Phase IV – Remedy Implementation Plan

for the site:

Former Aquinas College
15 Walnut Park
Newton, MA

RTN 3-33782

Prepared For:

City of Newton
52 Elliot Street
Newton, Massachusetts

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Project No. 2437

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Table of Contents

FIGURES

TABLES

APPENDICES

1.0 INTRODUCTION AND SUMMARY

Pursuant to section 310 CMR 40.0850 of the Massachusetts Contingency Plan (MCP), on behalf of the City of Newton, Lord Environmental, Inc. (LEI) is submitting this Phase IV - Remedy Implementation Plan for the former Aquinas College located at 15 Walnut Park in Newton, MA. (the "Site"). A Site Locus is presented as **Figure 1**. Along with figures and other attachments, copies of the appropriate Bureau of Waste Site Cleanup (BWSC) Transmittal Form BWSC 108 is attached following the report text.

The Massachusetts Department of Environmental Protection (DEP) was notified on Wednesday, August 24, 2016 of potential Imminent Hazard conditions triggered by the finding of a concentration of 45 milligrams per kilogram (mg/kg) arsenic in a near surface soil sample within 500 feet of a school, playground, park or residence. Because the area in question is enclosed within a chain-link fence prohibiting general access, DEP determined that conditions did not represent an Imminent Hazard but were otherwise reportable. The likely source of the arsenic and lead has been attributed to the historical application of pesticides to control gypsy moths.

A Release Notification Form (RNF) was submitted on August 29, 2016 for a 120-day reportable condition. The RNF provides information detailing the identification of a 120-day reportable condition of a release of arsenic at 45 mg/kg and lead 200 mg/kg in soil. In accordance with the MCP regulations at 310 CMR 40.0360, the RCS-1 for arsenic is 20 mg/Kg, and 200 mg/kg for lead. The concentrations reported represented the highest identified in six soil samples collected from the area.

RAM activities consisting of the excavation of the top one-foot of soil from the fenced-in RAM area were conducted in August 2016. A total of 653.46 tons of soil was excavated and re-used off-site for daily cover at a state-approved landfill facility in Westminster, Mass. Laboratory analysis of confirmatory soil samples collected after excavation indicated that average arsenic and lead concentrations are below applicable Method 1 S-1 standards in that part of the Site. As there were no other identifiable current exposure points, the Site was classified as a Tier II Disposal Site.

Subsequent Phase II assessment indicated other areas of the Site that have arsenic concentrations above DEP published Imminent Hazard concentrations in soil. These areas have also been fenced-in and therefore no Imminent Hazard condition currently exists at the Site. This plan has been prepared to guide the excavation and off-site disposal of surficial soil from these areas.

2.0 SITE DESCRIPTION AND HISTORY

2.1 Physical Setting

The Site is the location of the former Aquinas College at 15 Walnut Park in Newton, Massachusetts and is identified by the City of Newton Assessor's Office as parcel 12003 on Map 0004AQ. Its UTM coordinates are: 5214699mN and -7925326mE (Zone: 18). A site locus map is provided as **Figure 1**. The six-acre parcel was developed in 1965 for the College. The 74,443-square foot building which is the subject of this Plan is the former college building. The property was sold to the City of Newton in September of 2015.

The Site is zoned for Municipal Improved Education. The building is three-stories high and features a full basement and boiler room. A fourth story exists in the former convent portion of the building. It appears to be completely masonry (brick) design. The central and southern portion of the building houses the classrooms, auditorium and cafeteria. The convent has 25 individual living spaces, lounge areas, chapel and storage areas.

The building is currently being utilized by City's Newton Early Childhood Care Program (NECP) at limited rooms and heated by fuel oil. The northern portion of the building is currently used for City of Newton storage. It is served by municipal water and sewer.

The area in front of the building to the west is a large, paved parking area. To the north, east and south is grass covered. (see **Figure 2** & Photographs in **Appendix A**).

2.2 Site History

In planning for the building renovation, the City was required to complete a polychlorinated biphenyl (PCB) abatement program due to the presence of PCBs in exterior window and door caulk exceeding 50 mg/kg. As part of the EPA approved plan, sampling for PCBs in soil underneath the caulk was completed and determined that reportable concentrations of PCBs existed in the soil. DEP notification was made, and a RAM plan was submitted to DEP. DEP assigned the "release" RTN-3-33384. PCB waste and excavated soil was sent to Model City in New York for disposal. An additional 118.2 tons of PCB impacted soil was transported to the Turnkey Landfill in New Hampshire. A Permanent Solution Statement for the PCB release was submitted to DEP on December 5, 2016.

In order to get approval for off-site disposal, the disposal facility required a full waste characterization of a representative soil sample. In doing those analyses, an elevated concentration of arsenic (28 mg/kg) and lead (280 mg/kg) was identified in the sample. A TCLP analyses did not indicate the lead was leachable. Due to this finding, it was decided to include total lead and arsenic in all post abatement verification sampling. In addition, the City conservatively decided to have representative soil samples collected from the front lawn (east of the Site building) area being considered for a future playground and analyses for PCBs lead and arsenic. Six near-surface soil samples were collected with a hand trowel from just beneath the grass and loam on August 15, 2016. See **Figure 4** for a Site Plan depicting

the sampling locations. While no PCBs were detected in these samples, arsenic was detected at a maximum concentration of 45 mg/kg and average concentration of 31 mg/kg, and lead at a maximum concentration of 200 mg/kg and an average of 127 mg/kg. Based on these concentrations, The City of Newton notified DEP on the 120-day notification requirement on August 29, 2016. A Release Abatement Measure Plan (RAM) Plan was submitted to DEP on August 30, 2016 that described the proposed excavation of the top one-foot of soil across the area where a playground was proposed. A total of 643.56 tons of soil was excavated and trucked to the Westminster Landfill for reuse.

Only lead and arsenic were identified as contaminants of concern, and no other physical evidence of contamination such as staining, odors, debris or suspicious containers was observed in the fill. There is no known source for these findings based on site history. Research has identified that the pesticide, lead arsenate was used to control gypsy moths in Massachusetts up into the mid 1960's before it was banned in 1988. The pesticide was also commonly used in apple orchards and potato fields and was also used to control crabgrass. The college building was constructed in 1965. Prior land use was determined to be "undeveloped" based on historical fire insurance maps and aerial photography.[1]

Use of the pesticide at the property could not be confirmed. However, the general ratio of lead to arsenic in lead arsenate found in soil is approximately 3:1.[2] Soil arsenic and lead concentrations at the Site generally adhere to this ratio.

2.3.1 Compliance History

Permits have previously been issued for the underground storage tanks (USTs) at the property from the City of Newton. The current 10,000-gallon No.2 fuel oil UST at the Site is currently used to store oil for heating the Site building.

2.3.2 Oil and/or Hazardous Materials Use and History

The current Site building was built in 1967. At that time a 10,000-gallon fuel oil UST was installed outside the boiler room for storage of No. 4 fuel oil.

According to an ASTM Phase I Report prepared for the Site by Ransom Environmental, dated March 3, 2015, approximately 7,500 gallons of No. 4 fuel oil was released to the boiler room floor on April 28, 1990. Clean Harbors responded to this release and removed standing oil from the boiler room as well as removing oil from adjacent sewer drains. The Site is listed on the ERNS database for this spill.

In 1995, the original 10,000-gallon UST was removed and replaced with another 10,000-gallon UST. This UST was a double-walled tank with leak detection to store No. 2 fuel oil.

Based on information gathered by Ransom during their ASTM Phase I investigation, they determined that there was a Recognized Environmental Condition related to the 1990 boiler room spill. Ransom subsequently performed a subsurface investigation in January and February 2015 in and around the boiler room at the Site consisting of the advancement of

[1] ASTM Phase I & II Site Assessment. Ransom Environmental, March 3, 2015.
[2] USEPA Historical Pesticide Research, 2004

several soil borings and the completion of these borings as groundwater monitoring wells. According to the March 2015 Phase I Report, Ransom indicated that they found no evidence of a release to the environment.

The City of Newton purchased the Site property on September 2, 2015. On October 20, 2015, the City of Newton Water Department excavated through a feed line from the UST as they were looking for a water line break. As the building had been vacant prior to the sale to the City, the UST systems were not operating at the time of this incident. A feed line was ruptured and, according to the UST contractor Petroleum Management Systems (PMS) of Wakefield, Massachusetts, less than 5 gallons of fuel oil was released. PMS responded to this release and repaired the feed line. PMS excavated less than 2 cubic yards of impacted soil surrounding the line break. Ralph Tella, LSP of LAI visited the Site on October 21, 2015 to inspect Site conditions. Mr. Tella field-screened the stockpiled soil with a photo-ionization detector (PID). The headspace readings for this soil stockpile were less than 1 part per million by volume (ppmv). Mr. Tella determined that the observed conditions did not require notification to DEP.

On November 2, 2015 Arthur Cabral of the City of Newton Department of Public Buildings called LAI regarding a release of fuel oil to the boiler room floor in excess of 10 gallons. The cause of the release was a loose feed line strainer. Site employees took immediate action to shut off the oil supply line and apply absorbents. Based on this information, Oliver Leek of LAI called DEP to report this potential release. Mr. Leek spoke to Paul Giddings who indicated that he would issue a Release Tracking Number (RTN) for the release if Mr. Tella (LSP) determined there was a release to the environment. PMS responded to the release and applied absorbents and placed booms around the boiler room floor drains. Mr. Tella inspected a catch basin in the parking area adjacent to the boiler room and two sewer manholes for evidence of oil. No evidence of oil was observed in any of these structures. Mr. Tella also inspected the floor drain adjacent to the release. The floor drain was plugged with sweepings and old sediment. Mr. Tella subsequently called and left a message for Mr. Giddings indicating that to his belief, no release to the environment had occurred. Mr. Giddings confirmed to LAI that DEP considered the release to be contained and did not issue a RTN.

In November 2020, approximately 50 gallons of fuel oil spilled from a faulty transfer pump in the boiler room and the fuel oil was released to the concrete floor. Immediate Response Actions were implemented and the fuel oil on the floor was absorbed and cleaned up. DEP assigned RTN 3-36598 to this release. The boiler room was vented and approximately one cubic yard of soil was excavated from where oil had impacted the subsurface. Assessment included sampling soil surrounding the release area, collecting groundwater samples from existing and newly installed wells, and the collection of indoor air samples from within the occupied spaces of the building. Based on remediation and the collection of soil, groundwater, and indoor air samples, LEI prepared and submitted a Permanent Solution Statement without Conditions for the release in March 2021.

The 10,000-gallon No. 2 fuel oil UST at the Site installed in 1995 is currently in use.

2.3 Site Hydrogeological Characteristics

Subsurface investigations at the Site have been limited to sampling surficial soil, excavation of arsenic and lead impacted soil, and the advancement of shallow test pits and soil borings. Soils encountered across the Site consisted of fine to coarse sands with gravel. No bedrock was encountered during any of the subsurface investigations and no bedrock outcrops have been observed at the Site. Groundwater was not encountered during any of the soil sampling events.

On August 15, 2016, surficial soil samples were collected in the grassy area to the east of the Site building. These soil samples were designated SF-1 through SF-6. These samples were sent to Alpha Analytical Laboratory (Alpha) in Westborough, Massachusetts for analysis of arsenic and lead. Analytical results indicated the presence of arsenic above applicable S-1 standards in all of the samples with an average of 31.2 mg/kg. Lead was present in all of the samples above laboratory method detection limits but below applicable S-1 standards with the exception of the concentration of lead in SF-1 at 200 mg/kg.

LAI directed the excavation of test pits on August 24, 2016 using a mini excavator. These test pits were located coincidently with select SF samples and were designated TP-1 through TP-3. Composite soil samples were collected at each location from the ground surface to one foot below grade. Laboratory results indicated that arsenic and lead were detected above laboratory method detection limits but below applicable S-1 standards. A summary of this date is provided in **Table 1**.

Laboratory analytical data for shallow soil and test pit samples generally indicate higher arsenic and lead concentrations near the ground surface and decreasing with depth. Average arsenic and lead exposure point concentrations (EPCs) for arsenic and lead in confirmatory soil samples collected after the removal of 12 inches of soil from the excavation area to the east of the Site building in August 2016 are below applicable Method 1 S-1 GW-2/3 standards.

Additional soil samples were collected during test pitting activities on September 6, 2016 southwest of the excavation area and across the concrete walkway to the main entrance to the Site building. These test pits (designated TP-4 through TP-6) were excavated using a mini rubber track-mounted excavator and were dug to a maximum depth of two feet. Composite soil samples were collected from the ground surface to one foot below ground surface. These samples were placed in laboratory-provided glassware and were transported to Alpha for analysis of lead and arsenic.

Laboratory analytical data indicated an average lead concentration of 70.3 mg/kg with a maximum of 120 mg/kg in the test pit samples. The average arsenic concentration was 10.7 mg/kg with a maximum concentration of 17 mg/kg in the test pit samples. A summary of these data is provided as **Table 2**, and copies of the original laboratory reports is provided as **Appendix B**.

Post soil excavation verification sampling was implemented in concert with the plan to excavate all soil impacted at concentrations exceeding the S-1/GW-2/3 cleanup standards.

The plan was to collect a statistically representative number of post-excavation soil samples based on a grid pattern overlaying the Site.

The sampling grid was based on 10' x 10' squares. Samples were collected at each of the square's nodes. An equal volume composite sample was made up from three adjacent squares (eight individual samples). Therefore, a total of 19 composite samples were made for laboratory analyses (designated COMP-1 through COMP-19). See **Figure 5** for a depiction of composite sample areas and pertinent Site features.

Soil samples were collected on September 7 and 8, 2016 using a stainless-steel hand trowel at each point, composited and placed in laboratory prepared sampling jars for transport to the lab under chain-of-custody protocol for total lead and arsenic analyses. As a result of those analyses, it was determined that all post excavation soil sample data for total lead was below the applicable S-1/GW-2 Method 1 cleanup standard of 200 mg/kg. The average total lead concentration was 76 mg/kg, and the maximum concentration was 110 mg/kg. Prior lead TCLP analyses determined that the lead was not leachable.

