyte detected below quantitation limits

Spike Recovery outside recovery limits

BRL Below Reporting Limit

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 17-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306012

Client Sample ID: WS-2

Collection Date: 6/3/2013 4:28:00 PM

Project: Lab ID:

1306012-002

Date Received: 6/4/2013 Matrix: WATER

Analyses Result Det. Limit Qual Units DF **Date Analyzed**

	RANGES -	MADED	EDU
LETI	DAIMGEO:	- WALLER	CFO

Analyst: KG

Prep Method: (Pre	Prep Date: 6/4/2013 8:59:14 AM			
Adjusted C11-C22 Aromatics	ND	101	µg/L	1	6/7/2013
C09-C18 Aliphatics	ND	101	μg/L	1	6/7/2013
C19-C36 Aliphatics	ND	101	μg/L	1	6/7/2013
Unadjusted C11-C22 Aromatics	ND	101	μg/L	1	6/7/2013
Surr: 1-Chlorooctadecane	72.7	40-140	%REC	1	6/7/2013
Surr: o-Terphenyl	76.9	40-140	%REC	1	6/7/2013

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method:	(eph_Wpr)	Prej	p Date:	6/4/2013 8:59:14 AM	
Naphthalene	ND	1.01	μg/L	1	6/6/2013 12:47:00 PM
2-Methylnaphthalene	ND	1.01	μg/L	1	6/6/2013 12:47:00 PM
Acenaphthene	ND	1.01	μg/L	1	6/6/2013 12:47:00 PM
Phenanthrene	ND	1.01	μg/L	1	6/6/2013 12:47:00 PM
Total PAH Target Concentration	ND	1.01	μg/L	1	6/6/2013 12:47:00 PM
Surr: 2,2-Difluorobiphenyl	52.1	40-140	%REC	1	6/6/2013 12:47:00 PM
Surr: 2-Fluorobiphenyl	57.1	40-140	%REC	1	6/6/2013 12:47:00 PM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Pre			
C9-C10 Aromatic Hydrocarbons	ND	100	μg/L	1	6/6/2013 1:21:00 AM
Unadjusted C5-C8 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/6/2013 1:21:00 AM
Unadjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/6/2013 1:21:00 AM
Methyl Tert-Butyl Ether	ND	1.00	µg/L	1	6/6/2013 1:21:00 AM
Benzene	ND	1.00	μg/L	1	6/6/2013 1:21:00 AM
Toluene	ND	1.00	μg/L	1	6/6/2013 1:21:00 AM
Ethylbenzene	ND	1.00	μg/L	1	6/6/2013 1:21:00 AM
m,p-Xylene	ND	1.00	μg/L	1	6/6/2013 1:21:00 AM
o-Xylene	ND	1.00	μg/L	1	6/6/2013 1:21:00 AM
Naphthalene	ND	1.00	μg/L	1	6/6/2013 1:21:00 AM
Adjusted C5-C8 Aliphatic Hydrocarbons	ND	100	μg/L	. 1	6/6/2013 1:21:00 AM

Qualifiers:

- Analyte detected in the associated Method Blank
- Value above quantitation range Е
- Analyte detected below quantitation limits
- Spike Recovery outside recovery limits

- BRL Below Reporting Limit
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Reported Date: 17-Jun-13

CLIENT:

Clean Harbors

Client Sample ID: WS-2

Lab Order:

1306012

Collection Date: 6/3/2013 4:28:00 PM

Project:

150001.

Date Received: 6/4/2013

Lab ID:

1306012-002

Matrix: WATER

Analyses	Result	Det. Limit Q	ual Units	DF	Date Analyzed
VPH - MADEP VPH					Analyst: ZC
Prep Method:		Prep	Date:		
Adjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μ g/L	1	6/6/2013 1:21:00 AM
Surr: 2,5-Dibromotoluene FID	128	70-130	%REC	1	6/6/2013 1:21:00 AM
Surr: 2,5-Dibromotoluene PID	87.5	70-130	%REC	1	6/6/2013 1:21:00 AM

Qualifiers: B Analyte detected in the associated Method Blank

BRL Below Reporting Limit

E Value above quantitation range

H Holding times for preparation or analysis exceeded

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

Reported Date: 17-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306012

Project:

Lab ID:

1306012-003

Client Sample ID: WS-3

Collection Date: 6/3/2013 5:07:00 PM

Date Received: 6/4/2013

Matrix: WATER

Analyses	Result	Det. Limit Q	ual Units	DF	Date Analyzed
EPH RANGES - MADEP EPH					Analyst: KG
Prep Method:	(eph_Wpr)	Pre	p Date:	6/4/2013 8:59:14 AM	
Adjusted C11-C22 Aromatics	ND	101	 μg/L	1	6/7/2013
C09-C18 Aliphatics	ND	101	μg/L	1	6/7/2013
C19-C36 Aliphatics	ND	101	μg/L	1	6/7/2013
Unadjusted C11-C22 Aromatics	ND	101	μg/L	1	6/7/2013
Surr: 1-Chlorooctadecane	60.4	40-140	%REC	1	6/7/2013
Surr: o-Terphenyl	65.6	40-140	%REC	•	6/7/2013

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method	i: (eph_Wpr)	Pre	p Date:	6/4/2013 8:59:14 AM	
Naphthalene	ND	1.01	µg/L	1	6/6/2013 1:25:00 PM
2-Methylnaphthalene	ND	1.01	μg/L	, 1	6/6/2013 1:25:00 PM
Acenaphthene	ND	1.01	μg/L	1	6/6/2013 1:25:00 PM
Phenanthrene	ND	1.01	μg/L	1	6/6/2013 1:25:00 PM
Total PAH Target Concentration	ND	1.01	μg/L	1	6/6/2013 1:25:00 PM
Surr: 2,2-Difluorobiphenyl	55.6	40-140	%REC	1	6/6/2013 1:25:00 PM
Surr: 2-Fluorobiphenyl	53.8	40-140	%REC	1	6/6/2013 1:25:00 PM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Prep	Date:		-
C9-C10 Aromatic Hydrocarbons	ND	100	μg/L	1	6/6/2013 2:08:00 AM
Unadjusted C5-C8 Aliphatic Hydrocarbons	ND	100	µg/L	1	6/6/2013 2:08:00 AM
Unadjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/6/2013 2:08:00 AM
Methyl Tert-Butyl Ether	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
Benzene	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
Toluene	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
Ethylbenzene	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
m,p-Xylene	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
o-Xylene	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
Naphthalene	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
Adjusted C5-C8 Aliphatic Hydrocarbons	ND	100	µg/L	1	6/6/2013 2:08:00 AM

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside recovery limits

- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Reported Date: 17-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306012

Client Sample ID: WS-3

Collection Date: 6/3/2013 5:07:00 PM

Project:

Lab ID:

1306012-003

Date Received: 6/4/2013

Matrix: WATER

Analyses	Result	Det. Limit Q	ual Units	DF	Date Analyzed
VPH - MADEP VPH			-		Analyst: ZC
Prep Method:		Prep	Date:		
Adjusted C9-C12 Aliphatic Hydrocarbons	ND	100	µg/L	1	6/6/2013 2:08:00 AM
Surr: 2,5-Dibromotoluene FID	109	70-130	%REC	1	6/6/2013 2:08:00 AM
Surr: 2,5-Dibromotoluene PID	82.8	70-130	%REC	1	6/6/2013 2:08:00 AM

Qualifiers:

Analyte detected in the associated Method Blank

BRL Below Reporting Limit

Е Value above quantitation range

Holding times for preparation or analysis exceeded

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike Recovery outside recovery limits

ANALYTICAL QC SUMMARY REPORT

CLIENT: Clean Harbors

Work Order: 1306012

Project:

TestCode: EPHP_W_DIESEL

Sample ID: MB-22401	SampType: MBLK	TestCo	de: EPHP_W_	TestCode: EPHP_W_DIE Units: µg/L		Prep Date:	e: 6/4/2013		RunNo: 50506	96	
Client ID: ZZZZZ	Batch ID: 22401	Test	No: MADEP EF	TestNo: MADEP EPH_ (eph_Wpr)		Analysis Date:	e: 6/5/2013		SeqNo: 573403	83	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	ef Val	%RPD	RPDLimit	Qual
Naphthalene	QN	1.00									
2-Methylnaphthalene	QN	1.00									
Acenaphthene	2	1.00									
Phenanthrene	2	1.00									
Total PAH Target Concentration	Q	1.00									
Surr: 2,2-Difluorobiphenyl	10.72	0	25	0	42.9	40	140				
Surr: 2-Fluorobiphenyl	12.01	0	. 25	0	48.0	40	140				
Sample ID: LCS-22401	SampType: LCS	TestCo	TestCode: EPHP_W_DIE	DIE Units: µg/L		Prep Date:	e. 6/4/2013		RunNo: 50506		
Client ID: ZZZZZ	Batch ID: 22401	Test	No: MADEP EF	TestNo: MADEP EPH_ (eph_Wpr)		Analysis Date:			SeqNo: 573401	. 5	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	ef Val	%RPD	RPDLimit	leno
Naphthalene	20.77	1.00	20	0	41.5	40	140				
2-Methylnaphthalene	23.32	1.00	50	0	46.6	40	140				
Acenaphthene	26.57	1.00	20	0	53.1	40	140				
Phenanthrene	38.55	1.00	50	0	77.1	. 4 O	140				
Surr: 2,2-Difluorobiphenyl	11.72	0	25	0	46.9	2 4	140				
Surr: 2-Fluorobiphenyl	12.73	0	25	0	50.9	40	140				
Sample ID: LCSD-22401	SampType: LCSD	TestCox	de: EPHP_W_I	TestCode: EPHP_W_DIE Units: µg/L		Prep Date:	9: 6/4/2013		RunNo: 50506		
Client ID: ZZZZZ	Batch ID: 22401	Test	TestNo: MADEP EPH_ (eph_Wpr)	H_ (eph_Wpr)	•	Analysis Date:	e: 6/5/2013	-	SeqNo: 573402	02	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	ef Val	%RPD F	RPDLimit	Oual
Naphthalene	22.59	1.00	20	0	45.2	40	140	20.77	8.39	5	
2-Methylnaphthalene	25.52	1.00	20	0	51.0	4		23.32	9.01	20	
Acenaphthene	28.37	1.00	20	0	26.7	40	140	26.57	6.55	20	
Qualifiers: BRL Below Reporting Limit	ing Limit		E Value al	Value above quantitation range	ige		H Holding tir	mes for pre	Holding times for preparation or analysis exceeded	Vsis exceeder	
J Analyte detects	Analyte detected below quantitation limits		ND Not Det	Not Detected at the Reporting Limit	g Limit		R RPD outsic	RPD outside recovery limits	v limite		
S Spike Recover	Spike Recovery outside recovery limits			•	1						

GeoLabs, Inc.

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

Work Order:

1306012 Project:

Qual 0 0 %RPD RPDLimit SeqNo: 573402 RunNo: 50506 0 0 4.71 38.55 0 0 LowLimit HighLimit RPD Ref Val Prep Date: 6/4/2013 Analysis Date: 6/5/2013 64 64 64 64 4 4 4 %REC 80.8 49.6 50.6 TestCode: EPHP_W_DIE Units: µg/L TestNo: MADEP EPH_ (eph_Wpr) 000 SPK value SPK Ref Val Б 1.00 00 Result 12.64 40.41 12.41 SampType: LCSD Batch ID: 22401 Surr: 2,2-Difluorobiphenyl Sample ID: LCSD-22401 Surr: 2-Fluorobiphenyl Client ID: ZZZZZ Phenanthrene Analyte

TestCode: EPHP_W_DIESEL

Holding times for preparation or analysis exceeded RPD outside recovery limits H & Not Detected at the Reporting Limit Value above quantitation range ы В Analyte detected below quantitation limits Spike Recovery outside recovery limits BRL Below Reporting Limit - s Qualifiers:

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

Clean Harbors 1306012 CLIENT:

Work Order: Project:

TestCode: epht_w

Sample ID: MB-22401	SampType: mblk	TestC	TestCode: epht_w	Units: µg/L		Prep Date:	te: 6/4/2013		RinNo. 50494		
Client ID: ZZZZZ	Batch ID: 22401	Tes	TestNo: MADEP EPH	_		Analysis Date:			SeqNo: 573366	3366	
Analyte	Result	PQ	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	ef Val	%RPD	FPD1 imit	٥
Adjusted C11-C22 Aromatics	CN	100					- 1				ב עמ עמ
C09-C18 Aliphatics	2	100									
C19-C36 Aliphatics	Q	100									
Unadjusted C11-C22 Aromatics	2	9									
Surr: 1-Chlorooctadecane	60.63	0	100	c	90	•	7				
Surr: o-Terphenyl	66.70	0		0	66.7	4 4	140				
Sample ID: LCS-22401	SampType: Lcs	TestCo	TestCode: epht_w	Units: µg/L		Prep Date:	ie: 6/4/2013		RinNo: 50404	1 2	
Client ID: ZZZZZ	Batch ID: 22401	Test	TestNo: MADEP EPH	_		Analysis Date:			SeaNo: 573367	1367	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	ef Val	«RPD	imi imi	٥
C09-C18 Aliphatics	2	9	100	 	0 0	Ş					200
C19-C36 Aliphatics	QN	001	100	o c	49.0	} €	04,				
Unadjusted C11-C22 Aromatics	QN	100	100) O	49.8	₹ ₹	2 5				
Surr: 1-Chlorooctadecane	58.92	0	100	C	28.0	2 5	2 5				
Surr: o-Terphenyl	65.93	0	100	0	65.9	, 4	140				
Sample ID: LCSD-22401	SampType: Lcsd	TestCo	TestCode: epht_w	Units: µg/L		Prep Date:	e: 6/4/2013		RunNo: 50494		
Client ID: ZZZZZ	Batch ID: 22401	Test	TestNo: MADEP EPH	_		Analysis Date:			SeqNo: 573368	368	
Analyte	Result	Pol	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	i Val	Uda%	# 1000	Ī
C09-C18 Aliphatics	QN	100	100	c	573			5 6	ָרָבְיּיִרְיִי		Gual
C19-C36 Aliphatics	2	100	100	· c	ς · α	2 5		26.00	o	22	
Unadjusted C11-C22 Aromatics	Q	100	100	0 0	, 4 0. 0	3 €	54-	94 0	0 (52	
Surr: 1-Chlorooctadecane	59.71	0	100) C	2.05	₹		28.82	0 (25	
Surr: o-Terphenyi	82.41	0	100	0	82.4	t 4	140	> c	>	0 (
						!	2	>	>	Þ	
Qualifiers: BRL Below Reporting Limit	ing Limit		E Value ah	Value above quantitation range	8						
J Analyte detect	Analyte detected helow mantitation limits		,		٠.			nes tor pre	Holding times for preparation or analysis exceeded	alysis exceede	ç
S Snibe Beowert outside	es contra quantitation mines			NOT Detected at the Reporting Limit	g Limit		R RPD outside recovery limits	de recovery	' limits		

45 Johnson Lane \sim Braintree MA 02184 \sim 781 848 7814 \sim 781 848 7811 GeoLabs, Inc.

Analyte detected below quantitation limits Spike Recovery outside recovery limits

- s

1306012 Work Order:

Project:

TestCode: VPH_W2

	274027										
Sample ID: MBLK Samp	SampType: MBLK	TestCo	TestCode: VPH_W2	Units: µg/L		Prep Date:	45		RunNo 50547	17	
Client ID: ZZZZZ Batc	Batch ID: R50547	Test	TestNo: VPH			Analysis Date:	S. 6/6/2013		Seallo: 573	: 2	
Analyte	<u>+</u>	Š) 						Seque: 3/3/30	2	
	Result	됩	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RP	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	Q	1.00									
2,2,4-Trimethylpentane	Q	1.00									
2-Methylpentane	QN	1.00									
n-Butylcyclohexane	Q	1.00									
n-Decane	2	1.00									
n-Nonane	QN	1.00									
n-Pentane	QN	1.00									
C9-C10 Aromatic Hydrocarbons	QN	100									
Unadjusted C5-C8 Aliphatic Hydrocarbo	QN	100									
Unadjusted C9-C12 Aliphatic Hydrocarb	S	100									
Methyl Tert-Butyl Ether	Q	1.00									
Benzene	QN	1.00									
Toluene	Q	1.00									
Ethylbenzene	2	1.00									
m,p-Xylene	QN	1.00									
o-Xylene	QN	1.00									
Naphthalene	Q	1.00									
Adjusted C5-C8 Aliphatic Hydrocarbons	QV	100									
Adjusted C9-C12 Aliphatic Hydrocarbon	Q	100									
Surr: 2,5-Dibromotoluene FID	89.04	0	100	0	89.0	20	130				
Surr: 2,5-Dibromotoluene PID	88.42	0	100	0	88.4	20	130				
): FCS	SampType: LCS	TestCoc	TestCode: VPH_W2	Units: µg/L		Prep Date:			RunNo: 50547		
Client ID: ZZZZ Batch	Batch ID: R50547	TestN	TestNo: VPH		Q	Analysis Date:	6/5/2013		SeqNo: 573128	80	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD	RPD Ref Vai	%RPD F	RPDLimit	Oual
1,2,4-Trimethylbenzene	81.52	1.00	100	0	81.5	70	130				
Qualifiers: BRL Below Reporting Limit J Analyte detected below quantitation limits S Spike Recovery outside recovery limits	quantitation limits		E Value a	Value above quantitation range Not Detected at the Reporting Limit	ge J.Limit		H Holdin R RPD o	Holding times for preparatio RPD outside recovery limits	Holding times for preparation or analysis exceeded RPD outside recovery limits	ysis exceede	

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

1306012 Work Order:

Project:

TestCode: VPH_W2

Sample ID: LCS	SampType: LCS	TestCo	TestCode: VPH W2	Units: ua/L.		Pren Date	 a		Diskler Co		}
! ! ! !				3		וכה המי	ıš		KUNNO: 50547	247	
Cilent ID: 22.22	Batch ID: R50547	Test	TestNo: VPH			Analysis Date:	e: 6/5/2013	<u>8</u>	SeqNo: 573128	3128	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2,4-Trimethylpentane	87.10	1.00	100	0.16	86.9	02	130				
2-Methylpentane	82.67	1.00	100	0	82.7	202	130				
n-Butylcyclohexane	84.08	1.00	100	0	84.1	70	130				
n-Decane	82.01	1.00	100	0.0149	82.0	20	130				
n-Nonane	85.69	1.00	100	0.01028	85.7	8	130				
n-Pentane	89.62	1.00	100	0	89.6	20	130				
C9-C10 Aromatic Hydrocarbons	88.39	50.0	100	0	88.4	20	130				
Unadjusted C5-C8 Aliphatic Hydrocarbo	arbo 209.0	100	300	0	69.7	02	130				
Unadjusted C9-C12 Aliphatic Hydrocarb	carb 218.4	100	300	0	72.8	70	130				
Methyl Tert-Butyl Ether	80.62	1.00	100	0	80.6	20	130				
Benzene	80.49	1.00	100	0	80.5	2.0	130				
Toluene	81.02	1.00	100	0	81,0	02	130				
Ethylbenzene	89.64	1.00	100	0	89.6	02	130				
m,p-Xylene	151.6	1.00	200	0.1	75.7	02	130				
o-Xylene	88.52	1.00	100	0	88.5	70	130				
Naphthalene	91.16	1.00	100	0	91.2	70	130				
Surr: 2,5-Dibromotoluene FID	81.07	0	100	0	81.1	70	130				
Surr: 2,5-Dibromotoluene PID	101.3	0	100	0	101	70	130				
): LCSD	SampType: LCSD	TestCor	TestCode: VPH_W2	Units: µg/L		Prep Date:			RunNo: 50547	747	
Client ID: ZZZZ	Batch ID: R50547	Test	TestNo: VPH			Analysis Date:	: 6/6/2013	e	SeqNo: 573129	1129	
Analyte	Result	Pal	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	84.90	1.00	100	0	84.9	70	130	81.52	4.06	35	
2,2,4-Trimethylpentane	91.91	1.00	100	0.16	91.8	70	130	87.1	5.37	3 %	
2-Methylpentane	87.62	1.00	100	0	87.6	02	130	82.67	5.81	3 %	
n-Butylcyclohexane	80.35	1.00	100	0	80.4	70	130	84.08	4.54	25	
Qualifiers: BRL Below Reporting Limit	Limit		E Value	Value above quantitation range	96		1 2	Alding times for a			
J Analyte detected	Analyte detected below quantitation limits		NO Not De	Not Detected at the Denocting I imit	,			Trouming things for proparation of analysis exceeded	reparation of all	anysis exceede	5
Spring Source	Spike Recovery cutoide recovery limits			ected at the Nepoting	5 LIIIII		×	KPD outside recovery limits	ry limits		

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

J Analyte detected below quantitation limits Spike Recovery outside recovery limits

1306012 Work Order: Project:

TestCode: VPH_W2

Sample ID: LCSD Samp	SampType: LCSD	TestCo	TestCode: VPH W2	Units: 110/1		Dran Date	9		2		
Client ID: 77777		1	ŗ	ı A		ם מ	ָנֵי ניַ		Kunino: 50547	74,	
	Batch IU: R50547	Test	No: VPH			Analysis Date:	te: 6/6/2013	5	SeqNo: 573129	3129	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
n-Decane	85.78	1.0	100	0.0149	85.8	70	130	82.04	7 70		
n-Nonane	83.02	1.00	100	0.01028	83.0	2 6	130	85.69	. t. t.	3 4	
n-Pentane	96.16	1.00	100	0	96.2	2 2	130	89.62	7.04	 	
C9-C10 Aromatic Hydrocarbons	88.64	50.0	100	0	88.6	20	130	88 39	0.282	3 5	
Unadjusted C5-C8 Aliphatic Hydrocarbo	222.3	100	300	0	74.1	20	130	209	6.18	3 5	
Unadjusted C9-C12 Aliphatic Hydrocarb	216.4	100	300	0	72.1	70	130	218.4	0.920	3 2	
Wetnyl Ten-Butyl Ether	84.73	1.00	100	0	84.7	20	130	80.62	4.97	3 5	
Denzene T-1/	87.79	1.00	100	0	87.8	70	130	80.49	8.68	. K	
Oluene Ethylboares	86.46	1.00	100	0	86.5	70	130	81.02	6.50	25	
m p. Xviene	88.98	1.00	100	0	89.0	70	130	89.64	0.739	25	
mpyylene Aydese	145.7	1.00	200	0.1	72.8	70	130	151.6	3.96	52	
Nonhtholone	89.68	1.00	100	0	89.7	70	130	88.52	1.30	25	
Surra of Discount of Tables	119.2	9.	100	0	119	70	130	91.16	26.7	25	ď
Surra 2 E Dibrom Maria Pin	84.61	0	100	0	84.6	20	130	0	0	0	
carr. 2,3-biblionioloidene PID	86.55	0	100	0	86.6	70	130	0	0	0	

Holding times for preparation or analysis exceeded RPD outside recovery limits H R E Value above quantitation range ND Not Detected at the Reporting Limit J Analyte detected below quantitation limits
S Spike Recovery outside recovery limits Spike Recovery outside recovery limits BRL Below Reporting Limit Qualifiers;

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

/					1	TEMPERATURE ONLY	15			0 = Other	9:50	15)
10,40	TAGE	(Sloca	"instair			Requested				B = Bag P = Plastic V = Voa	14/13	/ 6. 57 NH (2508) MA (MA-015) RI (LA000252)
	Marctions Afart	ce (s) confidence Proto	an-Ar			Analysis Req				Containers: A = Amber G = Glass S = Summa	Date / Time	44.3 NH
01000	M Compliant	Réquirements: circle choice (s) CT RCP (Reasonable Confidence Protocols) State / Fed Program - Criteria	Project: Nacre.	Invoice to *:		< क्रिक्स्यान्स्य [7 = Other		7/9
()	CHW	Requireme CT R State	Pro		ve:	HAN	7	77		5 = NaOH 6 = MEOH	1	A CT (PH-0148)
	Inou	MCP Methods DEP Other		Juss Com	Preserative:	GeoLabs SAMPLE NUMBER	100 -	200		es 3 = H2SO4 4 = Na2S2O3		s are NET 30 Days.
	circle choice Done Not Needed Lab to do Lab to do Y / N	7	- 0630	Caretry 100 clean husbers		G Geotabs B Geotabs	(00/3			Preservatives 1 = Hcl 2 = HN03	Received by:	2010730.J&P.C of CR.09/22/10 THANK YOU - WE APPRECIATE YOUR BUSINESS / All discounting will be removed after 90 days * All Payment terms are NET 30 Days. A late payment charge of 1.5% per mont or 18% per year, together with expenses above and beyond collection costs, inclyding attoreny s fees and court costs, will be applied to balances that go beyond NET 30 days.
i	Handling ion	GW-1 S-1 QC	168-1		- 	24⊢4~× ∪0∑0	6	->		Received on Ice		emoved after 90 day es above and beyond that go beyond NET
ſ	Sample Har Filtration Preservation	ircle choice (s)	Phone: 6	email: Mad	CONTAINER	F > 4 H	1/e 3//	→			Time 7	discounting will be ogether with expens applied to balances
	V RECO!	Data Delivery: circle choice (s) Fax Format: Excel				Y.E N / ID	7	4 in		II A = Air OT = Other	Date / Tir	UR BUSINESS / All to 18% per year, t
	GUSTOBY irjonmental Laboratorie Braintree, MA 02184 1781.848.7811 m	Dat Fax Forms Excel	Drive.	desh		SAMPLE LOCATION / ID	-5M	× 2,7		ater S = Soil 0 = Oil		NE APPRECIATE YO
	GTAIN OF CUSTODY RECORD GeoLabs, Inc. Environmental Laboratories 45 Johnson Lane, Braintree, MA 02184 p 781.848.7844 • f 781.848.7811 www.geolabs.com	Turnaround: circle one 3-day 5 / 7-days	the hard	Macla		S ≪ Z T T T T T T T T T T T T T T T T T T	N I	AM		DW = Drinking Water SL = Sludge	40	22/10 THANK YOU - I late payment ch
	GeoLabs, Inc. 45 Jc www	Turnaround 1-day 2-day	**************************************	act: h.z.h	COLLECTION	W	3/600	1001		Matrix Codes: GW = Ground Water WW = Waste Water	Kelindulished by	18P.C of CR.09/22/
,	Geol	- 6	Client:Address:	Contact:		0 4 F H	e	\		Matri) GW = (WW =)	Kelingt	2010730

Tuesday, June 18, 2013

Rich MacCarthy Clean Harbors 42 Longwater Drive Norwell, MA 02061

TEL: (781) 792-5822 FAX: (781) 792-5938

Project:

Noonan - Arlington

Location:

Order No.: 1306067

GeoLabs, Inc.

Braintree MA 02184

Tele: 781 848 7844

Fax: 781 848 7811

GeoLabs, Inc. 45 Johnson Lane

Dear Rich MacCarthy:

GeoLabs, Inc. received 6 sample(s) on 6/7/2013 for the analyses presented in the following report.

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

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

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

Sincerely

David Mick

Laboratory Director

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

> CT (PH-0148) - MA (M-MA015) - NH (2508) - RI (LA000252) Accredited in Accordance with NELAC

N. 2. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	The second	MassDE	P Ana	lýtical Protócol Ce	rtificátion Form	()				
Laboratory Na	ame: GeoLabs, In	1C.	Harri.	Projec	xt #:	A Company of the Comp	Constitution of the Consti			
Project Location	on: Noonan- Arlir	ngton		RTN:						
This form prov	/ides certification	for the followi	ng data	a set: 1306067 (001-0	006)					
Matrices:	☐ Ground\	water/Surface		· · · · · · · · · · · · · · · · · · ·	☐ Drinking Water ☐	Air 🗆	Other-wast	ewater		
	ol (check all that a	apply below):								
	CAM III B	MassDEP VPI CAM IV A	X	8081 Pesicides CAM V B	7196 Hex Cr CAM VI B □		MassDEP A CAM IX A	APH		
8270 SVOC CAM II B 🔲	7010 Metals CAM III C	MassDEP EPH CAM IV B	H 図	8151 Herbicides CAM V C	8330 Explosives CAM VIII A □		TO-15 VOC CAM IX B	٦ <u></u>		
6010 Metals CAM III A □	6020 Metals CAM III D 🔲	8082 PCB CAM V A		9014 Total Cyanide/PAC CAM VI A □	6860 Perchlorate CAM VIII B □					
Affirmative R	esponses to Qu	estions A thr	ough l	F are required for "P	resumptive Certainty"	" status				
А	Were all samples properly preserved	received in a co d (including tem	ondition nperatur me	n consistent with those dure) in the field or laboratethod holding times?	described on the Chain of tory, and prepared/analyze	Custody, zed within	⊠ Yes	□ No		
В	Were the analytic	al method(s) ar	nd all as pr	ssociated QC requireme rotocol(s) followed?	ents specified in the select	ted CAM	⊠ Yes	□ No		
С	Were all required protocol(s)	corrective actio	ns and	analytical response acti entified performance sta	ions specified in the selec andard non-conformances	xted CAM s?	⊠ Yes	□ No		
D	Does the laborato Assurance and C	ry report compl Juality Control (ly with a Guidelin	ll reporting requirement nes for the Acquisition a	ts specified in CAM VII A, nd Reporting of Analtyical	"Quality Data"?	⊠ Yes	□ No		
E	VPH, EPH, APH a. VPH, EPH modification(s	H, and APH Met	thods or	nly: Was each method c dual method(s) for a list	conducted without signification	ant ns.)	⊠ Yes	□No		
	b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?									
	evaluated in a	laboratory narra	ative (in	ncluding all "No" respons	d non-conformances identi ses to Questions A throug	nh E)	⊠ Yes	□No		
	Questions G, H,	, and I below	are rec	quired for "Presump	otive Certainty" status specified in the selected (
G Data Use				protocol(s)?			⊠ Yes	□ No		
·	representativ	veness require	ements	described in 310 CMR	ay not necessarily meet R 40. 1056 (2) (k) and WS	C-07-350	usablility ar).	nd		
<u>H</u>	Were all Q	C performance	standa	rds as specified in the C	CAM protocol(s) achieved?	?		⊠ No¹		
1 All pogative ru	Were results rep	ported for the co	omplete	analyte list specified in	the selected CAM protoc	ol(s)?	□ Yes	⊠ No¹		
				tached laboratory narr						
those responsib	ble for obtaining the and belief, accurate	he information	i, the ma	s of perjury that, based aterial contained in thi	d upon my personal inquis analytical report is, to	uiry of the best	t			
Signature:	a larry	My	h	Positio	n: Laboratory Directo	or				
Printed Name <u>:</u>	David Mick		<u> </u>	Date: _	June 18, 2013					

Date: 18-Jun-13

CLIENT:

Clean Harbors

Project:

Noonan - Arlington

Lab Order:

1306067

CASE NARRATIVE

Physical Condition of Samples

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

Project Documentation

The project was accompanied by satisfactory Chain of Custody documentation.

