

Ms. Mary Savage-Dunham
Director of Community Planning
Town of Hingham
210 Central Street
Hingham, MA 02043

September 30, 2020
File No. 4097.00

Re: LSP Opinion – Stormwater Infiltration
100 Industrial Park Road
Hingham, MA

Dear Ms. Savage-Dunham:

As requested by the Hingham Planning Board, Sanborn, Head & Associates, Inc. (Sanborn Head) has prepared this Licensed Site Professional (LSP) Opinion letter for the 100 Industrial Park Road property in Hingham, Massachusetts (Site). This letter has been prepared to address questions that we understand to have been raised by the Town of Hingham Planning Board and the Town's peer reviewer, Mr. John Chessia of Chessia Consulting Services, LLC, related to the potential feasibility of stormwater infiltration for the proposed redevelopment at the Site.

Based on our review of the proposed project, the historical Site activities, the documented releases of oil and/or hazardous materials (OHM) at the Site from multiple historical sources, the extensive environmental assessment and remediation activities completed in accordance with the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000, and the Site's sensitive location immediately upgradient from a Zone A¹ water supply protection area, it is our opinion that focused stormwater infiltration by design to the groundwater in the rear of the Site is not appropriate at this Site. In particular, it is our opinion that focused infiltration in the rear of the Site (i.e., areas to the southeast and southwest of the existing warehouse building) introduces the significant potential to invalidate the existing Site conditions upon which the current MCP Site closure is based by exacerbating the release conditions (i.e., mobilizing residual impacts in the subsurface towards the Zone A areas).

Summary of Proposed Project

We understand that the project proposes renovation of the existing Site into a package delivery station. The existing 149,000 square foot (sf) building is being renovated, the former foundry building is being removed, and the remainder of the Site area surrounding the building is being adjusted to facilitate truck unloading and loading as well as additional employee parking. The existing landscaped and paved areas are proposed to be improved

¹ Zone A – drainage area for a Class A surface water body used as a public water supply as defined by 310 CMR 22.02

per the Site plans prepared by the project's Civil Engineer, BL Companies of Meriden, Connecticut, and dated September 30, 2020.

The proposed renovation includes a new Title 5 wastewater leaching field adjacent to the northern exterior corner of the Site building with a design flow of 3,900 gallons per day (gpd). In addition, a subsurface stormwater detention system is proposed within a paved area on the southwestern side of the existing Site building. The detention basin system is proposed to discharge to a constructed stormwater wetland treatment pond with impervious liner proposed on the southeastern side of the former foundry building. In addition, a rain garden area is proposed within the proposed parking lot to the northwest of the existing Site building.

Summary of Site Use and Massachusetts Contingency Plan History

The Site was formerly used by the Merriman Division of PCC Specialty Products, Inc. for the manufacturing of specialty metals products from approximately 1965 until 1998. Operations included a brass foundry and other specialty metal production including bronze and structural stainless steel.

A chlorinated volatile organic compound (CVOC) groundwater plume was first identified in the rear of the Site in 1987 at which time Release Tracking Number (RTN) 3-0331 was assigned to the Site (now identified as RTN 4-3000331). Copies of the original groundwater contour plan prepared by Tighe & Bond, Inc. (T&B) have been attached for reference. Groundwater was estimated to flow in a generally southern direction at the Site with a minor easterly component on the eastern side of the Site building. RTN 3-14712 was also assigned to the Site in 1997 after elevated lead was identified in the former foundry sand disposal area adjacent to the foundry building. These RTNs were linked and response actions for RTN 3-14712 were performed under RTN 3-0331.

Extensive assessment and remediation activities were completed by T&B and GZA GeoEnvironmental, Inc. (GZA) over the years to reduce the contamination at the Site. These activities including groundwater treatment, removal of numerous buried drums, removal of approximately 9,200 tons of impacted foundry sand, removal of over 20 cubic yards (CY) of sediment from the NEDD, removal of a former drywell and approximately 90 CY of contaminated soil within the foundry building, operation of an air sparge/soil vapor extraction (AS/SVE) system within the foundry building, and operation of a high-vacuum extraction (HVE) system at a former degreasing pit within the Site building.

A Site-specific Method 3 Risk Characterization completed in 2003 determined that No Significant Risk (NSR) had been achieved outside of the Zone A area provided that the Site use remained industrial/commercial. Accordingly, GZA submitted a Class A-3 Response Action Outcome (RAO or Permanent Solution Statement) Statement in August 2003 supported by an Activity and Use Limitation (AUL) to address potential future soil exposures. The proposed use is consistent with the uses allowed in the AUL. The AUL also required the use of a Soil Management Plan for potential future construction activities, a relatively routine requirement for earthwork in residually impacted areas. A copy of the Updated Soil Management Plan for the project is attached for reference. This document details the

procedures for the safe handling of Site soils and, if required, off-Site disposal of soils during the redevelopment.