Three of the nineteen soil samples analyzed for total arsenic exceeded the Method 1 cleanup standard of 20 mg/kg. Therefore 85% of the arsenic data fell below the standard. The average concentration was 14.3 mg/kg, and the maximum concentration was 32 mg/kg. A summary of these data is provided as **Table 2**, and copies of the original laboratory reports is provided as **Appendix B**.

On December 27, 2016, LAI personnel collected soil samples at the Site in order to further delineate the arsenic and lead impacts in landscaped areas. These soil samples (designated B-1 through B-15) were collected with a hand auger at depths of 0-6 inches and 6-12 inches. Sampling locations and other pertinent Site features are included in **Figure 7**. The soil samples were field-screened with a photo-ionization detector (PID) for total organic vapor (TOV). No TOV readings above 0.0 parts per million by volume (ppmv) were observed in any of the soil samples collected. Soil samples were placed in laboratory-provided glassware and the 0-6 inch samples were transported to Alpha under chain-of-custody documentation for analysis of arsenic and lead.

Laboratory results indicated the presence of arsenic and lead in each of the soil samples above laboratory method detection limits. Arsenic concentrations in samples collected from B-1, B-3, B-4, B-6, B-7, B-8, B-9, B-10, B-11, and B-12 were above Method 1 S-1 GW-2/3 standards. Additionally, arsenic concentrations in B-1, B-8, B-9, B-10, and B-11 exceed the "Imminent Hazard" value of 40 mg/kg for soil within a foot of the ground surface. Prior to this assessment, a chain-link fence was present surrounding the area extending from B-10 to B-12. This soil data is summarized in **Table 3**.

Once in receipt of this data, Ralph Tells, LSP phoned the DEP Northeast Regional Office to notify them of this condition on January 9, 2017. Mr. Tella spoke to Chris Bresnahan of DEP and they arranged a Site visit for January 13, 2017. Mr. Bresnahan indicated to Mr. Tella during the Site meeting, that if the areas are surrounded by fencing, then there would not be an "Imminent Hazard" Condition. Arthur Cabral, (City of Newton Building Department representative), present at the Site meeting indicated to DEP that the City would fence in the

two other areas with a concentration of arsenic over 40 mg/kg. The landscaped area surrounding B-1 and the landscaped area surrounding B-8 and B-9 were subsequently fenced in by the City to prevent access.

Subsequent to the Site visit, Mr. Bresnahan sent LAI a letter informing us that the "Imminent Hazard" level for arsenic is slated to be revised to 50 mg/kg (See attached letter in **Appendix A**).

Based on the concentrations of arsenic and lead in the top 6 inches of soil, LAI submitted select 6-12 inch samples to Alpha for analysis. Laboratory analytical data indicated the presence of arsenic and lead in all of the samples above laboratory method detection limits. However, only the lead concentration in LB-2 (230 mg/kg) and the arsenic concentrations in soil collected from LB-11 (54 mg/kg) exceeded the applicable Method 1 S-1 GW-2/3 standard. This soil data is summarized in **Table 4**.

To further delineate the extent of arsenic and lead impacts at the Site, LAI personnel conducted additional soil sampling on February 24, 2017. LAI collected soil samples (designated LB-16 through LB-22 using a hand auger at depths of 0-6 inches and 6-12 inches. Sampling locations and other pertinent Site features are included in **Figure 7**. The soil samples were field-screened with a PID for TOV. No TOV readings above 0.0 ppmv were observed in any of the soil samples collected. Soil samples were placed in laboratory-provided glassware and the 0-6 inch samples were transported to Alpha under chain-of-custody documentation for analysis of arsenic and lead.

Laboratory results indicated the presence of arsenic and lead in each of the 0-6 inch soil samples above laboratory method detection limits. Arsenic concentrations in samples collected from LB-18, LB-19, LB-20, and LB-22 were above Method 1 S-1 GW-2/3 standards. Additionally, the arsenic concentrations LB-22 exceed the "Imminent Hazard" value of 40 mg/kg for soil within a foot of the ground surface. The location of LB-22 was within the fenced-in area surrounding B-8 and B-9, and therefore does not represent an "Imminent Hazard". Lead concentrations in soil collected from the 0-6 inch samples from LB-18, LB-19 and LB-22 (240 mg/kg, 200 mg/kg, and 240 mg/kg, respectively) were above the applicable Method 1 S-1 GW-2/3. This soil data is summarized in **Table 5**.

Based on the concentrations of arsenic and lead in the top 6 inches of soil, LAI submitted all of the 6-12 inch samples collected on February 24, 2017 to Alpha for analysis. Laboratory analytical data indicated the presence of arsenic and lead in all of the samples above laboratory method detection limits. However, only the arsenic concentrations in soil collected from LB-20 (28 mg/kg) and LB-22 (26 mg/kg) exceeded the applicable Method 1 S-1 GW-2/3 standard. This soil data is summarized in **Table 6**.

On July 2, 2020, LEI directed New England Geotech of Jamestown, Rhode Island in the advancement of soil borings on the west side of the Site building with a direct-push rig. Soil borings were designated LB-31 through LB-50 and were advanced to maximum depths of three feet and five feet (in LB-31, LB-35, LB-39, LB-43, and LB-47). All of the soil samples with the exception of LB-36 (collected in the gravel, fenced-in parking area) were advanced through the asphalt surface of the parking area. Soils generally consisted of fine to coarse sand

and gravel with some indications of fill (i.e., trace brick). Soil samples were field-screened with a RAE Systems MiniRAE PID for total organic vapor (TOV). No reading above 3.6 ppmv were observed and no indications of contaminants other than arsenic and lead were observed in the field. TOV readings above 0.0 ppmv were likely due to moisture and/or the presence of asphalt. A summary of soil details is presented in the below table. Soil samples were placed in laboratory-provided glassware and sent under chain-of-custody protocols to Alpha for analysis of arsenic and lead.

SOIL BORING LOG - FIELD SCREENING BORING METHOD: GEOPROBE® DATE: JULY 2, 2020				
BORING #	**DEPTH (FT)**	**RECOVERY ADV/REC (FT)**	**PID READING**	**SOIL DESCRIPTION**
LB-31	0-5	5/4.5	0.2	Fine to Med sand and gravel, trace brick
LB-32	0-3	3/3	3.4	Fine to medium sand
LB-33	0-3	3/2.5	3.6	Fine to medium sand, trace silt
LB-34	0-3	3/2.5	1.5	Fine to coarse sand and gravel, trace brick
LB-35	0-5	5/2.5	0.3	Fine to coarse sand and gravel, trace brick
LB-36	0-3	3/2.5	1.1	Fine to coarse sand and gravel
LB-37	0-3	3/2.5	2.3	Fine to coarse silty sand and gravel fill, trace brick
LB-38	0-3	3/2.5	0.7	Fine to coarse silty sand and gravel fill, trace brick
LB-39	0-5	3/4	1.6	Fine to coarse sand and gravel, trace silt
LB-40	0-3	3/2	0.5	Fine to medium sand and gravel, trace silt
LB-41	0-3	3/2.5	0.3	Fine to coarse sand and gravel
LB-42	0-3	3/1.5	1.0	Fine to coarse sand and gravel
LB-43	0-5	5/3.5	1.1	Fine to coarse silty sand and gravel fill, trace brick
LB-44	0-3	3/2	0.0	Fine to coarse silty sand and gravel fill, trace brick
LB-45	0-3	3/2.5	0.0	Medium to coarse sand and gravel, trace fine sand
LB-46	0-3	3/1.5	0.0	Fine to coarse sand and gravel
LB-47	0-5	5/4.5	0.0	Medium to coarse sand and gravel
LB-48	0-3	3/2.5	0.4	Fine to coarse sand and gravel
LB-49	0-3	3/2.5	0.0	Fine to coarse sand and gravel, trace silt
LB-50	0-3	3/2.5	0.0	Fine to coarse sand and gravel

Laboratory results indicated the presence of lead and arsenic in all of the soil samples above laboratory method detection limits. Only the concentration of arsenic (25.6 mg/kg) in soil collected from LB-44 from 0-3 feet exceeded the S-2 GW-2/3 Standard. The S-2 standard is appropriate for soil under the asphalt paved parking areas. This soil data is summarized in **Table 7**.

To further delineate the extent of arsenic and lead impacts at the Site, LEI personnel conducted additional soil sampling on July 22, 2021 in the northern portion of the property that is wooded. LEI collected soil samples (designated LB-51 through LB-59 using a hand auger at depths of 0-6 inches and 6-12 inches. Sampling locations and other pertinent Site features are included in **Figure 7**. The soil samples were field-screened with a PID for TOV. No TOV readings above 0.0 ppmv were observed in any of the soil samples collected. Soil samples were placed in laboratory-provided glassware and both the 0-6 inch and 6-12 inch samples were transported to New England Testing Laboratory (NETLAB) under chain-of-custody documentation for analysis of arsenic and lead.

Laboratory results indicated the presence of arsenic and lead in each of the 0-6 inch soil samples above laboratory method detection limits. Arsenic concentrations in samples collected from LB-52, LB-54, LB-55, LB-58, and LB-59 were above Method 1 S-1 GW-2/3 standards. Additionally, the arsenic concentrations LB-55, LB-58, and LB-59 exceed the "Imminent Hazard" value of 40 mg/kg for soil within a foot of the ground surface and within 500 feet of a school.

Laboratory analytical data indicated the presence of arsenic and lead in all of the 6-12 inch samples above laboratory method detection limits. However, only the arsenic concentrations in soil collected from LB-54 (48.8 mg/kg), LB-55 (24.9 mg/kg), and LB-58 (88 mg/kg) exceeded the applicable Method 1 S-1 GW-2/3 standard. Additionally, the arsenic concentrations LB-54, and LB-58 exceed the "Imminent Hazard" value of 40 mg/kg for soil within a foot of the ground surface and within 500 feet of a school. This soil data is summarized in **Table 8.**

The location of LB-51 to LB-59 is within a mostly fenced-in area that is wooded with significant undergrowth. The City of Newton is in the process of making repairs to portions of the fencing that are not secure. The City has also erected some fencing along the southern woods line to further restrict access and prevent an "Imminent Hazard" condition.

3.0 ENVIRONMENTAL FATE AND TRANSPORT OF OIL AND/OR HAZARDOUS MATERIAL

3.1 Evaluation of Fate & Transport Characteristics of Arsenic and Lead

The primary contaminants of concern at the Site are arsenic and lead. Analytical data obtained to date has been consistent with these findings. Based on Site history, and the general ratio of arsenic to lead, the source of the arsenic and lead is inferred to be from the use of lead arsenate as a pesticide.

Information concerning the fate and transport characteristics of arsenic and lead are readily available in the literature and only briefly reiterated herein as it pertains to the Site. Generally, arsenic found in soil from anthropogenic releases forms insoluble complexes with iron, aluminum and manganese oxides found in soil surfaces. In this form, arsenic is relatively immobile. Arsenic from lead arsenate is not expected to travel vertically more than one foot based on research by the USEPA. Site analytical data for soil samples indicated significantly reduced concentrations of arsenic in 6-12 inch samples compared to 0-6 inch samples. Generally, lead is considered relatively insoluble and immobile in soils, particularly in soils with net negative surface charge such as soils within the United States. TCLP analysis for lead conducted in conjunction with disposal characterization did not indicate that the lead was leachable as the results was not detected above laboratory method detection limits.

3.2 Migration Pathways & Exposure Potential

Migration pathways and exposure potential information have been developed from data obtained during the Phase II CSA and from data compiled for the Site during previous investigations. Elements necessary for a migration pathway to exist include a source, a release mechanism, and a medium allowing movement of the contaminant. Exposure potential exists when there are sensitive receptors with the potential to come into contact with the contaminant.

With reference to the release of arsenic and lead at this Site, soil represents the primary media through which contamination may migrate. Based on the relatively shallow depth of contaminant impact, it is unlikely that these contaminants could migrate off-Site. No preferential pathways of contamination such as underground utilities have been identified, and an impact to indoor air is not likely.

An Exposure Assessment that evaluates potential exposure scenarios associated with these identified migration pathways is presented in **Section 5.0**.

4.0 NATURE AND EXTENT OF CONTAMINATION

4.1 Nature of Contamination

The contaminants of concern at the Site are arsenic and lead. The volume of the original estimated release of contaminants is unknown, but it is suspected that the arsenic and lead impacts to soil are due to the historic use of lead-arsenate pesticide at the Site.

4.2 Extent of Soil Impact: Soil Analytical Data

Soil analytical data is presented in the attached **Tables**. Laboratory analytical results indicate arsenic and lead concentrations above applicable S-1 and S-2 GW-2/3 standards in soil samples collected during the various subsurface investigations. Soil impacts above applicable standards for arsenic and lead appear to be limited to within three feet of the ground surface, and generally within the top one foot. As arsenic and lead concentrations in

soil are present across the entire property, the disposal site boundary conservatively encompasses the entire property at 15 Walnut Park. **Figure 6** depicts the entire property and disposal site.

4.3 Extent of Groundwater Impact: Groundwater Analytical Data

As the arsenic and lead impacted soil (above Method 1 standards) appears to be surficial (within the top 1 foot, or thereabout), subsurface investigations conducted to date have not encountered groundwater. In addition, TCLP data does not indicate that they are leachable. Consequently, it is not likely that groundwater is impacted with lead or arsenic above applicable Method 1 GW-2/3 standards.

4.4 Extent of Impact to Indoor Air

Arsenic and lead are not volatile metals. Additionally, no GW-2 standard exists for these contaminants. Therefore, a Vapor Intrusion Pathway is considered to be unlikely.

4.5 Data Validation

All official laboratory analyses of groundwater in support of this ongoing investigation were performed by Alpha Analytical Laboratories of Westborough, Massachusetts. A review of the laboratory data was conducted in order to evaluate its suitability for use within this report. A summary of the official laboratory results has been presented in the attached soil data **Tables** and in **Appendix B** (official laboratory reports). The laboratory analytical reports were reviewed for the Quality Assurance/Quality Control (QA/QC) information such as procedures followed and achievement of performance and acceptance standards.

There were no deficiencies noted within any of the analytical results. Therefore, all data presented is considered a suitable basis for the conclusions of this investigation.