Analysis of Sample(s)

EPH carbon ranges and diesel targets only reported via MADEP EPH, per client request.

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

EPHP- Samples 001 and 002- Naphthalene is reported with an 'E' value.

EPHT- Sample 002- surrogates are diluted out of sample.

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/18/13

CLIENT:

Clean Harbors

Project:

Noonan - Arlington

Lab Order:

1306067

CASE NARRATIVE

EPH Methods

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

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

C11-C22 Aromatic Hydrocarbons exclude concentrations of Target PAH Analytes

CERTIFICATION:

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

Were all performance/acceptance standards achieved? YES

Were any significant modifications made to the EPH method? NO

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

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/18/13

CLIENT:

Clean Harbors

Project:

Noonan - Arlington

Lab Order:

1306067

CASE NARRATIVE

VPH Methods

Method for Ranges: MADEP VPH 04-1.1

Method for Target Analytes: MADEP VPH 04-1.1

Soil sample(s) were received in MeOH and soil was completely covered by MeOH.

Soil sample(s) ratio 1:1 +/- 25%

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

C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range. (MTBE, Benzene, Toluene)

C9-C12 Aliphatic Hydrocarbons exclude concentration of Target Analytes eluting in that range (Ethylbenzene, m&p-Xylenes, o-Xylene) AND concentration of C9-C10 Aromatic Hydrocarbons.

CERTIFICATION

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

Were all QA/QC performance/acceptance standards achieved? YES

Were any significant modifications made to the VPH method, as specified in Sec. 11.3? NO

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

SIGNATURE:

POSITION: LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/18/13

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

Client Sample ID: S-16

Lab Order:

1306067

Collection Date: 6/5/2013 11:00:00 AM

DF

Project:

Noonan - Arlington

Date Received: 6/7/2013

Lab ID:

Analyses

1306067-001

Matrix: SOIL

EDH	D٨	NICEC	R/T/A	UED	CDU

Date Analyzed

Analyst: KG

Prep Method:	(eph_Spr)	Pre	Date: 6/10/201	3 2:57:17 I	°M
Adjusted C11-C22 Aromatics	2120	192	mg/Kg-dry	10	6/12/2013
C09-C18 Aliphatics	2860	962	mg/Kg-dry	50	6/12/2013
C19-C36 Aliphatics	1090	192	mg/Kg-dry	10	6/12/2013
Unadjusted C11-C22 Aromatics	2210	192	mg/Kg-dry	10	6/12/2013
Surr: 1-Chlorooctadecane	59.1	40-140	%REC	1	6/12/2013
Surr: o-Terphenyl	79.6	40-140	%REC	1	6/12/2013

Det. Limit Qual Units

Result

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method:	(eph_Spr)	P	rep D	ate: 6/10/201	3 2:57:17 PM	
Naphthalene	24.3	0.128	7.00	mg/Kg-dry	1	6/12/2013 9:30:00 PM
2-Methylnaphthalene	61.1	0.128	E	mg/Kg-dry	1	6/12/2013 9:30:00 PM
Acenaphthene	ND	0.128		mg/Kg-dry	1	6/12/2013 9:30:00 PM
Phenanthrene	8.04	0.128		mg/Kg-dry	1	6/12/2013 9:30:00 PM
Total PAH Target Concentration	93.4	0.128		mg/Kg-dry	1	6/12/2013 9:30:00 PM
Surr: 2,2-Difluorobiphenyl	55.6	40-140		%REC	1	6/12/2013 9:30:00 PM
Surr: 2-Fluorobiphenyl	48.4	40-140		%REC	1	6/12/2013 9:30:00 PM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Prej			
Unadjusted C5-C8 Aliphatic HC	50.9	12.8	mg/Kg-dry	1	6/13/2013 2:32:00 AM
Unadjusted C9-C12 Aliphatic HC	328	128	mg/Kg-dry	10	6/13/2013 1:04:00 AM
Methyl Tert-Butyl Ether	ND	0.128	mg/Kg-dry	1	6/13/2013 2:32:00 AM
Benzene	ND	0.128	mg/Kg-dry	1	6/13/2013 2:32:00 AM
Toluene	17.9	0.128	mg/Kg-dry	1	6/13/2013 2:32:00 AM
Ethylbenzene	29.1	0.128	mg/Kg-dry	1	6/13/2013 2:32:00 AM
m,p-Xylene	64.1	1.28	mg/Kg-dry	10	6/13/2013 1:04:00 AM
o-Xylene	42.7	1.28	mg/Kg-dry	10	6/13/2013 1:04:00 AM
Naphthalene	ND	0.128	mg/Kg-dry	1	6/13/2013 2:32:00 AM
C9-C10 Aromatic Hydrocarbons	488	128	mg/Kg-dry	10	6/13/2013 1:04:00 AM
Adjusted C5-C8 Aliphatic HC	33.0	12.8	mg/Kg-dry	1	6/13/2013 2:32:00 AM
Adjusted C9-C12 Aliphatic HC	ND	12.8	mg/Kg-dry	1	6/13/2013 2:32:00 AM
Surr: 2,5-Dibromotoluene FID	93.1	70-130	%REC	10	6/13/2013 1:04:00 AM

Qualifiers:

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

E Value above quantitation range

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

S Spike Recovery outside recovery limits

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

1306067

Lab Order:

Project:

Noonan - Arlington

Lab ID:

1306067-001

Client Sample ID: S-16

Collection Date: 6/5/2013 11:00:00 AM

Date Received: 6/7/2013

Matrix: SOIL

Analyses	Result	Det. Limit Q	ual Units	DF	Date Analyzed
VPH - MADEP VPH					Analyst: ZC
Prep Method:		Prep Date:			
Surr: 2,5-Dibromotoluene FID	108	70-130	%REC	1	6/13/2013 2:32:00 AM
Surr: 2,5-Dibromotoluene PID	84.6	70-130	%REC	10	6/13/2013 1:04:00 AM
Surr: 2,5-Dibromotoluene PID	120	70-130	%REC	1	6/13/2013 2:32:00 AM

Qualifiers:

В

Е

Analyte detected in the associated Method Blank

Value above quantitation range

Analyte detected below quantitation limits

Spike Recovery outside recovery limits

BRL Below Reporting Limit

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

Lab Order: 1306067

Project: Lab ID:

Analyses

Noonan - Arlington

1306067-002

Client Sample ID: S-18

Collection Date: 6/5/2013 12:00:00 PM

Date Received: 6/7/2013

Matrix: SOIL

DF

FDH	IGES	NA A	DED	

Prep Method:	(eph_Spr)	P	rep D	ate: 6/10/201	3 2:57:17	PM
Adjusted C11-C22 Aromatics	1220	170		mg/Kg-dry	10	6/12/2013
C09-C18 Aliphatics	2720	852		mg/Kg-dry	50	6/12/2013
C19-C36 Aliphatics	942	170		mg/Kg-drv	10	6/12/2013
Unadjusted C11-C22 Aromatics	1270	170		mg/Kg-dry	10	6/12/2013
Surr: 1-Chlorooctadecane	0	40 -140	s	%REC	10	6/12/2013
Surr: o-Terphenyl	0	40-140	s	%REC	10	6/12/2013

Result Det. Limit Qual Units

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Date Analyzed

Prep Method	l: (eph_Spr)	Prep Da	ate: (5/10/2013 2:57:17 PM	
Naphthalene	10.9	0.114	mg/Kg-	dry 1	6/12/2013 10:07:00 PM
2-Methylnaphthalene	30.6	0.114 E	mg/Kg-		
Acenaphthene	ND	0.114	mg/Kg-	. *	6/12/2013 10:07:00 PM 6/12/2013 10:07:00 PM
Phenanthrene	5.43	0.114	mg/Kg-		6/12/2013 10:07:00 PM
Total PAH Target Concentration	46.9	0.114	mg/Kg-		6/12/2013 10:07:00 PM
Surr: 2,2-Difluorobiphenyl	54.6	40-140	%REC	•	6/12/2013 10:07:00 PM
Surr: 2-Fluorobiphenyl	49.8	40-140	%REC		6/12/2013 10:07:00 PM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Pre			
Unadjusted C5-C8 Aliphatic HC	42.4	11.4	mg/Kg-dry	1	6/12/2012 2:45:00 444
Unadjusted C9-C12 Aliphatic HC	485	114	mg/Kg-dry	10	6/13/2013 3:15:00 AM
Methyl Tert-Butyl Ether	ND	0.114	mg/Kg-dry	10	6/13/2013 1:48:00 AM
Benzene	ND	0.114	mg/Kg-dry	1	6/13/2013 3:15:00 AM
Toluene	16.2	0.114	•	1	6/13/2013 3:15:00 AM
Ethylbenzene	23.7	0.114	mg/Kg-dry	1	6/13/2013 3:15:00 AM
m,p-Xylene	58.8	1.14	mg/Kg-dry	1	6/13/2013 3:15:00 AM
o-Xylene	30.5		mg/Kg-dry	10	6/13/2013 1:48:00 AM
Naphthalene		0.114	mg/Kg-dry	1	6/13/2013 3:15:00 AM
C9-C10 Aromatic Hydrocarbons	ND 500	0.114	mg/Kg-dry	1	6/13/2013 3:15:00 AM
Adjusted C5-C8 Aliphatic HC	593	114	mg/Kg-dry	10	6/13/2013 1:48:00 AM
•	26.2	11.4	mg/Kg-dry	1	6/13/2013 3:15:00 AM
Adjusted C9-C12 Aliphatic HC	ND	11.4	mg/Kg-dry	1	6/13/2013 3:15:00 AM
Surr: 2,5-Dibromotoluene FID	86.2	70-130	%REC	10	6/13/2013 1:48:00 AM

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside recovery limits

- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Reported Date: 18-Jun-13

CLIENT: Lab Order:

Clean Harbors

1306067

Project:

Noonan - Arlington

Lab ID:

1306067-002

Client Sample ID: S-18

Collection Date: 6/5/2013 12:00:00 PM

Date Received: 6/7/2013

Matrix: SOIL

Analyses	Result	Det. Limit	Qua	Units	DF	Date Analyzed		
VPH - MADEP VPH						Analyst: ZC		
Prep Method:		Р	rep D	ate:				
Surr: 2,5-Dibromotoluene FID	218	70-130	S	%REC	1	6/13/2013 3:15:00 AM		
Surr: 2,5-Dibromotoluene PID	87.2	70-130		%REC	10	6/13/2013 1:48:00 AM		
Surr: 2,5-Dibromotoluene PID	118	70-130		%REC	1	6/13/2013 3:15:00 AM		

Qualifiers:	В	Analyte detected in the associated Method Blank
	E	Value above quantitation

BRL Below Reporting Limit

E Value above quantitation range

H Holding times for preparation or analysis exceeded

J Analyte detected below quantitation limits
 S Spike Recovery outside recovery limits

ND Not Detected at the Reporting Limit

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

Client Sample ID: S-25

Lab Order:

1306067

Collection Date: 6/5/2013 4:30:00 PM

Project:

Noonan - Arlington

Date Received: 6/7/2013

Lab ID:

Analyses

1306067-003

Matrix: SOIL

DF

EPH	RANGES	- MADEP	EPH

Date Analyzed

Analyst: KG

Prep Method: (eph_Spr)	Prep	Date: 6/10/201	3 2:57:17	P M
Adjusted C11-C22 Aromatics	ND	16.5	mg/Kg-dry	1	6/12/2013
C09-C18 Aliphatics	ND	16.5	mg/Kg-dry	1	6/12/2013
C19-C36 Aliphatics	ND	16.5	mg/Kg-dry	1	6/12/2013
Unadjusted C11-C22 Aromatics	ND	16.5	mg/Kg-dry	1	6/12/2013
Surr: 1-Chlorooctadecane	61.8	40-140	%REC	1	6/12/2013
Surr: o-Terphenyl	68.6	40-140	%REC	1	6/12/2013

Det. Limit Qual Units

Result

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method	: (eph_Spr)	Pre	Date: 6/10/201	3 2:57:17 PI	И
Naphthalene	ND	0.110	mg/Kg-dry	1	6/12/2013 10:44:00 PM
2-Methylnaphthalene	ND	0.110	mg/Kg-dry	1	6/12/2013 10:44:00 PM
Acenaphthene	ND	0.110	mg/Kg-dry	1	6/12/2013 10:44:00 PM
Phenanthrene	ND	0.110	mg/Kg-dry	1	6/12/2013 10:44:00 PM
Total PAH Target Concentration	ND	0.110	mg/Kg-dry	1	6/12/2013 10:44:00 PM
Surr: 2,2-Difluorobiphenyl	52.1	40-140	%REC	1	6/12/2013 10:44:00 PM
Surr: 2-Fluorobiphenyl	57.4	40-140	%REC	1	6/12/2013 10:44:00 PM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Prep			
Unadjusted C5-C8 Aliphatic HC	ND	11.0	mg/Kg-dry	1	6/12/2013 10:09:00 AM
Unadjusted C9-C12 Aliphatic HC	ND	11.0	mg/Kg-dry	1	6/12/2013 10:09:00 AM
Methyl Tert-Butyl Ether	ND	0.110	mg/Kg-dry	1	6/12/2013 10:09:00 AM
Benzene	ND	0.110	mg/Kg-dry	1	6/12/2013 10:09:00 AM
Toluene	ND	0.110	mg/Kg-dry	1	6/12/2013 10:09:00 AM
Ethylbenzene	0.143	0.110	mg/Kg-dry	1	6/12/2013 10:09:00 AM
m,p-Xylene	0.375	0.110	mg/Kg-dry	1	6/12/2013 10:09:00 AM
o-Xylene	0.789	0.110	mg/Kg-dry	1	6/12/2013 10:09:00 AM
Naphthalene	ND	0.110	mg/Kg-dry	1	6/12/2013 10:09:00 AM
C9-C10 Aromatic Hydrocarbons	ND	11.0	mg/Kg-dry	1	6/12/2013 10:09:00 AM
Adjusted C5-C8 Aliphatic HC	ND	11.0	mg/Kg-dry	1	6/12/2013 10:09:00 AM
Adjusted C9-C12 Aliphatic HC	ND	11.0	mg/Kg-dry	1	6/12/2013 10:09:00 AM
Surr: 2,5-Dibromotoluene FID	90.2	70-130	%REC	1	6/12/2013 10:09:00 AM

Qualifiers:

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

E Value above quantitation range

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

S Spike Recovery outside recovery limits

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306067

Project:

Noonan - Arlington

Lab ID:

Analyses

1306067-003

Client Sample ID: S-25

Collection Date: 6/5/2013 4:30:00 PM

Date Received: 6/7/2013

Matrix: SOIL

VPH - MADEP VPH

Result Det. Limit Qual Units

DF Date Analyzed

Prep Date:

Prep Method:

Surr: 2,5-Dibromotoluene PID

89.8 70-130

%REC

6/12/2013 10:09:00 AM

Analyst: ZC

Qualifiers:

В

Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

S Spike Recovery outside recovery limits

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

Client Sample ID: S-37

Lab Order:

1306067

Collection Date: 6/5/2013 2:00:00 PM

Project:

Noonan - Arlington

Date Received: 6/7/2013

Lab ID:

1306067-004

Matrix: SOIL

Analyses	Result	Det. Limit (Qual Uni	its	DF	Date Analyzed
EPH RANGES - MADEP EPH						Analyst: KG
Prep Method:	(eph_Spr)	Pre	ep Date:	6/10/20 ⁻	13 2:57:17 PM	
Adjusted C11-C22 Aromatics	ND	17.6	mg/l	Kg-dry	1	6/12/2013
C09-C18 Aliphatics	ND	17.6	mg/l	Kg-dry	1	6/12/2013
C19-C36 Aliphatics	ND	17.6	mg/	Kg-dry	1	6/12/2013
Unadjusted C11-C22 Aromatics	ND	17.6	mg/l	Kg-dry	1	6/12/2013
Surr: 1-Chlorooctadecane	42.1	40-140	%RI	EC	1	6/12/2013
Surr: o-Terphenyl	67.5	40-140	%RI	EC	1	6/12/2013

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method	l: (eph_Spr)	Prep Date: 6/10/20		3 2:57:17 PM	
Naphthalene	0.168	0.118	mg/Kg-dry	1	6/12/2013 11:21:00 PM
2-Methylnaphthalene	0.566	0.118	mg/Kg-dry	1	6/12/2013 11:21:00 PM
Acenaphthene	ND	0.118	mg/Kg-dry	1	6/12/2013 11:21:00 PM
Phenanthrene	ND	0.118	mg/Kg-dry	1	6/12/2013 11:21:00 PM
Total PAH Target Concentration	0.734	0.118	mg/Kg-dry	1	6/12/2013 11:21:00 PM
Surr: 2,2-Difluorobiphenyl	49.9	40-140	%REC	1	6/12/2013 11:21:00 PM
Surr: 2-Fluorobiphenyl	55.2	40-140	%REC	1	6/12/2013 11:21:00 PM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Prep			
Unadjusted C5-C8 Aliphatic HC	ND	11.8	mg/Kg-dry	1	6/12/2013 10:52:00 AM
Unadjusted C9-C12 Aliphatic HC	ND	11.8	mg/Kg-dry	1	6/12/2013 10:52:00 AM
Methyl Tert-Butyl Ether	ND	0.118	mg/Kg-dry	1	6/12/2013 10:52:00 AM
Benzene	ND	0.118	mg/Kg-dry	1	6/12/2013 10:52:00 AM
Toluene	ND	0.118	mg/Kg-dry	1	6/12/2013 10:52:00 AM
Ethylbenzene	ND	0.118	mg/Kg-dry	1	6/12/2013 10:52:00 AM
m,p-Xylene	ND	0.118	mg/Kg-dry	1	6/12/2013 10:52:00 AM
o-Xylene	0.694	0.118	mg/Kg-dry	1	6/12/2013 10:52:00 AM
Naphthalene	ND	0.118	mg/Kg-dry	1	6/12/2013 10:52:00 AM
C9-C10 Aromatic Hydrocarbons	ND	11.8	mg/Kg-dry	1	6/12/2013 10:52:00 AM
Adjusted C5-C8 Aliphatic HC	ND	11.8	mg/Kg-dry	1	6/12/2013 10:52:00 AM
Adjusted C9-C12 Aliphatic HC	ND	11.8	mg/Kg-dry	1	6/12/2013 10:52:00 AM
Surr: 2,5-Dibromotoluene FID	88.0	70-130	%REC	1	6/12/2013 10:52:00 AM

Qualifiers:

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

E Value above quantitation range

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

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306067

Noonan - Arlington

Project: Lab ID:

1306067-004

Prep Method:

Client Sample ID: S-37

Collection Date: 6/5/2013 2:00:00 PM

Date Received: 6/7/2013

Matrix: SOIL

Analyses

VPH - MADEP VPH

Result Det. Limit Qual Units

DF Date Analyzed

Analyst: ZC

Prep Date:

Surr: 2,5-Dibromotoluene PID

83.2

70-130

%REC

6/12/2013 10:52:00 AM

Qualifiers:

Analyte detected in the associated Method Blank

Value above quantitation range

Analyte detected below quantitation limits

S Spike Recovery outside recovery limits

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

Lab Order: 1306067

Project:

Noonan - Arlington

Lab ID:

Analyses

1306067-005

Client Sample ID: S-39

Collection Date: 6/5/2013 2:30:00 PM

Date Received: 6/7/2013

Matrix: SOIL

DF

EPH	RANGES	- MADEP	EPH

Prep Method:	(eph_Spr)	Prep	Date: 6/10/201	3 2:57:17	PM
Adjusted C11-C22 Aromatics	ND	16.3	mg/Kg-dry	1	6/12/2013
C09-C18 Aliphatics	24.4	16.3	mg/Kg-dry	1	6/12/2013
C19-C36 Aliphatics	ND	16.3	mg/Kg-dry	1	6/12/2013
Unadjusted C11-C22 Aromatics	ND	16.3	mg/Kg-dry	1	6/12/2013
Surr: 1-Chlorooctadecane	40.1	40-140	%REC	1	6/12/2013
Surr: o-Terphenyl	74.7	40-140	%REC	1	6/12/2013

Det. Limit Qual Units

Result

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Date Analyzed

Analyst: KG

Prep Method	l: (eph_Spr)	Prej	Date: 6/10/201	3 2:57:17 PM	
Naphthalene	ND	0.109	mg/Kg-dry	1	6/12/2013 11:58:00 PM
2-Methylnaphthalene	0.486	0.109	mg/Kg-dry	1	6/12/2013 11:58:00 PM
Acenaphthene	ND	0.109	mg/Kg-dry	1	6/12/2013 11:58:00 PM
Phenanthrene	0.113	0.109	mg/Kg-dry	1	6/12/2013 11:58:00 PM
Total PAH Target Concentration	0.599	0.109	mg/Kg-dry	1	6/12/2013 11:58:00 PM
Surr: 2,2-Difluorobiphenyl	40.0	40-140	%REC	1	6/12/2013 11:58:00 PM
Surr: 2-Fluorobiphenyl	41.3	40-140	%REC	1	6/12/2013 11:58:00 PM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Prej	Date:		
Unadjusted C5-C8 Aliphatic HC	ND	10.9	mg/Kg-dry	1	6/12/2013 11:36:00 AM
Unadjusted C9-C12 Aliphatic HC	ND	10.9	mg/Kg-dry	1	6/12/2013 11:36:00 AM
Methyl Tert-Butyl Ether	ND	0.109	mg/Kg-dry	1	6/12/2013 11:36:00 AM
Benzene	ND	0.109	mg/Kg-dry	1	6/12/2013 11:36:00 AM
Toluene	ND	0.109	mg/Kg-dry	1	6/12/2013 11:36:00 AM
Ethylbenzene	ND	0.109	mg/Kg-dry	1	6/12/2013 11:36:00 AM
m,p-Xylene	ND	0.109	mg/Kg-dry	1	6/12/2013 11:36:00 AM
o-Xylene	ND	0.109	mg/Kg-dry	1	6/12/2013 11:36:00 AM
Naphthalene	0.610	0.109	mg/Kg-dry	1	6/12/2013 11:36:00 AM
C9-C10 Aromatic Hydrocarbons	ND	10.9	mg/Kg-dry	1	6/12/2013 11:36:00 AM
Adjusted C5-C8 Aliphatic HC	ND	10.9	mg/Kg-drv	1	6/12/2013 11:36:00 AM
Adjusted C9-C12 Aliphatic HC	ND	10.9	mg/Kg-dry	1	6/12/2013 11:36:00 AM
Surr: 2,5-Dibromotoluene FID	85.9	70-130	%REC	1	6/12/2013 11:36:00 AM

Qualifiers:

- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits
- Spike Recovery outside recovery limits

- BRL Below Reporting Limit
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306067

Project:

Noonan - Arlington

Lab ID:

1306067-005

Client Sample ID: S-39

nent Sample ID: 3-39

Collection Date: 6/5/2013 2:30:00 PM **Date Received:** 6/7/2013

Matrix: SOIL

Analyses

VPH - MADEP VPH

Result De

Det. Limit Qual Units

DF

Date Analyzed

Analyst: ZC

Prep Method:

Prep Date:

Surr: 2,5-Dibromotoluene PID

85.6

70-130

%REC

6/12/2013 11:36:00 AM

Qualifiers:

B Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

S Spike Recovery outside recovery limits

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306067

Client Sample ID: S-48

1306067-006

Collection Date: 6/5/2013 3:30:00 PM

Project: Lab ID: Noonan - Arlington

Date Received: 6/7/2013 Matrix: SOIL

Analyses

Result Det. Limit Qual Units

DF Date Analyzed

EPH RANGES - MADEP EPH

Analyst: I	KG
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Prep Method:	(eph_Spr)	Prep	Date: 6/10/201	3 2:57:17	PM
Adjusted C11-C22 Aromatics	ND	17.0	mg/Kg-dry	1	6/12/2013
C09-C18 Aliphatics	ND	17.0	mg/Kg-dry	1	6/12/2013
C19-C36 Aliphatics	ND	17.0	mg/Kg-dry	1	6/12/2013
Unadjusted C11-C22 Aromatics	ND	17.0	mg/Kg-dry	1	6/12/2013
Surr: 1-Chlorooctadecane	58.8	40-140	%REC	1	6/12/2013
Surr: o-Terphenyl	77.9	40-140	%REC	1	6/12/2013

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method:	(eph_Spr)	Pre	Date: 6/10/201	3 2:57:17	PM
Naphthalene	ND	0.114	mg/Kg-dry	1	6/13/2013 12:34:00 AM
2-Methylnaphthalene	0.568	0.114	mg/Kg-dry	1	6/13/2013 12:34:00 AM
Acenaphthene	ND	0.114	mg/Kg-dry	1	6/13/2013 12:34:00 AM
Phenanthrene	0.156	0.114	mg/Kg-dry	1	6/13/2013 12:34:00 AM
Total PAH Target Concentration	0.724	0.114	mg/Kg-dry	1	6/13/2013 12:34:00 AM
Surr: 2,2-Difluorobiphenyl	48.2	40-140	%REC	1	6/13/2013 12:34:00 AM
Surr: 2-Fluorobiphenyl	53.8	40-140	%REC	1	6/13/2013 12:34:00 AM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Prep	Date:		
Unadjusted C5-C8 Aliphatic HC	ND	11.4	mg/Kg-dry	1	6/13/2013 12:20:00 PM
Unadjusted C9-C12 Aliphatic HC	ND	11.4	mg/Kg-dry	1	6/13/2013 12:20:00 PM
Methyl Tert-Butyl Ether	ND	0.114	mg/Kg-dry	1	6/13/2013 12:20:00 PM
Benzene	ND	0.114	mg/Kg-dry	1	6/13/2013 12:20:00 PM
Toluene	ND	0.114	mg/Kg-dry	1	6/13/2013 12:20:00 PM
Ethylbenzene	2.07	0.114	mg/Kg-dry	1	6/13/2013 12:20:00 PM
m,p-Xylene	ND	0.114	mg/Kg-dry	1	6/13/2013 12:20:00 PM
o-Xylene	0.670	0.114	mg/Kg-dry	1	6/13/2013 12:20:00 PM
Naphthalene	ND	0.114	mg/Kg-dry	1	6/13/2013 12:20:00 PM
C9-C10 Aromatic Hydrocarbons	ND	11.4	mg/Kg-dry	1	6/13/2013 12:20:00 PM
Adjusted C5-C8 Aliphatic HC	ND	11.4	mg/Kg-dry	1	6/13/2013 12:20:00 PM
Adjusted C9-C12 Aliphatic HC	ND	11.4	mg/Kg-dry	1	6/13/2013 12:20:00 PM
Surr: 2,5-Dibromotoluene FID	87.5	70-130	%REC	1	6/13/2013 12:20:00 PM

Qualifiers:

- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Spike Recovery outside recovery limits

- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

1306067

Lab Order: Project: Noonan - Arlington

Lab ID:

1306067-006

Client Sample ID: S-48

Collection Date: 6/5/2013 3:30:00 PM

Date Received: 6/7/2013

Matrix: SOIL

1

Analyses VPH - MADEP VPH Result Det. Limit Qual Units DF **Date Analyzed**

Prep Method:

Prep Date:

Surr: 2,5-Dibromotoluene PID

83.6

70-130

%REC

6/13/2013 12:20:00 PM

Analyst: ZC

Qualifiers:

Analyte detected in the associated Method Blank

Ε Value above quantitation range

Analyte detected below quantitation limits

Spike Recovery outside recovery limits

BRL Below Reporting Limit

Η Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

ANALYTICAL QC SUMMARY REPORT

Date: 18-Jun-13

TestCode: epht_s

Clean Harbors CLIENT:

1306067 Work Order: Noonan - Arlington Project:

Comple ID: 14D Course										
٠.	SampType: mblk	TestCoc	TestCode: epht_s	Units: mg/Kg		Prep Date:	te: 6/10/2013	RunNo: 50626	50626	<u> </u>
Client ID: ZZZZZ	Batch ID: 22432	Test	TestNo: MADEP EPH	PH (eph_Spr)		Analysis Date:	le: 6/12/2013	SedNo: 574374	574374	
Analyte	Result	Рог	SPK value	SPK Ref Val	7 1 1 1 1 1	tieri Pro-				
				ı	/OLEC	LOWLIIII	nignicilin APD Ket val	val %KPD	PDLimit	Qual
Adjusted C11-C22 Aromatics	QN	15.0								
C09-C18 Aliphatics	QN	15.0								
C19-C36 Aliphatics	QN	15.0								
Unadjusted C11-C22 Aromatics	QN	15.0								
Surr: 1-Chlorooctadecane	5.411	0	10	c	1 72	Ψ.	27			
Surr: o-Terphenyl	9.352	0	10		93.5	\$ 4	140			
Sample ID: LCS-22432	SampType: Lcs	TestCod	TestCode: epht_s	Units: mg/Kg		Prep Date:	e: 6/10/2013	BunNo: 60636	2020	
Client ID: ZZZZZ	Batch ID: 22432	TestN	TestNo: MADEP EPH	_		Analysis Date:		SeqNo: 574372	574372	
Analyte	Result	PQ	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val		T. C. C. C. C. C. C. C. C. C. C. C. C. C.	Č
C09-C18 Aliphatics	QV	15.0	5		203	Ş				Kual
C19-C36 Aliphatics	2) (2 9	o	20.3	40	140			
Tradinated O44 O22 America		15.0	10	0	68.4	40	140			
Oliadjusted CTT-C22 Aromatics	Q	15.0	10	0	81.0	40	140			
Surr 1-Uniorooctadecane	6.124	0	10	0	61.2	4	140			
Surr. o- I erpnenyl	12.26	0	10	0	123	40	140			
Sample ID: LCS#2-22432	SampType: Lcsd	TestCod	TestCode: epht s	Units: ma/Ka	j j	Prep Date:	6/40/2013	O Change		
Client ID: ZZZZZ	Batch ID: 22/32	Tooth						DAMINO. DODGE	97900	
	Date: 10. 4440		J. MADEP E	Testing: IMADEP EPH (eph_Spr)		Analysis Date:	e: 6/12/2013	SeqNo: 574373	574373	_
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	al %RPD	RPDI imit	<u> </u>
C09-C18 Aliphatics	QN	15.0	9	c	65.2	É	0.00			
C19-C36 Aliphatics	QN	15.0	10	0	70.6	5 4	140 6 926			
Unadjusted C11-C22 Aromatics	QN	15.0	10		43.1	9 €				
Surr: 1-Chlorooctadecane	5 107	c		•	2	†	140 8.095		0 25	
Surr o-Temberyl	5 1) (2 :	>	51.1	4	140	0	0	
can compare the	7.149	0	6	0	71.5	9	140	0	0 0	
Qualifiers: BRL Below Reporting Limit	ing Limit		E Value	Value above quantitation range	95		H Holding times	for preparation of	1000	
J Analyte detect	Analyte detected below quantitation limits		ND Not De	Not Detected at the Reporting Limit	. I :			received the propagation of analysis exceeded	analysis exceed	pa
S Spike Recover	Spike Recovery outside recovery limits						K KFD outside recovery limits	ecovery limits		

GeoLabs, Inc.