The prior owner, PCC Specialty Products, has retained the responsibility of on-going response actions for the Site under the MCP which include continued periodic groundwater and surface water sampling in the Zone A.

LSP Opinion for Stormwater Infiltration

Based on the distribution of the residual Site impacts, it is the opinion of the undersigned LSP that additional designed infiltration in the northwestern and western portions of the Site area is feasible from an MCP perspective. No groundwater contamination was identified in this area of the Site, there are no known historical releases in this area, and this area is located cross-gradient to the southern (rear) side of the Site building. The characteristics of this portion of the Site allow for the proposed Title 5 as well as the rain garden proposed by the BL Companies in the most recent Site plans. We understand, however, from the BL Companies that shallow bedrock, unsuitable soils and various setback constraints preclude additional stormwater infiltration in this area.

It is also our opinion that focused stormwater infiltration by design in the rear of the Site is not appropriate. Stormwater infiltration to the southeast and southwest of the existing warehouse building introduces the potential to alter the established, ambient groundwater flow regime at the Site. While groundwater concentrations have generally decreased over the years, we believe that focused groundwater infiltration within these areas of residual contamination in the rear of the Site risks causing measurable increases in groundwater concentrations within the Zone A area.

We trust that this opinion letter meets your needs at this time. Should you have any questions, please do not hesitate to call.

Very truly yours,
SANBORN, HEAD & ASSOCIATES, INC.