5.0 EXPOSURE ASSESSMENT

The Site is currently used as the City of Newton Early Childhood Program, and for storage space. Foreseeable future human receptors include adults and children. Individuals working at or visiting the property are potential human receptors to arsenic and lead impacted soil via dermal contact and incidental ingestion. Ingestion of arsenic and lead impacted soil at the property is possible, but areas that have elevated levels of arsenic in shallow soil are, or have been, fenced-in.

Land bordering the property to the north, east and west are residential. To the south are the Jackson Walnut Park School and the New England Montessori Teacher Education Centre. No institutions (as defined by the MCP) are located within 500 feet of the subject property.

The closest water body is Charles River, approximately 2,300 feet to the north.

A summary of potential human exposure pathways follows.

Potential for human exposure via:

- **Inhalation** – Minimal; No known impacts to groundwater and no GW-2 standard for arsenic or lead.

- **Dermal Contact** – Possible; site workers, students and employees could be exposed to impacted soil during normal operational procedures as surface soils are impacted at the Site. Areas with shallow soil concentrations of arsenic that exceed the DEP published "Imminent Hazard" values do not represent an "Imminent Hazard" Condition as they are not accessible due to fencing.

- **Ingestion** – Possible; environmental and/or other workers may be exposed to impacted soil and/or groundwater during any excavation in the immediate vicinity of the release location. Children could possibly ingest impacted soil while finger-mouthing. However, areas with shallow soil concentrations of arsenic that exceed the DEP published "Imminent Hazard" values do not represent an "Imminent Hazard" Condition as they are not accessible due to fencing.

Potential Environmental Impacts:

Significant environmental impacts are not considered likely. The Site is located within an urban area not hosting a critical wildlife habitat. No completed environmental exposure pathways have been identified. Groundwater is inferred to not be impacted. Therefore, it is unlikely that contaminated groundwater will discharge to surface water representing a significant environmental risk.

6.0 RISK CHARACTERIZATION

6.1 Selection of Method

A Method 1 Risk Characterization was completed for the Site on the basis that exposure to Site contaminants is predominantly through contact with soil, and published cleanup standards exist for each contaminant of concern. However, arsenic, and lead to a certain degree, are known to bioaccumulate. Under Method 1, exposure point concentrations are compared to established cleanup standards published in the Massachusetts Contingency Plan at 310 CMR 40.0970.

These Method 1 cleanup standards were determined with consideration of exposure of various groups of human and/or environmental receptors. In addition, there are published "Upper Concentration Limits" for site contaminants, which if exceeded, are described as presenting a significant risk to public welfare. At this Site, no Upper Concentration Limits were exceeded. The UCL for arsenic is 500 mg/kg and the UCL for lead is 6,000 mg/kg.

Use of the Method 1 cleanup standards requires the site-specific categorization of soil and groundwater, where appropriate. A discussion of this categorization follows.

6.2 Soil Categorization

Currently, the subject property is used in part as the City of Newton Early Childhood Program. Landscaped areas with accessible soil at the Site have a *frequency of use* for adults and children at the subject property characterized as high with a potential high intensity of use. Another distinct area of the Site has been characterized with soil samples being collected from potentially accessible soil below the asphalt-paved surfaces of the parking area to the west of the Site building. This area has low intensity and frequency by both adults and children.

Soil category S-1 applies to the landscaped areas of the Site and S-2 applies to the soil underneath the asphalt-paved parking area.

6.3 Groundwater Categorization

The Site is not located within a groundwater protection area (see **Figure 3** for the DEP Site Assessment Map). Municipal water is available to the Site and to all surrounding properties. GW-2 applies to areas of the Site that are within 30 feet of a building (assuming that groundwater is located within 15 feet of the ground surface). As all groundwater is assumed to eventually discharge to surface water in the Commonwealth, Groundwater Category GW-3 also applies to the Site.

6.4 Risk to Human Health, Public Welfare and Environment

Groundwater Exposure

Groundwater has not been encountered during subsurface investigations at the Site. Given the relatively shallow nature of the arsenic and lead impacts at the Site and research that indicates that lead and arsenic impacts from lead arsenate applications are not leachable and do not tend to extend vertically more than one foot, groundwater is inferred to not be impacted. Therefore, groundwater exposure is not likely and was not assessed.

Soil Exposure

There are currently three distinct areas of the Site that are considered in this risk characterization. The area to the east of the Site building where the top 1 foot of soil has been removed and backfilled with clean imported fill prior to the construction of a playground is one distinct area. Another distinct area is the remaining landscaped and wooded areas where LEI has collected soil samples from 0-6 inches, 6-12 inches, and test pit samples that were a composite from 0-1 feet. A distinct third area of the Site is located under the asphalt-paved parking area. The previously excavated area to the east of the Site building

and the landscaped areas represent S-1 soils where the soils under the asphalt-paved parking represent S-2 soils.

Table 1 summarizes pre-excavation sampling in the area to the east of the Site building and is therefore not considered in this risk assessment as this area has been excavated to a maximum depth of 1 foot bsg. **Table 2** summarizes post-excavation confirmatory soil sampling for the area to the east of the Site building. As seen in **Table 2**, Average EPCs post excavation are below applicable Method 1 S-1 GW-2/3 standards. The EPC for arsenic is 14.3 mg/kg and the EPC for lead is 76.1 mg/kg. **Tables 3-6 and 8** summarize soil samples collected from landscaped and wooded areas surrounding the Site building with a hand auger at depths of 0-6 inches and 6-12 inches. Soil data presented in **Tables 3-6 and 8** indicates arsenic and/or lead concentrations exceed applicable S-1 standards in several of the sampling locations (B-1, B-3, B-4, B-6 through 12, B-14, LB-18 through 20, LB-22, LB-52, LB-54, LB-55, LB-58, and LB-59). Soil data for the twenty soil sampling locations collected in the area of the Site to the west of the Site building and underneath the asphalt-paved parking area are presented in **Table 7**. Method 1 S-2 standards are applicable to this portion of the Site as soils are potentially accessible, due to asphalt paving. Only the arsenic concentration (25.6 mg/kg) in soil collected from boring LB-44 from 0-3 feet exceeds the applicable standard of 20 mg/kg.

Several soil samples at the Site in landscaped areas have soil arsenic concentrations above 40 mg/kg. Soil sampling locations in this category include B-1, B-8, B-9, B-10, B-11, LB-22, LB-54, LB-55, LB-58, and LB-59. These areas of the Site are currently fenced-in to limit exposure potential, and therefore do not represent an Imminent Hazard condition. They do not, however, represent a condition of No Significant Risk of Harm to Human Health for the foreseeable future use of the property. The City of Newton intends to excavate shallow soil in these areas within the time allowed in the Phased process under the MCP.

6.5 Characterization of Risk of Harm to Safety

Safety hazards include the potential for fire or explosion, and physical dangers that may pose a threat of bodily injury to people. Conditions that also constitute a risk of harm to safety include the presence of unconfined materials that exhibit characteristics of corrosivity, reactivity, flammability, or are considered infectious materials.

None of the hazardous material detected at the Site exhibits the characteristics of corrosivity, reactivity, or are considered infectious materials. Based on current and reasonably foreseeable conditions, no applicable or suitable analogous safety standards were identified for hazardous materials detected at the Site or on the subject property.

There are no release-related physical dangers present at the Site. No old or corroded drums, lagoons, pits or other physical hazards associated with the release are present at the Site. Site conditions attributable to the release are limited to residual soil and groundwater contamination. As such, a condition of No Significant Risk of harm to safety exists at the Site.

6.6 Conclusion of Risk Characterization

In conclusion of the risk characterization, Site conditions do not represent an Imminent Hazard and exposure to all Substantial Hazards are currently controlled through fencing. As fencing is considered a temporary measure, conditions do not represent "No Significant Risk" of Harm to Human Health for the foreseeable future. As such additional remedial response actions under Phase III of the MCP are required.

7.0 PHASE III EVALUATION

The Phase III Identification, Evaluation, and Selection of Comprehensive Response Action Alternatives performance standards specified at 310 CMR 40.0853 states:

1. A Phase III evaluation shall result in:

    - The identification and evaluation of remedial action alternatives which are reasonably likely to achieve a level of "No Significant Risk" considering the oil and hazardous material present, media contaminated, and site characteristics; and,
    - The recommendation of a remedial action alternative that is a Permanent or Temporary Solution, where a Permanent Solution includes measures that reduce, to the extent feasible, the concentrations of oil and hazardous material in the environment to levels that achieve or approach background.

2. The Phase III Remedial Action Plan shall describe and document the information, reasoning, and results used to identify and evaluate remedial action alternatives in sufficient detail to support the selection of the proposed remedial action alternative.

7.1 Remedial Action Alternatives

Based on soil data collected at the Site to date, arsenic and lead have been released to shallow soil likely as a result of the application of lead arsenate pesticide to control gypsy moths. It is not possible to know if this application was done in accordance with the products labelling. As such, lead and arsenic concentrations above applicable Method 1 Standards, and in some areas Imminent Hazard concentrations, are present at the Site in shallow soil.

Excavation and Off-Site Disposal
Excavation and off-Site disposal of surficial soils at the Site will eliminate all Imminent Hazard conditions related to arsenic concentrations that are currently controlled via fencing. Soil would be excavated with heavy equipment and stockpiled pending disposal characterization. Excavation of this soil will be completed under the direction of an LSP and perimeter air monitoring will be conducted during excavation activities. Site soil analytical data indicates that after removal of soil with concentrations greater than 40 mg/kg of arsenic

from these areas, average EPCs for arsenic will be below applicable S-1 and S-2 Standards, allowing for closure with a Permanent Solution.

Excavation and off-Site disposal of arsenic and lead impacted soil are considered feasible if the technology to be employed by the alternative is reasonably likely to achieve a Permanent or Temporary Solution; and individuals with the expertise needed to effectively implement available solutions would be available, regardless of arrangements for securing their services.

A detailed evaluation pursuant to 310 CMR 40.0857 is not required as this remedial action alternative (a) is proven to be effective in remediating arsenic and lead impacted soil present at the disposal site, based on experience gained at other disposal sites with similar conditions, the remedial action alternative; (b) results in the reuse, recycling, destruction, detoxification, treatment or any combination thereof of the hazardous material present at the disposal site; (c) can be implemented in a manner that will not pose a significant risk of harm to health, safety, public welfare or the environment, as described in 310 CMR 40.1000; and (d) is likely to result in the reduction and/or control of hazardous material at the disposal site to a degree and in a manner such that the requirements of a Permanent Solution as set forth in 310 CMR 40.1000 will be met.

Other remedial alternatives such as chemical fixation and phytoremediation were not considered to be feasibly implemented at this site due to their uncertain effectiveness within the time frame required to achieve a Permanent Solution.

Because excavation of shallow soils with off-Site disposal will result in a Permanent Solution and as the City of Newton plans to conduct this proposed soil excavation work within the time allowed to conduct response actions under the MCP, no further alternatives are presented herein.

8.0 SELECTED COMPREHENSIVE REMEDIAL ALTERNATIVE

Because excavation of shallow soils with off-Site disposal will result in a Permanent Solution, excavation with off-Site re-use is the selected Remedial Alternative. The schedule for implementation by the City of Newton has been delayed due to the Covid-19 pandemic as it is contingent on the re-development of another City school that will be the new home to the NECP. Once the NECP moves to 687 Watertown Street in Newton, renovations of the 15 Walnut Park property will commence and will include the excavation and off-site re-use of arsenic-, and lead-impacted soil.

8.1 Excavation

The top 12 inches of lead and arsenic impacted soil will be excavated and stockpiled pending full disposal characterization and will be transported off-site to an approved facility. Arsenic-, and lead-impacted soil excavated from the Site in 2016 was transported to Westminster Landfill in Westminster, MA for use as daily cover and grading and shaping material. A similar disposal option will be identified for this final phase of the remediation.

Stockpiled soil will be placed on top of 6-mil polyethylene sheeting and will be covered daily. After excavation, representative confirmatory soil samples will be collected for comparison with applicable Method 1 S-1 soil standards.

8.2 Dust Control

During excavation, it is likely that dust will be released into the air. To control the dust, water will be sprayed onto the excavation area as well as loading and stockpiling areas to eliminate visible dust. This will be performed by the use of hand-held hoses as necessary.

8.3 Air Monitoring

An air monitoring plan will be implemented as part of the plan to control fugitive dust. As a general rule, if visible dust is controlled fugitive dust emissions are controlled. However, total particulate (PM10) recording monitors will be used along the site perimeter to quantitate dust and alert workers in the event that unacceptable ("action") concentrations are detected.

In the event that action concentrations are exceeded, the Contractor will be issued a verbal notification to stop work and implement additional dust control measures. All monitoring data will be documented in a daily field report.

Real-time monitoring of total dust will be performed using MIE Personal Data Rams (PDRs) aerosol monitors, or similar. These units utilize light-scattering microscopy technology. The lower detection limit for the operating range of these units is 0.001 milligrams per cubic meters (mg/m3). The PDRs will be checked periodically during the work day by an on-site Safety Representative to verify equipment operation and compliance with the target action levels. The units will be set to log a data point every ten minutes in order to create a real time graph that can be used to correlate soil disturbance activities with airborne dust levels. Data will be downloaded into a computer daily and will be available to all project personnel.

The PDRs will be positioned along the excavation fence line at locations most likely to be in the direction of off-site dust migration from the excavation depending on the wind direction on the day and time of work. One PDRs will be placed at a height of five feet on site boundary in the downwind direction to monitor for dust being generated in the excavation and one PDR will be placed upwind of the excavation to measure ambient dust concentrations. Should a third PDR be used, it will be placed or hand held at the discretion of the onsite technician.

The" Action Limit" will be set at 150 ug/M^3, based on the daily EPA PM10 National Ambient Air Quality Standard. The OSHA 8-hour workplace Permissible Exposure Limit for arsenic is 10 ug/M^3, and 50 ug/M^3 for lead. These limits are approximately 7-33% of the Action Limit and believed to be conservative as the highest recorded concentration in soil is 79.9 mg/Kg arsenic and 395 mg/Kg lead, orders of magnitude less than one percent.