45 Johnson Lane \sim Braintree MA 02184 \sim 781 848 7844 \sim 781 848 7811

Clean Harbors	
CLIENT:	

1306067 Work Order:

Noonan - Arlington Project:

TestCode: VPH S2

Sample ID: MBLK	SampType: MBLK	TestCo	TestCode: VPH_S2	Units: mg/Kg		Prep Date:			RunNo: 50664	4	
Client ID: ZZZZZ	Batch ID: R50664	Test	TestNo: VPH			Analysis Date: 6/12/2013	6/12/201	m	SeqNo: 574266	566	
Analyte	Result	PoL	SPK value	SPK Ref Val	%REC	%REC LowLimit HighLimit RPD Ref Val	ghLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	QV	0.100						-			
2,2,4-Trimethylpentane	Q	0.100									
2-Methylpentane	Ð	0.100									
n-Butylcyclohexane	Ð	0.100									
n-Decane	Q	0.100									
n-Nonane	QN	0.100									
n-Pentane	QN	0.100									
Unadjusted C5-C8 Aliphatic HC	QN	10.0									
Unadjusted C9-C12 Aliphatic HC		10.0									
Methyl Tert-Butyl Ether	2	0.100									
Benzene	ND	0.100									
Toluene	QN	0.100									
Ethylbenzene	Q	0.100									
m,p-Xylene	QN	0.100									
o-Xylene	Q	0.100									
Naphthalene	QN	0.100									
C9-C10 Aromatic Hydrocarbons	Q	10.0									
Surr: 2,5-Dibromotoluene FID	96.83	0	100	0	96.8	20	130				
Surr: 2,5-Dibromotoluene PID	86.83	0	100	0	86.8	0,2	130				
Sample ID: LCS	SampType: LCS	TestCoc	TestCode: VPH S2	Units: mg/Ka		Prep Date:			RunNo: 50664		2

Holding times for preparation or analysis exceeded RPD outside recovery limits 130 130 R H 2 2 3 97.6 97.7 E Value above quantitation range ND Not Detected at the Reporting Limit 0.008 5 5 5 0.100 Analyte detected below quantitation limits Spike Recovery outside recovery limits 97.73 BRL Below Reporting Limit r s 2-Methylpentane Qualifiers:

Qual

%RPD RPDLimit

%REC LowLimit HighLimit RPD Ref Val

SPK value SPK Ref Val

g

Result

0.100

80.55 97.61

1,2,4-Trimethylbenzene 2,2,4-Trimethylpentane

Analyte

80.6

Analysis Date: 6/12/2013

Prep Date:

Units: mg/Kg

TestCode: VPH_S2 TestNo: VPH

Batch ID: R50664

Client ID: ZZZZZ

SeqNo: 574264 RunNo: 50664

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

1306067 Work Order:

Noonan - Arlington Project:

TestCode: VPH_S2

							Ì			
Sample ID: LCS	SampType: LCS	TestCo	TestCode: VPH \$2	Units: mg/Kg		Prep Date:			RinNo: 50664	
Client ID: ZZZZZ	Batch ID: R50664	Test	TestNo: VPH)	_	Analysis Dal	Analysis Date: 6/12/2013		SenNo: 574264	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	LowLimit HighLimit RPD Ref Val	PD Ref Val	%RPD RPDI imit	Ç
n-Butylcyclohexane	126.4	0.100	190	C	126	5	130			
n-Decane	123.5	0.100	100		123	2 5	5 5			
n-Nonane	116.4	0.100	100	0	116	30	<u>8</u> 5			
n-Pentane	102.5	0.100	100	0	103	8 2	30			
Unadjusted C5-C8 Aliphatic HC	240.7	10.0	300	0	80.2	2 2	130			
Unadjusted C9-C12 Aliphatic HC	343.2	10.0	300	0	114	202	<u>8</u>			
Methyl Tert-Butyl Ether	80.42	0.100	100	0	80.4	2. 02	130			
Benzene	83.26	0.100	100	0	83.3	2 2	130			
Toluene	80.22	0.100	100	0.01	80.2	2 6	<u> </u>			
Ethylbenzene	82.70	0.100	100	0.015	82.7	2 2	130			
m,p-Xylene	164.9	0.100	200	0	82.4	2 2	130			
o-Xylene	91.06	0.100	100	0	9-1	2. 6	130			
Naphthalene	107.4	0.100	100		107	? ?	130			
C9-C10 Aromatic Hydrocarbons	88.32	10.0	100	· 0	883	2. 0.	130			
Surr: 2,5-Dibromotoluene FID	89.21	0	100	0	89.2	2 2	5 5			
Surr: 2,5-Dibromotoluene PID	83.74	0	100	0	83.7	70	130			
Sample ID: LCSD	SampType: LCSD	TestCoc	TestCode: VPH \$2	Units: ma/Ka	ļ	Pren Date:				

Ø	SampType: LCSD	TestCod	TestCode: VPH_S2	Units: mg/Kg		Prep Date:	*.*		RunNo: 50664	 	
Client ID: ZZZZZ Ba	Batch ID: R50664	TestNo	TestNo: VPH			Analysis Date: 6/12/2013	: 6/12/20	13	SeqNo: 574265	ž	
Analyte	Result	PQL	SPK value	SPK value SPK Ref Val	%REC	LowLimit	-lighLimit	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual	PDLimit	Qual
1,2,4-Trimethylbenzene	80.71	0.100	100	0	80.7	2	130	-	c	26	
2,2,4-Trimethylpentane	90.06	0.100	100	0.008	99.1	2	130	· c	o c	3 %	
2-Methylpentane	97.94	0.100	100	0	97.9	02	130	· c	, c	2 2	
n-Butylcyclohexane	123.4	0.100	100	0	123	2 6	130	o c	o c	8 6	
n-Decane	127.0	0.100	100	0	127	2 2	13	· ·	.	9 8	
n-Nonane	1186	0 100	100	· c		2 6	2 5	> '	5	23	
	5	3	3	Þ	<u> </u>	€	130	0	0	25	
Oualifiers: BRL Below Reporting Limit J Analyte detected below quantitation limits S Spike Recovery outside recovery limits	mit low quantitation limits side recovery limits		E Value	E Value above quantitation range ND Not Detected at the Reporting Limit	e Limit		H R	Holding times for preparation RPD outside recovery limits	Holding times for preparation or analysis exceeded RPD outside recovery limits	/sis exceede	70

45 Johnson Lane \sim Braintree MA 02184 \sim 781 848 7811 GeoLabs, Inc.

1306067 Work Order:

Noonan - Arlington Project:

TestCode: VPH_S2

Sample ID: LCSD	SampType: 1 CSD	TeefCo	TestCode: VBM 63	I Inite: manife.	5						
	and odd dime	2000	76 LUA .97	OIIIIS. MOING		Frep Date:	Ċħ		KunNo: 50664	64	
Client ID: ZZZZZ	Batch ID: R50664	Testl	TestNo: VPH			Analysis Dat	Analysis Date: 6/12/2013		SeqNo: 574265	265	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	LowLimit HighLimit RPE	RPD Ref Val	%RPD	RPDLimit	Qual
n-Pentane	103.0	0.100	100	0	103	6	130	0	0	25	
Unadjusted C5-C8 Aliphatic HC	242.2	10.0	300	0	80.7	70	130	0	0	7 2	
Unadjusted C9-C12 Aliphatic HC	357.3	10.0	300	0	119	70	130	0	0	55	
Methyl Tert-Butyl Ether	82.03	0.100	100	0	82.0	70	130	0	0	25	
Benzene	81.96	0.100	100	0	82.0	70	130	0	0	25	
Toluene	86.54	0.100	100	0.01	86.5	70	130	0	0	25	
Ethylbenzene	89.74	0.100	100	0.015	89.7	70	130	0	0	25	
m,p-Xylene	180.5	0.100	200	0	90.3	70	130	0	0	52	
o-Xylene	82.74	0.100	100	0	82.7	70	130	0	0	25	
Naphthalene	113.1	0.100	100	0	113	70	130	0	0	25	
C9-C10 Aromatic Hydrocarbons	88.33	10.0	100	0	88.3	70	130	0	0	25	
Surr: 2,5-Dibromotoluene FID	83.67	0	100	0	83.7	70	130	0	0	0	
Surr: 2,5-Dibromotoluene PID	88.66	0	100	0	88.7	70	130	0	0	0	

Holding times for preparation or analysis exceeded RPD outside recovery limits H K E Value above quantitation range

ND Not Detected at the Reporting Limit Analyte detected below quantitation limits Spike Recovery outside recovery limits BRL Below Reporting Limit Qualifiers:

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

OF /				Lab Use Only	anutanaqmat ¬∢∞ ⊳∓	<u>_</u>						0 = Other				(9)
PAGE	cols)	in tar		Requested								: B = Bag P = Plastic V = Voa				NH (2508) MA (MA-015) RI (LA000252)
YUUU'' Special Instructions	e (s) infidence Proto criteria	-4r/		Analysis Rec								Containers: A = Amber G = Glass S = Summa	Nate / Time	Sale Control		Zα
Special Ir	rements: circle choice (s) CT RCP (Reasonable Confidence Protocols) State / Fed Program - Criteria	Project: Nacham Project PO:		An	- In							7 = Other		5-13		
Gong	Requirements: circle choice (s) CT RCP (Reasonable Confid State / Fed Program - Crite	Project: 74 Project PO:	e e	(/	HUN HOTO	7	7	7 7	7	7		5 = NaOH 6 = MEOH	l e			CT (PH-0148)
14M 0	MCP Methods DEP Other	twee Co	Preserative:		Y.E. NUMBER	10	202	50	10			3 = H2S04 (4 = Na2S203 (6	R		4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	NET 30 Days. A rattoreny"s fees
	DEP Other	2822 0690	d.		GeoLabs SAMPLE NUMBER	0-191	2	38				Preservatives 1 = Hcl 3 = 2 = HNO3 4 =	Received by:	B		late payment charge of 1.5% per mont or 18% per year, together with expenses above and beyond collection costs, inclyding attoreny"s fees and beyond NET 30 days.
Sample Handling: circle choice Filtration Done Not Needed Lab to do Preservation Lab to do Y/	GW-1 S-1 QC	21-792-		-	O 2 2 4 20	1	7 7	7	7	7					00.00	nd beyond collect yond NET 30 days
Sample Handlir Filtration Preservation	() (P.S.	222		Z I	XX-X	511	V	a	N	8		Received on Ice		5161	s baromar at llia	expenses above a
	circle choice (s)	Phone: 72 Fax: 78 email: <i>mad</i>		CONTAINER	F > 0. W		16/1	42.5	147	No.		ther	/,Time	130	All discounting	ar, together with
V RECC atories 2.184 811	Data Delivery: circle choice (s) Fax email Format: Excel	120			PLE ON / 10						·	oil A = Air ii OT = Other	Date /	11/9	OLIA RUSINESS	ont or 18% per ye
CUSTODY I ironmental Laboratorie Braintree, MA 0218 ⁴ • f 781.848.7811 m	Da Fax Form Excel	4 0 %			SAMPLE LOCATION / ID	97-5	200	N-3	5-36	87-5		ter S = Soil 0 = Oil			F APPRECIATE Y	rge of 1.5% per m al
CHAIN OF CUSTODY RECORD GeoLabs, Inc. Environmental Laboratories 45 Johnson Lane, Braintree, MA 02184 p 781.848.7844 • f 781.848.7811 www.geolabs.com	oircle one 3-day 5 / 7-days	and with MA	-		v ≼ ≅ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	4	W\ \			>		DW = Drinking Water SL = Sludge		M	THANK YOU - W	late payment cha
GHA GeoLak nc. 45 John p 781.8 www.ge	Turnaround: circle one 3-day 5 / 7-days	Kan a		COLLECTION	F- — ≅ m	1100	200	1400	05.h1	1530		ater ter	d by:		of CR.09/22/10	
Georgabs, In	1-day 2-day	Contact: A.Z.		٥	20 E T A B B	6/5	12	6/2	000	0/6		Matrix Codes: GW = Ground Water WW = Waste Water	Relinquished by:	Tank I	2010730.J&P.C	

Tuesday, June 18, 2013

Rich MacCarthy Clean Harbors 42 Longwater Drive Norwell, MA 02061

TEL: (781) 792-5822 FAX: (781) 792-5938

Project:

Noonan Park

Location:

Order No.: 1306066

GeoLabs, Inc. 45 Johnson Lane

Braintree MA 02184

Tele: 781 848 7844

Fax: 781 848 7811

Dear Rich MacCarthy:

GeoLabs, Inc. received 1 sample(s) on 6/7/2013 for the analyses presented in the following report.

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

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

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

Sincerely,

David Mick

Laboratory Director

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

Certifications:

CT (PH-0148) - MA (M-MA015) - NH (2508) - RI (LA000252) Accredited in Accordance with NELAC

	Taring in	MassDEP A	nalytical Protocol Co	ertification Form	- 1	5.74 6 1255.55	
	me: GeoLabs, In		Projec		<u> </u>		apar several control
	on: Noonan-Parl		RTN:		<u></u>		
This form prov	/ides certification	for the following d	ata set: 1306066-001				
Matrices:			ter 🗵 Soil/Sediment	☐ Drinking Water ☐	Air 🗆	Other week	lourater
CAM Protoco	I (check all that a	pply below):	<u> </u>	Difficing Water	<u> </u>	Other-wast	<u>ewater</u>
8260 VOC CAM II A	7470/7471 Hg CAM III B □	MassDEP VPH CAM IV A □	8081 Pesicides CAM V B	7196 Hex Cr CAM VI B		MassDEP A	APH
8270 SVOC CAM II B 🔲	7010 Metals CAM III C 🗆	MassDEP EPH CAM IV B ⊠	8151 Herbicides CAM V C	8330 Explosives CAM VIII A □		TO-15 VOC CAM IX B	٦ <u>.</u>
6010 Metals CAM III A 🛛	6020 Metals CAM III D	8082 PCB CAM V A 🗆	9014 Total Cyanide/PAC CAM VI A □	6860 Perchlorate CAM VIII B □			
Affirmative R	esponses to Que	estions A through	h F are required for "P	resumptive Certainty"	' status		
А	Were all samples properly preserved	received in a conditi d (including tempera	ion consistent with those outure) in the field or labora method holding times?	described on the Chain of tory, and prepared/analyze	Custody, ed within	⊠ Yes	□ No
В	Were the analytic	al method(s) and all	associated QC requirement protocol(s) followed?	ents specified in the select	ted CAM	⊠ Yes	□ No
С	Were all required protocol(s)	corrective actions ar implemented for all	nd analytical response act identified performance st	ions specified in the select andard non-conformances	ted CAM	⊠ Yes	□ No
D	Does the laborato Assurance and C	ry report comply wit luality Control Guide	h all reporting requiremen elines for the Acquisition a	ts specified in CAM VII A, nd Reporting of Analtyical	"Quality Data"?	⊠ Yes	□No
E	VPH, EPH, APH a. VPH, EPH modification(I, and APH Methods	only: Was each method olividual method(s) for a list	conducted without signification	ant is.)	⊠ Yes	□ No
	b. APH and TC)-15 Methods only: \	Was the complete analyte	list reported for each met	hod?	☐ Yes	□ No
F	evaluated in a	laboratory narrative	(including all "No" respon	d non-conformances identi ses to Questions A throug	ıh.E\ İ	⊠ Yes	□ No
	Were the renor	and I below are	required for "Presump	ptive Certainty" status specified in the selected (2414		
G			protocol(s)?		i	⊠ Yes	□ No
	representativ	<u>/eness requiremen</u>	ts described in 310 CMF	ay not necessarily meet R 40. 1056 (2) (k) and WS	C-07-350	usablility a).	nd
Н	Were all Q	C performance stan	dards as specified in the (CAM protocol(s) achieved?	?	⊠ Yes	□ No ¹
<u> </u>	Were results rep	orted for the comple	ete analyte list specified ir	the selected CAM protoc	ol(s)?	☐ Yes	⊠ No¹
			attached laboratory nar				
those responsib	ole for obtaining ti	ne pains and penal ne information, the rate and complete.	material contained in th	d upon my personal inquis analytical report is, to	uiry of the bes	t	
Signature:	1 Cerry	Muk	Position	on: Laboratory Directo	or		
Printed Name:	David Mick		Date:	June 18, 2013			

Date: 18-Jun-13

CLIENT:

Clean Harbors

Project:

Noonan Park

Lab Order:

1306066

CASE NARRATIVE

Physical Condition of Samples

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

Project Documentation

The project was accompanied by satisfactory Chain of Custody documentation.

Analysis of Sample(s)

EPH carbon ranges and diesel targets only reported via MADEP EPH, per client request.

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

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/18/13

CLIENT:

Clean Harbors

Project:

Noonan Park

Lab Order:

1306066

CASE NARRATIVE

EPH Methods

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

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

C11-C22 Aromatic Hydrocarbons exclude concentrations of Target PAH Analytes

CERTIFICATION:

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

Were all performance/acceptance standards achieved? YES

Were any significant modifications made to the EPH method? NO

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

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/18/13

Reported Date: 18-Jun-13

CLIENT:

Clean Harbors

Lab Order: 1306066

Noonan Park

Project: Lab ID:

1306066-001

Client Sample ID: SS-12

Collection Date: 6/6/2013 6:00:00 PM

Date Received: 6/7/2013

Matrix: SOIL

Analyst: KG

Analyst: Jsi

Analyses Result Det. Limit Qual Units DF Date Analyzed

EPH RANGES - MADEP EPH

Prep Method:	(eph_Spr)	Prep	Date: 6/10/201	3 2:57:17	PM	
Adjusted C11-C22 Aromatics	ND	16.3	mg/Kg-dry	1	6/12/2013	,
C09-C18 Aliphatics	ND	16.3	mg/Kg-dry	1	6/12/2013	
C19-C36 Aliphatics	ND	16.3	mg/Kg-dry	1	6/12/2013	
Unadjusted C11-C22 Aromatics	ND	16.3	mg/Kg-dry	1	6/12/2013	
Surr: 1-Chlorooctadecane	63.9	40-140	%REC	1	6/12/2013	
Surr: o-Terphenyl	88.2	40-140	%REC	1	6/12/2013	

EPH TARGET ANALYTES - MADEP EPH

Prep Method:	(eph_Spr)	Prep	Date: 6/10/201	3 2:57:17	PM
Naphthalene	ND	0.109	mg/Kg-dry	1	6/13/2013 1:11:00 AM
2-Methylnaphthalene	ND	0.109	mg/Kg-dry	1	6/13/2013 1:11:00 AM
Acenaphthene	ND	0.109	mg/Kg-dry	1	6/13/2013 1:11:00 AM
Phenanthrene	0.255	0.109	mg/Kg-dry	1	6/13/2013 1:11:00 AM
Total PAH Target Concentration	0.255	0.109	mg/Kg-dry	1	6/13/2013 1:11:00 AM
Surr: 2,2-Difluorobiphenyl	50.9	40-140	%REC	1	6/13/2013 1:11:00 AM
Surr: 2-Fluorobiphenyl	55.5	40-140	%REC	1	6/13/2013 1:11:00 AM

Qualifiers:

Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

S Spike Recovery outside recovery limits

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

ANALYTICAL QC SUMMARY REPORT

Clean Harbors CLIENT:

1306066 Work Order:

Noonan Park Project:

TestCode: epht_s

Date: 18-Jun-13

	SampType: mblk	TestCo	TestCode: epht s	Units: ma/Ka		Pren Date	P. 6/10/2013	Punklo: £0636	
Client ID: ZZZZZ	Batch ID: 22432	Test	Vo: MADEP EI	TestNo: MADEP EPH (eph_Spr)	7	Analysis Date:		SeqNo: 574371	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	I %RPD RPDLimit	t Qual
Adjusted C11-C22 Aromatics	Q	15.0							
C09-C18 Aliphatics	Q	15.0							
C19-C36 Aliphatics	QN	15.0							
Unadjusted C11-C22 Aromatics	QN	15.0							
Surr: 1-Chlorooctadecane	5.411	0	9	0	54.1	40	140		
Surr: o-Terphenyl	9.352	0	10	0	93.5	40	140		
Sample ID: LCS-22432	SampType: Lcs	TestCo	TestCode: epht_s	Units: mg/Kg		Prep Date:	e. 6/10/2013	RunNo: 50626	
Client ID: ZZZZZ	Batch ID: 22432	Test	lo: MADEP EI	TestNo: MADEP EPH (eph_Spr)	•	Analysis Date:		SeqNo: 574372	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	%RPD RPDLimit	Qual
C09-C18 Aliphatics	ON	15.0	9	0	58.3	40	140		
C19-C36 Aliphatics	QN	15.0	10	0	68.4	40	140		
Unadjusted C11-C22 Aromatics	QN	15.0	10	0	81.0	40	140		
Surr: 1-Chlorooctadecane	6.124	0	10	0	61.2	40	140		
Surr: o-Terphenyi	12.26	0	10	0	123	40	140		
<u> </u>	SampType: Lcsd	TestCoc	TestCode: epht_s	Units: mg/Kg		Prep Date:	9: 6/10/2013	RunNo: 50626	
Client ID: ZZZZZ	Batch ID: 22432	Test	o: MADEP EF	TestNo: MADEP EPH (eph_Spr)		Analysis Date:	e: 6/12/2013	SeqNo: 574373	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	%RPD RPDLimit	Qual
C09-C18 Aliphatics	QN	15.0	10	0	65.2	40	140 5.826	0 25	
C19-C36 Aliphatics	Q	15.0	10	0	70.6	40	140 6.836	0	
Unadjusted C11-C22 Aromatics	QN	15.0	10	0	43.1	40	140 8.095	0	
Surr: 1-Chlorooctadecane	5.107	0	10	0	51.1	40		0	
Surr: o-Terphenyl	7.149	0	10	0	71.5	40	140 0	0	

GeoLabs, Inc.

Holding times for preparation or analysis exceeded

RPD outside recovery limits

H &

E Value above quantitation range ND Not Detected at the Reporting Limit

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

Analyte detected below quantitation limits Spike Recovery outside recovery limits

BRL Below Reporting Limit

Qualifiers:

OF /				Lab Use Only TEMPERATURE B A A L	.9		0 = Other			-015)
PAGE	(s	VK		Rednested			B = Bag P = Plastic V = Voa			NH (2508) MA (MA-015) RI (LA000252)
Special Instructions	e (s) onfidence Protocol Criteria	m - f		Analysis Requ			Containers: A = Amber G = Glass S = Summa	Date / Time		NH.
16	Requirements: circle choice (s) CT RCP (Reasonable Confidence Protocols) State / Fed Program - Criteria	Project: - Nocitals Project PO:		Ar			7 = Other	2/-		(8)
4M Con	Requireme CT R State	Pro Pro	((300 P) HJ 3			5 = NaOH 6 = MEOH		9	A CT (PH-0148)
CAR	WCP Methods DEP Other	1690 2 hubor, car	Preserative:	GeoLabs SAMPLE NUMBER	100-07		ives 3 = H2SO4 4 = Na2S2O3	W.		2010730.J&P.C of CR.09/22/10 THANK YOU - WE APPRECIATE YOUR BUSINESS Ail discounting will be removed after 90 days - All Payment terms are NET 30 Days. A late payment charge of 1.5% per mont or 18% per year, together with expenses above and beyond collection costs, inclyding attoreny's fees and court costs, will be applied to balances that go beyond NET 30 days.
choice ded lo Y/N				GeoLab	200		Preservatives 1 = Hc 2 = HN03	Received by		* All Payment to collection costs, 30 days.
Handling: circle choice Done Not Needed Lab to do tion Lab to do Y / N	GW-1 S-1 QC	Phone: 781 - 793 - Fax: 781 - 871 - email: maccarchy@a	-	0	<i>j</i> 2		1 (ce			ifter 90 days and beyond eyond NET
Handlir r ation		18/2	-	∑ < ⊢ c − ×	N		Received on Ice	161	}	removed a ses above s that go be
Sample Har Filtration Preservation	choice (s)	ii: ha	PONTAINED	DD4Z-H->	-		Rec	(3)	Ţ	ting will be with expen to balance
Q	izle si	Phone: Fax: email: 4	In our	- ≻ a, ш	8	_	er	Time //3 (4/1 discoun together se applied
CHAIN OF CUSTODY RECORD GeoLabs, Inc. Environmental Laboratories 45 Johnson Lane, Braintree, MA 02184 p 781.848.7844 • f 781.848.7811 www.geolabs.com	Data Delivery: circle choice (s) ax remail connat:	all all all all all all all all all all		<u> </u>	6		A = Air OT = Other	Date / 7	† 	R BUSINESS of 18% per year sourt costs, will the
CHAIN OF CUSTODY R GeoLabs, Inc. Environmental Laboratories 45 Johnson Lane, Braintree, MA 02184 p 781.848.7844 • f 781.848.7811 www.geolabs.com	Data I Fax Format: Excel	0004		SAMPLE LOCATION / ID	33		S = Soil 0 = Oil			PRECIATE YOU 1.5% per mont and c
Environmen Environmen he, Braintre 44 • f 78	es Carte	Marke Car					DW = Drinking Water SL = Sludge	24		(YOU - WE AP
CHAIN OF C GeoLabs, Inc. Envira 45 Johnson Lane, Bt p 781.848.7844 • www.geolabs.com	circle one 3-day 5/7-days	Men		S	22		DW = Drinkin SL = Sludge	100		/10 THANI late pay
Geol. Geol. 45 Joh p 781 www.	Turnaround: circle one 3-day	A ich	0110	E M → ↑	1081		des: id Water 3 Water	shed by:		5 of CR.09/22
Geofahs, II	1-day 2-day	Client: C/c		2013	9/0		Matrix Codes: GW = Ground Water WW = Waste Water	Relinquished by:		2010730.J&P.C

Monday, June 17, 2013

Rich MacCarthy Clean Harbors 42 Longwater Drive Norwell, MA 02061 GeoLabs, Inc. 45 Johnson Lane Braintree MA Tele: 781 848 7844 Fax: 781 848 7811

TEL: (781) 792-5822 FAX: (781) 792-5938

Project:

Location:

Noonan-Arlington

Order No.: 1306012

Dear Rich MacCarthy:

GeoLabs, Inc. received 3 sample(s) on 6/4/2013 for the analyses presented in the following report.

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

Report is being re-issued with additional comments on Case Narrative. Analytical methods and results meet requirements of 310CMR 40.1056(J) as per MADEP Compendium of Analytical Methods (CAM).

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

David Mick

Sincerely.