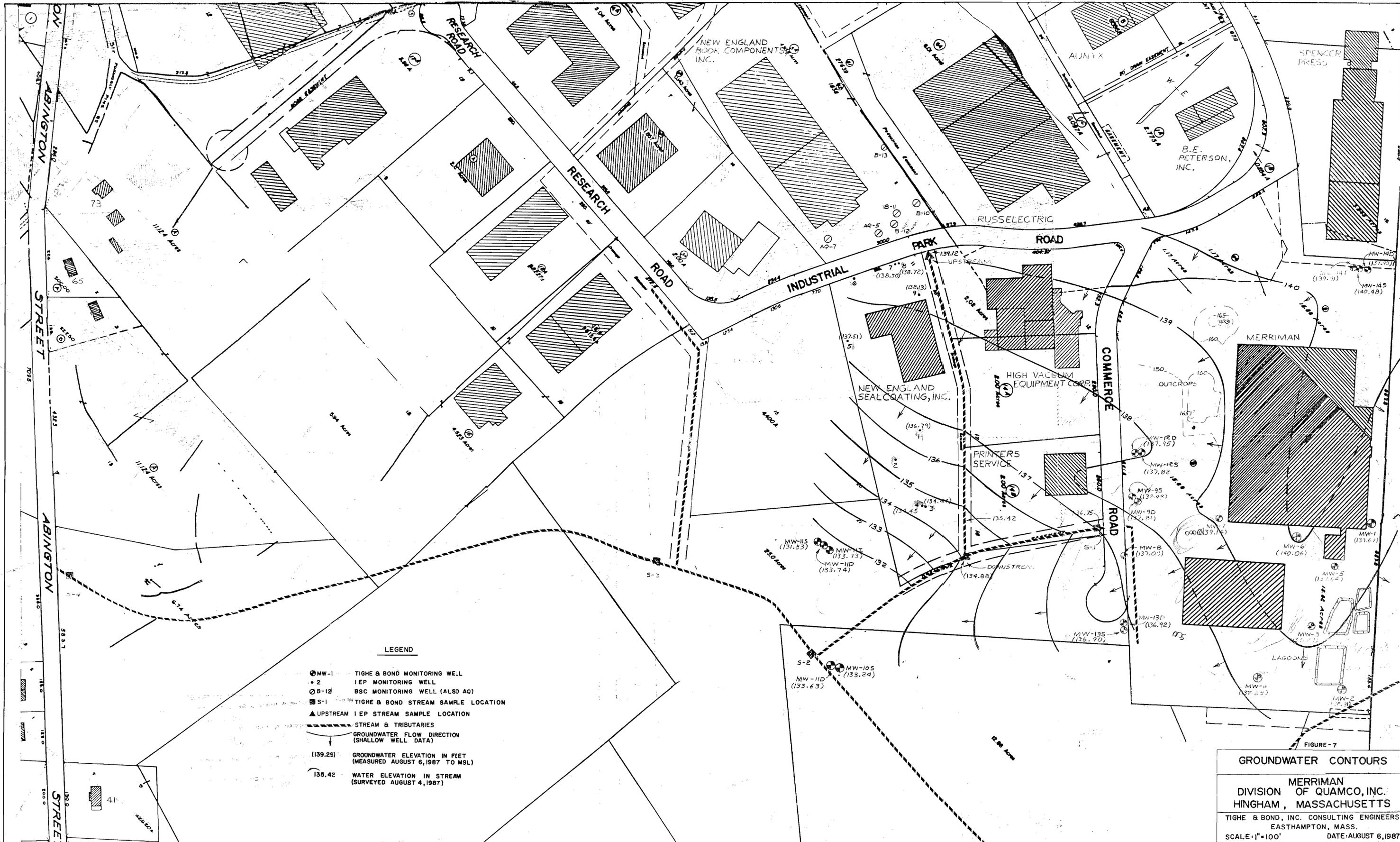


Matthew P. Heil, PE, LSP
Project Director

MPH/CS: mph

Encl. Groundwater Contour Plan, prepared by Tighe & Bond, Inc. (T&B), 1987
Updated Soil Management Plan, July 22, 2020

cc: Tim Casey and Tom Nolan, Jeb Group, LLC
Kevin Hixson, BL Companies



- LEGEND**
- MW-1 TIGHE & BOND MONITORING WELL
 - 2 IEP MONITORING WELL
 - ⊙ B-12 BSC MONITORING WELL (ALSO AQ)
 - S-1 TIGHE & BOND STREAM SAMPLE LOCATION
 - ▲ UPSTREAM IEP STREAM SAMPLE LOCATION
 - STREAM & TRIBUTARIES
 - GROUNDWATER FLOW DIRECTION (SHALLOW WELL DATA)
 - (139.29) GROUNDWATER ELEVATION IN FEET (MEASURED AUGUST 6, 1987 TO MSL)
 - 135.42 WATER ELEVATION IN STREAM (SURVEYED AUGUST 4, 1987)

FIGURE - 7

GROUNDWATER CONTOURS

MERRIMAN
DIVISION OF QUAMCO, INC.
HINGHAM, MASSACHUSETTS

TIGHE & BOND, INC. CONSULTING ENGINEERS
EASTHAMPTON, MASS.

SCALE: 1" = 100' DATE: AUGUST 6, 1987

UPDATED SOIL MANAGEMENT PLAN
100 Industrial Drive
Hingham, Massachusetts
RTN 3-00331

1.0 INTRODUCTION

On behalf of JEB Group, LLC (the property owner), Sanborn, Head & Associates, Inc. (SHA) has prepared this Updated Soil Management Plan (SMP) outlining soil management procedures to be followed during the renovation of the existing approximately 149,000 square foot (sf) building and surrounding area into a proposed package delivery station at 100 Industrial Drive, Hingham, Massachusetts (Site). The proposed redevelopment is detailed in the plans titled *Land Development Plans Issued for Town of Hingham Conservation Commission and Planning Board Approval, 100 Industrial Park Road, Hingham, MA*, prepared by BL Companies of Meriden, Connecticut and dated March 6, 2020 as revised. This Updated SMP corresponds with the existing 2009 SMP and clarifies that it has been applied to the entire Site area.

An Activity and Use Limitation (AUL) was recorded at the Plymouth District of the Land Court on April 9, 2012. Section 3, (iii) of the AUL requires that:

Except for emergency utility repair, a Soil Management Plan must be approved by an LSP prior to the commencement of any activity that is likely to disturb Site-related soil. The Soil Management Plan should describe appropriate soil management characterization, storage, transport and disposal procedures in accordance with the provisions of the MCP cited at 310 CMR 40.0030 et seq. Workers who may come into contact with the soil, groundwater, or other environmental media at the Site should be appropriately trained on the requirements of the Plan, and the Plan must remain available on Site throughout the course of the project. Following utility emergency work, soil must be returned to the excavation and the area will be recovered by pavement or landscaping;

The Site is located in an industrial park, immediately south of Route 3, in the southeastern portion of Hingham, Massachusetts. The Site was formerly occupied by PCC Specialty products, which manufactured brass, bronze, and stainless-steel products. The contaminants of concern at the Site varied with location depending on the historic activity within the specific portion of the property. The potential concerns included metals, polycyclic aromatic hydrocarbons (PAHs), petroleum constituents, and chlorinated solvents.

The risk assessment concluded that commercial or industrial workers who did not come into direct contact with sub-surface soils were not at significant risk. A trespasser or visitor to the property was also found to not be at risk. But land use activities such as single family residential, school or daycare earthen playground, play fields and other activities that would involve extensive use by children, who potentially could come into contact with the soil on a frequent basis, were to be prohibited.