8.4 Schedule

It is anticipated that the excavation work will begin in early 2023. Based on this timeframe, and as assessment has indicated that there is no Substantial Hazard, a Temporary Solution

will be prepared prior to January 9, 2023. A RAM Plan will then be prepared to conduct the excavation work, post Temporary Solution.

9.0 LIMITATIONS

No warranty, either expressed or implied, is given with respect to this report or any opinions expressed herein. It is expressly understood that this report and the opinions presented herein are based upon an interpretation of Site conditions as they existed only at the time this report was prepared.

In preparing this report, Lord Environmental, Inc. has relied upon and presumed accurate certain information about the Site and vicinity provided by governmental agencies, the client, and a contract analytical laboratory. Except as otherwise stated in the report in relation to data obtained from the analytical laboratory, Lord Environmental, Inc. has not attempted to verify the accuracy or completeness of any such information.

This report is intended for the sole use of the client in fulfillment of applicable regulatory requirements established by the Massachusetts Department of Environmental Protection. This report is not intended for use by any party other than the Massachusetts Department of Environmental Protection, the client, and duly appointed entities of the client.

FIGURES

LORD ASSOCIATES, INC. **1506 Providence Highway, Suite 30** **Norwood, MA 02062-4647** **(781) 255-5554**	**REFERENCE:** USGS TOPOGRAPHIC MAPS Newton QUADRANGLE CONTOUR INTERVAL: 3 METERS	NORTH	**FIGURE 1: LOCATION MAP** **15 Walnut Park** **Newton, Massachusetts**

FIGURE 2

Aerial Photograph

Former Aquinas College
Walnut Park
Newton, MA

Lord Associates, Inc.
1506 Providence Highway, Suite 30

Norwood, MA. 02062

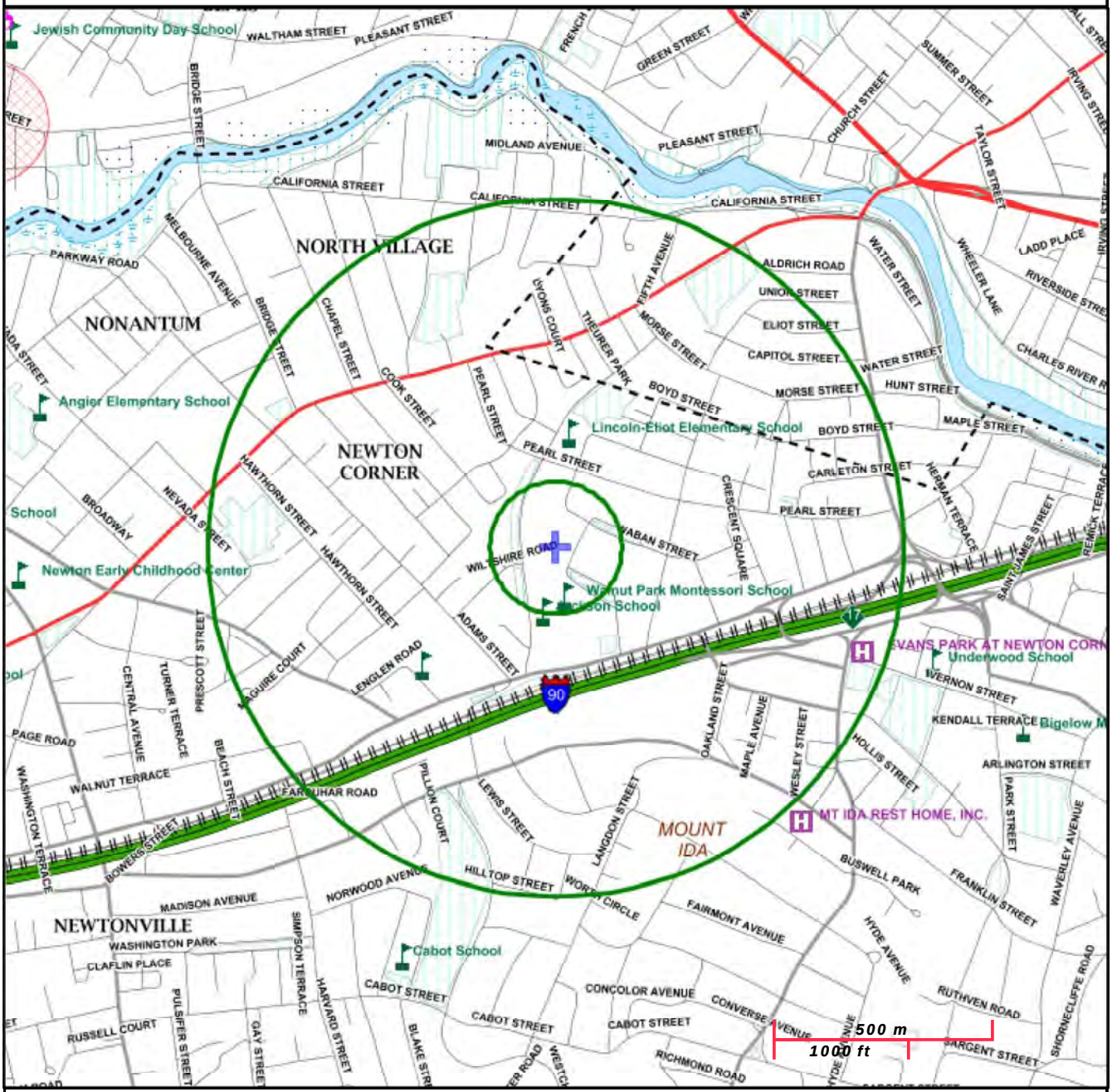
MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

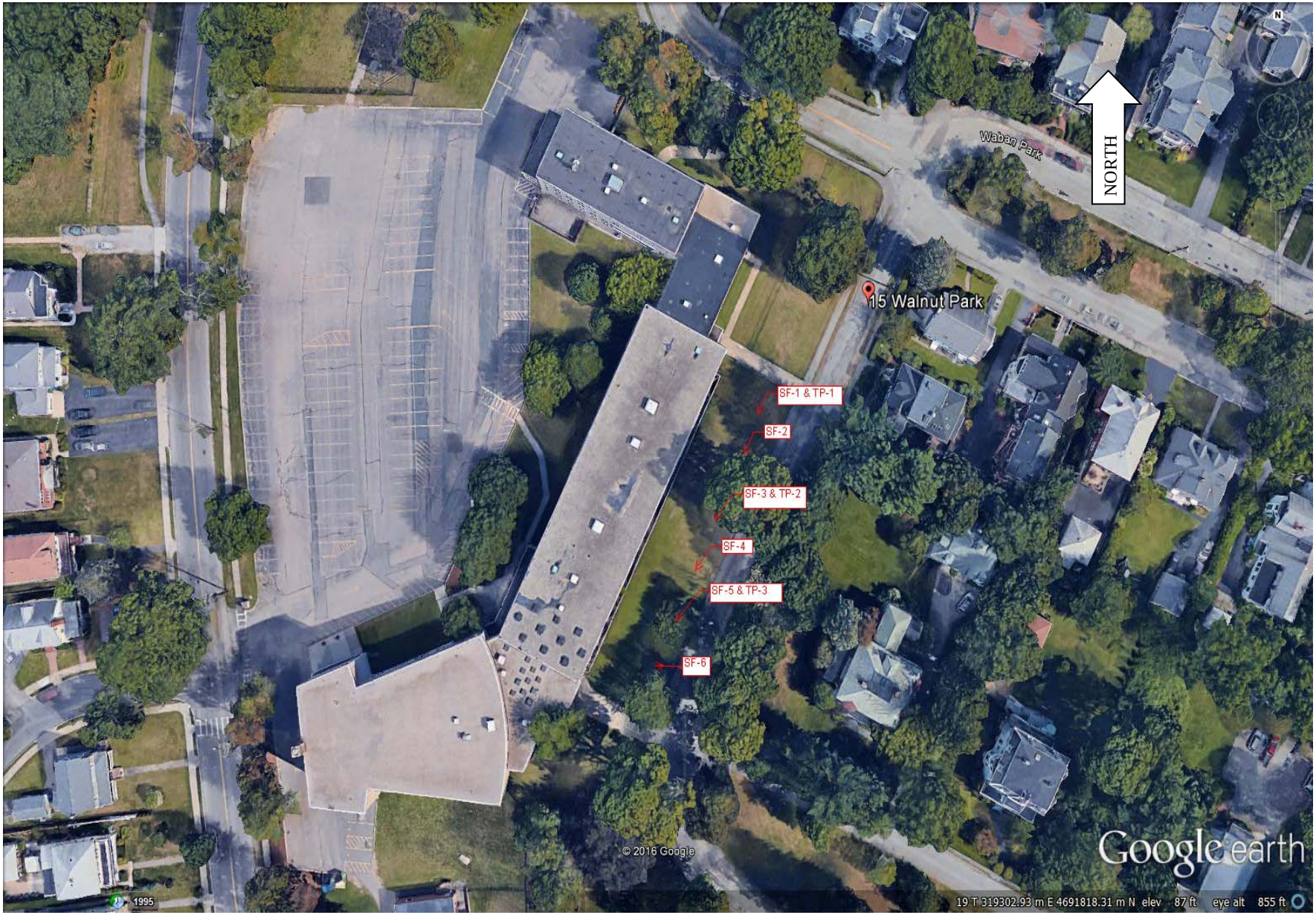
Site Information:
FORMER AQUINAS COLLEGE
15 WALNUT PARK NEWTON, MA
NAD83 UTM Meters:
5214699mN , -7925326mE (Zone: 18)
January 25, 2016

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at: http://www.mass.gov/mgis/.

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail
Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct
Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam
Aquifers: Medium Yield, High Yield, EPA Sole Source
Non Potential Drinking Water Source Area: Medium, High (Yield)
PWS Protection Areas: Zone II, IWPA, Zone A
Hydrography: Open Water, PWS Reservoir, Tidal Flat
Wetlands: Freshwater, Saltwater, Cranberry Bog
FEMA 100yr Floodplain; Protected Open Space; ACEC
Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential
Solid Waste Landfill; PWS: Com.GW,SW, Emerg.,Non-Com.

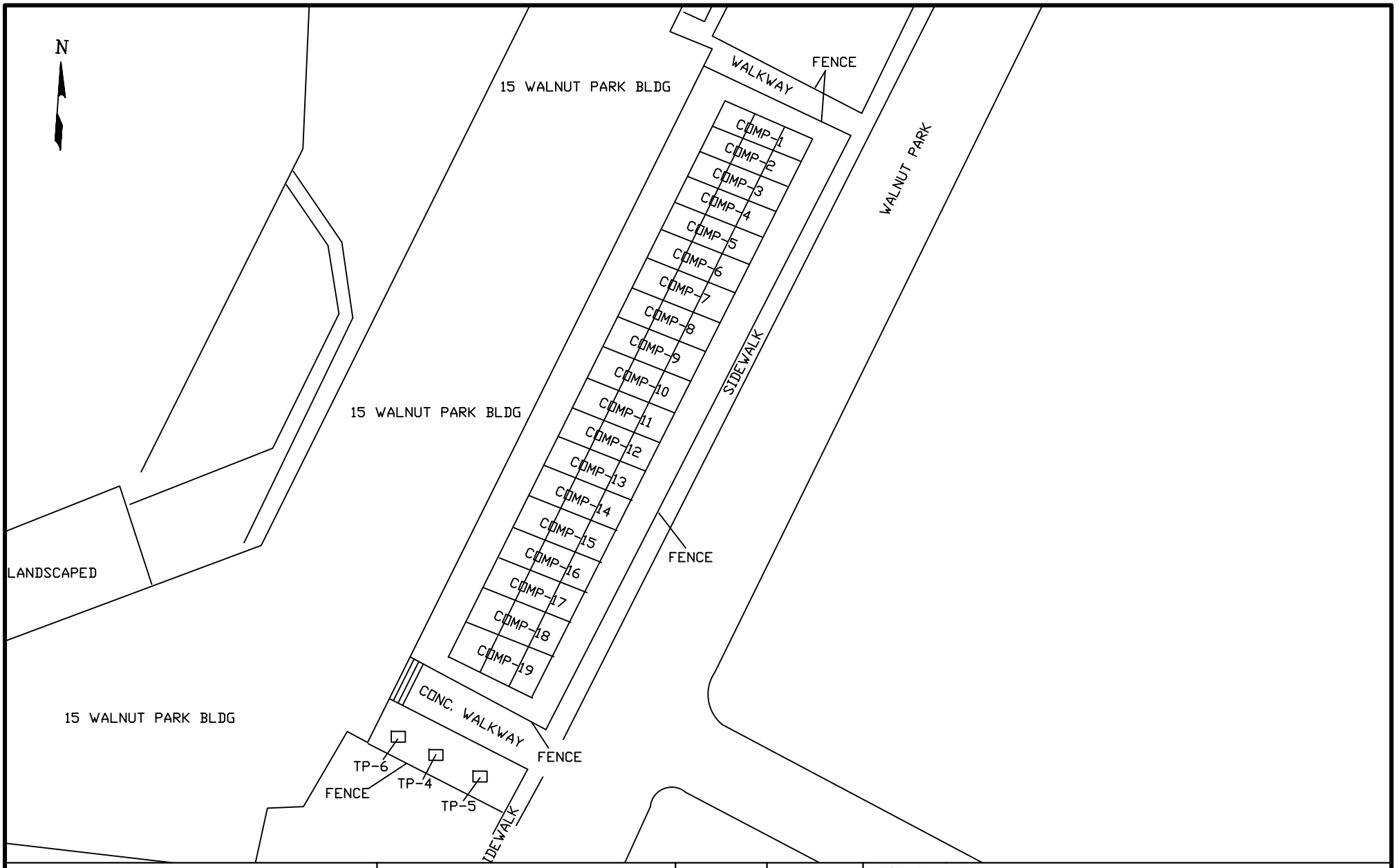


LORD ASSOCIATES, INC.