Laboratory Director

For current certifications, please visit our website at Certifications:

CT (PH-0148) - MA (M-MA015) - NH (2508) - RI (LA000252) Accredited in Accordance with

. 1 € 1 € 1 N E	10 10 10 10 10 10 10 10 10 10 10 10 10 1	MassDE	P Ana	lytical Protocol Ce	artification Form	ALT Y	38	2 /32
Laboratory Na	ame: GeoLabs, In	1C.		Projec		Charles Many		
Project Locati	ion: Noonan-Arlin	igton		RTN:				
This form prov	vides certification	for the followi	ing dat	a set: 1306012 (001-0	003)			
Matrices:	⊠ Ground	dwater/Surface			□ Drinking Water □	Air 🖂	Other week	
· r	7 (oneon all triat a	pply below):	<u> </u>		J Dilliming vacci L	All L	Utner-wasi	tewater
8260 VOC CAM II A 🔲	CAM III B	MassDEP VPI CAM IV A	X	8081 Pesicides CAM V B	7196 Hex Cr CAM VI B		MassDEP A	APH
8270 SVOC CAM II B 🔲	7010 Metals CAM III C	MassDEP EPH CAM IV B	H 区	8151 Herbicides CAM V C □	8330 Explosives CAM VIII A □		TO-15 VOC CAM IX B	গ
6010 Metals CAM III A □	6020 Metals CAM III D 🔲	8082 PCB CAM V A		9014 Total Cyanide/PAC CAM VI A □	6860 Perchlorate CAM VIII B			
Affirmative Re	esponses to Qui	estions A thr	ough I	F are required for "P	resumptive Certainty"	" status		
A	Were all samples a properly preserved	received in a co d (including tem	ondition nperatur me	n consistent with those de tre) in the field or laborate ethod holding times?	lescribed on the Chain of tory, and prepared/analyze	Custody, ed within	☑ Yes	□ No
В	Were the analytica	al method(s) an	ıd all as pr	ssociated QC requirement rotocol(s) followed?	ents specified in the select	ed CAM	⊠ Yes	□ No
С	Were all required (protocol(s)	corrective action implemented for	ns and or all ide	analytical response action	ions specified in the select andard non-conformances	ted CAM	⊠ Yes	□ No
D	Does the laborator Assurance and Q	y report compluality Control C	y with a Suidelin	ıll reporting requirement ies for the Acquisition ar	is specified in CAM VII A, and Reporting of Analtyical	"Quality Data"?	⊠ Yes	□ No
E	VPH, EPH, APH a. VPH, EPH	and TO-15 only I, and APH Meth	y: t hods on	nlv: Was each method co	conducted without signification of signification	ont	⊠ Yes	□ No
							☐ Yes	□ No
					list reported for each meth			<u> </u>
	Cvaluated in a li	ianoratory rigita	auve und	ICIUOINO All "No" responsa	non-conformances identi- ses to Questions A through	.L -\	⊠ Yes	□ No
G G	Were the repor	ting limits at or	below a	all CAM reporting limits :	tive Certainty" status specified in the selected C	~^^ T		
				protocol(s)2	ay not necessarily meet		⊠ Yes	□ No
	representativ	eness requirer	ments c	aescripea in 310 CMR i	40. 1056 (2) (k) and W9(C-07-250	usablility ar	nd
<u>H</u>	Were all QC	performance s	standar	ds as specified in the C/	AM protocol(s) achieved?	,		⊠ No¹
All negative re	Were results repr	orted for the co	mplete	analyte list specified in	the selected CAM protoco	ol(s)?	□ Yes	⊠ No¹
the undersigne	ed. attest under th	addresseu III	an au	tached laboratory narra	<i>ative.</i> I upon my personal inqu			
nose responsib	ble for obtaining the e and belief, accur	ie informátion,	, the ma	yor perjury man, baseu aterial contained in this	d upon my personal inquis analytical report is, to	iry of the best	t	
Signature:	1 Janie	/ 1Vh	<i>I_</i>	Position	n: Laboratory Directo			
Printed Name:_	David Mick			Date:	June 17, 2013	<u>-</u>		

Date: 17-Jun-13

CLIENT:

Clean Harbors

Project:

Lab Order:

1306012

CASE NARRATIVE

Physical Condition of Samples

The project was received by the laboratory in satisfactory condition. The sample(s) were received undamaged, in appropriate containers with the correct preservation, with the following exception: Samples were unpreserved, but brought directly from the field.

Project Documentation

The project was accompanied by satisfactory Chain of Custody documentation.

Analysis of Sample(s)

Carbon ranges and diesel targets only analyzed via MADEP EPH method, per client request.

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

VPH LCSD RPD % Recovery for Naphthalene is outside of recovery limits.

SIGNATURE:

PRINTED NAME: David Mick

LAB DIRECTOR

DATE: 06/17/13

CLIENT:

Clean Harbors

Project:

Lab Order:

1306012

CASE NARRATIVE

EPH Methods

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

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

C11-C22 Aromatic Hydrocarbons exclude concentrations of Target PAH Analytes

CERTIFICATION:

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

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

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/17/13

CLIENT:

Clean Harbors

Project:

Lab Order:

1306012

CASE NARRATIVE

VPH Methods

Method for Ranges: MADEP VPH 04-1.1

Method for Target Analytes: MADEP VPH 04-1.1

Soil sample(s) were received in MeOH and soil was completely covered by MeOH.

Soil sample(s) ratio 1:1 +/- 25%

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

C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range. (MTBE, Benzene, Toluene)

C9-C12 Aliphatic Hydrocarbons exclude concentration of Target Analytes eluting in that range (Ethylbenzene, m&p-Xylenes, o-Xylene) AND concentration of C9-C10 Aromatic Hydrocarbons.

CERTIFICATION

Were all QA/QC procedures REQUIRED by the VPH Method followed? YES Were all QA/QC performance/acceptance standards achieved? NO (See Case Narrative) Were any significant modifications made to the VPH method, as specified in Sec. 11.3? NO

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

SIGNATURE:

POSITION: LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/17/13

Reported Date: 17-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306012

Client Sample ID: WS-1

Collection Date: 6/3/2013 4:00:00 PM

Project: Lab ID:

Date Received: 6/4/2013

Lab ID:	1206012-001			Date 1	Received:	6/4/2013
	1306012-001				Matrix:	WATE
	100				-	
Inalyses		Result	Det. Limit Qua	l Units		DF

Analyses	Result	Det. Limit (Qual Unit	s DF	Date Analyzed
EPH RANGES - MADEP EPH					Analyst: KG
Prep Method:	(eph_Wpr)	Pre	ep Date:	6/4/2013 8:59:14 AM	-
Adjusted C11-C22 Aromatics	ND	103	μg/L		6/7/2013
C09-C18 Aliphatics	ND	103	μg/L	1	·=- · · •
C19-C36 Aliphatics	118	103	μg/L	1	6/7/2013
Unadjusted C11-C22 Aromatics	ND	103	µg/L	1	6/7/2013
Surr: 1-Chlorooctadecane	52.3	40-140	%RE0	1 1	6/7/2013
Surr: o-Terphenyl	77.8	40-140	%REC	•	6/7/2013 6/7/2013

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method:	(eph_Wpr)	Pre	p Date:	6/4/2013 8:59:14 AM	
Naphthalene	ND	1.03	μg/L		C/0/0040 40 00 00
2-Methylnaphthalene	5.91	1.03	. •		6/6/2013 12:09:00 PM
Acenaphthene			μg/L	1	6/6/2013 12:09:00 PM
Phenanthrene	ND	1.03	μg/L	1	6/6/2013 12:09:00 PM
	ND	1.03	μg/L	1	6/6/2013 12:09:00 PM
Total PAH Target Concentration	5.91	1.03	μg/L	1	6/6/2013 12:09:00 PM
Surr: 2,2-Difluorobiphenyl	51.2	40-140	%REC	1	
Surr: 2-Fluorobiphenyl	54.3	40-140		'	6/6/2013 12:09:00 PM
• •	04.0	70-140	%REC	• 1	6/6/2013 12:09:00 PM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Pre	Date:		
C9-C10 Aromatic Hydrocarbons	ND	100	µg/L		
Unadjusted C5-C8 Aliphatic	ND	100		1	6/6/2013 12:33:00 PM
Hydrocarbons		100	µg/L	1	6/6/2013 12:33:00 PM
Unadjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/6/2013 12:33:00 PM
Methyl Tert-Butyl Ether	ND	1.00	μg/L	4	0/0/00/10
Benzene	ND	1.00		1	6/6/2013 12:33:00 PM
Toluene	· · ·		μg/L	1	6/6/2013 12:33:00 PM
Ethylbenzene	2.06	1.00	μg/L	1	6/6/2013 12:33:00 PM
	1.23	1.00	μg/L	1	6/6/2013 12:33:00 PM
m,p-Xylene	3.16	1.00	μg/L	1	6/6/2013 12:33:00 PM
o-Xylene	7.46	1.00	μg/L		
Naphthalene	ND	1.00		1	6/6/2013 12:33:00 PM
Adjusted C5-C8 Aliphatic			µg/L	1	6/6/2013 12:33:00 PM
Hydrocarbons	ND	100	μg/Ľ	1	6/6/2013 12:33:00 PM

Qualifiers:

- В Analyte detected in the associated Method Blank E
 - Value above quantitation range
- Analyte detected below quantitation limits
- Spike Recovery outside recovery limits

- BRL Below Reporting Limit
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Reported Date: 17-Jun-13

CLIENT:

Clean Harbors

Client Sample ID: WS-1

Lab Order: 1306012

Collection Date: 6/3/2013 4:00:00 PM

Project:

Lab ID:

1306012-001

Date Received: 6/4/2013

Matrix: WATER

Analyses	Result	Det. Limit Q	ual Units	DF	Date Analyzed
VPH - MADEP VPH					Analyst: ZC
Prep Method:		Pre	Date:		
Adjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/6/2013 12:33:00 PM
Surr: 2,5-Dibromotoluene FID	119	70-130	%REC	1	6/6/2013 12:33:00 PM
Surr: 2,5-Dibromotoluene PID	85.0	70-130	%REC	1	6/6/2013 12:33:00 PM

Qualifiers:

Analyte detected in the associated Method Blank

BRL Below Reporting Limit

Е Value above quantitation range

Holding times for preparation or analysis exceeded

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike Recovery outside recovery limits

Reported Date: 17-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306012

Client Sample ID: WS-2

Collection Date: 6/3/2013 4:28:00 PM

Project: Lab ID:

Date Received: 6/4/2013

1306012-002

Matrix: WATER

Analyses	Result	Det. Limit	Qual Unit	s DF	Date Analyzed
EPH RANGES - MADEP EPH					Analyst: KG
Prep Method:	(eph_Wpr)	F	Prep Date:	6/4/2013 8:59:14 AM	
Adjusted C11-C22 Aromatics	ND	101	μg/L	1	6/7/2013
C09-C18 Aliphatics	ND	101	μg/L	1	6/7/2013
C19-C36 Aliphatics	ND	101	µg/L	1	6/7/2013
Unadjusted C11-C22 Aromatics	ND	101	µg/L	1	6/7/2013
Surr: 1-Chlorooctadecane	72.7	40-140	%RE	C 1	6/7/2013
Surr: o-Terphenyl	76.9	40-140	%RE	C 1	6/7/2013

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method	: (eph_Wpr)	Prep	Date:	6/4/2013 8:59:14 AM	
Naphthalene	ND	1.01	µg/L	1	6/6/2013 12:47:00 PM
2-Methylnaphthalene	ND	1.01	μg/L	1	6/6/2013 12:47:00 PM
Acenaphthene	ND	1.01	μg/L	1	6/6/2013 12:47:00 PM
Phenanthrene	ND	1.01	μg/L	1	6/6/2013 12:47:00 PM
Total PAH Target Concentration	ND	1.01	μg/L	1	6/6/2013 12:47:00 PM
Surr: 2,2-Difluorobiphenyl	52.1	40-140	%REC	1	6/6/2013 12:47:00 PM
Surr: 2-Fluorobiphenyl	57.1	40-140	%REC	1	6/6/2013 12:47:00 PM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Prep	Date:		
C9-C10 Aromatic Hydrocarbons	ND	100	μg/L	1	6/6/2013 1:21:00 AM
Unadjusted C5-C8 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/6/2013 1:21:00 AM
Unadjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/6/2013 1:21:00 AM
Methyl Tert-Butyl Ether	ND	1.00	μg/L	1	6/6/2013 1:21:00 AM
Benzene	ND	1.00	μg/L	1	6/6/2013 1:21:00 AM
Toluene	ND	1.00	μg/L	1	6/6/2013 1:21:00 AM
Ethylbenzene	ND	1.00	μg/L	1	6/6/2013 1:21:00 AM
m,p-Xylene	ND	1.00	μg/L	1	6/6/2013 1:21:00 AM
o-Xylene	ND	1.00	μg/L	1	6/6/2013 1:21:00 AM
Naphthalene	ND	1.00	μg/L	1	6/6/2013 1:21:00 AM
Adjusted C5-C8 Aliphatic Hydrocarbons	ND	100	μg/L	. 1	6/6/2013 1:21:00 AM

Qualifiers:

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

Ε Value above quantitation range

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

Spike Recovery outside recovery limits

Reported Date: 17-Jun-13

CLIENT:

Clean Harbors

Client Sample ID: WS-2

Lab Order:

1306012

Collection Date: 6/3/2013 4:28:00 PM

Project:

1300012

Date Received: 6/4/2013

Lab ID:

1306012-002

Matrix: WATER

Analyses	Result	Det. Limit Q	ual Units	DF	Date Analyzed
VPH - MADEP VPH					Analyst: ZC
Prep Method:		Prep	Date:		
Adjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μ g/L	1	6/6/2013 1:21:00 AM
Surr: 2,5-Dibromotoluene FID	128	70-130	%REC	1	6/6/2013 1:21:00 AM
Surr: 2,5-Dibromotoluene PID	87.5	70-130	%REC	1	6/6/2013 1:21:00 AM

Qualifiers: B Analyte detected in the associated Method Blank

BRL Below Reporting Limit

E Value above quantitation range

H Holding times for preparation or analysis exceeded

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

Reported Date: 17-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306012

Project: Lab ID:

1306012-003

Client Sample ID: WS-3

Collection Date: 6/3/2013 5:07:00 PM

Date Received: 6/4/2013

Matrix: WATER

Analyses	Result	Det. Limit Q	ual Units	DF	Date Analyzed
EPH RANGES - MADEP EPH			-		Analyst: KG
Prep Method:	(eph_Wpr)	Pre	p Date:	6/4/2013 8:59:14 AM	
Adjusted C11-C22 Aromatics	ND	101	 μg/L	1	6/7/2013
C09-C18 Aliphatics	ND	101	μg/L	1	6/7/2013
C19-C36 Aliphatics	ND	101	μg/L	1	6/7/2013
Unadjusted C11-C22 Aromatics	ND	101	µg/L	1	6/7/2013
Surr: 1-Chlorooctadecane	60.4	40-140	%REC	; 1	6/7/2013
Surr: o-Terphenyl	65.6	40-140	%REC	•	6/7/2013

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method	i: (eph_Wpr)	Pre	p Date:	6/4/2013 8:59:14 AM	
Naphthalene	ND	1.01	µg/L	1	6/6/2013 1:25:00 PM
2-Methylnaphthalene	ND	1.01	μg/L	, 1	6/6/2013 1:25:00 PM
Acenaphthene	ND	1.01	μg/L	1	6/6/2013 1:25:00 PM
Phenanthrene	ND	1.01	μg/L	1	6/6/2013 1:25:00 PM
Total PAH Target Concentration	ND	1.01	μg/L	1	6/6/2013 1:25:00 PM
Surr: 2,2-Difluorobiphenyl	55.6	40-140	%REC	1	6/6/2013 1:25:00 PM
Surr: 2-Fluorobiphenyl	53.8	40-140	%REC	1	6/6/2013 1:25:00 PM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Prep	Date:		
C9-C10 Aromatic Hydrocarbons	ND	100	μg/L	1	6/6/2013 2:08:00 AM
Unadjusted C5-C8 Aliphatic Hydrocarbons	ND	100	µg/L	1	6/6/2013 2:08:00 AM
Unadjusted C9-C12 Aliphatic Hydrocarbons	ND	100	µg/L	1	6/6/2013 2:08:00 AM
Methyl Tert-Butyl Ether	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
Benzene	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
Toluene	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
Ethylbenzene	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
m,p-Xylene	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
o-Xylene	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
Naphthalene	ND	1.00	μg/L	1	6/6/2013 2:08:00 AM
Adjusted C5-C8 Aliphatic Hydrocarbons	ND	100	µg/L	1	6/6/2013 2:08:00 AM

Qualifiers:

- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Spike Recovery outside recovery limits

BRL Below Reporting Limit

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 17-Jun-13

CLIENT:

Clean Harbors

Lab Order:

Client Sample ID: WS-3

1306012

Collection Date: 6/3/2013 5:07:00 PM

Project:

Lab ID:

1306012-003

Date Received: 6/4/2013

Matrix: WATER

Analyses	Result	Det. Limit Q	ual Units	DF	Date Analyzed
VPH - MADEP VPH					Analyst: ZC
Prep Method:		Prep	Date:		
Adjusted C9-C12 Aliphatic Hydrocarbons	ND	100	µg/L	1	6/6/2013 2:08:00 AM
Surr: 2,5-Dibromotoluene FID	109	70-130	%REC	1	6/6/2013 2:08:00 AM
Surr: 2,5-Dibromotoluene PID	82.8	70-130	%REC	1	6/6/2013 2:08:00 AM

Qualifiers:

Analyte detected in the associated Method Blank

BRL Below Reporting Limit

Е Value above quantitation range

Holding times for preparation or analysis exceeded

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike Recovery outside recovery limits

ANALYTICAL QC SUMMARY REPORT

Clean Harbors CLIENT:

1306012 Work Order:

Project:

TestCode: EPHP_W_DIESEL

henyl henyl	Sample ID: MB-22404	Comp.Dimo: MBI K	10000	die Gilde	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			11				
POL SPK value SPK Ref Val %REC LowLimit HighLimit Hi		Carry year. Milet	200	7.A LL LL . A. T	JE CHIES. JEG/L		Prep U		m	RunNo: 5050		
ND 1.00 1.		Batch ID: 22401	Test	No: MADEP EP	H_ (eph_Wpr)		Analysis Da		m	SeqNo: 57340	ಐ	
ND 1,00 1,	Analyte	Result	Pol		SPK Ref Vai	%REC		HighLimit	RPD Ref Val		PDLimit	Qual
ND 1.00 1	Naphthalene	QV	1.00			-			!			
ND 1.00 1.	2-Methylnaphthalene	QN	1.00									
ND 1.00 1.	Acenaphthene	Q	1.00									
100 1.00 1	Phenanthrene	2	1.00									
10.72 0 25 0 42.9 40 140 140 140 12.01 0 25 0 48.0 40 140 140 12.01 12.0	Total PAH Target Concentration	QN	1.00									
12.01 12.0	Surr: 2,2-Difluorobiphenyl	10.72	0	25	0	42.9	40	140				
255-22401 SampType: LCS TestCode: EPHP_W_DIE Units: µg/L Prep Date: 6/4/20 6/4/20 ZZZZ Batch ID: 22401 TestNo: MADEP EPH_(eph_Wpr) Analysis Date: 6/6/20 6/6/20 Analysis Date: 6/6/20 6/6/20 Palene 20.77 1.00 50 0 41.5 40 140 Palene 23.32 1.00 50 0 46.6 40 140 Place piphenyl 11.72 0 25 0 46.9 40 140 Place piphenyl 12.73 0 25 0 60.9 40 140 Place piphenyl 12.73 0 25 0 60.9 40 140 Place piphenyl 12.73 0 25 0 60.9 40 140 Place piphenyl 12.73 0 25 0 60.9 40 140 Place piphenyl 12.73 0 25 0 50.9 40 140 Place piphenyl	Surr. 2-Fluorobiphenyl	12.01	0	. 25	0	48.0	4	140				
22222 Batch ID: 22401 TestNo: MADEP EPH (eph Wpr) SPK Ref Val %REC LowLinit High Limit halene 20.77 1.00 50 0 44.5 40 140 halene 23.32 1.00 50 0 46.6 40 140 halene 23.32 1.00 50 0 46.6 40 140 10-robiphenyl 11.72 0 25 0 46.9 40 140 10-robiphenyl 12.73 0 25 0 46.9 40 140 12-rotar SampType: LCSD TestCode: EPHP_W_DIE: Uphr. PMPT Php. PmP Date: 64.29 46.9 40 140 125-5 1.00 <td>Sample ID: LCS-22401</td> <td>SampType: LCS</td> <td>TestCo</td> <td>de: EPHP_W_D</td> <td>IE Units: µg/L</td> <td></td> <td>Prep Da</td> <td>Ш</td> <td></td> <td>RunNo: 50506</td> <td></td> <td></td>	Sample ID: LCS-22401	SampType: LCS	TestCo	de: EPHP_W_D	IE Units: µg/L		Prep Da	Ш		RunNo: 50506		
PQL SPK value SPK Ref Val %REC LowLinnit HighLinnit High		Batch ID: 22401	Test	No: MADEP EPI	(eph_Wpr)		Analysis Da		•	SeqNo: 57340	_	
140 140	Analyte	Result	PQL		SPK Ref Val	%REC	LowLimit		RPD Ref Val		PDLimit	Oual
1.00 50 0 46.6 40 140	Naphthalene	20.77	1.00	20	0	41.5	40	140				
100 50 0 53.1 40 1	2-Methylnaphthalene	23.32	1.00	50	0	46.6	40	140				
1.00 50 0 77.1 40 140 140 140 140 140 14.72 0 25 0 46.9 40 140 140 140 140 140 14.72 0 25 0 46.9 40 140	Acenaphthene	26.57	1.00	20	0	53.1	40	140				
11.72 0 25 0 46.9 40 140 140 140 15.73 0 25 0 60.9 40 140 140 140 12.73 0 25 0 60.9 40 140 140 12.2401	Phenanthrene	38.55	1.00	90	0	77.1	40	140				
SampType: LCSD TestCode: EPHP_W_DIE Units: µg/L Rnalysis Date: G/4/20 Frep Date: G/4/20	Surr: 2,2-Difluorobiphenyl	11.72	0	25	0	46.9	40	140				
SD-22401 SampType: LCSD TestCode: EPHP_W_DIE Units: µg/L Prep Date: 6/4/20 722 Batch ID: 22401 TestNo: MADEP EPH_ (eph_Wpr) Analysis Date: 6/5/20 Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit PQL SPK value SPK Ref Val %REC LowLimit HighLimit HighLimit PRL Below Reporting Limit 25.52 1.00 50 0 51.0 40 140 J Analyte detected below quantitation limits R Value above quantitation range H R S Spike Recovery outside recovery limits ND Not Detected at the Reporting Limit R R	Surr: 2-Fluorobiphenyl	12.73	0	25	0	50.9	40	140				
ZZZ Batch ID: 22401 TestNo: MADEP EPH_ (eph_Wpr) Analysis Date: 6/5/20 6/5/20	Sample ID: LCSD-22401	SampType: LCSD	TestCo	de: EPHP_W_D	IE Units: μg/L		Prep Da	II .		RunNo: 50506		
Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit HighL		Batch ID: 22401	Test	NO: MADEP EP	ا_ (eph_Wpr)		Analysis Da			SeqNo: 57340.	01	
140 140	Analyte	Result	PQL		SPK Ref Val	%REC	LowLimit		RPD Ref Val		PDLimit	Qual
ralene 25.52 1.00 50 0 51.0 40 140 28.37 1.00 50 0 56.7 40 140 BRL Below Reporting Limit E Value above quantitation range H J Analyte detected below quantitation limits ND Not Detected at the Reporting Limit R S pike Recovery outside recovery limits R R	Naphthalene	22.59	1.00	20	0	45.2	40	140	20.77	8.39	5	
BRL Below Reporting Limit J Analyte detected below quantitation limits S Spike Recovery outside recovery limits	2-Methylnaphthalene	25.52	1.00	20	0	51.0	40	140	23.32	9.01	20 05	
BRL Below Reporting Limit J Analyte detected below quantitation limits ND Not Detected at the Reporting Limit R Spike Recovery outside recovery limits	Acenaphthene	28.37	1.00	20	0	26.7	40	140	26.57	6.55	20	
Analyte detected below quantitation limits ND Not Detected at the Reporting Limit Recovery outside recovery limits	BRL	ing Limit		,	ove quantitation rar	ıge			olding times for p.	reparation or analy	sis exceeded	
Spike Recovery outside recovery limits		ted below quantitation limits			cted at the Reportin	g Limit			D outside recove	ry limits		
		ry outside recovery limits										

GeoLabs, Inc.

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

Work Order:

1306012 Project:

Qual 0 0 %RPD RPDLimit SeqNo: 573402 RunNo: 50506 0 0 4.71 38.55 0 0 LowLimit HighLimit RPD Ref Val Prep Date: 6/4/2013 Analysis Date: 6/5/2013 64 64 64 64 4 4 4 %REC 80.8 49.6 50.6 TestCode: EPHP_W_DIE Units: µg/L TestNo: MADEP EPH_ (eph_Wpr) 000 SPK value SPK Ref Val Б 1.00 00 Result 12.64 40.41 12.41 SampType: LCSD Batch ID: 22401 Surr: 2,2-Difluorobiphenyl Sample ID: LCSD-22401 Surr: 2-Fluorobiphenyl Client ID: ZZZZZ Phenanthrene Analyte

TestCode: EPHP_W_DIESEL

Holding times for preparation or analysis exceeded RPD outside recovery limits H & Not Detected at the Reporting Limit Value above quantitation range ы В Analyte detected below quantitation limits Spike Recovery outside recovery limits BRL Below Reporting Limit - s Qualifiers:

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Clean Harbors 1306012 CLIENT:

Work Order: Project:

TestCode: epht_w

Sample ID: MB-22401	SampType: mblk	TestCo	TestCode: epht_w	Units: µg/L		Prep Date:	9: 6/4/2013		RunNo: 50494	76	
Client ID: ZZZZ	Batch ID: 22401	Test	No: MADEP EI	TestNo: MADEP EPH (eph_Wpr)		Analysis Date:			SeqNo: 573366	366	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit Ri	RPD Ref Val	%RPD	RPD! imit	Ğ
Adjusted C11-C22 Aromatics	QN	100									
C09-C18 Aliphatics	S	100									
C19-C36 Aliphatics	Q	100									
Unadjusted C11-C22 Aromatics	Q	100									
Surr: 1-Chlorooctadecane	60.63	0	100	0	909	40	140				
Surr: o-Terphenyl	66.70	0	100	0	66.7	40	140				
Sample ID: LCS-22401	SampType: Lcs	TestCo	TestCode: epht_w	Units: µg/L		Prep Date:	6/4/2013		RunNo: 50494	100	
Client ID: ZZZZZ	Batch ID: 22401	Test	TestNo: MADEP EPH	_	7	Analysis Date:			SeqNo: 573367	367	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RF	RPD Ref Val	%RPD	RPD! imit	٥
C09-C18 Aliphatics	2	92	100	c	20.05	\$					Kaa
C19-C36 Aliphatics	Q	100	100	· c	0.00	?	5 5				
Unadjusted C11-C22 Aromatics	Q	100	100) c	40.0	ş	5 6				
Surr: 1-Chlorooctadecane	58.92	0	100) C	ָ ק ק	9 5	7 5				
Surr: o-Terphenyl	65.93	0	100	0	65.9	5 4	4 5				
l #:	SampType: Lcsd	TestCoc	TestCode: epht_w	Units: µg/L	e	Prep Date:	6/4/2013		RunNo: 50494	4	
Client ID: ZZZZZ	Batch ID: 22401	Testh	TestNo: MADEP EPH	'H (eph_Wpr)	•	Analysis Date:	6/4/2013		SeqNo: 573368	. 89	
Analyte	Result	Pal	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RP	RPD Ref Val	%RPD	RPDLimit	Oual
C09-C18 Aliphatics	QN	100	100	0	57.3	40	140	50.02	ĺ	1	
C19-C36 Aliphatics	Q	100	100	0	47.8	40	140	30.32	> 0	Ω 6	
Unadjusted C11-C22 Aromatics	g	100	100	0	64.9	40	140	49.82	.	9 8	
Surr: 1-Chlorooctadecane	59.71	0	100	0	59.7	5.40	140	5.05	> c	ς,	
Surr: o-Terphenyl	82.41	0	100	0	82.4	. 4	140) C	0 0	-	
								•	•	•	
		ļ	į								

45 Johnson Lane \sim Braintree MA 02184 \sim 781 848 7814 \sim 781 848 7811 GeoLabs, Inc.

Holding times for preparation or analysis exceeded

RPD outside recovery limits

H &

E Value above quantitation range
ND Not Detected at the Reporting Limit

Analyte detected below quantitation limits Spike Recovery outside recovery limits

BRL Below Reporting Limit

Qualifiers:

1306012 Work Order:

Project:

TestCode: VPH_W2

	100										
Sample ID: MBLK	SampType: MBLK	TestCo	TestCode: VPH_W2	Units: na/L		Prep Date:	i a		PunNo coc47		
Client ID: ZZZZ	Batch ID: R50547		TestNo: VPH	•		Analysis Date:	e: 6/6/2013		SeaNo: 573130		
Analyte	Result	Pal	SPK value	SPK Ref Val	%REC	LowLimit	ah! imit	RPD Ref Val	מפס עפמ%		-
1,2.4-Trimethylbenzene	CN	100					ļ			בוונוו מחשו	<u>.</u>
2,2,4-Trimethylpentane		00.1									
2-Methylpentane		9									
n-Butylcyclohexane	2	1.00									
n-Decane	9	1.00									
n-Nonane	Q	1.00									
n-Pentane	QN	1.00									
C9-C10 Aromatic Hydrocarbons		100									
Unadjusted C5-C8 Aliphatic Hydrocarbo		100									
Unadjusted C9-C12 Aliphatic Hydrocarb		100									
Methyl Tert-Butyl Ether		1.00									
Benzene	QN	1.00									
Toluene	QN	1.00									
Ethylbenzene	2	1.00									
m,p-Xylene	QN	1.00									
o-Xylene	QN	1.00									
Naphthalene	QN	1.00									
Adjusted C5-C8 Aliphatic Hydrocarbons	rocarbons	100									
Adjusted C9-C12 Aliphatic Hydrocarbon		100									
Surr: 2,5-Dibromotoluene FID	ID 89.04	0	100	0	0.68	20	130				
Surr: 2,5-Dibromotoluene PID	ID 88.42	0	100	0	88.4	2 2	130				
I 💢	SampType: LCS	TestCo	TestCode: VPH_W2	Units: µg/L		Prep Date:] [RunNo: 50547	 	
Client ID: ZZZZ	Batch ID: R50547	Test	TestNo: VPH		Q	Analysis Date: 6/5/2013	6/5/2013		SeqNo: 573128		_
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD	RPD Ref Vai	%RPD RPDLimit	imit Qual	
1,2,4-Trimethylbenzene	81.52	1.00	100	0	81.5	20	130			1	7
Qualifiers: BRL Below Rep	Below Reporting Limit Analyte detected below quantitation limits	its	E Value al	Value above quantitation range Not Detected at the Reporting Limit	ge g Limit		H Holding R RPD out	Holding times for preparatio RPD outside recovery limits	Holding times for preparation or analysis exceeded RPD outside recovery limits	kceeded	
S Spike Ked	Spike Recovery outside recovery limits										

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Analyte detected below quantitation limits Spike Recovery outside recovery limits

1306012 Work Order:

Project:

TestCode: VPH_W2

Sample ID: LCS	SampType: LCS	TestCo	TestCode: VPH W2	Hair said							
ļ			1	Oilles. pugne		riep Date	ns.		KunNo: 50547	547	
Client ID: ZZZZ	Batch ID: R50547	Test	TestNo: VPH			Analysis Date:	e: 6/5/2013	m	SeqNo: 573128	3128	
Analyte	Result	Pol	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2,4-Trimethylpentane	87.10	1.00	100	0.16	86.9	02	130				
2-Methylpentane	82.67	1.00	100	0	82.7	02	130				
n-Butylcyclohexane	84.08	1.00	100	0	84.1	70	130				
n-Decane	82.01	1.00	100	0.0149	82.0	20	130				
n-Nonane	85.69	1.00	100	0.01028	85.7) 06	130				
n-Pentane	89.62	1.00	100	0	89.6	20	130				
C9-C10 Aromatic Hydrocarbons	88.39	50.0	100	0	88.4	20	130				
Unadjusted C5-C8 Aliphatic Hydrocarbo	rbo 209.0	100	300	0	69.7	02	130				
Unadjusted C9-C12 Aliphatic Hydrocarb	arb 218.4	100	300	0	72.8	20	130				
Methyl Tert-Butyl Ether	80.62	1.00	100	0	80.6	02	130				
Benzene	80.49	1.00	100	0	80.5	202	130				
Toluene	81.02	1.00	100	0	81.0	202	130				
Ethylbenzene	89.64	1.00	100	0	89.6	20	130				
m,p-Xylene	151.6	1.00	200	0.1	75.7	202	130				
o-Xylene	88.52	1.00	100	0	88.5	70	130				
Naphthalene	91.16	1.00	100	0	91.2	70	130				
Surr: 2,5-Dibromotoluene FID	81.07	0	100	0	81.1	70	130				
Surr: 2,5-Dibromotoluene PID	101.3	0	100	0	101	70	130				
CSD	SampType: LCSD	TestCor	TestCode: VPH_W2	Units: µg/L		Prep Date:			RunNo: 50547	47	
Client ID: ZZZZ	Batch ID: R50547	Test	TestNo: VPH		-	Analysis Date:	: 6/6/2013	m	SeqNo: 573129	129	
Analyte	Result	Pal	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	84.90	1.00	100	0	84.9	70	130	81.52	4.06	25	
2,2,4-Trimethylpentane	91.91	1.00	100	0.16	91.8	70	130	87.1	5.37	3 8	
2-Methylpentane	87.62	1.00	100	0	87.6	70	130	82.67	5.81	3 15	
n-Butylcyclohexane	80.35	1.00	100	0	80.4	70	130	84.08	4.54	5 2	
Qualifiers: BRL Below Reporting Limit	Limit		E Value	Value above quantitation range	9		1 5	aldina di			
J Analyte detected b	Analyte detected below quantitation limits		,	**************************************				morning united for preparation of analysis exceeded	reparation or an	alysis exceede	.
Word Date of the S	CION quantifation minus			NOT DETECTED AT THE REPORTING LIMIT	g Limit		R R	RPD outside recovery limits	ry limits		

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J Analyte detected below quantitation limits Spike Recovery outside recovery limits

1306012 Work Order: Project:

TestCode: VPH_W2

Batch ID: R atic Hydrocarbons 5-C8 Aliphatic Hydrocarbo 9-C12 Aliphatic Hydrocarb utyl Ether		Testcone: VPH WZ	Units: pg/L		Prep Date:	<u>.</u>		RunNo. 50547	247	
ocarbons hatic Hydrocarbo ohatic Hydrocarb	50547 TestN	INo: VPH			Analysis Da	Analysis Date: 6/6/2013	က	SeqNo: 573129	3129	
ocarbons natic Hydrocarbo ohatic Hydrocarb	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	LowLimit HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
ocarbons hatic Hydrocarbo ohatic Hydrocarb	85.78	100	0.0149	85.8	02	130	82.04	4 40	2,5	
ocarbons natic Hydrocarbo ohatic Hydrocarb	83.02 1.00	100	0.01028	83.0	8	130	85.69	3.17	3 2	
ocarbons natic Hydrocarbo ohatic Hydrocarb		100	0	96.2	70	130	89.62	7.04	25	
natic Hydrocarbo	ur)	100	0	88.6	70	130	88.39	0.282	25	
onatic hydrocarb		300	0	74.1	70	130	209	6.18	25	
		300	0	72.1	70	130	218.4	0.920	25	
	•	100	0	84.7	70	130	80.62	4.97	25	
		100	0	87.8	20	130	80.49	8.68	52	
Ethylhonzen	_	100	0	86.5	70	130	81.02	6.50	25	
	_	100	0	89.0	20	130	89.64	0.739	25	
	_	200	0.1	72.8	70	130	151.6	3.96	25	
Q	•	100	0	89.7	70	130	88.52	1.30	25	
	119.2 1.00	100	0	119	70	130	91.16	26.7	25	ĸ
	84.61 0	100	0	84.6	20	130	0	0	0	
	86.55 0	100	0	86.6	20	130	0	0	0	

Holding times for preparation or analysis exceeded RPD outside recovery limits H R E Value above quantitation range ND Not Detected at the Reporting Limit J Analyte detected below quantitation limits
S Spike Recovery outside recovery limits Spike Recovery outside recovery limits BRL Below Reporting Limit Qualifiers;

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

Special Instructions Special Instructions CHM Compliant Englished Reserved EDH - CS Requirements: circle choice (s) CT RCP Methods CT RCP (Bassonship Confidence Destroyle)		Geolabs SAMPLE NUMBER SOLZ - 001 OD 2 V OD 3 V V V V V V V V V V V V V	SS	Date/Time 6/4/13 4:50
ndling: circle choice Done Not Needed Lab to do Lab to do Y / N	6189 0640	D B B B B B B B B B B B B B B B B B B B	Received on Ice Preservatives 1 = Hc 2 = HN03	Received by:
Filtration Filtration	Phone: 6 Fax. 78 Pax.	CONTAINER E P < A - A - A - A - A - A - A - A - A -	Receive A = Air OT = Other	Let 4 13 Let 4
CUSTOL invironmental Labo Braintree, MA 1 • f 781.848. om	Format: 5/7-days Fxcel Who-s Agents	S SAMPLE LOCATION / ID M W S - 1 M W S - 2 M W S - 2	DW = Drinking Water S = Soil SL = Sludge 0 = Oil	Date Lety ANN YOU - WE APPRECIATE YOUR BUSINESS
GeoLabs, Inc. GeoLabs, Inc. Environment 45 Johnson Lane, B p 781.848.7844 • www.geolabs.com	Note the	COLLECTION COLLEC	er eer	Relinquished by: Second Sec

Thursday, June 20, 2013

Rich MacCarthy Clean Harbors 42 Longwater Drive Norwell, MA 02061

TEL: (781) 792-5822 FAX: (781) 792-5938

Project:

EO5401971

Location:

Noonan-Arlington

Order No.: 1306097

GeoLabs, Inc.

Braintree MA 02184

Tele: 781 848 7844

Fax: 781 848 7811

GeoLabs, Inc. 45 Johnson Lane

Dear Rich MacCarthy:

GeoLabs, Inc. received 3 sample(s) on 6/11/2013 for the analyses presented in the following report.

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

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

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

Sincerely,

David Mick

Laboratory Director

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

> CT (PH-0148) - MA (M-MA015) - NH (2508) - RI (LA000252) Accredited in Accordance with NELAC

- 1470 H.			P Ana	lytical Protocol Ce	ntification Form		- Marie 1	ey Ne. ::
Laboratory Na	ame: GeoLabs, In	1C.		Projec	ot#: EO 5401971		The state of the s	74-1
Project Location	Project Location: 1306097 (001-003) RTN:							
This form prov	vides certification	for the followi	ng data	a set: 1305102-001				
Matrices:	☐ Ground\	water/Surface	Water	r □ Soil/Sediment □	☐ Drinking Water ☐	Air ⊠	Other	
	ol (check all that a							
8260 VOC CAM II A	CAM III B	MassDEP VPI CAM IV A	×	8081 Pesicides CAM V B □	7196 Hex Cr CAM VI B □		MassDEP A	APH
8270 SVOC CAM II B 🔲	7010 Metals CAM III C □	MassDEP EPH CAM IV B	H	8151 Herbicides CAM V C	8330 Explosives CAM VIII A 🖂		TO-15 VOC CAM IX B	
6010 Metals CAM III A □	6020 Metals CAM III D	8082 PCB CAM V A		9014 Total Cyanide/PAC CAM VI A □	6860 Perchlorate CAM VIII B □			
Affirmative Ro	esponses to Qu	estions A thr	ough F	= are required for "P	resumptive Certainty'	" status	<u> </u>	
A	Were all samples properly preserved	received in a co d (including tem	ondition nperatur me	n consistent with those dure) in the field or laboratethod holding times?	described on the Chain of tory, and prepared/analyz	Custody, ed within	⊠ Yes	□ No
В	Were the analytic	al method(s) ar	nd all as pr	ssociated QC requireme rotocol(s) followed?	ents specified in the selec	ted CAM	⊠ Yes	□ No
С	Were all required protocol(s)	corrective actio	ns and or all ide	analytical response acti entified performance sta	ions specified in the select andard non-conformances	oted CAM s?	⊠ Yes	□ No
D	Does the laborato Assurance and C	ry report compl ⊋uality Control (ly with a Guidelin	all reporting requirement les for the Acquisition a	ts specified in CAM VII A, nd Reporting of Analtyical	"Quality I Data"?	⊠ Yes	□ No
E	VPH, EPH, APH a. VPH, EPH modification(H, and APH Met	thods or	nly: Was each method c dual method(s) for a list	conducted without signific of significant modification	ant ns.)	⊠ Yes	□ No
	b. APH and TC)-15 Methods o	nly: Wa	is the complete analyte	list reported for each met	hod?	☐ Yes	□ No
	evaluated in a	laboratory narra	ative (in	ncluding all "No" respons	d non-conformances ident ses to Questions A throug	ah F) İ	⊠ Yes	□ No
	Questions G, H,	, and I below	are rec	quired for "Presump	otive Certainty" status	1		
G				protocol(s)?		İ	⊠ Yes	□ No¹
<u>Data Use</u>	<u>er Note:</u> Data that representati	achieve "Pres veness require	sumptiv ements	re Certainty" status ma described in 310 CMR	ay not necessarily meet ? 40. 1056 (2) (k) and WS	the data	usablility a).	nd
Н					CAM protocol(s) achieved		☐ Yes	⊠ No ¹
l l					the selected CAM protoc	col(s)?	□ Yes	⊠ No¹
				tached laboratory nari				
those responsib	ned, attest under the ble for obtaining the ge and belief, accu	he information	ı, the m	s of perjury that, base aterial contained in th	d upon my personal inq is analytical report is, to	uiry of the bes	t	
Signature:	a Javiel	Mil		Positic	on: Laboratory Direct	or		
Printed Name:	David Mick			Date: _	June 20, 2013			

Date: 20-Jun-13

CLIENT:

Clean Harbors

Project:

EO5401971

Lab Order:

1306097

CASE NARRATIVE

Physical Condition of Samples

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

Project Documentation

The project was accompanied by satisfactory Chain of Custody documentation.

Analysis of Sample(s)

EPH carbon ranges and diesel targets only reported via method MADEP EPH, per client request.

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

EPHP LCS & LCSD % Recovery for Naphthalene is outside of recovery limits. EPHT LCSD % Recovery for Unadjusted C11-C22 Aromatics is outside of recovery limits.

Can While

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/20/13

CLIENT:

Clean Harbors

Project:

EO5401971

Lab Order:

1306097

CASE NARRATIVE

EPH Methods

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

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

C11-C22 Aromatic Hydrocarbons exclude concentrations of Target PAH Analytes

CERTIFICATION:

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

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

SIGNATURE:

LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/20/13

CLIENT:

Clean Harbors

Project:

EO5401971

Lab Order:

1306097

CASE NARRATIVE

VPH Methods

Method for Ranges: MADEP VPH 04-1.1

Method for Target Analytes: MADEP VPH 04-1.1

Soil sample(s) were received in MeOH and soil was completely covered by MeOH.

Soil sample(s) ratio 1:1 +/- 25%

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

C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range. (MTBE, Benzene, Toluene)

C9-C12 Aliphatic Hydrocarbons exclude concentration of Target Analytes eluting in that range (Ethylbenzene, m&p-Xylenes, o-Xylene) AND concentration of C9-C10 Aromatic Hydrocarbons.

CERTIFICATION

Were all QA/QC procedures REQUIRED by the VPH Method followed? YES Were all QA/QC performance/acceptance standards achieved? YES Were any significant modifications made to the VPH method, as specified in Sec. 11.3? NO

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

SIGNATURE:

POSITION: LAB DIRECTOR

PRINTED NAME: David Mick

DATE: 06/20/13

Reported Date: .20-Jun-13

CLIENT:	
---------	--

Clean Harbors

Lab Order:

1306097

Project:

Lab ID:

EO5401971

1306097-001

Client Sample ID: WS-1A

Collection Date: 6/10/2013 10:00:00 AM

Date Received: 6/11/2013

Matrix: OTHER

Analyses	Result Det. Limit Qual Units	DF	Date Analyzed	
EPH RANGES - MADEP EPH			Analyst: KG	

Prep Method:	eph_Wpr)	Prep	Date: 6/17/2	013 8:43:10	AM
Adjusted C11-C22 Aromatics	ND	103	 μg/L	1	6/17/2013
C09-C18 Aliphatics	ND	103	μg/L	1	6/17/2013
C19-C36 Aliphatics	ND	103	μg/L	1	6/17/2013
Unadjusted C11-C22 Aromatics	ND	103	μg/L	1	6/17/2013
Surr: 1-Chlorooctadecane	67.0	40-140	%REC	1	6/17/2013
Surr: o-Terphenyl	70.9	40-140	%REC	1	6/17/2013

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method	l: (eph_Wpr)	Prej	Date:	6/17/2013 8:43:10 AM	
Naphthalene	ND	1.03	μg/L	1	1/6/2006 2:39:00 AM
2-Methylnaphthalene	ND	1.03	μg/L	1	1/6/2006 2:39:00 AM
Acenaphthene	ND	1.03	μg/L	1	1/6/2006 2:39:00 AM
Phenanthrene	ND	1.03	μg/L	1	1/6/2006 2:39:00 AM
Total PAH Target Concentration	ND	1.03	μg/L	1	1/6/2006 2:39:00 AM
Surr: 2,2-Difluorobiphenyl	55.3	40-140	%REC	1	1/6/2006 2:39:00 AM
Surr: 2-Fluorobiphenyl	65.5	40-140	%REC	1	1/6/2006 2:39:00 AM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Pre	Date:		
C9-C10 Aromatic Hydrocarbons	ND	100	 μg/L	1	6/12/2013 8:04:00 AM
Unadjusted C5-C8 Aliphatic Hydrocarbons	ND	100	µg/∟	1	6/12/2013 8:04:00 AM
Unadjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/12/2013 8:04:00 AM
Methyl Tert-Butyl Ether	ND	1.00	μg/L	1	6/12/2013 8:04:00 AM
Benzene	ND	1.00	μg/L	1	6/12/2013 8:04:00 AM
Toluene	ND	1.00	μg/L	1	6/12/2013 8:04:00 AM
Ethylbenzene	ND	1.00	μg/L	1	6/12/2013 8:04:00 AM
m,p-Xylene	2.63	1.00	μg/L	1	6/12/2013 8:04:00 AM
o-Xylene	6.50	1.00	μg/L	1	6/12/2013 8:04:00 AM
Naphthalene	ND	1.00	μg/L	1	6/12/2013 8:04:00 AM
Adjusted C5-C8 Aliphatic Hydrocarbons	ND	100	µg/L	1	6/12/2013 8:04:00 AM

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits
- S Spike Recovery outside recovery limits

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 20-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306097

Project:

EO5401971

Lab ID:

1306097-001

Client Sample ID: WS-1A

Collection Date: 6/10/2013 10:00:00 AM

Date Received: 6/11/2013

Matrix: OTHER

Analyses	Result Det. Limit Qual Units			DF	Date Analyzed	
VPH - MADEP VPH					Analyst: ZC	
Prep Method:		Prep	Date:			
Adjusted C9-C12 Aliphatic Hydrocarbons	ND	100	µg/L	1	6/12/2013 8:04:00 AM	
Surr: 2,5-Dibromotoluene FID	95.2	70-130	%REC	1	6/12/2013 8:04:00 AM	
Surr: 2,5-Dibromotoluene PID	80.1	70-130	%REC	1	6/12/2013 8:04:00 AM	

Qualifiers:

- Analyte detected in the associated Method Blank В
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- Spike Recovery outside recovery limits

BRL Below Reporting Limit

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 20-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306097

EO5401971

Project: Lab ID:

1306097-002

Client Sample ID: WS-2A

Collection Date: 6/10/2013 10:30:00 AM **Date Received:** 6/11/2013

Matrix: OTHER

<u>Ana</u>	yses	Result	Det. Limit	Qual Ur	nits	DF	Date Analyzed

EPH RANGES - MADEP EPH

Prep Method:	Prej	Date: 6/17/2	013 8:43:10	AM	
Adjusted C11-C22 Aromatics	ND	103	μg/L	1	6/17/2013
C09-C18 Aliphatics	ND	103	μg/L	1	6/17/2013
C19-C36 Aliphatics	ND	103	μg/L	1	6/17/2013
Unadjusted C11-C22 Aromatics	ND	103	μg/L	1	6/17/2013
Surr: 1-Chlorooctadecane	62.6	40-140	%REC	1	6/17/2013
Surr: o-Terphenyl	71.9	40-140	%REC	1	6/17/2013

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Analyst: KG

Prep Method	l: (eph_Wpr)	Prej	p Date:	6/17/2013 8:43:10 AM	
Naphthalene	ND	1.03	μg/L	1	1/6/2006 3:16:00 AM
2-Methylnaphthalene	ND	1.03	μg/L	1	1/6/2006 3:16:00 AM
Acenaphthene	ND	1.03	μg/L	1	1/6/2006 3:16:00 AM
Phenanthrene	ND	1.03	μg/L	1	1/6/2006 3:16:00 AM
Total PAH Target Concentration	ND	1.03	μg/L	1	1/6/2006 3:16:00 AM
Surr: 2,2-Difluorobiphenyl	53.0	40-140	%REC	1	1/6/2006 3:16:00 AM
Surr: 2-Fluorobiphenyl	65.0	40-140	%REC	1	1/6/2006 3:16:00 AM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Prep	Date:		
C9-C10 Aromatic Hydrocarbons	ND	100	μg/L	1	6/12/2013 8:45:00 AM
Unadjusted C5-C8 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/12/2013 8:45:00 AM
Unadjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/12/2013 8:45:00 AM
Methyl Tert-Butyl Ether	ND	1.00	μg/L	1	6/12/2013 8:45:00 AM
Benzene	ND	1.00	μg/L	1	6/12/2013 8:45:00 AM
Toluene	ND	1.00	μg/L	1	6/12/2013 8:45:00 AM
Ethylbenzene	ND	1.00	µg/L	1	6/12/2013 8:45:00 AM
m,p-Xylene	ND	1.00	μg/L	1	6/12/2013 8:45:00 AM
o-Xylene	ND	1.00	μg/L	1	6/12/2013 8:45:00 AM
Naphthalene	ND	1.00	μg/L	1	6/12/2013 8:45:00 AM
Adjusted C5-C8 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/12/2013 8:45:00 AM

Qualifiers:

- Analyte detected in the associated Method Blank
- Value above quantitation range Ė
- Analyte detected below quantitation limits
- Spike Recovery outside recovery limits

- BRL Below Reporting Limit
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Reported Date: 20-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306097

1300097

Project: Lab ID: EO5401971 1306097-002 Client Sample ID: WS-2A

Collection Date: 6/10/2013 10:30:00 AM

Date Received: 6/11/2013

Matrix: OTHER

Analyses	Result	Det. Limit Q	ual Units	DF	Date Analyzed	
VPH - MADEP VPH					Analyst: ZC	
Prep Method:		Prep	Date:			
Adjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/12/2013 8:45:00 AM	
Surr: 2,5-Dibromotoluene FID	82.1	70-130	%REC	1	6/12/2013 8:45:00 AM	
Surr: 2,5-Dibromotoluene PID	81.6	70-130	%REC	1	6/12/2013 8:45:00 AM	

Qualifiers:

Analyte detected in the associated Method Blank

BRL Below Reporting Limit

E Value above quantitation range

H Holding times for preparation or analysis exceeded

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike Recovery outside recovery limits

Reported Date: 20-Jun-13

CLIENT:	
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Clean Harbors

Lab Order:

1306097

EO5401971

Project: Lab ID:

1306097-003

Client Sample ID: WS-3A Collection Date: 6/10/2013 11:00:00 AM

Date Received: 6/11/2013

Matrix: OTHER

Analyses	Result	Det. Limit Qual Units	DF	Date Analyzed
EPH RANGES - MADEP EPH				Analyst: KG

EPH RANGES - MADEP EPH

Prep Method:	(eph_Wpr)	Prep	Date: 6/17/2	013 8:43:10	AM
Adjusted C11-C22 Aromatics	ND	102	μg/L	1	6/17/2013
C09-C18 Aliphatics	ND	102	μg/L	1	6/17/2013
C19-C36 Aliphatics	ND	102	μg/L	1	6/17/2013
Unadjusted C11-C22 Aromatics	ND	102	μg/L	1	6/17/2013
Surr: 1-Chlorooctadecane	65.3	40-140	%REC	1	6/17/2013
Surr: o-Terphenyl	82.2	40-140	%REC	1	6/17/2013

EPH TARGET ANALYTES - MADEP EPH

Analyst: Jsi

Prep Method	i: (eph_Wpr)	Pre	Date:	6/17/2013 8:43:10 AM	
Naphthalene	ND	1.02	μg/L	1	1/6/2006 3:49:00 AM
2-Methylnaphthalene	ND	1.02	μg/L	1	1/6/2006 3:49:00 AM
Acenaphthene	ND	1.02	μg/L	1	1/6/2006 3:49:00 AM
Phenanthrene	ND	1.02	μg/L	1	1/6/2006 3:49:00 AM
Total PAH Target Concentration	ND	1.02	μg/L	1	1/6/2006 3:49:00 AM
Surr: 2,2-Difluorobiphenyl	52.8	40-140	%REC	1	1/6/2006 3:49:00 AM
Surr: 2-Fluorobiphenyl	59.2	40-140	%REC	1	1/6/2006 3:49:00 AM

VPH - MADEP VPH

Analyst: ZC

Prep Method:		Pre	Date:		
C9-C10 Aromatic Hydrocarbons	ND	100	μg/L	1	6/12/2013 9:27:00 AM
Unadjusted C5-C8 Aliphatic Hydrocarbons	ND	100	µg/L	1	6/12/2013 9:27:00 AM
Unadjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/12/2013 9:27:00 AM
Methyl Tert-Butyl Ether	ND	1.00	μg/L	1	6/12/2013 9:27:00 AM
Benzene	ND	1.00	μg/L	1	6/12/2013 9:27:00 AM
Toluene	ND	1.00	μg/L	1	6/12/2013 9:27:00 AM
Ethylbenzene	ND	1.00	µg/L	1	6/12/2013 9:27:00 AM
m,p-Xylene	ND	1.00	μg/L	1	6/12/2013 9:27:00 AM
o-Xylene	ND	1.00	μg/L	1	6/12/2013 9:27:00 AM
Naphthalene	ND	1.00	µg/L	4	6/12/2013 9:27:00 AM
Adjusted C5-C8 Aliphatic Hydrocarbons	ND	100	µg/L	1	6/12/2013 9:27:00 AM

Qualifiers:

- Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits
- Spike Recovery outside recovery limits

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Reported Date: 20-Jun-13

CLIENT:

Clean Harbors

Lab Order:

1306097

Project:

EO5401971

Lab ID:

1306097-003

Client Sample ID: WS-3A

Collection Date: 6/10/2013 11:00:00 AM

Date Received: 6/11/2013

Matrix: OTHER

Analyses	Result	Det. Limit Q	ual Units	DF	Date Analyzed
VPH - MADEP VPH			-		Analyst: ZC
Prep Method:		Prep	Date:		
Adjusted C9-C12 Aliphatic Hydrocarbons	ND	100	μg/L	1	6/12/2013 9:27:00 AM
Surr: 2,5-Dibromotoluene FID	83.2	70-130	%REC	1	6/12/2013 9:27:00 AM
Surr: 2,5-Dibromotoluene PID	81.4	70-130	%REC	1	6/12/2013 9:27:00 AM

Qualifiers:

Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

S Spike Recovery outside recovery limits

BRL Below Reporting Limit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

ANALYTICAL QC SUMMARY REPORT

Clean Harbors CLIENT:

1306097 Work Order:

E05401971 Project:

TestCode: EPHP_W_DIESEL

Date: 20-Jun-13

sample IU: mb-22473	SampType: MBLK	TestCo	de: EPHP_W_L	TestCode: EPHP_W_DIE Units: µg/L		Prep Date:	Prep Date: 6/17/2013	RunNo: 50724	
Client ID: ZZZZZ	Batch ID: 22473	Test	TestNo: MADEP FPH (enh Wpr)	H (enh Worl)		Analysis Date: 4/8/2006	4/8/2006	Cookles	
			i i	/		and yell parc.	10,200	Sedito. 5/4956	
Analyte	Result	POL	SPK value SPK Ref Val	SPK Ref Val	%REC	LowLimit H	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Naphthalene	QV	1.00	<u> </u>						
2-Methylnaphthalene	QN	1.00							
Acenaphthene	QN	1.00							
Phenanthrene	Q	1.00							
Total PAH Target Concentration	S	1.00							
Surr: 2,2-Difluorobiphenyl	13.69	0	25	0	54.8	40	140		
Surr: 2-Fluorobiphenyl	15.74	0	25	0	63.0	40	140		
Sample ID: Ics-22473	SampType: LCS	TestCo	de: EPHP_W_D	TestCode: EPHP_W_DIE Units: µg/L		Prep Date: 6/17/2013	6/17/2013	RunNo: 50724	
Client ID: ZZZZZ	Batch ID: 22473	Test	TestNo: MADEP EPH_ (eph_Wpr)	H_ (eph_Wpr)	•	Analysis Date: 1/6/2006	1/6/2006	SeqNo: 574957	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC		LowLimit HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Naphthalene	17.50	1.00	20	0	35.0	40	140		0
2-Methylnaphthalene	24.44	1.00	50	0	48.9	40	140		•
Acenaphthene	26.63	1.00	90	0	53.3	40	140		
Phenanthrene	35.77	1.00	50	0	71.5	40	140		
Total PAH Target Concentration	104.3	1.00				•	?		

Surr: 2,2-Difluorobiphenyl Surr: 2-Fluorobiphenyl	14.97	00	25	0	59.9	40	140	
Sample ID: Ics1-22473 Client ID: ZZZZZ	SampType: LCSD Batch ID: 22473	TestCod TestN	e: EPHP_W_ o: MADEP EI	TestCode: EPHP_W_DIE Units: µg/L TestNo: MADEP EPH_ (eph_Wpr)		Prep Date Analysis Date	Prep Date: 6/17/2013 Analysis Date: 1/6/2006	RunNo: 50724 SeqNo: 574958
	Result	PoL	SPK value	SPK value SPK Ref Val	%REC	LowLimit	%REC LowLimit HighLimit RPD Ref Val	/al %RPD RPDLimit Qual
Naphthalene 2-Methylnaphthalene	17.04	1.00	50	0	34.1	40	140	S
BRL Below Reporting Limit J Analyte detected below S Spike Recovery outside	Below Reporting Limit Analyte detected below quantitation limits Spike Recovery outside recovery limits		E Value	E Value above quantitation range ND Not Detected at the Reporting Limit	nge ng Limit		H Holding time R RPD outside	Holding times for preparation or analysis exceeded RPD outside recovery limits

Surr: 2,2-Difluorobiphenyl

GeoLabs, Inc.