Although the soils that remain on-Site do not represent a significant risk to a commercial worker or trespasser at the property, they do represent a potential risk to a construction worker who is

exposed directly to the soil or dust. That potential risk can be mitigated if appropriate soil management and health and safety measures are implemented.

2.0 OBJECTIVE

The objective or intent will be to re-use excavated soils on Site, to the maximum extent feasible. We understand from the Site cut/fill calculations completed by others that the proposed redevelopment scheme is approximately balanced. Specifically, we understand that the anticipated volume of bedrock to be removed from the Site is consistent with the anticipated volume of soil to be generated such that a net soil removal from the Site is not anticipated to complete the proposed project earthwork. However, any portion of the excavated soils, which based on visual and olfactory observations, appear to be significantly contaminated, will be separated from the other soil, and then stockpiled and sampled for laboratory analyses by the JEB Group, LLC's Licensed Site Professional (LSP). Based on the data and the subsequent opinion of the LSP, that soil may or may not be re-used on-site. If on-site re-use is inappropriate, the soil will be exported from the property for off-site re-use or disposal.

3.0 PROCEDURES

3.1 Minimum Temporary Stockpile Criteria

It is anticipated that certain soils will be excavated during the redevelopment earthwork, temporarily stockpiled and then placed/re-used at some other appropriate location within the property boundaries. The stockpiling of the excavated soils will be performed in conformance with state and local regulations governing contaminated material and soil waste. Minimum stockpile handling criteria are as follows:

1. Stockpile maintenance will be the responsibility of the Contractor.
2. Excavation, material handling and stockpiling will be performed in a manner that limits the mixing of different materials containing varying levels and/or types of contamination. Care will be taken to segregate and separately stockpile any solid wastes such as concrete debris, and any soil exhibiting visual and/or olfactory evidence of significant contamination.
3. The transfer of all materials from the excavation area to designated temporary stockpile areas will be the responsibility of the Contractor and will be conducted in such a manner as to limit the spread of the soils or potentially contaminated materials.
4. Soils that will remain in a stockpile for more than 24 hours will be graded by the Contractor to shed water. The stockpiled soils will be covered by the Contractor prior to inclement weather and at the end of each work day with minimum 6-mil-thick polyethylene sheeting overlapped and weighted to form a continuous waterproof barrier over the material. The cover will be maintained throughout the stockpile period to control water entering the stockpiled materials and to limit dust generation until such time as the LSP provides an opinion regarding potential re-use or disposal.
5. Stockpile areas will be graded such that stormwater runoff is diverted from stockpiled materials. Stockpile slopes will be no steeper than 1 horizontal to 1 vertical.

3.2 On-site Re-use of Excavated Soils

The AUL allows for the on-Site re-use of soils at the property provided that a condition of No Significant Risk, as determined by the LSP, continues to be maintained upon completion of earthwork activities. Such soil may not be reused within the 100-foot buffer zone of the nearby wetlands.

3.3 Dust Control

The primary potential mechanism for the off-site transport of the site soils will be wind blown dust. In order to prevent this from occurring, the Contractor will have available on-site a source of water to apply as a spray mist if the weather conditions result in the generation and potential migration of dust.

3.4 Worker Health and Safety

The Contractor is responsible for the health and safety of their employees. However, the risk characterization completed in support of the Response Action Outcome (RAO) closure report concluded that a detailed Health and Safety Plan was not required for workers who are exposed to site soils, outside of the former manufacturing building footprint, for a period less than six months, as long as the criteria set forth at 310 CMR 40.0018 are met.

4.0 DISPOSITION OF REMEDIATION WASTES

If soils are identified during the excavation that distinctly differ from the surrounding soil in terms of visual staining or olfactory evidence of potential contamination, those soils will be separated and tested by the LSP and then based on that data and the subsequent opinion of the LSP may require off-site disposal. The off-site disposition of such soils will depend on the results of stockpile characterization and an assessment of relevant management options in compliance with applicable laws and regulations.

5.0 DISPOSITION OF REMEDIAL WASTEWATER

Should the construction-related excavations encounter groundwater which requires removal, any such groundwater will be pumped and then discharged to the subsurface on-site in accordance with 310 CMR 40.0045: remedial wastewater discharges to the ground surface or subsurface and/or groundwater, managed in accordance with a USEPA National Pollution Discharge Elimination System (NPDES) Remediation General Permit (RGP) obtained by the Contractor should surface

water discharge be required, or disposed at the expense of the Contractor at a permitted off-site wastewater disposal facility pre-approved by the LSP.

Prepared by:



LSP #2107
978 505-9729 (Cell)
Matthew P. Heil

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