1506 Providence Highway, Suite 30
Norwood, MA 02062-4647
(781) 255-5554

FIGURE 4: Soil Sampling Locations

Former Aquinas College
Newton, Massachusetts



LORD ASSOCIATES, INC.
1506 PROVIDENCE HWY #30 (781) 255-5554
NORWOOD, MA FAX (781) 255-5535

SITE:
FORMER AQUINAS COLLEGE
15 WALNUT PARK
NEWTON, MA

TITLE: SITE PLAN

FILE: FIGURE 5 2437

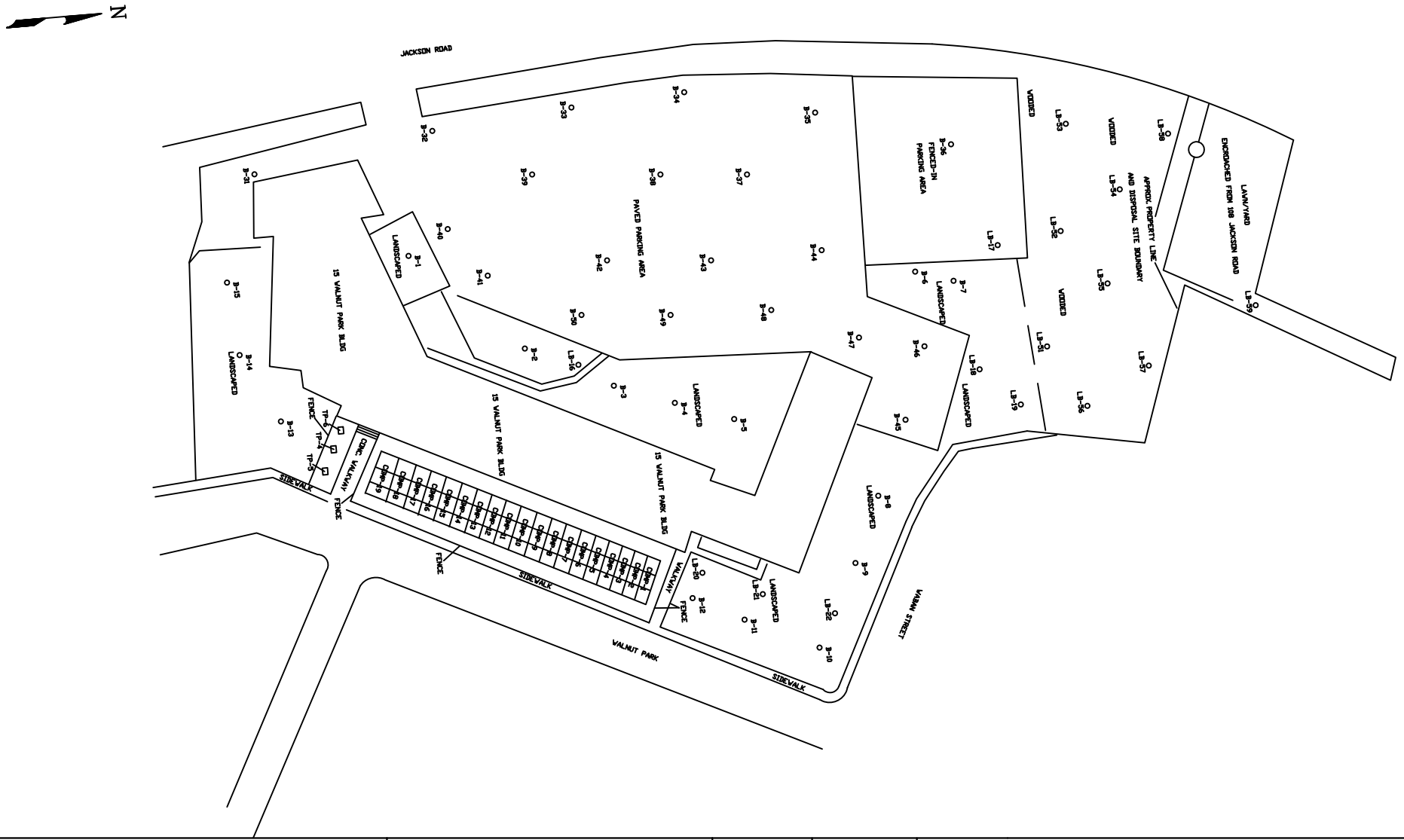
DRAWN BY:	FIGURE:
PL	5
SHEET:	DATE/REV:
1 of 1	10/21/2016

LEGEND:

NODES REPRESENT SOIL SAMPLING LOCATIONS

NOTES:

1. FIGURE TO APPROX. SCALE BASED ON AERIAL PHOTO



LORD ENVIRONMENTAL, INC.

1506 PROVIDENCE HWY #30 (781) 255-5554
NORWOOD, MA FAX (781) 255-5535

SITE:

FORMER AQUINAS COLLEGE
15 WALNUT PARK
NEWTON, MA

TITLE: SITE PLAN

FILE: FIGURE 6 2437

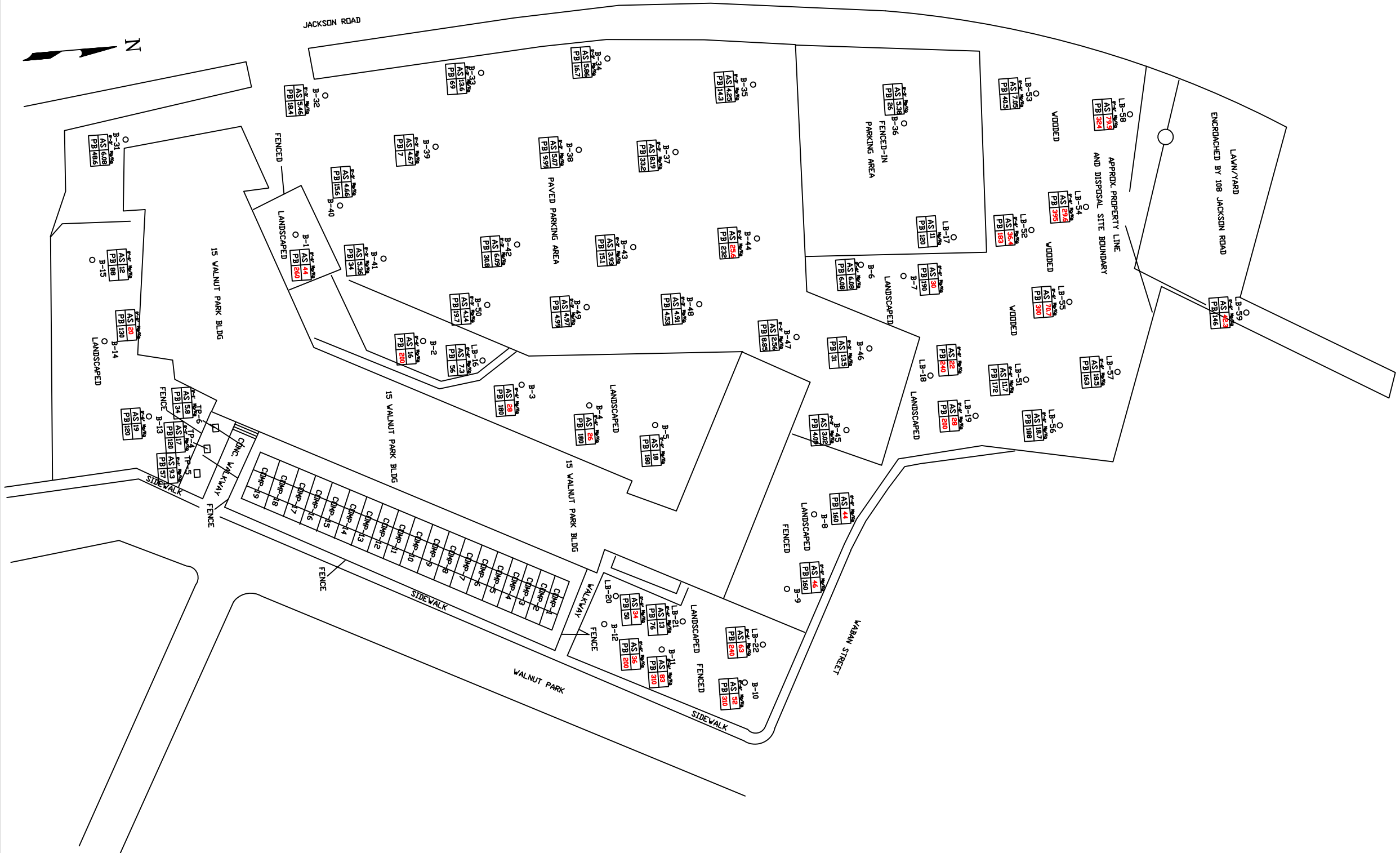
DRAWN BY:	FIGURE:
PL	6
SHEET:	DATE/REV:
1 of 1	9/2/2021

LEGEND:

O SOIL SAMPLING LOCATIONS

NOTES:

1. FIGURE TO APPROX. SCALE BASED ON AERIAL PHOTO



LORD ENVIRONMENTAL, INC. 1506 PROVIDENCE HWY #30 (781) 255-5554 NORWOOD, MA FAX (781) 255-5535	TITLE: SITE PLAN W/ ARSENIC AND LEAD CONC.	DRAWN BY: PL	FIGURE: 7	LEGEND: 0 SOIL SAMPLING LOCATIONS 52 CONC. IN RED EXCEEDS APPLICABLE METHOD ! STD.
SITE: FORMER AQUINAS COLLEGE 15 WALNUT PARK NEWTON, MA	FILE: FIGURE 7 2437	SHEET: 1 of 1	DATE/REV: 9/2/2021	NOTES: 1. FIGURE TO APPROX. SCALE BASED ON AERIAL PHOTO

TABLES

Table 1
Summary of Soil Results with Comparison to Cleanup Standards

CLIENT SAMPLE ID				**SF-1**		**SF-2**		**SF-3**		**SF-4**		**SF-5**		**SF-6**			
SAMPLING DATE				**15-AUG-16**		**15-AUG-16**		**15-AUG-16**		**15-AUG-16**		**15-AUG-16**		**15-AUG-16**			
LAB SAMPLE ID				**L1625528-01**		**L1625528-02**		**L1625528-03**		**L1625528-04**		**L1625528-05**		**L1625528-06**		**Average**	
	CAS Number	**S1/G3-14**	**Units**		**Qual**		**Qual**		**Qual**		**Qual**		**Qual**		**Qual**		
MCP Total Metals																	
Arsenic, Total	**7440-38-2**	**20**	**mg/kg**	**45**		**32**		**35**		**28**		**23**		**24**		31.2	
Lead, Total	**7439-92-1**	**200**	**mg/kg**	**200**		**120**		**120**		**120**		**89**		**110**		126.5	
CLIENT SAMPLE ID				**TP-1**		**TP-2**		**TP-3**									
SAMPLING DATE				**24-Aug-16**		**24-Aug-16**		**24-Aug-16**									
LAB SAMPLE ID																	
	CAS Number	**S1/G3-14**	**Units**		**Qual**		**Qual**		**Qual**								
MCP Total Metals																	
Arsenic, Total	**7440-38-2**	**20**	**mg/kg**	**15**		**17**		**16**								16.0	
Lead, Total	**7439-92-1**	**200**	**mg/kg**	**100**		**120**		**130**								116.7	

Table 2
Summary of Post Soil Excavation

CLIENT SAMPLE ID				SP-NORTH		SP-SOUTH		COMP-1		COMP-2		COMP-3			
SAMPLING DATE				01-SEP-16		01-SEP-16		07-SEP-16		07-SEP-16		07-SEP-16			
LAB SAMPLE ID				L1627967-01		L1627967-02		L1627967-03		L1627967-04		L1627967-05			
	CAS Number	S1/G2-14	Units		Qual		Qual		Qual		Qual		Qual		
General Chemistry															
Solids, Total	---		%	95.4		97.1		80.6		85.1		75.9			
MCP Total Metals															
Arsenic, Total	7440-38-2	20	mg/kg	12		10		24		28		32			
Lead, Total	7439-92-1	200	mg/kg	50		41		110		100		110			

CLIENT SAMPLE ID				COMP-4		COMP-5		COMP-6		COMP-7		COMP-8			
SAMPLING DATE				07-SEP-16		07-SEP-16		07-SEP-16		07-SEP-16		07-SEP-16			
LAB SAMPLE ID				L1627967-06		L1627967-07		L1627967-08		L1627967-09		L1627967-10			
	CAS Number	S1/G2-14	Units		Qual		Qual		Qual		Qual		Qual		
General Chemistry															
Solids, Total	---		%	82.3		83.8		85.8		86.6		86.2			
MCP Total Metals															
Arsenic, Total	7440-38-2	20	mg/kg	18		10		12		12		10			
Lead, Total	7439-92-1	200	mg/kg	97		40		68		60		63			

CLIENT SAMPLE ID				COMP-9		COMP-10		COMP-11		COMP-12		COMP-13		COMP-14	
SAMPLING DATE				07-SEP-16		07-SEP-16		07-SEP-16		07-SEP-16		07-SEP-16		07-SEP-16	
LAB SAMPLE ID				L1628137-01		L1628137-02		L1628137-03		L1628137-04		L1628137-05		L1628137-06	
	CAS Number	S1/G1-14	Units		Qual		Qual		Qual		Qual		Qual		Qual
General Chemistry															
Solids, Total	---		%	86.1		89.4		85.8		84.9		87.4		89.2	
MCP Total Metals															
Arsenic, Total	7440-38-2	20	mg/kg	9.7		12		10		11		16		12	
Lead, Total	7439-92-1	200	mg/kg	63		71		56		58		83		86	

CLIENT SAMPLE ID				COMP-15		COMP-16		COMP-17		COMP-18		COMP-19		EPC	
SAMPLING DATE				07-SEP-16		07-SEP-16		08-SEP-16		08-SEP-16		08-SEP-16		Average	Max
LAB SAMPLE ID				L1628137-07		L1628137-08		L1628137-09		L1628137-10		L1628137-11			
	CAS Number	S1/G1-14	Units		Qual		Qual		Qual		Qual		Qual		
General Chemistry															
Solids, Total	---		%	89.8		87.2		87.5		92.2		90.6			
MCP Total Metals															
Arsenic, Total	7440-38-2	20	mg/kg	12		11		12		9.2		11		14.3	32
Lead, Total	7439-92-1	200	mg/kg	78		71		85		62		84		76.1	110

Table 2 (cont.)

Sample Results Comparison with MCP /GW-1 Criteria.									
CLIENT SAMPLE ID				**TP-4**		**TP-5**		**TP-6**	
SAMPLING DATE				**06-SEP-16**		**06-SEP-16**		**06-SEP-16**	
LAB SAMPLE ID				**L1627964-01**		**L1627964-02**		**L1627964-03**	
	CAS Number	**S1/G1 2014**	**Units**		**Qual**		**Qual**		**Qual**
General Chemistry									
Solids, Total	**---**		**%**	**92.2**		**93.6**		**96.9**	
MCP Total Metals									
Arsenic, Total	**7440-38-2**	**20**	**mg/kg**	**17**		**9.3**		**5.8**	
Lead, Total	**7439-92-1**	**200**	**mg/kg**	**120**		**57**		**34**	

TABLE 3

Soil Arsenic and Lead Concentrations

Former Aquinas College, 15 Walnut Park, Newton, MA

CLIENT SAMPLE ID			B-1, 0-6"		B-2, 0-6"		B-3, 0-6"		B-4, 0-6"		B-5, 0-6"		B-6, 0-6"		B-7, 0-6"			
SAMPLING DATE			27-DEC-16		27-DEC-16		27-DEC-16		27-DEC-16		27-DEC-16		27-DEC-16		27-DEC-16			
	S1/G2-14	Units		Qual		Qual		Qual		Qual		Qual		Qual		Qual		
General Chemistry																		
Solids, Total		%	67		74		76.1		74		78.2		76.2		78.4			
MCP Total Metals																		
Arsenic, Total	20	mg/kg	44		16		28		26		18		32		30			
Lead, Total	200	mg/kg	260		200		180		180		170		260		190			

CLIENT SAMPLE ID			B-8, 0-6"		B-9, 0-6"		B-10, 0-6"		B-11, 0-6"		B-12, 0-6"		B-13, 0-6"		B-14, 0-6"		B-15, 0-6"	
SAMPLING DATE			27-DEC-16		27-DEC-16		27-DEC-16		27-DEC-16		27-DEC-16		27-DEC-16		27-DEC-16		27-DEC-16	
	S1/G2-14	Units		Qual		Qual		Qual		Qual		Qual		Qual		Qual		Qual
General Chemistry																		
Solids, Total		%	66.2		80.2		69.4		75.6		73.8		75.2		75.2		80.7	
MCP Total Metals																		
Arsenic, Total	20	mg/kg	44		46		52		83		36		19		20		12	
Lead, Total	200	mg/kg	160		180		310		310		200		120		130		88	

TABLE 4

Soil Arsenic and Lead Concentrations

Former Aquinas College, 15 Walnut Park, Newton, MA

CLIENT SAMPLE ID			**LB-2, 6"-12"**		**LB-4, 6"-12"**		**LB-6, 6"-12"**		**LB-7, 6"-12"**		**LB-8, 6"-12"**	
SAMPLING DATE			**27-DEC-16**		**27-DEC-16**		**27-DEC-16**		**27-DEC-16**		**27-DEC-16**	
	S1/G2-14	**Units**		**Qual**		**Qual**		**Qual**		**Qual**		**Qual**
General Chemistry												
Solids, Total		**%**	**80.9**		**86.4**		**87.6**		**86.1**		**78.2**	
MCP Total Metals												
Arsenic, Total	**20**	**mg/kg**			**14**		**18**		**15**		**16**	
Lead, Total	**200**	**mg/kg**	**230**				**110**					
CLIENT SAMPLE ID												
SAMPLING DATE												
	S1/G2-14	**Units**	**LB-9, 6"-12"**		**LB-10, 6"-12"**		**LB-11, 6"-12"**		**LB-12, 6"-12"**		**LB-14, 6"-12"**	
			27-DEC-16		**27-DEC-16**		**27-DEC-16**		**27-DEC-16**		**27-DEC-16**	
General Chemistry				**Qual**		**Qual**		**Qual**		**Qual**		**Qual**
Solids, Total		**%**										
MCP Total Metals												
			83.5		**79.7**		**80.6**		**83.6**		**80.9**	
Arsenic, Total	**20**	**mg/kg**										
Lead, Total	**200**	**mg/kg**										
			11		**14**		**54**		**20**		**17**	
					96		**170**		**140**			

TABLE 5

Soil Arsenic and Lead Cconcentrations

Former Aquinal College, 15 Walnut Park, Newton, MA

CLIENT SAMPLE ID			LB-16 0-6"		LB-17 0-6"		LB-18 0-6"		LB-19 0-6"		LB-20 0-6"		LB-21 0-6"		LB-22 0-6"	
SAMPLING DATE			24-FEB-17		24-FEB-17		24-FEB-17		24-FEB-17		24-FEB-17		24-FEB-17		24-FEB-17	
	S1/G2-14	Units		Qual		Qual		Qual		Qual		Qual		Qual		Qual
General Chemistry																
Solids, Total		%	84.7		68.7		78.6		75.6		79.3		80.2		74.6	
MCP Total Metals																
Arsenic, Total	20	mg/kg	7.3		11		22		28		34		13		63	
Lead, Total	200	mg/kg	56		120		240		200		150		76		240	

TABLE 6

Soil Arsenic and Lead Concentrations

Former Aquinas College, 15 Walnut Park, Newton, MA

CLIENT SAMPLE ID			LB-16, 6-12"		LB-17, 6-12"		LB-18, 6-12"		LB-19, 6-12"		LB-20, 6-12"		LB-21, 6-12"		LB-22, 6-12"	
SAMPLING DATE			24-FEB-17		24-FEB-17		24-FEB-17		24-FEB-17		24-FEB-17		24-FEB-17		24-FEB-17	
LAB SAMPLE ID			L1712503-01		L1712503-02		L1712503-03		L1712503-04		L1712503-05		L1712503-06		L1712503-07	
	S1/G2-14	Units		Qual		Qual		Qual		Qual		Qual		Qual		Qual
General Chemistry																
Solids, Total		%	88		82		79.7		79.2		82.9		88		74.4	
MCP Total Metals																
Arsenic, Total	20	mg/kg	6.6		18		14		13		28		8.2		26	
Lead, Total	200	mg/kg	32		170		120		73		180		48		100	

Soil Sample Results Comparison with MCP S-2/GW-2/3 Criteria.

15 Walnut Park, Newton, MA

CLIENT SAMPLE ID				LB-31 0-3		LB-31 3-5		LB-32 0-3		LB-33 0-3		LB-34 0-3		LB-35 0-3		LB-35 3-5		LB-36 0-3		LB-37 0-3		LB-38 0-3		LB-39 0-3		LB-39 3-5		LB-40 0-3	
SAMPLING DATE				02-JUL-20		02-JUL-20		02-JUL-20		02-JUL-20		02-JUL-20		02-JUL-20		02-JUL-20		02-JUL-20		02-JUL-20		02-JUL-20		02-JUL-20		02-JUL-20		02-JUL-20	
LAB SAMPLE ID				L2028605-01		L2028605-02		L2028605-03		L2028605-04		L2028605-05		L2028605-06		L2028605-07		L2028605-08		L2028605-09		L2028605-10		L2028605-11		L2028605-12		L2028605-13	
	CAS Number	S2/G2-14	Units		Qual		Qual		Qual		Qual		Qual		Qual		Qual		Qual		Qual		Qual		Qual		Qual		Qual
General Chemistry																													
Solids, Total	---		%	91.3		90.6		87.8		89		92		91		88		92.2		87.3		89.5		90.9		87.7		88.4	
MCP Total Metals																													
Arsenic, Total	7440-38-2	20	mg/kg	6.08		4.42		5.46		13.6		5.86		4.25		11.2		5.38		8.19		5.07		4.67		4.79		4.66	
Lead, Total	7439-92-1	600	mg/kg	48.6		18		18.4		69		16.7		14.3		64.4		26		33.2		9.99		7		11.3		15.6	

CLIENT SAMPLE ID				LB-41 0-3		LB-42 0-3		LB-43 0-3		LB-43 3-5		LB-44 0-3		LB-45 0-3		LB-46 0-3		LB-47 0-3		LB-47 3-5		LB-48 0-3		LB-49 0-3		LB-50 0-3			
SAMPLING DATE				02-JUL-20		02-JUL-20		02-JUL-20		02-JUL-20		02-JUL-20		02-JUL-20		02-JUL-20		02-JUL-20		02-JUL-20		02-JUL-20		02-JUL-20		02-JUL-20			
LAB SAMPLE ID				L2028605-14		L2028605-15		L2028605-16		L2028605-17		L2028605-18		L2028605-19		L2028605-20		L2028605-21		L2028605-22		L2028605-23		L2028605-24		L2028605-25			
	CAS Number	S2/G1-14	Units		Qual		Qual		Qual		Qual		Qual		Qual		Qual		Qual		Qual		Qual		Qual		Qual		
General Chemistry																													
Solids, Total	---		%	90		91.3		91.5		86.2		86.8		90.9		94		95.6		95.7		89.6		89.2		93.1			
MCP Total Metals																													
Arsenic, Total	7440-38-2	20	mg/kg	5.36		6.09		2.69		3.93		25.6		3.02		13.5		2.56		1.86		4.91		4.97		4.14		Average EPC	6.486
Lead, Total	7439-92-1	600	mg/kg	34		30.8		7.38		15.1		232		4.9		31		8.85		4.29		4.53		4.99		19.7		Average EPC	30.00

TABLE 8
Soil Sample Results Comparison with MCP S-1/GW-2/3 Criteria.
15 Walnut Park, Newton, MA

NETLAB Case Number: 1G26012		LB-51 0-6''		LB-51 6-12''		LB-52 0-6''		LB-52 6-12''		LB-53 0-6''		LB-53 6-12''		LB-54 0-6''		LB-54 6-12''		LB-55 0-6''		LB-55 6-12'	
Lab Sample Number:		**1G26012-01**		**1G26012-02**		**1G26012-03**		**1G26012-04**		**1G26012-05**		**1G26012-06**		**1G26012-07**		**1G26012-08**		**1G26012-09**		**1G26012-10**	
Date Sampled:		7/22/2021 13:00		7/22/2021 13:10		7/22/2021 13:20		7/22/2021 13:30		7/22/2021 13:40		7/22/2021 13:50		7/22/2021 14:00		7/22/2021 14:10		7/22/2021 14:20		7/22/2021 14:30	
Parameter	S-1 & GW-2/3 Standard	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit
Total Metals																					
Arsenic	**20**	**11.7**	0.71	**12.4**	0.6	**36.4**	0.71	**12.7**	0.64	**7.05**	0.5	**12.5**	0.54	**29.6**	0.63	**48.8**	0.66	**70.7**	0.79	**24.9**	0.62
Lead	**200**	**172**	0.35	**131**	0.3	**183**	0.36	**58.5**	0.32	**40.5**	0.25	**91.2**	0.27	**395**	0.32	**488**	0.33	**300**	0.39	**101**	0.31

NETLAB Case Number: 1G26012		LB-56 0-6''		LB-56 6-12''		LB-57 0-6''		LB-57 6-12''		LB-58 0-6''		LB-58 6-12''		LB-59 0-6''		LB-59 6-12''	
Lab Sample Number:		**1G26012-11**		**1G26012-12**		**1G26012-13**		**1G26012-14**		**1G26012-15**		**1G26012-16**		**1G26012-17**		**1G26012-18**	
Date Sampled:		7/22/2021 14:40		7/22/2021 14:50		7/22/2021 15:00		7/22/2021 15:10		7/22/2021 15:20		7/22/2021 15:30		7/22/2021 15:40		7/22/2021 15:50	
		Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit
Total Metals																	
Arsenic	**20**	**18.7**	0.75	**11.9**	0.71	**18.5**	0.79	**19.1**	0.56	**79.9**	0.79	**88**	0.6	**42.3**	0.79	**11.8**	0.62
Lead	**200**	**188**	0.37	**117**	0.35	**163**	0.39	**105**	0.28	**324**	0.39	**349**	0.3	**146**	0.4	**40.1**	0.31

APPENDIX A

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC 108

Release Tracking Number
3 - 34034

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

A. SITE LOCATION:

1. Site Name: CITY OF NEWTON DPW YARD

2. Street Address: 60-80 ELLIOT STREET

3. City/Town: NEWTON 4. ZIP Code: 024640000

☑ 5. Check here if the disposal site that is the source of the release is Tier Classified. Check the current Tier Classification Category:

☐ a. Tier I ☐ b. Tier ID ☑ c. Tier II

B. THIS FORM IS BEING USED TO: (check all that apply)

☐ 1. Submit a **Phase I Completion Statement,** pursuant to 310 CMR 40.0484.

☐ 2. Submit a **Revised Phase I Completion Statement,** pursuant to 310 CMR 40.0484.

☐ 3. Submit a **Phase II Scope of Work,** pursuant to 310 CMR 40.0834.

☐ 4. Submit an **interim Phase II Report.** This report does not satisfy the response action deadline requirements in 310 CMR 40.0500.

☐ 5. Submit a **final Phase II Report and Completion Statement,** pursuant to 310 CMR 40.0836.

☐ 6. Submit a **Revised Phase II Report and Completion Statement,** pursuant to 310 CMR 40.0836.

☑ 7. Submit a **Phase III Remedial Action Plan and Completion Statement,** pursuant to 310 CMR 40.0862.

☐ 8. Submit a **Revised Phase III Remedial Action Plan and Completion Statement,** pursuant to 310 CMR 40.0862.

☑ 9. Submit a **Phase IV Remedy Implementation Plan,** pursuant to 310 CMR 40.0874.

☐ 10. Submit a **Modified Phase IV Remedy Implementation Plan,** pursuant to 310 CMR 40.0874.

☐ 11. Submit an **As-Built Construction Report,** pursuant to 310 CMR 40.0875.

☐ 12. Submit a **Phase IV Status Report,** pursuant to 310 CMR 40.0877.

☐ 13. Submit a **Phase IV Completion Statement,** pursuant to 310 CMR 40.0878 and 40.0879.

Specify the outcome of Phase IV activities: (check one)

☐ a. Phase V Operation, Maintenance or Monitoring of the Comprehensive Remedial Action is necessary to achieve a Permanent or Temporary Solution.

☐ b. The requirements of a Permanent Solution have been met. A completed Permanent Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ c. The requirements of a Temporary Solution have been met. A completed Temporary Solution Statement and Report (BWSC104) will be submitted to DEP.

B. THIS FORM IS BEING USED TO (cont.): (check all that apply)

☐ 14. Submit a **Revised Phase IV Completion Statement,** pursuant to 310 CMR 40.0878 and 40.0879.

☐ 15. Submit a **Phase V Status Report,** pursuant to 310 CMR 40.0892.

☐ 16. 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 every six months, concurrent with a Status Report.

☐ iv. A Remedial Monitoring Report(s) submitted annually, concurrent with a Status Report.

c. Status of Site: (check one) ☐ i. Phase IV ☐ ii. Phase V ☐ iii. Remedy Operation Status ☐ iv. Temporary Solution

d. Number of Remedial Systems and/or Monitoring Programs: _____

A separate BWSC108A, CRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.

☐ 17. Submit a **Remedy Operation Status,** pursuant to 310 CMR 40.0893.

☐ 18. Submit a **Status Report to maintain a Remedy Operation Status,** pursuant to 310 CMR 40.0893(2).

☐ 19. Submit a **Transfer and/or a Modification of Persons Maintaining a Remedy Operation Status (ROS),** pursuant to 310 CMR 40.0893(5) (check one, or both, if applicable).

☐ a. Submit a Transfer of Persons Maintaining an ROS (the transferee should be the person listed in Section D, "Person Undertaking Response Actions").

☐ b. Submit a Modification of Persons Maintaining an ROS (the primary representative should be the person listed in Section D, "Person Undertaking Response Actions").

c. Number of Persons Maintaining an ROS not including the primary representative: _____

☐ 20. Submit a **Termination of a Remedy Operation Status,** pursuant to 310 CMR 40.0893(6).(check one)

☐ a. Submit a notice indicating ROS performance standards have not been met. A plan and timetable pursuant to 310 CMR 40.0893(6)(b) for resuming the ROS are attached.

☐ b. Submit a notice of Termination of ROS.

☐ 21. Submit a **Phase V Completion Statement,** pursuant to 310 CMR 40.0894.

Specify the outcome of Phase V activities: (check one)

☐ a. The requirements of a Permanent Solution have been met. A completed Permanent Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ b. The requirements for a Temporary Solution have been met. A completed Temporary Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ 22. Submit a **Revised Phase V Completion Statement,** pursuant to 310 CMR 40.0894.

☐ 23. Submit a **Temporary Solution Status Report,** pursuant to 310 CMR 40.0898.

☐ 24. Submit a **Plan for the Application of Remedial Additives** near a sensitive receptor, pursuant to 310 CMR 40.0046(3).

a. Status of Site: (check one)

☐ i. Phase IV ☐ ii. Phase V ☐ iii. Remedy Operation Status ☐ iv. Temporary Solution

C. 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 indicates that a* ***Phase I, Phase II, Phase III, Phase IV or Phase V Completion Statement*** *and/or a* ***Termination of a Remedy Operation Status*** *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;

> *if Section B indicates that a* ***Phase II Scope of Work*** *or a* ***Phase IV Remedy Implementation 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) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B indicates that an* ***As-Built Construction Report,*** *a* ***Remedy Operation Status,*** *a* ***Phase IV, Phase V or Temporary Solution Status Report,*** *a* ***Status Report to Maintain a Remedy Operation Status,*** *a* ***Transfer or Modification of Persons Maintaining a Remedy Operation Status*** *and/or a* ***Remedial Monitoring Report*** *is 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.

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#: 7473

2. First Name: RALPH J 3. Last Name: TELLA

4. Telephone: 7812555554 5. Ext.: 6. Email:

7. Signature: RALPH J TELLA

8. Date: 1/12/2022
(mm/dd/yyyy)

9. LSP Stamp:

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

D. PERSON UNDERTAKING RESPONSE ACTIONS:

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: NEWTON DEPT OF PUBLIC BUILDINGS

3. Contact First Name: ARTHUR 4. Last Name: CABRAL

5. Street: 52 ELLIOT ST 6. Title: PROJECT & BUDGET MGR

7. City/Town: NEWTON 8. State: MA 9. ZIP Code: 024611605

10. Telephone: 6177961600 11. Ext: 12. Email:

E. RELATIONSHIP TO SITE OF PERSON UNDERTAKING RESPONSE ACTIONS: ☐ Check 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:

F. REQUIRED ATTACHMENT 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 approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

☐ 2. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the submittal of any Phase Reports to DEP.

☑ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase III Remedial Action Plan.

☑ 4. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase IV Remedy Implementation Plan.

☐ 5. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of any field work involving the implementation of a Phase IV Remedial Action.

☐ 6. If submitting a Transfer of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for the person making this submittal (transferee) is attached.

☐ 7. If submitting a Modification of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for each new person making this submittal is attached.

☐ 8. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to: BWSC.eDEP@state.ma.us.

☑ 9. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

G. CERTIFICATION OF PERSON UNDERTAKING RESPONSE ACTIONS:

1. I, ARTHUR CABRAL, 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.

>*if Section B indicates that this is a* **Modification of a Remedy Operation Status (ROS),** I attest under the pains and penalties of perjury that I am fully authorized to act on behalf of all persons performing response actions under the ROS as stated in 310 CMR 40.0893(5)(d) to receive oral and written correspondence from MassDEP with respect to performance of response actions under the ROS, and to receive a statement of fee amount as per 4.03(3).

I understand that any material received by the Primary Representative from MassDEP shall be deemed received by all the persons performing response actions under the ROS, and I am 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: ARTHUR CABRAL (Signature) 3. Title: PROJECT & BUDGET MGR

4. For: NEWTON DEPT OF PUBLIC BUILDINGS (Name of person or entity recorded in Section D) 5. Date: 1/12/2022 (mm/dd/yyyy)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street:

8. City/Town: 9. State: 10. ZIP Code:

11. Telephone: 12. Ext.: 13. Email:

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:)

Received by DEP on 1/12/2022 2:29:58 PM

From: Bresnahan, Chris (DEP)
To: Ralph Tella
Cc: Arthur F. Cabral; Oliver Leek; Roberson, Stephen (DEP)
Subject: FW: Site visit Former Aquinas College property
Date: Tuesday, January 17, 2017 9:58:54 AM

Ralph J. Tella, CHMM, LSP
Lord Associates, Inc.
Corporate Headquarters
1506 Providence Hwy-Suite 30
Norwood, MA 02062

Mr. Tella;
Thank you for arranging the meeting Friday morning with Mr. Cabral and his associate from the School Department at the former Aquinas College property. Earlier in the week you had notified the Department on behalf of the City of Newton that a condition which Could Pose an Imminent Hazard (CPIH) per 310 CMR 40.0321(2) had been identified at the former Thomas Aquinas college property currently operated by the City of Newton for a variety of uses including a pre-school and playground. You had reported that greater than 40 milligrams per kilogram of arsenic had been detected in soil samples collected from two discrete zones of the property (Z1, and Z2) within twelve inches of the ground surface, at points located within 500 feet of occupied residences, as a school and park area, where access by children is not completely controlled or eliminated by means of bituminous pavement, concrete, a fence or other physical barrier. You also discussed a third discrete zone (Z3), which is completely enclosed by a fence with gates that can be locked to eliminate access by children, where concentrations of up to 86 milligrams per kilogram of Arsenic had been measured in surficial soil samples. We met at the property this morning for the purpose of evaluating existing access controls as well as to discuss the soil data you had obtained.

As I explained, subsequent to your call last Monday, I've been provided new instructions on processing such CPIH notifications. In 2014, the MCP Method 1 standards were revised to incorporate updated toxicity values. The published values at 310 CMR 40.0321(2)(b) of concentrations of 7 hazardous materials in soil that require notification as a release that could pose an IH, however, **were not updated at that time and do not reflect updated toxicity values**. Consequently, until such time that 310 CMR 40.0321(2)(b) is amended to reflect the updated toxicity information, PRPs are required to notify based on those current MCP values.

The table below provides IH concentrations that reflect updated toxicity values.

Hazardous Material	2014 Value (mg/g)	Updated 2015 Value(mg/g)	Risk Driver
Arsenic (total)	40	50	Cancer
Cadmium (total)	60	1000	Non-Cancer
Chromium (VI)	200	200	Dermatitis (ORS)
Cyanide	100	100	One-time Dose (ORS)
Mercury	300	400	Non-Cancer
Methyl Mercury	10	90	Non-Cancer
PCB (total)	10	10	Cancer

During our meeting I agreed to provide you an e-mail summarizing our discussions and MassDEP's findings. Please see the detail below.

The area of the property I refer to as Z1 is located in the South west section of the property near Jackson Road, adjacent to the entrance of the Pre-School between the pre-School Building and the parking lot. This area is within 150 feet of a school and access to the area by children is not completely controlled or eliminated by means of bituminous pavement, concrete, a fence or other physical barrier. The area is partly fenced. The highest concentration of arsenic identified in a sample of surficial soils collected from this area that you described is 44 milligrams per kilogram. MassDEP does not consider the reported concentration to be an IH based on updated toxicity information and therefore additional response action related to the notification as an IH (IRA Plan, IRA and IRAC/PS Statement) are not required.

The area of the property I refer to as Z2 is located in the North East section of the property adjacent to Waban Street. Z2 is also adjacent to the building on the property that currently houses the Newton Fire Department's Headquarters. This area is within 150 feet of occupied residences and access to the area by children is not completely controlled or eliminated by means of bituminous pavement, concrete, a fence or other physical barrier. The area is partly fenced. The highest concentration of arsenic identified in a sample of surficial soils collected from this area that you described is 46 milligrams per kilogram. MassDEP does not consider the reported concentration to be an IH based on updated toxicity information and therefore additional response action related to the notification as an IH (IRA Plan, IRA and IRAC/PS Statement) are not required.

The area of the property I refer to as Z3 is located in the North East section of the property adjacent to the corner of Waban Street and Walnut Place. Z2 is also adjacent to the building on the property that currently houses the Newton Fire Department's Headquarters as well as the Pre-School. This area is within 150 feet of occupied residences, the pre-school as well as a

playground. Access to the area by children is completely controlled by means of a fence, equipped with gates that can be locked. The highest concentration of arsenic identified in a sample of surficial soils collected from this area that you described is 86 milligrams per kilogram. As access to the area by children is controlled by the existing fence, reporting per 310 CMR 40.0321(2) is not required.

During the notification you provided on January 9, 2-16 on behalf of the City of Newton, I provided the Release Tracking Number 3-0034033 which has been assigned to the release. I will designate this RTN as Less than Reporting Threshold for the purpose of MassDEP's records.

Please feel free to call me if you have any questions relative to this matter.

Sincerely:

Chris Bresnahan

_____

Chris Bresnahan
Environmental Engineer
Emergency Response
MassDEP-NERO
205B Lowell Street
Wilmington, MA 01887
(978) 694-3377
Report Spills @ (888) 304-1133

From: Ralph Tella [mailto:RTella@lordenv.com]
Sent: Tuesday, January 10, 2017 2:00 PM
To: Bresnahan, Chris (DEP); Roberson, Stephen (DEP)
Cc: Arthur F. Cabral; Oliver Leek
Subject: Site visit Former Aquinas College property

Chris, I spoke with Steve and told him that the City is willing to meet on-site later this week with us to discuss these latest findings. Please let us know what date & time works best for you.

Regards, Ralph

Ralph J. Tella, CHMM, LSP

Lord Associates, Inc.

Corporate Headquarters
1506 Providence Hwy-Suite 30
Norwood, MA 02062
v 781.255.5554 Ext 1004
f 781.255.5535

Southcoast Office
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Fall River, MA 02720
v 508.679.2002
f 508.679.2205

Environmental Consulting & Licensed Site Professional Services
www.lordenv.com

APPENDIX B

New England Testing Laboratory, Inc.
(401) 353-3420

REPORT OF ANALYTICAL RESULTS

NETLAB Work Order Number: 1G26012
Client Project: 2437 - 15 Walnut Park

Report Date: 02-August-2021

Prepared for:

Jon Puliafico
Lord Environmental, Inc.
1506 Providence Highway, Suite 30
Norwood, MA 02062

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

Samples Submitted :

The samples listed below were submitted to New England Testing Laboratory on 07/26/21. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provided to us by the client which are indicated on the custody record. The case number for this sample submission is 1G26012. Custody records are included in this report.

Lab ID	Sample	Matrix	Date Sampled	Date Received
1G26012-01	LB-51 0-6"	Soil	07/22/2021	07/26/2021
1G26012-02	LB-51 6-12"	Soil	07/22/2021	07/26/2021
1G26012-03	LB-52 0-6"	Soil	07/22/2021	07/26/2021
1G26012-04	LB-52 6-12"	Soil	07/22/2021	07/26/2021
1G26012-05	LB-53 0-6"	Soil	07/22/2021	07/26/2021
1G26012-06	LB-53 6-12"	Soil	07/22/2021	07/26/2021
1G26012-07	LB-54 0-6"	Soil	07/22/2021	07/26/2021
1G26012-08	LB-54 6-12"	Soil	07/22/2021	07/26/2021
1G26012-09	LB-55 0-6"	Soil	07/22/2021	07/26/2021
1G26012-10	LB-55 6-12'	Soil	07/22/2021	07/26/2021
1G26012-11	LB-56 0-6"	Soil	07/22/2021	07/26/2021
1G26012-12	LB-56 6-12"	Soil	07/22/2021	07/26/2021
1G26012-13	LB-57 0-6"	Soil	07/22/2021	07/26/2021
1G26012-14	LB-57 6-12"	Soil	07/22/2021	07/26/2021
1G26012-15	LB-58 0-6"	Soil	07/22/2021	07/26/2021
1G26012-16	LB-58 6-12"	Soil	07/22/2021	07/26/2021
1G26012-17	LB-59 0-6"	Soil	07/22/2021	07/26/2021
1G26012-18	LB-59 6-12"	Soil	07/22/2021	07/26/2021

Request for Analysis

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

LB-51 0-6'' (Lab Number: 1G26012-01)

Analysis	Method
Arsenic	EPA 6010C
Lead	EPA 6010C

LB-51 6-12'' (Lab Number: 1G26012-02)

Analysis	Method
Arsenic	EPA 6010C
Lead	EPA 6010C

LB-52 0-6'' (Lab Number: 1G26012-03)

Analysis	Method
Arsenic	EPA 6010C
Lead	EPA 6010C

LB-52 6-12'' (Lab Number: 1G26012-04)

Analysis	Method
Arsenic	EPA 6010C
Lead	EPA 6010C

LB-53 0-6'' (Lab Number: 1G26012-05)

Analysis	Method
Arsenic	EPA 6010C
Lead	EPA 6010C

LB-53 6-12'' (Lab Number: 1G26012-06)

Analysis	Method
Arsenic	EPA 6010C
Lead	EPA 6010C

LB-54 0-6'' (Lab Number: 1G26012-07)

Analysis	Method
Arsenic	EPA 6010C
Lead	EPA 6010C

LB-54 6-12'' (Lab Number: 1G26012-08)

Analysis	Method
Arsenic	EPA 6010C
Lead	EPA 6010C

LB-55 0-6'' (Lab Number: 1G26012-09)

Analysis	Method
Arsenic	EPA 6010C
Lead	EPA 6010C

LB-55 6-12' (Lab Number: 1G26012-10)

Analysis	Method
Arsenic	EPA 6010C

Request for Analysis (continued)

LB-55 6-12' (Lab Number: 1G26012-10) (continued)

Analysis	Method
Lead	EPA 6010C

LB-56 0-6'' (Lab Number: 1G26012-11)

Analysis	Method
Arsenic	EPA 6010C
Lead	EPA 6010C

LB-56 6-12'' (Lab Number: 1G26012-12)

Analysis	Method
Arsenic	EPA 6010C
Lead	EPA 6010C

LB-57 0-6'' (Lab Number: 1G26012-13)

Analysis	Method
Arsenic	EPA 6010C
Lead	EPA 6010C

LB-57 6-12'' (Lab Number: 1G26012-14)

Analysis	Method
Arsenic	EPA 6010C
Lead	EPA 6010C

LB-58 0-6'' (Lab Number: 1G26012-15)

Analysis	Method
Arsenic	EPA 6010C
Lead	EPA 6010C

LB-58 6-12'' (Lab Number: 1G26012-16)

Analysis	Method
Arsenic	EPA 6010C
Lead	EPA 6010C

LB-59 0-6'' (Lab Number: 1G26012-17)

Analysis	Method
Arsenic	EPA 6010C
Lead	EPA 6010C

LB-59 6-12'' (Lab Number: 1G26012-18)

Analysis	Method
Arsenic	EPA 6010C
Lead	EPA 6010C

Method References

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

Case Narrative

Sample Receipt:

The samples associated with this work order were received in appropriately cooled and preserved containers. The chain of custody was adequately completed and corresponded to the samples submitted.

Exceptions: None

Analysis:

All samples were prepared and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control requirements and allowances. Results for all soil samples, unless otherwise indicated, are reported on a dry weight basis.

Exceptions: None

Results: Total Metals

Sample: LB-51 0-6''

Lab Number: 1G26012-01 (Soil)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Arsenic	**11.7**		0.71	mg/kg	07/27/21	07/29/21
Lead	**172**		0.35	mg/kg	07/27/21	07/29/21

Results: Total Metals

Sample: LB-51 6-12"

Lab Number: 1G26012-02 (Soil)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Arsenic	**12.4**		0.60	mg/kg	07/27/21	07/29/21
Lead	**131**		0.30	mg/kg	07/27/21	07/29/21

Results: Total Metals

Sample: LB-52 0-6''

Lab Number: 1G26012-03 (Soil)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Arsenic	**36.4**		0.71	mg/kg	07/27/21	07/29/21
Lead	**183**		0.36	mg/kg	07/27/21	07/29/21

Results: Total Metals

Sample: LB-52 6-12"

Lab Number: 1G26012-04 (Soil)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Arsenic	**12.7**		0.64	mg/kg	07/27/21	07/29/21
Lead	**58.5**		0.32	mg/kg	07/27/21	07/29/21

Results: Total Metals

Sample: LB-53 0-6''

Lab Number: 1G26012-05 (Soil)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Arsenic	**7.05**		0.50	mg/kg	07/27/21	07/29/21
Lead	**40.5**		0.25	mg/kg	07/27/21	07/29/21

Results: Total Metals

Sample: LB-53 6-12"

Lab Number: 1G26012-06 (Soil)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Arsenic	**12.5**		0.54	mg/kg	07/27/21	07/29/21
Lead	**91.2**		0.27	mg/kg	07/27/21	07/29/21

Results: Total Metals

Sample: LB-54 0-6''

Lab Number: 1G26012-07 (Soil)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Arsenic	**29.6**		0.63	mg/kg	07/27/21	07/29/21
Lead	**395**		0.32	mg/kg	07/27/21	07/29/21

Results: Total Metals

Sample: LB-54 6-12"

Lab Number: 1G26012-08 (Soil)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Arsenic	**48.8**		0.66	mg/kg	07/27/21	07/29/21
Lead	**488**		0.33	mg/kg	07/27/21	07/29/21

Results: Total Metals

Sample: LB-55 0-6''

Lab Number: 1G26012-09 (Soil)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Arsenic	**70.7**		0.79	mg/kg	07/27/21	07/29/21
Lead	**300**		0.39	mg/kg	07/27/21	07/29/21

Results: Total Metals

Sample: LB-55 6-12'

Lab Number: 1G26012-10 (Soil)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Arsenic	**24.9**		0.62	mg/kg	07/27/21	07/29/21
Lead	**101**		0.31	mg/kg	07/27/21	07/29/21

Results: Total Metals

Sample: LB-56 0-6''
Lab Number: 1G26012-11 (Soil)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Arsenic	**18.7**		0.75	mg/kg	07/27/21	07/29/21
Lead	**188**		0.37	mg/kg	07/27/21	07/29/21

Results: Total Metals

Sample: LB-56 6-12"

Lab Number: 1G26012-12 (Soil)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Arsenic	**11.9**		0.71	mg/kg	07/27/21	07/29/21
Lead	**117**		0.35	mg/kg	07/27/21	07/29/21

Results: Total Metals

Sample: LB-57 0-6''

Lab Number: 1G26012-13 (Soil)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Arsenic	**18.5**		0.79	mg/kg	07/27/21	07/29/21
Lead	**163**		0.39	mg/kg	07/27/21	07/29/21

Results: Total Metals

Sample: LB-57 6-12"

Lab Number: 1G26012-14 (Soil)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Arsenic	**19.1**		0.56	mg/kg	07/27/21	07/29/21
Lead	**105**		0.28	mg/kg	07/27/21	07/29/21

Results: Total Metals

Sample: LB-58 0-6''

Lab Number: 1G26012-15 (Soil)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Arsenic	**79.9**		0.79	mg/kg	07/27/21	07/29/21
Lead	**324**		0.39	mg/kg	07/27/21	07/29/21

Results: Total Metals

Sample: LB-58 6-12"

Lab Number: 1G26012-16 (Soil)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Arsenic	**88.0**		0.60	mg/kg	07/27/21	07/29/21
Lead	**349**		0.30	mg/kg	07/27/21	07/29/21

Results: Total Metals

Sample: LB-59 0-6''

Lab Number: 1G26012-17 (Soil)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Arsenic	**42.3**		0.79	mg/kg	07/27/21	07/29/21
Lead	**146**		0.40	mg/kg	07/27/21	07/29/21

Results: Total Metals

Sample: LB-59 6-12"

Lab Number: 1G26012-18 (Soil)

Analyte	Result	Qual	Reporting Limit	Units	Date Prepared	Date Analyzed
Arsenic	**11.8**		0.62	mg/kg	07/27/21	07/29/21
Lead	**40.1**		0.31	mg/kg	07/27/21	07/29/21

Quality Control

Total Metals

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B1G1175 - Metals Digestion Soils										
Blank (B1G1175-BLK1)					Prepared & Analyzed: 07/27/21					
Lead	ND		0.33	mg/kg						
Arsenic	ND		0.66	mg/kg						
LCS (B1G1175-BS1)					Prepared & Analyzed: 07/27/21					
Lead	93.9		0.33	mg/kg	100		93.9	85-115		
Arsenic	19.3		0.66	mg/kg	20.0		96.3	85-115		

Notes and Definitions

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

NEW ENGLAND TESTING LABORATORY, INC.
59 Greenhill Street
West Warwick, RI 02893
1-888-863-8522

1 G 2 6012

CHAIN OF CUSTODY RECORD

PROJ. NO. 2437 | PROJECT NAME/LOCATION: 15 Walnut Park

CLIENT: Lord Environmental, Inc

REPORT TO: Oliver Leek

INVOICE TO: Oliver Leek, Pam Blidwell

DATE	TIME	COMP	GRAB	SAMPLE I.D.	AQUEOUS	SOIL	OTHER	NO. OF CONTAINERS	PRESERVATIVE	TESTS** Lead	Arsenic	REMARKS
7/22/21	1:00		X	LB-51, 0-6"		X		1	—	X	X	
	1:10			LB-51, 6"-12"								
	1:20			LB-52, 0-6"								
	1:30			LB-52, 6-12"								
	1:40			LB-53, 0-6"								
	1:50			LB-53, 6-12"								
	2:00			LB-54, 0-6"								
	2:10			LB-54, 6-12"								
	2:20			LB-55, 0-6"								
	2:30			LB-55, 6-12"								
	2:40			LB-56, 0-6"								
	2:50			LB-56, 6-12"								
	3:00			LB-57, 0-6"								
	3:10		V	LB-57, 6-12"								

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
	7/26/21 1013		7/26/21 1013
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
	7/26/21 1445		7/26/21 1445
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time

Laboratory Remarks: 5
Temp. received: _____
Cooled ☐

Special Instructions:
List Specific Detection Limit Requirements:

Turnaround (Business Days)_____

**Netlab subcontracts the following tests: Radiologicals, Radon, Asbestos, UCMRs, Perchlorate, Bromate, Bromide, Sieve, Salmonella, Carbamates, CT ETPH

NEW ENGLAND TESTING LABORATORY, INC.
59 Greenhill Street
West Warwick, RI 02893
1-888-863-8522

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME/LOCATION
2437	15 Walnut Park

CLIENT: Lord Environmental, Inc.
REPORT TO: Olivier Leek
INVOICE TO: Olivier Leek; Pam Gildwell

DATE	TIME	COMP	GRAB	SAMPLE I.D.	AQUEOUS	SOIL	OTHER	NO. OF CONTAINERS	PRESERVATIVE	TESTS** Lead	TESTS** Arsenic	REMARKS
7/22/21	3:20		X	LB-58, 0-6"		X		1	—	X	X	
	3:30			LB-58, 6-12"								
	3:40			LB-59, 0-6"								
	3:50			LB-59, 6-12"								

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	7/26/21 1013	[signature]	7/26/21 1013
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	7/26/21 1445	[signature]	7/26/21 1445
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time

Laboratory Remarks:
Temp. received: _____
Cooled ☐

Special Instructions:
List Specific Detection Limit Requirements:

Turnaround (Business Days)_____

**Netlab subcontracts the following tests: Radiologicals, Radon, Asbestos, UCMRs, Perchlorate, Bromate, Bromide, Sieve, Salmonella, Carbamates, CT ETPH

MassDEP Analytical Protocol Certification Form

Laboratory Name: New England Testing Laboratory, Inc. Project #: 2437

Project Location: 15 Walnut Park RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s): 1G26012

Matrices: ☐ Groundwater/Surface Water ☒ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A ☐	7470/7471 Hg CAM III B ☐	MassDEP VPH (GC/PID/FID) CAM IV A ☐	8082 PCB CAM V A ☐	9014 Total Cyanide/PAC CAM VI A ☐	6860 Perchlorate CAM VIII B ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	MassDEP VPH (GC/MS) CAM IV C ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
6010 Metals CAM III A ☒	6020 Metals CAM III D ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☒ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☒ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☒ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☒ 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). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☒ Yes ☐ No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☒ Yes ☐ No[1]

***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	☒ Yes ☐ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☒ Yes ☐ No[1]

[1] *All negative responses must be addressed in an attached laboratory narrative.*

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

Signature: _____ **Position:** Laboratory Director

Printed Name: Richard Warila **Date**: 8/2/2021

APPENDIX C

Lord Environmental, Inc.
Consulting & Licensed Site Professional Services

1506 Providence Highway, Suite 30
Norwood, MA 02062-4647

Voice: 781.255.5554
www.lordenv.com

January 21, 2022

Deborah Youngblood, PhD, Commissioner
City Hall Room 107
1000 Commonwealth Avenue
Newton, MA 02459

Mayor Ruthann Fuller
City Hall
1000 Commonwealth Avenue
Newton, MA 02459

Re: Availability of Phase IV – Remedy Implementation Plan
Former Aquinas College
15 Walnut Park
Newton, MA
DEP RTN 3-33782

Dear Public Officials:

Lord Environmental, Inc. has completed a Phase IV Remedy Implementation Plan for the property located at 15 Walnut Park, Newton, MA. The subject property was listed as a Disposal Site by the MADEP in August 2016 in response to a finding of arsenic and lead in soil. The Site has been classified as Tier II. Remedial activities are ongoing.

Pursuant to section 310 CMR 40.1403(3) of the Massachusetts Contingency Plan, at any time after the MADEP has been notified of a release or threat of release pursuant to 310 CMR 40.0300, the Chief Municipal Officer and Board of Health in the community(ies) in which the site is located shall be notified of the availability of the completion of a Phase IV Report and to provide a copy of the report conclusions. The intention of this letter is to fulfill this legal obligation.

The chosen remedial action is to excavate shallow soils impacted with lead and arsenic for off-Site disposal. As such, additional remedial response actions under the MCP are required.

In addition, 310 CMR 40.1403(3) stipulates that this notification shall include information about how local officials may obtain a copy of the report. A copy of the report can be viewed by scheduling a file review of RTN 3-33782 with the DEP Northeast Regional Office in Wilmington (978) 694-3200 or online at http://public.dep.state.ma.us/SearchableSites2/Search.aspx.

Very truly yours,
LORD ENVIRONMENTAL, INC.

Oliver P. Leek
Senior Project Manager