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

Project: EO5401971	1						TestCode:]	TestCode: EPHP_W_DIESEL	
Sample ID: Ics1-22473 Client ID: ZZZZZ	SampType: LCSD Batch ID: 22473	TestCc Test	TestCode: EPHP_W_DIE Units: µg/l. TestNo: MADEP EPH_ (eph_Wpr)	Units: µg/l_ eph_Wpr)		Prep Date: 6/17/201: Analysis Date: 1/6/2006	Prep Date: 6/17/2013 Mysis Date: 1/6/2006	RunNo: 50724 SeqNo: 574958	
Analyte	Result	PQL	SPK value SPK Ref Val	Ref Val	%REC	LowLimit	%REC LowLimit HighLimit RPD Ref Val	%RPD RPD! imit	<u>.</u>
Acenaphthene Phenanthrene	22.97	1.00	S 2	0 (45.9	40	140	- 1	
Total PAH Target Concentration	91.36	1.00	OG.	o	60.7	40	140		
Surr: 2,2-Difluorobiphenyl	14.79	0	25	0	59.2	40	140		
Surr: 2-Fluorobiphenyi	16.97	0	25	0	67.9	40	140		
Sample ID: LCS1-22473	SampType: LCSD	TestCo	TestCode: EPHP_W_DIE Units: µg/L	Units: µg/L		Prep Date:	6/17/2013	RunNo: 50768	
Client ID: ZZZZZ	Batch ID: 22473	Test	TestNo: MADEP EPH_ (eph_Wpr)	eph_Wpr)	•	Analysis Date: 1/7/2006	177/2006	SeqNo: 575266	
Analyte	Result	PQL	SPK value SPK	SPK Ref Val	%REC	LowLimit	LowLimit HighLimit RPD Ref Val	%RPD RPDLimit	Jeno
Naphthalene	29.55	1.00	50	0	59.1	40	140		
2-Methylnaphthalene	32.38	1.00	20	0	64.8	. 40	140		
Acenaphthene	33.05	1.00	20	0	66.1	40	140		
Phenanthrene	38.99	1.00	20	0	78.0	40	140		
Total PAH Target Concentration	134.0	1.00					•		
Surr: 2,2-Diffuorobiphenyl	15.88	0	25	0	63.5	40	140		
Surr: 2-Fluorobiphenyl	18.16	0	25	0	72.6	40	140		

Clean Harbors

1306097 EO5401971

Work Order: CLIENT:

Project:

Holding times for preparation or analysis exceeded RPD outside recovery limits H R E Value above quantitation range ND Not Detected at the Reporting Limit Analyte detected below quantitation limits Spike Recovery outside recovery limits BRL Below Reporting Limit Qualifiers:

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

Project: E05401971	1						Test	TestCode: e	epht_w		
Sample ID: MB-22473 Client ID: ZZZZZ	SampType: mblk Batch ID: 22473	TestCo	TestCode: epht_w TestNo: MADEP EPH	Units: µg/L PH (eph_Wpr)		Prep Date: Analysis Date:	e: 6/17/2013 e: 6/17/2013		RunNo: 50706 SeqNo: 574828	706	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD	RPD Ref Val	%RPD	RPDLimit	en O
Adjusted C11-C22 Aromatics	Q.	100		;							
C19-C36 Aliphatics	2 2	9 5									
Unadjusted C11-C22 Aromatics	9 E	3 5									
Surr: 1-Chlorooctadecane	52.51	3 0	100	c	A CA	Ş	4				
Surr: o-Terphenyi	62.20	0	100	0	62.2	4 4	140				
Sample ID: LCS-22473	SampType: Lcs	TestCoc	TestCode: epht_w	Units: ua/L	j E	Prep Date:	6/47/2043		Dankler Cotton		
Client ID: ZZZZZ	Batch ID: 22473	Test	TestNo: MADEP EPH	_		Analysis Date:			SeaNo: 574829	820	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	ighLimit	RPD Ref Val	%RPD	1000 1000	Č
C09-C18 Alinhatics							- 1		מואל או	ארטבוווון	Gual
C10_C36 Alinhatica	ON !	9	100	0	20.7	40	140				
C19-C30 Alipinatics	Q	8	100	0	53.7	40	140				
Unadjusted C11-C22 Aromatics	ON.	100	100	0	42.2	40	140				
Surr: 1-Chlorooctadecane	67.81	0	100	0	67.8	40	140				
Surr: o-Terphenyl	80.10	0	100	0	80.1	4	140				
Sample ID: LCS1-22473	SampType: Lcsd	TestCoo	TestCode: epht_w	Units: µg/L		Prep Date:	6/17/2013		RunNo: 50706		
Client ID: ZZZZZ	Batch ID: 22473	TestN	TestNo: MADEP EPH	H (eph_Wpr)		Analysis Date:	: 6/17/2013		SeqNo: 574830	830	
Analyte	Result	Pol	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD	RPD Ref Val	%RPD	RPDI imit	[6]
C09-C18 Aliphatics	QN	100	100	o	46.5	40	140	50.05			
C19-C36 Aliphatics	QN	5	100	C	42.8	\$ \$	5 5	00.00	- (ς; Ω	
Unadjusted C11-C22 Aromatics	Q	100	100	0	333	0 1 0 4	0 4	33.00	o c	25	(
Surr: 1-Chlorooctadecane	51.61	0	100	0	51.6	40	140		,	ξ ·	'n
Surr: o-Terphenyl	86.78	0	100	0	66.8	5 4	140	o c	> C	5 6	
							!	•	·	>	
Qualifiers: BRL Below Reporting Limit	ing Limit		E Value a	Value above quantitation range	nge		Holding	times for m	and the contract of the contra		
	Analyte detected below quantitation limits		ND Not Det	Not Detected at the Reporting Limit	ng Limit			RPD outside recovery limits	RPD outside recovery limits	arysis exceede	5
S Spike Recover	Spike Recovery outside recovery limits										

Clean Harbors

CLIENT: Work Order:

1306097 EO5401971

Project:

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

Clean Harbors CLIENT:

1306097 Work Order:

E05401971 Project:

TestCode: VPH_W2

Sample ID: MBLK SampT	SampType: MBLK	TestCc	TestCode: VPH W2	Units: na/L		Prep Date:			BunNo: 50661	861	
Client ID: ZZZZZ Batch	Batch ID: R50661	Test	TestNo: VPH			Analysis Date:	E: 6/12/2013		SeaNo: 574234	4234	
Analyte	Result	PaL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit F	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	QN	1.00									
2,2,4-Trimethylpentane	QN	1.00									
2-Methylpentane	Q	1.00									
n-Butyfcyclohexane	2	1.00									
n-Decane	9	1.00									
n-Nonane	Q	1.00									
n-Pentane	Q	1.00									
C9-C10 Aromatic Hydrocarbons	Q	100									
Unadjusted C5-C8 Aliphatic Hydrocarbo	Q	100									
Unadjusted C9-C12 Aliphatic Hydrocarb	2	100									
Methyl Tert-Butyl Ether	Q	1.00									
Benzene	QV	1.00									
Toluene	QN	1.00									
Ethylbenzene	Q	1.0									
m,p-Xylene	Q	1.00									
o-Xylene	Q	1.00									
Naphthalene	QV	1.00									
Adjusted C5-C8 Aliphatic Hydrocarbons	QN	100									
Adjusted C9-C12 Aliphatic Hydrocarbon	QN	100									
Surr: 2,5-Dibromotoluene FID	96.83	0	100	0	96.8	20	130				
Surr: 2,5-Dibromotoluene PID	86.83	0	100	0	86.8	70	130				
Sample ID: LCS SampTy	SampType: LCS	TestCo	TestCode: VPH_W2	Units: µg/L		Prep Date:			RunNo: 50661	661	
Client ID: ZZZZZ Batch	Batch ID: R50661	Test	TestNo: VPH		•	Analysis Date.	6/12/2013	-	SeqNo: 574232	4232	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit R	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	80.55	1.00	100	0	80.6	70	130				
Oualifiers: BRL Below Reporting Limit J Analyte detected below quantitation limits S Spike Recovery outside recovery limits	quantitation limits recovery limits		E Value	Value above quantitation range Not Detected at the Reporting Limit	ge g Limit		H Hol	Holding times for preparatio RPD outside recovery limits	Holding times for preparation or analysis exceeded RPD outside recovery limits	malysis exceed	pe

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

Clean Harbors Work Order: CLIENT:

1306097 EO5401971 Project:

TestCode: VPH_W2

Sample ID: LCS Sa	SampType: LCS	TestCoo	TestCode: VPH_W2	Units: µg/L		Prep Date:	i		RunNo: 50661		
Client ID: ZZZZZ E	Batch ID: R50661	Test	TestNo: VPH			Analysis Dat	Analysis Date: 6/12/2013	_	SeqNo: 574232		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit	-imit Qual	n
2,2,4-Trimethylpentane	97.61	1.00	100	0.08	97.5	02	130				
2-Methylpentane	97.73	1.00	100	0	97.7	02	130				
n-Butylcyclohexane	126.4	1.00	100	0	126	2.02	130				
n-Decane	123.5	1.00	100	0	123	2 2	130				
n-Nonane	116.4	1.00	100	0	116	8	130				
n-Pentane	102.5	1.00	100	0	103	02	130				
C9-C10 Aromatic Hydrocarbons	QN	100	100	0	88.3	0/	130				
Unadjusted C5-C8 Aliphatic Hydrocarbo	bo 240.7	100	300	0	80.2	02	130				
Unadjusted C9-C12 Aliphatic Hydrocarb	trb 343.2	100	300	0	114	02	130				
Methyl Tert-Butyl Ether	80.42	1.00	100	0	80.4	0/	130				
Benzene	83.26	1.00	100	0	83.3	20	130				
Toluene	80.22	1.00	100	0.1	80.1	02	130				
Ethylbenzene	82.70	1.00	100	0.15	82.6	02	130				
m,p-Xylene	164.9	1.00	200	0.1	82.4	20	130				
o-Xylene	91.06	1.00	100	0	91.1	20	130				
Naphthalene	107.4	1.00	100	0	107	2 2	130				
Adjusted C5-C8 Aliphatic Hydrocarbons	QN sı	100			į	2	3				
Adjusted C9-C12 Aliphatic Hydrocarbon	ON NO	100									
Surr: 2,5-Dibromotoluene FID	88	0	100	0	89.2	02	130				
Surr: 2,5-Dibromotoluene PID	83.74	0	100	0	83.7	2.02	130				
Sample ID: LCSD Sar	SampType: LCSD	TestCod	TestCode: VPH W2	Units: na/l		Pren Date			O Service Control of the Control of		
			l	i L		2			ruilling, suppl		

Sample ID: LCSD	SampType: LCSD	TestCode:	FestCode: VPH_W2	Units: µg/L		Prep Date:	.e.		RunNo: 50661	661	
Client ID: ZZZZZ	Batch ID: R50661	TestNo: VPH	VPH		*	Analysis Dat	Analysis Date: 6/12/2013	13	SeqNo: 574233	4233	
Analyte	Result	POL	SPK value	SPK value SPK Ref Val	%REC	LowLimit	HighLimit	%REC LowLimit HighLimit RPD Ref Val	%RPD	%RPD RPDLimit Qual	Qual
1,2,4-Trimethylbenzene 2,2,4-Trimethylpentane	80.71 99.06	1.00	100	0.08	80.7	70	130	80.55 97.61	0.198	25	
Qualifiers: BRL Below Reporting Limit J Analyte detected below S Spike Recovery outside	Below Reporting Limit Analyte detected below quantitation limits Spike Recovery outside recovery limits		E Value	E Value above quantitation range ND Not Detected at the Reporting Limit	ge g Limit		H W	Holding times for preparation or analysis exceeded RPD outside recovery limits	preparation or a	malysis exceed	pa

45 Johnson Lane \sim Braintree MA 02184 \sim 781 848 7811 GeoLabs, Inc.

Clean Harbors EO5401971 1306097 Work Order: CLIENT: Project:

TestCode: VPH_W2

Sample ID: 1 Cen											
	samp lype: LCSD	TestCo	TestCode: VPH_W2	Units: ng/L		Prep Date:	œ.		RunMo: 50654	732	
Client ID: 22222		1)		1 L	į		NOTING OF	-00	
	Batch ID: R50661	Test	TestNo: VPH		•	Analysis Date:	e: 6/12/2013	<u>5</u>	SeqNo: 574233	1233	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	GRPD	fimi loda	2
2-Methylpentane	97.94	1 00	5			i	- 1				S C C C C C C C C C C C C C C C C C C C
n-Butvicyclohexane	7 0007		3 5	>		5	130	97.73	0.215	25	
n-Decane	123.4	1.00	100	0	123	70	130	126.4	2.46	25	
	127.0	1.00	100	0	127	20	130	123.5	2.81	25	
	118.6	1.00	100	0	119	30	130	1164	1 86	3 40	
n-Pentane	103.0	1.00	100	0	103	22	130	102.5	0.20	2 4	
C9-C10 Aromatic Hydrocarbons	Q	100	100	0	88.3	2	130	88 32	0.440	C2	
Unadjusted C5-C8 Aliphatic Hydrocarbo	rbo 242.2	100	300	c	1 Va	9 9	5 6	20:00	0.0113	Q7	
Unadjusted C9-C12 Aliphatic Hydrocarh		5	000	•	20.	2	20	240.7	0.642	25	
Methyl Tert-Butyl Ether		2 5	900	5	119	9	130	343.2	4.02	25	
Benzene	62.03	9.	100	0	82.0	2	130	80.42	1.98	25	
	81.96	9.	100	0	82.0	20	130	83.26	1.57	25	
	86.54	1.00	100	0.1	86.4	2	130	80.22	7.58	, c	
Eurlylbenzene	89.74	1.00	100	0.15	89.6	20	130	7 2 8	8 17	3 6	
m,p-Xylene	180.5	1.00	200	0.1	9N 2	2	130	10.40	- 6	C7	
o-Xylene	82 74	4			7.7	2	2	104.9	9.08	22	
Naphthalana	t 64.5	9	3	5	82.7	20	130	91.06	9.57	25	
Surr 2 & Dibrom del	1.5.1	00.1	100	0	113	70	130	107.4	5.19	25	
	83.67	0	100	0	83.7	70	130	0	c	} <	
Sull: 2,3-Dipromotoluene PID	88.66	0	100	0	88.7	70	130	0	· c	o c	
								•	•	>	

H Holding times for many	P DDD arteids propagation or analysis exceeded	site of the recovery limits
E Value above quantitation range	ND Not Detected at the Reporting Limit	
BRL Below Reporting Limit	J Analyte detected below quantitation limits	S Spike Recovery outside recovery limits
Qualifiers:		

45 Johnson Lane \sim Braintree MA 02184 \sim 781 848 7814 \sim 781 848 7811 GeoLabs, Inc.

iE (OF (witon					Lab Use Only		38UTA -1 ≪ Œ	EMPER	_									g 0 = Other stic			1 1,50	NICOLIII	J(MA-009)
/ PAGE	Special Instructions			oice (s)	CT RCP (Reasonable Confidence Protocols)	ı - Criteria		Noonan Arl	E0540871				Analysis Requested	 												Containers: A = Amber B = Bag G = Glass P = Plastic S = Summa V = Vna	-	Date / Time	/11/9	12/11/2	(MA-00 R1 II AONOSES)
130609	Specia			Requirements: circle choice (s)	CT RCP (Reasonable	State / Fed Program - Criteria		Project: NE	Ċ	Invoice to *:	23 25 25 25 25 25 25 25 25 25 25 25 25 25		16h	P		12891 Hat	∄	>	>	>						5 = NaOH $7 = Other$ $6 = MEOH$	10		Mar	17	ST (PH-0148)
					' Methods	DEP	Other	279				Preserative			GeoLabs SAMPLE NUMBER			6097-001	500	002	7					3 = H2SO4 4 = Na2S2O3	Fur	1	an for	70	cost.
andling: circle choice	Filtration Done	Not Needed			GW-1		00C	181.792.5							no:	τ ω Ε α.									Received on Ice	1 = Hcl 2 = HN03	Received hv	nananau	1	4.70 (4	ienns. Fayment due within 3U days unless other arrangements are made. Patst due balances subject to inferest and collection. Note: Homeowners and Law Firms routs pay when dropping off samples. We accept cash, check and credit cards.
Ē			Preservation	Data Delivery: circle choice (s)	email	i		Phone:	Fax:	email:			CONTAINER	ø:	- × v	>	,	744 5 or		* * *					Beceive	ther	Date / Time	11 12	+ .	1/3	er arrangements are made. Par st pay when dropping off samp
CHAIN OF CUSTODY RECORD	nental Laboratories	Braintree, MA 02184	101:040:101	Data Deliver	. Tax	rormat:	EACE I	1	2	-11					SAMPLE LOCATION / 10		i	· 00	2 S 2 A	NS 34						$S = Soil \qquad A = Air$ $0 = Oil \qquad OT = Other$	Date	9	1 1	1/9	t due within 30 days unless oth omeowners and Law Firms who
CHAIN OF CL	GeoLabs, Inc. Environmental Laboratories	45 Johnson Lane, Braintree, MA 02184 p 781.848.7844 • f 781 848 7811		Turnaround: circle one	3-day	5 / 7-days	7:10	₹ ~	1	1 mes 0			- 1	ω«	æ, :≥a_		,	X	-	>	,					DW = Drinking Water SL = Studge		· X		V	
(5	Ξ,	GeoLabs, Inc. 4		Turnar	1-day	2-day	Oliont	Address: 42	Ιİ	Contact:			COLLECTION	0	∑			+	2807	W 00					Matrix Codes:	GW = Ground Water WW = Waste Water	Relinquished by:		1	2010730 J&P.C. of CR 09/22/10	

Di.	con print or hard. (Farmy decisioned for our or after 40 classes, and the second	7 C 2 A 4 a h		TR	#2	118	.		
1	UNIFORM HAZARDOUS 1. Generator ID Number WASTE MANIFEST MP 508 587 1046	: :	Emergency Respons		4. Manifest	Fracking I	m Approved lumber 934	_	2050-0039 -LE
	5. Generator's Name and Mailing Address J. P. NOOVAN TRANSPORTATION 415 WEST ST. WEST BRIDE WATER MA. 02379 Generator's Phone: (508) 588-8026 ATTN: BOB D. Po.	Ge	nerator's Site Address MYSTIC YA ARIINGTON	s (if different to	nan mailing address	DF•R	o st.	- '	
	6. Transporter 1 Company Name CICAN HARBORS ENVIRONMENTAL SER 7. Transporter 2 Company Name		۷.		U.S. EPAID N U.S. EPAID N	039	3 822	50	
	8. Designated Facility Name and Site Address CICAN HARBORS ENV. RONNENTAL SERV 37 RUMMERY RO. SOUTH FORTIAND ME 04106 Facility's Phone: 207 772 2201	liees tre,			U.S. EPAID N		7218	2	
	ga. 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Num and Packing Group (if any))	nber,	10. Conta	iners .	11. Total Quantity	12. Unit Wt./Vol.	T	Waste Code	**
	1 NOW- DOT REGULATED MATERIAL, (WA	Tex. out	01	11	5020	G	1198		
	2.								
	3.	:							
	Special Handling instructions and Additional Information								
	16. GENERATOR'S/OFFEROR'S CERTIFICATION: hereby declare that the contents o	of this consignment are fo	ally and accurately de	scribed above	by the proper ship	pping name	a, and are clas	sified, pack	aged,
	marked and labeled/placarded, and are in all respects in proper condition for transport Exporter, I certify that the contents of this consignment conform to the terms of the attal I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a Generators/Offeror's Printed/Typed Name ON BEHALF OF J.P. PROPER BULL CAPTURE OF BRAND	ached EPA Acknowledgr a large quantity generato	nent of Consent. r) or (b) (if j.am a.esma	_	_	t export st	Mor		Year
-	16. International Shipments Import to U.S. Transporter signature (for exports only):	Export from U.S.	Port	-				4 186	13
1	17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name	Signatur	Date leavi		A 14 A		Mon		Year
	Transporter 2 Printed/Typad Name 18. Discrepancy	Signatur	e	V 212			Mon		Year
	18a. Discrepancy Indication Space Quantity Type		Residue Manifest Reference	Number:	Partial Reje	ction		Full Reje	ction
	18b. Alternate Facility (or Generator) Facility's Phone:				U.S. EPAID N.	ımber			
	 Signature of Alternate Facility (or Generator) Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste) 	treatment, disposal, and	recycling systems)		-		Mor	nth Day	Year
	1. H035 2. Designated Facility Owner or Operator: Cartification of receipt of hazardous materials co	3.		n 18g	4.				
	Printed Hyged Name CO Form 8700-22 (Rev. 3-05) Previous aditions are obsolete.	Signatur	M		ACILITY TO D	COTIL! A	Mor ON STA	6106	Year 1/3

TRL# 2117

Ples	ise nrint or type. (Form desig	ned for use on elite (12-pitch) typewriter.)	5 8 5 3 9 8 0	72-002					MB No. 2050-0039
A	UNIFORM HAZARDOUS	1. Generator ID Number	2. Page 1 of	3. Emergency Respons	e Phone	4. Manifest			
Î	WASTE MANIFEST	HP5085871046		enerator's Site Address MySTIC VAL ARLINE	<u>-3718'</u>	002	100	<u>9342</u>	<u>FLE</u>
	5. Generator's Name and Mailir	ng Address	0	enerator's Site Address	s (if different th	nan mailing addres	PFal	20 37.	1
Н	J.P. NOONA	N TRANSFORTATION		A DILLE	TEY PUR	A 1026	24		
	1.415 46	DECEMPER MA. 023	79	HICHIDA	1.00	em on-	· 1		
1	sues ski	e) 500- 8026 ATT BO	R Du Ports			•			
	8. Transporter 1 Company Nam	8) 588-8026 ATV: BO	<u> </u>			U.S. EPA ID N	lumber		
	Aire Head	and Lucasius Tot 4	00 Mers 1	. مر.	•	MAD	2393	2225	>
	7 Transporter 2 Company Name	ORS ENVIRONMENTAL S	ERVICES A	<u> </u>		U.S. EPA ID N			
П	7. Handporton & werripteng visit					1			
П	8. Designated Facility Name ar	nd Sine Addrass	<u> </u>			U.S. EPA ID N	lumber		
Ш	I MIFAN MANK	aRS さんどにんもんべせんパケ!	Services th	-Cr					
1	37 RUMME	NY RO. -0 ME, 04106							•
Ш	So. PORTIM	NO ME, 04106				MEDO	806	72/82	
П	Facility's Phone: 2.0 7		ID No had	10. Cont	oiners	11. Total	12, Unit		
	CE COLONIA CE	tion (including Proper Shipping Name, Hazard Class,	ID Malliner	No.	Туре	Quantity	Wt./Vol.	13. W	aste Codes
		OT REGULATED MATERI	Al /water a		1,745			المارين المارين	
یوا	Non De	AL KEO-DIALED PARIET	in the Contract of the Contract	'	-		G-	MA98	
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GENERATOR	. 2.					-			
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П	4.					1	1		
П	14. Special Handling Instruction	one and Additional Information					<u> </u>		
	18 CH 640 18				•			***	
П	770 C11 D-12	*							ŀ
П	DESUTE	ST 21000 PPM	•						
П	4-	ORIG APATIFICATION. I have builded on that the o	ontents of this consignment a	re fully and accurately	described abo	ve by the proper sl	hipping nam	e, and are class	ifled, packaged,
Ш	acinihaladai bac baham	arded, and are in all respects in proper condition for	transport according to applic	adie international and r	national govern	nmental regulations	s. If export s	hipment and I a	m the Primary
Ш	Exporter, I certify that the	e contents of this consignment conform to the terms inimization statement identified in 40 CFR 262.27(a)	of the attached EPA ACKNOW! (if I am a large quantity dens	eagment of Consent. erator) or (b) (if I am a s	mail quantity (generator) is true.			
Ш	Generator's/Offeror's Printed/I	Typed Name ON BEHALF OF J.P.	POONAN Sign	nature				Mon	h Day Year
П			1	BUL	Line			100	6 06 13
E	16, International Shipments	ANTROPIANO		Don't of	in the state of				
E	· [import to U.S.	Export from L		entry exit:				
_	Ittation of a state of the test	outs only): ent of Receipt of Materials)	سر الماري الم	$\overline{}$			_
TO ANSPORTER	Transporter p Printed/Typed N		Sig	ature		2		Mon	h Day Year
S	PAUL	BEAULES	<i>Y</i>	Myh	1 /=	ر		06	06 13
ğ	Transporter 2 Printed/Typed N		Sig	nature				Mon	
Æ									
1	18. Discrepancy 18a. Discrepancy Indication S	20200		Π		Partial R	oinatie=	Γ	Full Rejection
Н	Toa. Discrepancy indication a	Quantity	Туре	Residue		Paniai Ri	ejecuon	_	run rejection
$\ \cdot\ $, and a second s	•		Manifest Refere	nce Number:				
-	18b. Alternate Facility (or Gen	nerator)				U.S. EPA ID	Number		
=		,			•				
18	Facility's Phone:								
6	18c. Signature of Alternate Fa	ecility (or Generator)						Mo	nth Day Year
DESIGNATED BACILITY	Š				•				
1	19. Hazardous Waste Report	Management Method Codes (i.e., codes for hazardo	ous waste treatment, disposa	l, and recycling system	s)				
Ĕ	11/39	2.	3.			4.			
	[MU]								. ,
	20. Designated Facility Owner	r or Operator. Certification of receipt of hazardous m	aterials covered by the mani	fest except as noted in	item 18a				
	Printed/Typed Name	D. J.	Sig	nature	1		•	Mon	nth Day Year
-11	1 CACLU	Boston		1/	سسس	-		0	610613

Ple	ase orin	nt or type. (Form desig	ned for use on e	lite (12-pitch) type	writer.)	58539	180	12-00	ダ		Form	n Approved.	OMB No. 2	050-0039
1	UNIF	ORM HAZARDOUS	1. Generator ID No	umber		2. Page 1 of		ency Respons		4. Manifest	Tracking N			LE
		ASTE MANIFEST nerator's Name and Mailin	ng Address	587104	<u> </u>			-	•	an mailing address	400	033	<u>C F</u>	<u> </u>
	3.	P.NOOMAN SULKST SI	Temspo	ortanton			1 / /\	STICV	Alley	Muy 9	ANTGT	0ed 31		
	w	S WEST 5 EST Bridge ator's Phone: 508	water	MA. OF	379. 2-2 \ \ P	445 I	pert	waten	44144.	PLMED				
	Gener 6. Trai	ator's Phone: 506 nsporter 1 Company Nam	> 20- 90	JONG HHM	. 100 1					U.S. EPA ID I	lumber			
		lean Harbo		amental	Services	Jac						32335	0	
	7. Tran	nsporter 2 Company Nam	ne							U.S. EPA ID N	lumber	•		
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Form Approved, OMB No. 2050-0039 Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 2. Page 1 of 3. Emergency Response Phone 1. Generator ID Number UNIFORM HAZARDOUS MP5085871046 (800)483-3718 **WASTE MANIFEST** Generator's Site Address (if different than mailing address) Geogrator's Name and Mailing Address
IP Noonan Transportation
415 West Street
West Bridgemater, MA 02379 Mystic Valley Plany & Medford Street Arlington, MA 02474 Generator's Phone: (508) 587-1046 U.S. EPA ID Number MAD039322250 Clean Harbors Environmental Services Inc U.S. EPA ID Number 7. Transporter 2 Company Name 8. Designated Facility Name and Site Address
Clean Harbors Env Services Inc U.S. EPA ID Number MED980872182 37 Rumery Road South Portland, ME 04106 (207) 772-2201 10. Containers 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, 11. Total 13. Waste Codes Wt./Vol. Quantity and Packing Group (if any)) Type НМ 0, NON DOT REGULATED MATERIAL, (WATER, OIL) MA98 14. Special Handling Instructions and Additional Information 1.CH640184 Reccurately described above by the proper shipping name, and are classified, packaged, adional and national governmental regulations. It export shipment and I am the Primary 15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are full marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable interne ignment conform to the terms of the attached EPA Acker Exporter, I certify that the contents of this con I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (ii) (if I am a small quantity generator) is true. 2a/Offeror's Printed/Typed Name port from U.S. Port of entry/exit: Date leaving U.S.: mature (for exports only): r Acknowledgment of Receipt of Materials Transoc 18. Discrepancy 18a, Discrepancy Indication Space Residue Partial Rejection Full Rejection Quantity Manifest Reference Number: U.S. EPA ID Number 18b. Alternate Facility (or Generator) Facility's Phone: 18c. Signature of Alternate Facility (or Generator) 19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) 20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 180 Printed/Typed Name EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

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≱	18b. Alternate Facility (or G	enerator)									
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恒	18c. Signature of Alternate										
DESIGNATED FACILITY		ort Management Method Codes (i.e., codes for	hazardous waste	treatment, disposal, and	recycling system	ns)	4.				
198	19. Hazardous Waste Rep	on management metrod dodes (i.o., 5555)		3.			1"				
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1,	#119	wner or Operator: Certification of receipt of haz	ardous materials	covered by the manifest of	xcept as noted i	n item 188				Month	Day Yea
	20. Designated Facility Or	Wher of Operator, Octanosassi of Total		Signatu	111	ノィー	_1			DG 10	
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-	WASTE MANIFEST 5. Generator's Name and Mai	Ing Address Of Trans	Jenoriatio		Generator	s Site Address	(if different that	mailing addres	s)			
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	18b. Artemate Pacific Co. Facility's Phone: 18c. Signature of Alternative Co. 19. Hazardous Waste F. 1.	Report Management Method Codes (r.)							Day Year
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Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC112

BILL OF LADING (pursuant to 310 CMR 40.0030)

Release Tracking Number - 31576

A. LOCATION OF SITE OR DISPOSAL SITE WHERE REMEDIATION WASTE WAS GENERATED:
1. Release Name/Location Aid: INTERSECTION WITH MYSTIC VALLEY PKWY
0. Street Address 188 MEDFORD STREET
2. Street Address: Liber MEDI OND STREET
3. City/Town: ARLINGTON 4. Zip Code:
5. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site:
a. Tier 1A b. Tier 1B b. Tier 1C d. Tier II
6. If applicable provide the Permit Number:
B. THIS FORM IS BEING USED TO: (check one: B1-B4):
1. Submit a Bill of Lading (BOL) to transport Remediation Waste to Temporary Storage or a Receiving Facility. Response Actions associated with this BOL (check all that apply):
a. Immediate Response Action (IRA)
b. Release Abatement Measure (RAM) f Limited Removal Action (LRA): (must be retained pursuant to 310 CMR
c. Downgradient Property Status (DPS) 40.0034(6); can't be submitted via eDEP)
d. Utility Release Abatement Measure (URAM) g. Other
 2. Submit an Attestation of Completion of Shipment to Temporary Storage (Sections C, F and J are not required): 3. Submit an Attestation of Completion of Shipment to a Receiving Facility (Sections C, F and J are not required): 4. Certify that Remediation Waste Was Not Shipped, and the Bill of Lading is Void. (Sections C, D, E, and F are not required) 5. Date Bill of Lading submitted to the Department:
6. Period of Generation Associated with this Bill of Lading (mm/dd/yyyy) to 6/10/2013 (mm/dd/yyyy)
(All sections of this transmittal form must be filled out unless otherwise noted) The Bill of Lading is not considered complete until the Attestation of Completion of Shipment is received by the Department.
C. DESCRIPTION OF WASTE AND WASTE SOURCE: 1. Contaminated Media /Debris (check all that apply): V a. Soil b. Groundwater c. Surface Water d. Sediment e. Vegetation or Organic Debris f. Demolition/Construction Waste g. Inorganic Absorbent Materials h. Other: a. Inorganic Absorbent Materials b. Other:



Massachusetts Department of Environmental Protection

Bureau of Waste Site Cleanup

BWSC112

Release Tracking Number

BILL OF LADING (pursuant to 310 CMR 40.0030)

C. DESCRIPTION OF WASTE AND WASTE SOURCE (CONT.):
3. Containerized Waste (check all that apply):
a. Tank Bottoms/Sludges b. Containers c. Drums d. Engineered Impoundments
e. Other:
4. Estimated Quantity: Tons Cu. Yds. Gallons
5. Contaminant Source (check one):
a. Transportation Accident b. Underground Storage Tank c. Brownfields Redevelopment
d. Other:
6. Type of Contaminant (check all that apply):
a. Gasoline b. Diesel Fuel C. #2 Fuel Oil d. #4 Fuel Oil e. #6 Fuel Oil f. Jet Fuel
g. Waste Oil h. Kerosene i. Chlorinated Solvents j. Urban Fill k. Other:
7. Constituents of Concern (check all that apply):
a. As b. Cd c. Cr d. Pb e. Hg √ f. EPH/TPH g. VPH
h. PCBs i. VOCs j. SVOCs k. Other:
8. If applicable, check the box for the Reportable Concentration Category of the site:
a. RCS-1 b. RCS-2 c. RCGW-1 d. RCGW-2
9. Remediation Waste Characterization Documentation (check at least one):
a. Site History Information b. Sampling Analytical Methods and Procedures c. Laboratory Data
d. Field Screening Data e. Characterization Documentation previously submitted to the Department
i. Date submitted: ii. Type of Documentation:
(mm/dd/yyyy)
D. TRANSPORTER OR COMMON CARRIER INFORMATION:
1. Transporter/Common Carrier Name: CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.
2. Contact First Name: FRANK 3. Last Name: PHILLION
4. Street: 609 PLEASANT STREET 5. Title: SUPERVISOR
6. City/Town: WEYMOUTH 7. State: MA 8. Zip Code: 02189-0000
9. Telephone: (781) 803-4132 10. Ext: 11. Fax:



Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC112

Release Tracking Number BILL OF LADING (pursuant to 310 CMR 40.0030)

- 31576

E. RECEIVING FACILITY/TEMPORARY STORAGE LOCATION:
1. Operator/Facility Name ENVIRONMENTAL SOIL MANAGEMENT, INC.
2. Contact First Name: STEPHEN 3. Last Name: RAPER
4. Street: 67 INTERNATIONAL DRIVE 5. Title: COMPLIANCE MANAGER
6. City/Town: LOUDON 7. State: NH 8. Zip Code: 03307-0000
9. Telephone: (603) 783-0228 10. Ext: 11. Fax: (603) 783-0104
12. Type of Facility: (Check one)
a. Temporary Storage i. Period of Temporary Storage: to
ii. Reason for Temporary Storage:
b. Asphalt Batch/Hot Mix . c. Landfill/Disposal . d. Landfill/Structural Fill . e. Landfill/Daily Cover
f. Asphalt Batch/Cold Mix 🗸 g. Thermal Processing 🦳 h. Incinerator 📗 i. Other:
13. Division of Hazardous Waste/Class A Permit Number:
14. Division of Solid Waste Permit Number: DES-SW-SP-96-002
15. EPA Identification Number: NH5986485852
F. LSP SIGNATURE AND STAMP: I attest under the pains and penalties of perjury that I have personally examined and am familiar with this submittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief, the assessment action(s) undertaken to characterize the Remediation Waste which is (are) the subject of this submittal for acceptance at the facility identified in this submittal comply with applicable provisions of 310 CMR 40.0000, and such facility is permitted to accept Remediation Waste having the characteristics described in this submittal.
I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.
1. LSP #: 8959
2. First Name: ANTHONY M 3. Last Name: DELTUFO
4. Telephone: (781) 792-5819 5. Ext. 6. FAX: (781) 792-5938 Electronic
7. Signature: ANTHONY M DELTUFO 8. Date: 6/6/2013 (mm/dd/yyyy) 9. LSP Stamp:
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Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC112

BILL OF LADING (pursuant to 310 CMR 40.0030)

Release Tracking Number

	3 - 31370
G. PERSON SUBMITTING BILL OF LADING:	senge in person
	nange in person Indertaking response actions
2. Name of Organization: J.P. NOONAN TRANSPORTATION, INC.	
3. Contact First Name: ROBERT 4. Last Name: DUPUIS	
5. Street: 415 WEST STREET 6. Title: SAFETY DIR	ECTOR
7. City/Town: WEST BRIDGEWATER 8. State: MA 9. Zip Code:)2379-0000
10. Telephone: (508) 588-8026 11. Ext. 12. Fax:	
H. RELATIONSHIP TO SITE OF PERSON SUBMITTING BILL OF LADING:	here to change relationship
1. RP or PRP: a. Owner b. Operator c. Generator d. Transporter	
e. Other RP or PRP Specify:	
2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c.21E, s.2)):
3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c.21E, s.5(j))	
4. Any Other person Undertaking Response Actions: Specify Relationship	
I. REQUIRED ATTACHMENTS AND SUBMITTALS :	
 Check here if the Response Action(s) on which this opinion is based, if any, are (were) subj permit(s) and/or approvals issued by DEP or EPA. If the box is checked, you must attach a st applicable provisions thereof. 	atement dentitying the
 Check here if any non-updatable information provided on this form is incorrect, e. g. propert BWSC.eDEP@state.ma.us 	y address. Send corrections to
3. Check here to certify that the LSP Opinion containing the material facts, data, and other info	ormation is attached.
J. CERTIFICATION OF PERSON SUBMITTING BILL OF LADING:	
ANTHONY DELITIEO attest under the pains and penalties or per	jury (i) that I have personally
1.1,	iments accompanying this
examined and am familiar with the information contained in this dominate, mediately responsible for obtain transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtain material information contained in this submittal is, to the best of my knowledge and belief, true, accumulately information contained in this submittal is, to the best of my knowledge and belief, true, accumulately information contained in this submittal is, to the best of my knowledge and belief, true, accumulately information contained in this submittal is, to the best of my knowledge and belief, true, accumulately information contained in this submittal is, to the best of my knowledge and belief, true, accumulately information contained in this submittal is, to the best of my knowledge and belief, true, accumulately information contained in this submittal is, to the best of my knowledge and belief, true, accumulately information contained in this submittal is, to the best of my knowledge and belief, true, accumulately information contained in this submittal is, to the best of my knowledge and belief, true, accumulately information contained in this submittal is, to the best of my knowledge and belief, true, accumulately information contained in this submittal is, to the best of my knowledge and belief, true, accumulately information contained in this submittal is accumulately information contained in the submittal is accumulately information contained in the submittal is accumulately information contained in the submittal is accumulately information contained in the submittal contained in the submittal is accumulately information contained in the submittal contained in the submittal contained in the submittal contained in the submittal contained in the submittal contained in the submittal contained in the submittal contained in the submittal contained in the submittal contained in the submittal contained in the submittal contained in the submittal contained in the submittal contained in the submittal	indic dire complete, and (m)
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entity on whose behalf this submittal is made am/is aware that there are significant penalties, includ possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.	ang, but not miniou to,
2. By: ANTHONY DELTUFO 3. Title: AGENT	
J.P. NOONAN TRANSPORTATION, INC. 5. Date: 6/6/2013	
4. For J.P. NOONAN TRANSPORTATION, INC. (Name of person or entity recorded in Section H) (recorded in Section H)	nm/dd/yyyy)

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Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC112

BILL OF LADING (pursuant to 310 CMR 40.0030)

Release Tracking Number

	SELABINO (cont.)	
J. CERTIFICATION OF PERSON SUBMITTING BILL OF		
	ing certification is different from address recorded in Section H.	
7. Street: 42 LONGWATER DRIVE		
8. City/Town: NORWELL	9. State: MA 10. Zip Code: 02061-9149	
11. Telephone: (781) 792-5819	12. Ext 13. Fax: (781) 871-0690	
BILLABLE YEAR FOR THIS DISPOSAL SIT	MPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER TE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT RETURN THE DOCUMENT AS INCOMPLETE. IF YOU BE PENALIZED FOR MISSING A REQUIRED DEADLINE.	, which was a second of the se
Date Stamp (MassDEP USE ONLY):	-	
Received by DEP on 6/6/2013 4:14:37 PM		



J.P. NOONAN TRANSPORTATION, INC.

415 WEST STREET · P.O. BOX 400 WEST BRIDGEWATER, MA 02379-0400

TEL (508) 588-8026 FAX (508) 587-2876

September 6, 2011

Mr. Anthony M. DelTufo, LSP Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061

Re: Agent Authorization for DEP Submittals

Dear Mr. DelTufo:

On behalf of J.P. Noonan Transportation, Inc. (J.P. Noonan), I authorize Clean Harbors Environmental Services, Inc. (CHES) representatives to sign Massachusetts Department of Environmental Protection (DEP) Bureau of Waste Site Cleanup (BWSC) transmittal forms, bills of lading and/or uniform hazardous waste manifests, as Agent for J.P. Noonan, when I am unable to do so. This authorization is in accordance with Section 310 CMR 40.0009(2) of the Massachusetts Contingency Plan. I also authorize CHES to make electronic submittals of DEP documents. I understand that J.P. Noonan remains fully liable under federal and state laws and regulations with regard to Certifications of Person Undertaking Response Actions contained in the DEP transmittal forms as the generator and responsible party, and that CHES would be signing solely for our convenience.

Authorized Representative

m'at.

Sincerely

OF SAFETY



Remedial Investigations
42 Longwater Drive

Norwell, MA 02061 (781) 792-5000

http://www.cleanharbors.com/

BILL OF LADING SUPPORT DOCUMENTATION

No. 2 FUEL OIL RELEASE MYSTIC VALLEY PARKWAY AT MEDFORD STREET ARLINGTON, MASSACHUSETTS

DEP Release Tracking Number: 3-31576

Background

On May 31, 2013, Clean Harbors Environmental Services, Inc. (CHES) was contracted by J.P. Noonan. Transportation, Inc. (JP Noonan) to perform an Immediate Response Action (IRA) after a release of virgin No. 2 fuel oil from a tanker truck at the intersection of Mystic Valley Parkway and Medford Street in Arlington, Massachusetts (site). The truck overturned at the rotary at the intersection of the two streets, spilling its load of fuel oil. The IRA involved the recovery of oil from the Mystic River, the use of absorbent material to contain the release and the removal of soils and other media that were impacted by the release. Verbal approval has been received from MADEP to remove up to 50 cubic yards of soil during the IRA. The site is located within a residential area and, as such, no contaminants are suspected at the site other than the released virgin No. 2 fuel oil. As such, the soils are suitable for shipment to the Environmental Soil Management, Inc. (ESMI) thermal processing facility located in Loudon, New Hampshire for treatment and recycling.

Remediation Waste Characterization

Soils have been characterized as being impacted by virgin No. 2 fuel oil due to a spill which occurred due to a traffic accident involving a tanker truck carrying a load of No. 2 fuel oil.

Statement of Provisions

The spill occurred as the result of an traffic accident involving a tanker truck, and verbal approval was obtained from MADEP to complete the IRA activities described herein.



Massachusetts Department of Environmental Protection

Bureau of Waste Site Cleanup

BWSC112

BILL OF LADING (pursuant to 310 CMR 40.0030)

Release Tracking Number

3 - 31576

A. LOCATION OF SITE OR DISPOSAL SITE WHERE REMEDIATION WASTE WAS GENERATED:
Release Name/Location Aid: INTERSECTION WITH MYSTIC VALLEY PKWY
188 MEDFORD STREET
2. Street Address:L
3. City/Town: ARLINGTON 4. Zip Code:
5. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site:
a. Tier 1A b. Tier 1B b. Tier 1C d. Tier II
6. If applicable provide the Permit Number:
B. THIS FORM IS BEING USED TO: (check one: B1-B4):
Submit a Bill of Lading (BOL) to transport Remediation Waste to Temporary Storage or a Receiving Facility. Response Actions associated with this BOL (check all that apply):
a. Immediate Response Action (IRA)
b. Release Abatement Measure (RAM) f Limited Removal Action (LRA): (must be retained pursuant to 310 CMR
c. Downgradient Property Status (DPS) 40.0034(6); can't be submitted via eDEP)
d. Utility Release Abatement Measure (URAM) g. Other
 2. Submit an Attestation of Completion of Shipment to Temporary Storage (Sections C, F and J are not required): ✓ 3. Submit an Attestation of Completion of Shipment to a Receiving Facility (Sections C, F and J are not required): ✓ 4. Certify that Remediation Waste Was Not Shipped, and the Bill of Lading is Void. (Sections C, D, E, and F are not required) 5. Date Bill of Lading submitted to the Department: 6/6/2013 4:14:37 F (mm/dd/yyyy)
6. Period of Generation Associated with this Bill of Lading 6/1/2013 to 6/10/2013 (mm/dd/yyyy)
(All sections of this transmittal form must be filled out unless otherwise noted) The Bill of Lading is not considered complete until the Attestation of Completion of Shipment is received by the Department.
C. DESCRIPTION OF WASTE AND WASTE SOURCE: 1. Contaminated Media /Debris (check all that apply): a. Soil b. Groundwater c. Surface Water d. Sediment e. Vegetation or Organic Debris f. Demolition/Construction Waste g. Inorganic Absorbent Materials h. Other:
a. Inorganic Absorbent Materials b. Other:



Revised: 03/10/2010

Massachusetts Department of Environmental Protection

Bureau of Waste Site Cleanup

BWSC112

Release Tracking Number

31576

BILL OF LADING (pursuant to 310 CMR 40.0030)

C. DESCRIPTION OF WASTE AND WASTE SOURCE (cont.):
3. Containerized Waste (check all that apply):
a. Tank Bottoms/Sludges b. Containers c. Drums d. Engineered Impoundments
e. Other:
4. Estimated Quantity: Tons Cu. YdsGallons
5. Contaminant Source (check one): a. Transportation Accident b. Underground Storage Tank c. Brownfields Redevelopment
d. Other:
6. Type of Contaminant (check all that apply):
a. Gasoline b. Diesel Fuel c. #2 Fuel Oil d. #4 Fuel Oil e. #6 Fuel Oil f. Jet Fuel
g. Waste Oil h. Kerosene i. Chlorinated Solvents j. Urban Fill k. Other:
7. Constituents of Concern (check all that apply):
a. As b. Cd c. Cr d. Pb e. Hg f. EPH/TPH g. VPH
h. PCBs i. VOCs j. SVOCs k. Other:
8. If applicable, check the box for the Reportable Concentration Category of the site: a. RCS-1 b. RCS-2 c. RCGW-1 d. RCGW-2
9. Remediation Waste Characterization Documentation (check at least one):
9. Remediation Waste Characterization Documentation (check at least one). a. Site History Information b. Sampling Analytical Methods and Procedures c. Laboratory Data
d. Field Screening Data e. Characterization Documentation previously submitted to the Department
i. Date submitted: ii. Type of Documentation:
(mm/dd/yyyy)
D. TRANSPORTER OR COMMON CARRIER INFORMATION: 1. Transporter/Common Carrier Name: CLEAN HARBORS ENV. SERVICES, INC
1. Hartoportor, common carrier tarrier
2. Contact First Name: FRANK 3. Last Name: PHILLION
4. Street: 609 PLEASANT STREET 5. Title: SUPERVISOR
6. City/Town: WEYMOUTH 7. State: MA 8. Zip Code: 02189-0000
9. Telephone: (781) 803-4132 10. Ext: 11. Fax:



Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC112

Release Tracking Number

- 31576

BILL OF LADING (pursuant to 310 CMR 40.0030)

E. RECEIVING FACILITY/TEMPORARY STORAGE LOCATION:		
1. Operator/Facility Name ENVIRONMENTAL SOIL MANAGEMENT, INC.		
2. Contact First Name: STEPHEN 3. Last Name: RAPER		
4. Street: 67 INTERNATIONAL DRIVE 5. Title: COMPLIANCE MANAGER		
6. City/Town: LOUDON 7. State: NH 8. Zip Code: 03307-0000		
9. Telephone: (603) 783-0228 10. Ext: 11. Fax:		
12. Type of Facility: (Check one)		
a. Temporary Storage i. Period of Temporary Storage:to		
ii. Reason for Temporary Storage:		
b. Asphalt Batch/Hot Mix		
f. Asphalt Batch/Cold Mix 🗸 g. Thermal Processing 🗌 h. Incinerator 📗 i. Other:		
13. Division of Hazardous Waste/Class A Permit Number:		
14. Division of Solid Waste Permit Number: DES-SW-SP-96-002		
15. EPA Identification Number: NH5986485852		
F. LSP SIGNATURE AND STAMP: I attest under the pains and penalties of perjury that I have personally examined and am familiar with this submittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief, the assessment action(s) undertaken to characterize the Remediation Waste which is (are) the subject of this submittal for acceptance at the facility identified in this submittal comply with applicable provisions of 310 CMR 40.0000, and such facility is permitted to accept Remediation Waste having the characteristics described in this submittal. I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.		
1. LSP #:		
2. First Name: 3. Last Name:		
4. Telephone: 5. Ext.		
6. FAX:		
7. Signature:		
8. Date: 9. LSP Stamp: (mm/dd/yyyy)		



Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC112

BILL OF LADING (pursuant to 310 CMR 40.0030)

Release Tracking Number

3	- 31576

G. PERSON SUBMITTING BILL OF LADING:
Check all that apply: a. change in contact name b. Change of address c. change in person undertaking response actions
2. Name of Organization: JP NOONAN TRANSPORTATION INC
3. Contact First Name: BOB 4. Last Name: DUPUIS
5. Street: PO BOX 400 415 WEST ST 6. Title: DAFETY MANAGER
5. Street: 6. Title: DAI ETT MANAGER
7. City/Town: WEST BRIDGEWATER 8. State: MA 9. Zip Code: 02379-1030
10. Telephone: (508) 588-8026 11. Ext: 12. Fax:
H. RELATIONSHIP TO SITE OF PERSON SUBMITTING BILL OF LADING: Check here to change relationship
1. RP or PRP: a. Owner b. Operator c. Generator d. Transporter
e. Other RP or PRP Specify: NON-SPECIFIED PRP
2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c.21E, s.2):
3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c.21E, s.5(j))
4. Any Other person Undertaking Response Actions: Specify Relationship:
I. REQUIRED ATTACHMENTS AND SUBMITTALS :
1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approvals issued by DEP or EPA. If the box is checked, you must attach a statement identifying the applicable provisions thereof.
2. Check here if any non-updatable information provided on this form is incorrect, e. g. property address. Send corrections to BWSC.eDEP@state.ma.us
3. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.
J. CERTIFICATION OF PERSON SUBMITTING BILL OF LADING :
1. I,
2. By: 3. Title:
2. By: 3. Title:
4. For 5. Date:
(Name of person or entity recorded in Section H) (mm/dd/yyyy)

Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC112

BILL OF LADING (pursuant to 310 CMR 40.0030)

Release Tracking Number

3 -	31576

3 - 31576
J. CERTIFICATION OF PERSON SUBMITTING BILL OF LADING (cont.):
6. Check here if the address of the person providing certification is different from address recorded in Section H.
7. Street:
8. City/Town: 9. State: 10. Zip Code:
11. Telephone:12. Ext; 13. Fax:
YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.
Date Stamp (MassDEP USE ONLY):
Received by DEP on 7/3/2013 10:39:20 AM

Revised: 03/10/2010

Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC112A

	BILL OF LA	DING (pursuant to 310 CMR 40.003	30)	Release Tracking Number
	SUMMARY OF	SHIPMENT SHEET 1	OF 1	3 - 31576
A. SUMMARY OF SHIPMENT (To be filled out by the receiving facility upon receipt of Remediation Waste):				
1. Date of Shipm		2. Date of Receipt:	3. Number of Loads Shipped:	4. Daily Volume Shipped: yds³ ✓ tons gals
(mm/dd/yyy	^{y)} 2013	(mm/dd/yyyy) 6/10/2013	2.00	yds³ √tons gals 36.99
		6/11/2013	1.00	16.66
6/11/	2013	0/11/2013	1.00	10.00
	(3)			
		Magazia Santa Estado de Carta de Carta de Carta de Carta de Carta de Carta de Carta de Carta de Carta de Carta		
5. Totals Record	ded on this Summa	ary of Shipment Sheet:	3.00	53.65
B. Check here if additional BWSC112A BOL Summary Sheets are needed.				



Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

BWSC112B

Release Tracking Number

BILL OF LADING (pursuant to 310 CMR 40.0030) SUMMARY SHEET SIGNATURE PAGE

A. ACKNOWLEDGEMENT OF RECEIPT OF REMEDIAT	ION WASTE AT RECEIVIN	G FACILITY OR TEMPORARY STORAGE:
1.I, STEPHEN RAPER		penalties or perjury (i) that I have personally
examined and am familiar with the information contained transmittal form, (ii) that, based on my inquiry of those in	ndividuals immediately respond	onsible for obtaining the information, the
material information contained in this submittal is, to the that I am fully authorized to make this attestation on beh	best of my knowledge and	belief, true, accurate and complete, and (iii)
entity on whose behalf this submittal is made am/is awa	re that there are significant	penalties, including, but not limited to,
possible fines and imprisonment, for willfully submitting	ialse, maccurate, or incomp	ete information.
2. By: STEPHEN RAPER	3. Title:	COMPLIANCE MANAGER
4. For: ESMI	5. Date	7/1/2013
C. Data of Final Chinmont accordated with this Bill of Lad	ina: 6/11/2013	(mm/dd/yyyy)
6. Date of Final Shipment associated with this Bill of Ladi	(mm/dd/yyyy	
B. ACKNOWLEDGEMENT OF SHIPMENT AND RECEI	DT OF DEMEDIATION WAS	STE BY DERSON CONDUCTING RESPONSE
ACTIONS ASSOCIATED WITH THIS BILL OF LADING:	FI OF ALMIEDIATION WA	TE BY TENGON CONDOCTING TIEST CHOE
1.1, ANTHONY DELTUFO		(2) 11 - 11 12 13 14 15 15 15 15 15 15 15
examined and am familiar with the information contained		penalties or perjury (i) that I have personally any and all documents accompanying this
transmittal form, (ii) that, based on my inquiry of those in material information contained in this submittal is, to the	dividuals immediately respo	nsible for obtaining the information, the
that I am fully authorized to make this attestation on behi	alf of the entity legally respo	nsible for this submittal. I/the person or
entity on whose behalf this submittal is made am/is awar possible fines and imprisonment, for willfully submitting f	e that there are significant p	enalties, including, but not limited to,
ANTHONY DELTHEO	aise, maccurate, or meomph	ACENT
z. by.		
4. For: JP NOONAN TRANSPORTATION INC (Name of person or entity recorded in Second control of the second contr	5. Date	
(Name of person of entity recorded in S	ection G	(mm/dd/yyyy)
6. Check here if the address of the person providing of	ertification is different from	address recorded in BWSC112 Section H.
7. Street: 42 LONGWATER DRIVE		
8. City/Town: NORWELL	9. State	10. Zip Code: 02061-9149
11. Telephone: (781) 792-5819		Fax: (781) 871-0690
14. Check here if attaching optional supporting document	nentation such as copies of	Load Information Summary Sheets



Clean Harbors Environmental Services, Inc. 42 Longwater Drive
Norwell, MA 02061-9149
Phone: 781-792-5000
Fax: 781-792-5938
www.cleanharbors.com

June 12, 2013

Richard Jordan, Asst. V.P. Winchester Savings Bank 661 Main Street Winchester, Massachusetts 01890

Mr. Wayne A. Chouinard, Town Engineer Town of Arlington 51 Grove Street Arlington, Massachusetts 02476

Mr. Edward M. Lambert Jr., Commissioner Mass Department of Conservation and Recreation 251 Causeway Street, Suite 900 Boston, Massachusetts 02114-2104

Re: Informational Notice of Environmental Sampling

No. 2 Fuel Oil Release

Medford Street and Mystic Valley Parkway

Arlington, Massachusetts

DEP Release Tracking No.: 3-31572

Dear Sirs:

On May 31, 2013, a release of an estimated 9,500 gallons of No. 2 fuel oil occurred at the above-referenced location. Clean Harbors Environmental Services, Inc. (CHES) conducted Immediate Response Actions in accordance with the Massachusetts Contingency Plan (MCP) on behalf of J.P. Noonan Transportation, Inc., the truck owner. These actions included cleaning the pavement and drainage system, recovery of fuel from the Mystic River, removal of impacted soils adjacent to the roadway and at locations adjacent to the river at between the Medford Street and River Street bridges. Soil samples were collected for field screening and laboratory analysis. Once the laboratory data have been received, I will send you a copy of the laboratory report, data tables and a site sketch when they are completed. Please contact me if you have any questions at 781-792-5822.

Sincerely,

Richard E. MacCarthy Senior Remedial Engineer

Cc: Bob Dupuis 415 West Street

West Bridgewater, MA 02379

Project file EO5401971



As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

-

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):
1. Street Address: 188 Medford Street
City/Town: Arlington Zip Code: 02474-3114
B. This notice is being provided to the following party:
1. Name: Richard Jordan
2. Street Address: 661 Main Street
City/Town: Winchester Zip Code: 01890
C. This notice is being given to inform its recipient (the party listed in Section B):
1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.
2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)
D. Location of the property where the environmental sampling will be/has been conducted:
Street Address: 188 Medford Street
City/Town: Arlington Zip Code: 02474-3114
2. MCP phase of work during which the sampling will be/has been conducted:
 ✓ Immediate Response Action ☐ Release Abatement Measure ☐ Utility-related Abatement Measure ☐ Phase IV Remedy Implementation Plan ☐ Phase V/Remedy Operation Status ☐ Post-Class C Operation, Maintenance and Monitoring ☐ Other ☐ (specify)
Description of property where sampling will be/has been conducted:
☐ residential
4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.
Soil Samples collected in front of Bank building in landscaped areas along sidewalk, under sidewalk and in grassy area along curb east of Bank driveway.
E. Contact information related to the party providing this notice: Contact Name: Bob Dupuis
Street Address: 415 West Street
City/Town: West Bridgewater, MA Zip Code: 02379
Telephone: (508) 588-8026

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION



As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

3

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):
Street Address: 188 Medford Street
City/Town: Arlington Zip Code: 02474-3114
B. This notice is being provided to the following party:
1. Name: Town of Arlington
2. Street Address: 51 Grove Street
City/Town: Arlington Zip Code:
C. This notice is being given to inform its recipient (the party listed in Section B):
1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.
2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)
D. Location of the property where the environmental sampling will be/has been conducted:
1. Street Address: 188 Medford Street
City/Town: Arlington Zip Code: 02474-3114
2. MCP phase of work during which the sampling will be/has been conducted:
 ✓ Immediate Response Action ☐ Release Abatement Measure ☐ Utility-related Abatement Measure ☐ Phase IV Remedy Implementation Plan ☐ Phase V/Remedy Operation Status ☐ Phase I Initial Site Investigation ☐ Phase II Comprehensive Site Assessment ☐ Other ☐ (specify)
3. Description of property where sampling will be/has been conducted:
☐ residential ☐ commerical ☐ industrial ☐ school/playground ☑ Other roadway (specify)
4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.
Soil Samples collected in front of Bank building in landscaped areas along sidewalk, under sidewalk and in grassy area along curb east of Bank driveway.
E. Contact information related to the party providing this notice: Contact Name: Bob Dupuis
Street Address: 415 West Street
City/Town: West Bridgewater, MA Zip Code: 02379
Telephone: (508) 588-8026 Email:

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION



As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

	3
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A. The address of the disposal site related to t	this Notice	and Release Tracking N	umber (provided above):
Street Address: 188 Medford Street			
City/Town: Arlington 2	Zip Code:	02474-3114	
B. This notice is being provided to the following	ng party:		
Name: Edward Lambert			
2. Street Address: 251 Causeway Street, Suite 9	900		
City/Town: Boston Z	Zip Code:	02114-2104	
C. This notice is being given to inform its recip	pient (the p	arty listed in Section B)	:
1. That environmental sampling will be/ha	s been cond	ducted at property owned	by the recipient of this notice.
2. Of the results of environmental sampling	g conducted	d at property owned by the	e recipient of this notice.
3. Check to indicate if the analytical result the environmental sampling must be attac			hecked, the analytical results from
D. Location of the property where the environment			conducted:
Street Address: 188 Medford Street			
City/Town: Arlington Z	Zip Code:	02474-3114	
2. MCP phase of work during which the sampling	will be/has	been conducted:	
 ✓ Immediate Response Action ☐ Release Abatement Measure ☐ Utility-related Abatement Measure ☐ Phase I Initial Site Investigation ☐ Phase II Comprehensive Site Assessment 	☐ Phase	e III Feasibility Evaluation e IV Remedy Implementat e V/Remedy Operation Sta Class C Operation, Mainte (specify)	atus
3. Description of property where sampling will be/	has been co		
	ndustrial	school/playground	Other road and parkway (specify)
4. Description of the sampling locations and types	s (e.g., soil,	groundwater) to the exter	nt known at the time of this notice.
Soil Samples collected in front of Bank building in landscaped ar	reas along sidew	valk, under sidewalk, and along riv	rer between Medford and River Street bridges.
E. Contact information related to the party prov Contact Name: Bob Dupuis	viding this	notice:	
Street Address: 415 West Street			
City/Town: West Bridgewater, MA	Zip Code:	02379	
Telephone: (508) 588-8026	Email:		

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

#2 Fuel Oil Release – Mystic River Cleanup Update #1

July 2, 2013

Clean Harbors Environmental Services (CHES) has been retained to conduct Licensed Site Professional (LSP) oversight and assessment of the response actions being conducted for the #2 fuel oil release to the Mystic River. The spill of approximately 9,600 gallons of #2 fuel oil occurred on May 31, 2013 from a tanker truck. The majority of the released oil was recovered in the early stages of response. Subsequent clean-up activities have focused on the remaining oil that impacted the Arlington shoreline. CHES has prepared this informational sheet to update interested parties as to the progress of the on-going response actions.

At the outset of the Shoreline Assessment conducted on June 4, 2013, the impacted area of the Mystic River was divided into thirty 100' sections, and target cleanup actions for each section were established. Then, after removal of all impacted debris (trash, leaves and brush), seven (7) areas identified along Arlington riverbank where petroleum sheen remained, or could be generated by disturbing soils/sediments, were identified. No areas were identified along the Medford shoreline. These areas are identified on the attached Remediation Plan.

The following activities have been performed from since the June 8th public meeting in Medford:

- Shoreline debris removal cleanup assessment completed along riverbanks (June 10, 2013).
- Additional water samples from the Mystic River were collected and analyzed for extractable
 and volatile petroleum hydrocarbons (EPH/VPH) on June 10, 2013. The results indicate no
 detectable EPH/VPH concentrations upstream and at the center of the site, and insignificant
 concentrations downstream of the site that are well below the lowest ecological criteria (see
 attached Table 1).
- The seven areas identified along the Arlington riverbank where petroleum sheen was present were secured using containment and absorbent boom to ensure that the areas have no negative impact on the waterway (June 10-11, 2013).
- All containment boom crossing the river were removed per Massachusetts Department of Environmental Protection (DEP) approval and traffic was opened to the public (June 12, 2013).
- An inspection was conducted along the Arlington shoreline between Medford Street and River Street bridges and verbal approval was obtained from the Arlington Conservation Commission to conduct water-washing and limited removal of sediments and sporadic fringing moss/soils to eliminate the source of petroleum sheen (June 13, 2013).

- An inspection was conducted along the Arlington shoreline between Medford Street and River Street bridges (June 20, 2013). Little or no petroleum sheen or odors were present at the seven containment areas.
- Water-washing and sediment/moss/soil removal was conducted at the seven areas identified along the Arlington riverbank (June 25-26, 2013).
- Notice of Intent was submitted to the Arlington Conservation Commission (June 25, 2013).

The following waste materials have been shipped off-site for disposal including:

- Approximately 50 tons of petroleum impacted soils generated during the cleanup at the Medford Street rotary.
- Approximately 31 cubic yards of petroleum impacted debris generated during the cleanup at the Medford Street rotary and associated drainage structure cleaning.
- Approximately 18 cubic yards of spent absorbent materials generated during the cleanup at the Mystic River.
- Approximately 35,000 gallons of an oil and water mixture generated during the cleanup.
- Approximately 8 cubic yards of petroleum impacted debris generated during the shoreline cleanup at the seven containment areas.

The seven containment areas will be monitored to determine if additional response actions are necessary. Inspections of the river and shoreline will be conducted during both high and low water levels within the river, and after heavy rainfall events to monitor the site for evidence of petroleum. Any such conditions will then be addressed in an appropriate manner. Maintenance of the boom will also be conducted as necessary.

An IRA Plan is being prepared for submittal to the DEP on or before July 30th. The IRA Plan will document the response actions taken to date, including all laboratory data obtained, and will propose subsequent response actions based on the data obtained.

Questions pertaining to these response actions can be directed to Anthony M. DelTufo, LSP, Clean Harbors Environmental Services, Inc. at 781-792-5819, or via e-mail at deltufot@cleanharbors.com.

Table 1 Laboratory Analysis of Surface Water Samples 188 Medford Street (at Mystic Valley Parkway), Arlington, MA

Sample Dates: June 3 & 10, 2013

Sample ID	WS-1	WS-1A	WS-2	WS-2A	WS-3	WS-3A	Lowest Ecological Criteria*
Sample Date:	6/3/2013	6/10/2013	6/3/2013	6/10/2013	6/3/2013	6/10/2013	Ç
	(Downstream)	(Downstream)	(Middle)	(Middle)	(Upstream)	(Upstream)	
EPH (ug/l)							
C11-C22 Aromatics	ND(103)	ND(103)	ND(101)	ND(103)	ND(101)	ND(102)	5
C9-C18 Aliphatics	ND(103)	ND(103)	ND(101)	ND(103)	ND(101)	ND(102)	1,800
C19-C36 Aliphatics	118	ND(103)	ND(101)	ND(103)	ND(101)	ND(102)	2,100
Naphthalene	ND(1.03)	ND(1.03)	ND(1.01)	ND(1.03)	ND(1.01)	ND(1.02)	72
2-Methylnaphthalene	5.91	ND(1.03)	ND(1.01)	ND(1.03)	ND(1.01)	ND(1.02)	70
Acenaphthene	ND(1.03)	ND(1.03)	ND(1.01)	ND(1.03)	ND(1.01)	ND(1.02)	23
Phenanthrene	ND(1.03)	ND(1.03)	ND(1.01)	ND(1.03)	ND(1.01)	ND(1.02)	38
VPH (ug/l)							
C5-C8 Aliphatics	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	250
C9-C12 Aliphatics	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	1,800
C9-C10 Aromatics	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	540
Methyl Tert Butyl Ether	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	100,000
Benzene	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	460
Toluene	2.06	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	1,400
Ethylbenzene	1.23	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	181
Xylenes	10.62	9.13	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	200
Naphthalene	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	ND(1.00)	72

EPH = extractable petroleum hydrocarbons, VPH = volatile petroleum hydrocarbons, ND = not detected at the reporting limit ug/l = micrograms per liter (parts per billion)

^{* =} Lowest Ecologically Based Criteria from derivation of GW-3 Standards



Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061-9149 Phone: 781-792-5000

Fax: 781-792-5938 www.cleanharbors.com

June 25, 2013

Richard Jordan, Asst. V.P. (via email) Winchester Savings Bank 661 Main Street Winchester, Massachusetts 01890

Re: Informational Notice of Environmental Sampling

No. 2 Fuel Oil Release

188 Medford Street at Mystic Valley Parkway

Arlington, Massachusetts

DEP Release Tracking No.: 3-31576

Dear Mr. Jordan:

On May 31, 2013, a release of approximately 9,600 gallons of No. 2 fuel oil occurred at the above-referenced location due to a truck rollover. Clean Harbors Environmental Services, Inc. (CHES) conducted Immediate Response Actions in accordance with the Massachusetts Contingency Plan (MCP) on behalf of J.P. Noonan Transportation, Inc., the truck owner. These actions included cleaning the pavement and storm water drainage system, recovery of fuel from the Mystic River, removal of impacted soils adjacent to the roadway and at locations adjacent to the river between the Medford Street and River Street bridges. At the time of the release, a minor amount of fuel oil splashed onto the sidewalk and adjacent soil in front of your 188 Medford Street property. Also, some of the oil penetrated the seam between the sidewalk curb and roadway surface impacted the underlying soil. As a result, soil removal was conducted in front of 188 Medford Street on June 5th and 6th, 2013. The excavation included a small grassy area on the bank side of the sidewalk, which may extend onto the bank property. Based on the property boundary shown on the attached GIS map, it appears that most if not all of this small excavation falls within the roadway right-of-way, but it is possible that some of the grassy area excavation may have extended onto your property. During the excavation, soil samples were collected from the excavation limits for field screening and possible laboratory analysis. No visual or olfactory evidence of petroleum was noted in any of the samples from the grassy area excavation, and low field screening results were recorded. As such, none of these samples were submitted for laboratory analysis. Field screening results are summarized on Table 1 and the samples collected inside of the sidewalk are highlighted in yellow. A site sketch labeled as Figure 2 is attached showing the excavation and sample locations.

Samples from the street excavation showed higher field screening results, and some of these samples were submitted for laboratory analysis. The laboratory report is attached. As shown on Table 1 and the site sketch presented as Figure 2, a total of 55 samples were field screened for

volatile organic compounds (VOCs) using standard headspace screening methods and a MiniRAE photoionization detector (PID) calibrated to a benzene response factor. Soil removal was discontinued at certain locations adjacent to the roadway due to possible undermining of the pavement. Of the 55 samples, six samples were analyzed for extractable petroleum hydrocarbons (EPH) and volatile petroleum hydrocarbons (VPH) with No. 2 fuel oil specific target compounds. These samples are highlighted in green on Table 1, and the laboratory results are summarized in Table 2. The samples that were submitted for analysis consisted of the two samples with the highest VOC concentrations (S-16 and S-18, under the roadway), and four additional samples selected to provide geographic coverage of the excavated area.

The four samples selected for geographical coverage (S25, S37, S-39 and S-48) had similar or higher field screening results than the samples obtained closer to or on the bank property and can be used to safely approximate any remaining petroleum concentrations near or on the bank property. As shown on Table 2, only low or non-detectable EPH/VPH concentrations were reported. This data along with our field observations indicate that there is little or no petroleum concentrations remaining in the soils between the sidewalk and bank building, such that no further actions are warranted in this area. Please contact me at 781-792-5822 if you have any questions or would like to discuss this matter further.

Sincerely,

Richard E. MacCarthy Senior Remedial Engineer

Cc:

Bob Dupuis 415 West Street

West Bridgewater, MA 02379

Project file EO5401971



As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

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A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):
Street Address: 188 Medford Street
City/Town: Arlington Zip Code: 02474-3114
B. This notice is being provided to the following party:
1. Name: Richard Jordan
2. Street Address: 661 Main Street
City/Town: Winchester Zip Code: 01890
C. This notice is being given to inform its recipient (the party listed in Section B):
1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.
$\boxed{\checkmark}$ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)
D. Location of the property where the environmental sampling will be/has been conducted:
1. Street Address: 188 Medford Street
City/Town: Arlington Zip Code: 02474-3114
MCP phase of work during which the sampling will be/has been conducted:
 ✓ Immediate Response Action ☐ Release Abatement Measure ☐ Utility-related Abatement Measure ☐ Phase IV Remedy Implementation Plan ☐ Phase V/Remedy Operation Status ☐ Phase I Initial Site Investigation ☐ Phase II Comprehensive Site Assessment ☐ Other ☐ (specify)
3. Description of property where sampling will be/has been conducted:
residential commerical industrial school/playground Other (specify) 4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.
Soil Samples collected in front of Bank building in landscaped areas along sidewalk, under sidewalk and in grassy area along curb east of Bank driveway.
E. Contact information related to the party providing this notice: Contact Name: Bob Dupuis
Street Address: 415 West Street
City/Town: West Bridgewater, MA Zip Code: 02379
Telephone: (508) 588-8026 Email:

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

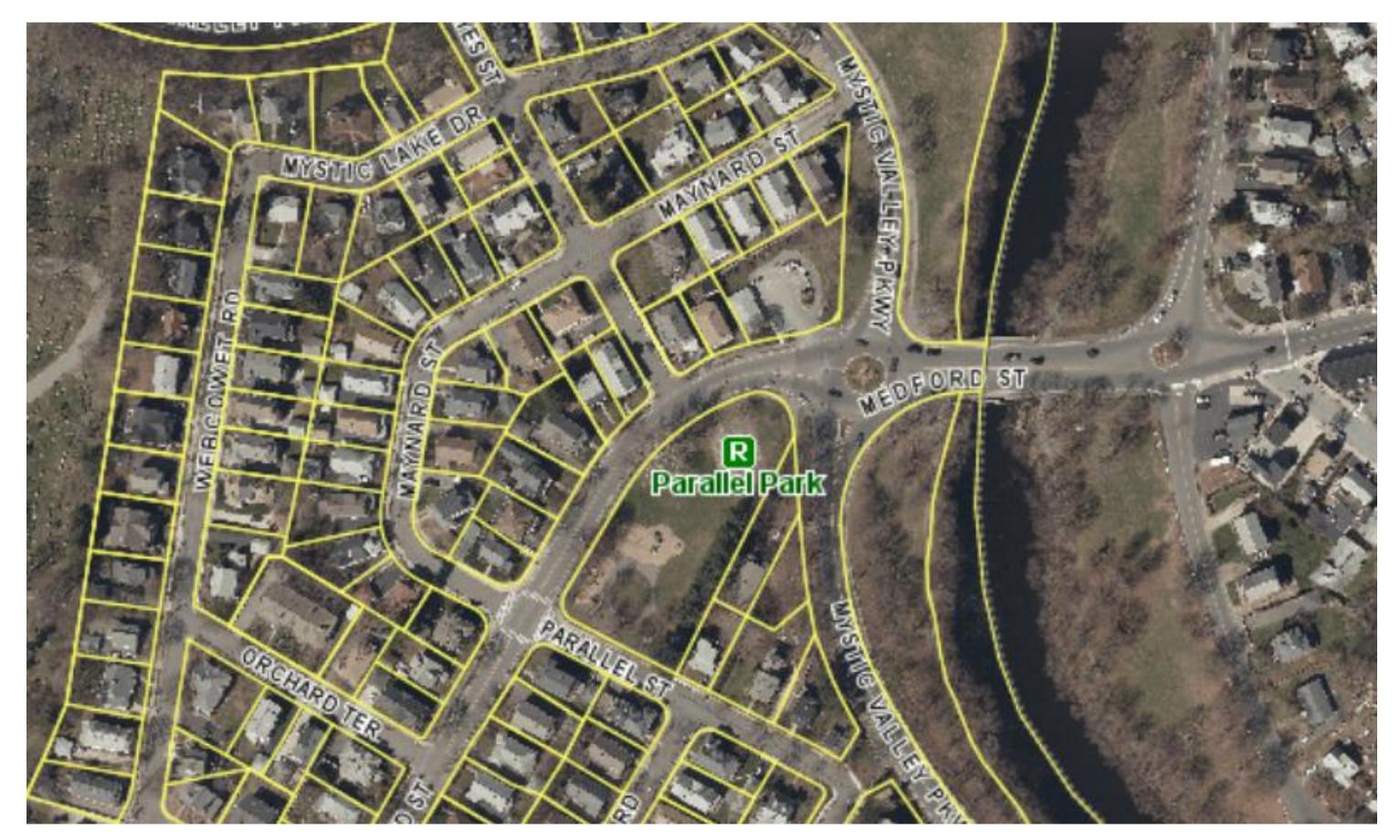
PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

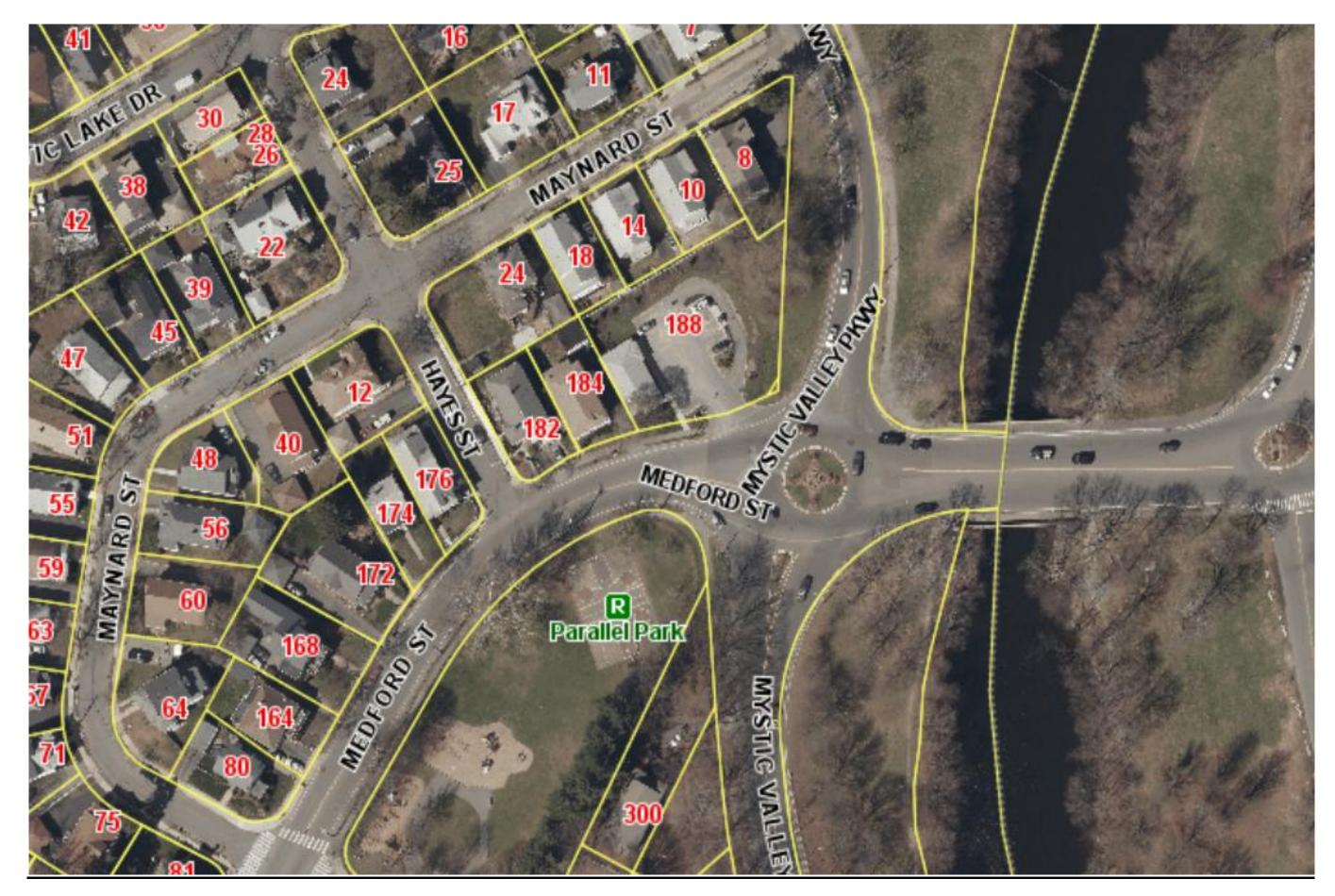
Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION



Arlington GIS Parcel boundaries



Arlington GIS Parcel boundaries with address

Table 1 Field Screening of Excavation Soil Samples 188 Medford Street (at Mystic Valley Parkway), Arlington, MA

Sample Dates: June 5 & 6, 2013

Sample ID	Sample Date:	Sample Depth	VOC Results	Notes/Observations:
		(inches)	(ppm)	
Winchester Bank Exca				
S1	6/5/2013	36	8.7	floor
S2**	6/5/2013	0-3	1.5	surface outside of dead grass area
S3	6/5/2013	8	2.1	floor under sidewalk
S4**	6/5/2013	12	12.9	wall
S5	6/5/2013	36	5.4	wall
S6 S7**	6/5/2013	8	0.9	floor under sidewalk
S8**	6/5/2013	12	5.4	wall
S8*** S9	6/5/2013 6/5/2013	0-3 18	0.0 452	surface outside of excavation below end of curb at manhole
S10	6/5/2013	0-3	0.3	floor under sidewalk and driveway
S11**	6/5/2013	6-8	4.2	below curb and landscaping transition
S12	6/5/2013	30	227	floor
S12 S13	6/5/2013	36	664	floor
S13	6/5/2013	40	1.1	floor
S15	6/5/2013	0-3	4.7	floor under sidewalk at manhole
S16*	6/5/2013	24-30	783	wall below curb
S17	6/5/2013	28-36	534	wall below curb
S18*	6/5/2013	36-40	738	wall below curb
S19	6/5/2013	18-30	3.0	wall on Savings Bank side of deepest trench
S20	6/5/2013	24-36	19.7	wall on Savings Bank side of deepest trench
S20A	6/5/2013	24-36	10.3	wall on Savings Bank side of deepest trench
S21	6/5/2013	36-40	9.0	wall on Savings Bank side of deepest trench
S22	6/5/2013	24-36	10.3	wall below curb
S23	6/5/2013	20-26	186	wall below curb
S24	6/5/2013	34-40	2.8	wall below curb
S25*	6/5/2013	40	4.0	floor below curb wall
S26**	6/5/2013	0-3	0.7	surface outside of dead grass area
S27**	6/5/2013	0-3	0.3	surface outside of dead grass area
S28	6/5/2013	24	8.9	floor under sidewalk
S29**	6/5/2013	12	6.0	floor under dead grass area
S30	6/5/2013	20-26	480	wall below curb
S31	6/5/2013	34-40	402	wall below curb
S32	6/5/2013	40	24.1	floor below curb wall
S32A	6/5/2013	46	19.8	floor below curb wall
S33	6/5/2013	30	7.2	floor under sidewalk
S34**	6/5/2013	12	4.5	floor under dead grass area
S35	6/6/2013 6/6/2013	24 72	3.6 39.2	wall floor
S36 S37*	6/6/2013	24	1.6	4" behind former curb location (curb removed)
S38	6/6/2013	64	1.2	floor
S39*	6/6/2013	24	16.2	wall below curb
S40	6/6/2013	24	0.7	floor
S41	6/6/2013	24	87.4	floor
S41A	6/6/2013	36	3.6	floor
S42	6/6/2013	24	4.2	floor under sidewalk
S43	6/6/2013	36-42	0.7	wall
S44	6/6/2013	60	87.2	floor
S45	6/6/2013	60	12.3	wall
S46	6/6/2013	48	3.4	floor under sidewalk
S47**	6/6/2013	12	0.7	floor
S48*	6/6/2013	20-26	79.0	wall
S49	6/6/2013	48	2.7	floor
S50**	6/6/2013	48	9.7	floor
S51	6/6/2013	20-26	414	wall below curb
Rotary Excavation			_	
S52	6/6/2013	6	2	floor
S53	6/6/2013	6	4.1	floor
	-1-1	-	_	~
S54 S55	6/6/2013 6/6/2013	6 0-3	5 2.9	floor surface outside of dead grass area

Notes: Italicized font denotes soil was removed during subsequent soil removal.

* = sample submitted for laboratory analysis

** = sample possibly located on bank property

Table 2
Field Screening and Laboratory Analysis of Excavation Soil Samples
188 Medford Street (at Mystic Valley Parkway), Arlington, MA

Sample Dates: June 5 & 6, 2013

Sample ID S-16 S-18 S-25 S-37 S-3		S-39	S-48	Method 1 Risk Standards*					
Depth (inches)	24-30	36-40	40	24	24	20-26	S-1/GW-2/3	S-2/GW-2/3	S-3/GW-2/3
Date:	6/5/2013	6/5/2013	6/5/2013	6/6/2013	6/6/2013	6/6/2013			
VOCs (ppm)	783	738	4.0	1.6	16.2	79.0			
EPH (mg/kg)									
C11-C22 Aromatics	2,120	1,220	ND(16.5)	ND(17.6)	ND(16.3)	ND(17.0)	1,000	3,000	5,000
C9-C18 Aliphatics	2,860	2,720	ND(16.5)	ND(17.6)	24.4	ND(17.0)	1,000	3,000	5,000
C19-C36 Aliphatics	1,090	942	ND(16.5)	ND(17.6)	ND(16.3)	ND(17.0)	3,000	5,000	5,000
Naphthalene	24.3	10.9	ND(0.110)	0.168	ND(0.109)	ND(0.114)	40 / 500	40 / 1,000	40 / 3,000
2-Methylnaphthalene	61.1	30.6	ND(0.110)	0.566	0.486	0.568	80 / 300	80 / 500	80 / 500
Acenaphthene	ND(0.128)	ND(0.114)	ND(0.110)	ND(0.118)	ND(0.109)	ND(0.114)	1,000	3,000	5,000
Phenanthrene	8.04	5.43	ND(0.110)	ND(0.118)	0.113	0.156	500	1,000	3,000
VPH (mg/kg)									
C5-C8 Aliphatics	33.0	26.2	ND(11.0)	ND(11.8)	ND(10.9)	ND(11.4)	100	500	500
C9-C12 Aliphatics	ND(12.8)	ND(11.4)	ND(11.0)	ND(11.8)	ND(10.9)	ND(11.4)	1,000	3,000	5,000
C9-C10 Aromatics	488	593	ND(11.0)	ND(11.8)	ND(10.9)	ND(11.4)	100	3,000	500
Methyl Tert Butyl Ether	ND(0.128)	ND(0.114)	ND(0.110)	ND(0.118)	ND(0.109)	ND(0.114)	100	100 / 500	100 / 500
Benzene	ND(0.128)	ND(0.114)	ND(0.110)	ND(0.118)	ND(0.109)	ND(0.114)	30	200	700 / 900
Toluene	17.9	16.2	ND(0.110)	ND(0.118)	ND(0.109)	ND(0.114)	500	1,000	2,000 / 3,000
Ethylbenzene	29.1	23.7	0.143	ND(0.118)	ND(0.109)	2.07	500	1,000	1,000 / 3,000
Xylenes	106.8	89.3	1.164	0.694	ND(0.109)	0.670	300 / 500	300 / 1,000	300 / 3,000
Naphthalene	ND(0.128)	ND(0.114)	ND(0.110)	ND(0.118)	0.610	ND(0.114)	40 / 500	40 / 1000	40 / 3000

VOCs = volatile organic compounds measured with a MiniRAE photoionization detector calibrated to a Benzene response

EPH = extractable petroleum hydrocarbons, VPH = volatile petroleum hydrocarbons

ppm = parts per million

mg/kg = milligrams per kilogram

Concentrations in **Bold** were above cleanup standards

^{* =} Method 1 risk standards for S-1 and S-3 soil in a GW-2 or GW-3 groundwater area



Clean Harbors Environmental Services, Inc. 42 Longwater Drive
Norwell, MA 02061-9149
Phone: 781-792-5000
Fax: 781-792-5938
www.cleanharbors.com

July 26, 2013

Mr. Adam W. Chapdelaine Arlington Town Manager 730 Massachusetts Avenue Arlington, Massachusetts 02476

Mr. Edward M. Lambert Jr., Commissioner Mass Department of Conservation and Recreation 251 Causeway Street, Suite 900 Boston, Massachusetts 02114-2104

Re: Informational Notice of Environmental Sampling and Laboratory Report Transmittal

No. 2 Fuel Oil Release

188 Medford Street at Mystic Valley Parkway

Arlington, Massachusetts

DEP Release Tracking No.: 3-31576

Dear Sirs:

On behalf of J.P. Noonan Transportation, Inc., Clean Harbors Environmental Services, Inc. (CHES) is submitting the attached Notice of Environmental Sampling (BWSC123) and transmittal of laboratory data. CHES is also submitting a copy of the Release Notification Form for the release. On May 31, 2013, a release of approximately 9,600 gallons of No. 2 fuel oil occurred at the above-referenced location due to a truck rollover. Clean Harbors Environmental Services, Inc. (CHES) conducted Immediate Response Actions in accordance with the Massachusetts Contingency Plan (MCP). These actions included cleaning the pavement and storm water drainage system, recovery of fuel from the Mystic River, surface water sampling and removal of impacted soils adjacent to the roadway and at locations adjacent to the river between the Medford Street and River Street bridges.

The attached preliminary Site Sketch, Aerial Photograph and Sampling Plan show the sample locations, and copies of the laboratory analytical results are attached. Further discussion regarding the analytical results will be available in the Immediate Response Action (IRA) Plan, to be submitted electronically to the Massachusetts Department of Environmental Protection (DEP) on or before July 30, 2013. The IRA Plan can be downloaded from the DEP website at http://public.dep.state.ma.us/wsc_viewer/main.aspx by entering the DEP Release Tracking Number referenced above. Local officials have the right to request Public Involvement Activities under 310 CMR 40.1403(9). No action other than the receipt of this letter is necessary by your office.

If you have any questions regarding this notice, please feel free to contact the undersigned at 781-792-5822.

Sincerely,

Richard E. MacCarthy Senior Remedial Engineer

Cc:

Cori Beckwith (via email)
Town of Arlington ConCom,

730 Mass Ave., Arlington, MA 02476

Alicia Hunt (via email) City of Medford ConCom

85 George P. Hassett Dr., Medford, MA 02155

Bob Dupuis (via email) 415 West Street

West Bridgewater, MA 02379

Project file EO5401971



As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

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			0 010.0
A. The address of the disposal site related to	this Notice a	nd Release Tracking N	umber (provided above):
Street Address: 188 Medford Street			
City/Town: Arlington	Zip Code: _	02474-3114	
B. This notice is being provided to the following	ing party:		
Name: Town of Arlington		_	
2. Street Address: 730 Massachusetts Avenue			
City/Town: Arlington 2	Zip Code: <u>(</u>	02476	
C. This notice is being given to inform its reci	ipient (the pa	rty listed in Section B):	
1. That environmental sampling will be/ha	as been condu	icted at property owned	by the recipient of this notice.
2. Of the results of environmental samplin	ng conducted	at property owned by the	e recipient of this notice.
3. Check to indicate if the analytical resul			necked, the analytical results from
D. Location of the property where the environ	mental samp	oling will be/has been c	onducted:
Street Address: 188 Medford Street			
City/Town: Arlington 2	Zip Code: <u>(</u>)2474-3114	
2. MCP phase of work during which the sampling	will be/has be	een conducted:	
☑ Immediate Response Action		II Feasibility Evaluation	
☐ Release Abatement Measure ☐ Utility-related Abatement Measure	☐ Phase \	IV Remedy Implementati V/Remedy Operation Sta	atus
☐ Phase I Initial Site Investigation ☐ Phase II Comprehensive Site Assessment	☐ Post-Cla	ass C Operation, Mainte	nance and Monitoring
 Description of property where sampling will be/ 	/has been con	(specify)	
residential commerical i			☑ Other roadway
Description of the sampling locations and types			(specify)
4. Description of the sampling locations and types	s (e.g., soii, gi	Touridwater) to the exteri	t known at the time of this notice.
Soil Samples collected in front of Bank building in landscaped	d areas along side	walk, under sidewalk and in gra	assy area along curb east of Bank driveway.
E O what is for much in the late of the la			
E. Contact information related to the party prov Contact Name: Bob Dupuis	wiaing this no	otice:	
Street Address: 415 West Street			
City/Town: West Bridgewater, MA	Zip Code:	02379	
Telephone: (508) 588-8026	Email:		

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION



As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):
Street Address: 188 Medford Street
City/Town: Arlington Zip Code: 02474-3114
B. This notice is being provided to the following party:
1. Name: Edward Lambert
2. Street Address: 251 Causeway Street, Suite 900
City/Town: Boston Zip Code: 02114-2104
C. This notice is being given to inform its recipient (the party listed in Section B):
1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.
2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
√ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)
D. Location of the property where the environmental sampling will be/has been conducted:
1. Street Address: 188 Medford Street
City/Town: Arlington Zip Code: 02474-3114
2. MCP phase of work during which the sampling will be/has been conducted:
 ✓ Immediate Response Action ☐ Release Abatement Measure ☐ Utility-related Abatement Measure ☐ Phase I Remedy Implementation Plan ☐ Phase V/Remedy Operation Status ☐ Phase I Initial Site Investigation ☐ Phase I Comprehensive Site Assessment ☐ Other ☐ (specify)
3. Description of property where sampling will be/has been conducted:
residential commerical industrial school/playground Other road and parkway (specify)
4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.
Soil Samples collected in front of Bank building in landscaped areas along sidewalk, under sidewalk, and along river between Medford and River Street bridges.
E. Contact information related to the party providing this notice: Contact Name: Bob Dupuis
Street Address: 415 West Street
City/Town: West Bridgewater, MA Zip Code: 02379
Telephone: (508) 588-8026

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION