SUPERFUND

Mohawk Tannery Site
Nashua, NH

THE SUPERFUND PROGRAM *protects human health and the environment by investigating and cleaning up often-abandoned hazardous waste sites and engaging communities throughout the process. Many of these sites are complex and need long-term cleanup actions. Those responsible for contamination are held liable for cleanup costs. EPA strives to return previously contaminated land and groundwater to productive use.*

SITE DESCRIPTION:

The former Mohawk Tannery, also known as Granite State Leathers, produced tanned hides for leather between 1924 and 1984. The Site consists of two contiguous parcels of approximately 15 acres each. The northern parcel housed the tannery and waste disposal operations, while the southern parcel remained undeveloped. The tannery produced sludge and acidic residues much of which was disposed in two lagoons and other areas on the Site. One of the two lagoons remains open; this lagoon and the other disposal areas could result in adverse effects to humans and the ecosystem, including the adjacent Nashua River. The Chester Realty Trust is the current owner and both parcels are under a purchase and sale agreement with a local private developer.

PUBLIC MEETING

July 25, 2018
Nashua City Hall Auditorium
3rd floor • 6:30 PM

Verbal comments will be transcribed. Written comments will be accepted during the public comment period (July 9th to August 8th, 2018).

YOUR OPINION IS IMPORTANT

EPA is asking for public comment on its selection of a removal alternative evaluated in the EE/CA Amendment. EPA is also looking for comments on the floodplain impacts determination discussed in Section 6.1.3 of the EE/CA Amendment. The public comment period will run until August 8, 2018. Comments can be sent by mail or email.

By mail:
Gerardo Millán-Ramos, Remedial Project Manager
US EPA New England
5 Post Office Square, Suite 100
Mail Code: OSRR07-1
Boston, MA 02109-3912

By email:
millan-ramos.gerardo@epa.gov

KEY CONTACTS:

GERARDO MILLÁN-RAMOS
U.S. EPA Project Manager
617-918-1377
millan-ramos.gerardo@epa.gov

KELSEY DUMVILLE
U.S. EPA Community Involvement Coordinator
617-918-1003
dumville.kelsey@epa.gov

STATE CONTACT:

ROBIN MONGEON
NH Department of Environmental Services
Project Manager
603-271-7378
robin.mongeon@des.nh.gov

GENERAL INFO:

TOLL-FREE CUSTOMER SERVICE
1-888-EPA-7341

LEARN MORE AT:

www.epa.gov/superfund/mohawk

EPA United States Environmental Protection Agency

July 2018

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SEMS Doc ID 627478

INTRODUCTION

The US Environmental Protection Agency, Region 1 (EPA) seeks public comment on its proposal to allow the encapsulation and impermeable capping of contaminated sludge and soils at the Mohawk Tannery Site in Nashua, NH (See Figure 1 for location of Site). Contaminated sludge and soils require encapsulation and impermeable capping to prevent to the extent practicable, unacceptable risks to human health and the environment.

The Mohawk Tannery Site (the Site) in Nashua, NH, is a site proposed to the National Priorities List (NPL) because it contains contaminated media that pose unacceptable risks to human health and the environment. In 2002 EPA performed an Engineering Evaluation/ Cost Analysis (EE/CA) for the Site which recommended a removal action to address the contaminated media. EPA removal actions are either in the form of a Time-Critical Removal Action (where immediate action must take place to prevent imminent and substantial endangerment to public health), or a Non-Time Critical Removal Action (NTCRA) where it is determined that more than a six-month planning period is available before cleanup activities begin. In the case of a NTCRA, an EE/ CA is performed by EPA prior to a NTCRA. The EE/CA analyzes the site's contamination, identifies the objectives and goals for the removal, and evaluates alternatives that satisfy the removal action objectives and goals.

At the time the 2002 EE/CA was performed, the City of Nashua believed there may be a viable developer that could possibly clean up the site, therefore requested that EPA not move forward with the NTCRA. EPA recently completed an amendment to the 2002 EE/CA. The amendment re-evaluates alternatives considered in 2002 and other possible removal actions. In addition to the removal actions at the Site, EPA's EE/CA Amendment incorporates possible removal actions at two adjacent properties to the north of the Site: the Fimbel Door property and the City of Nashua's Parkway Right of Way property. There is asbestos containing material (ACM) that is unrelated to the Site's past activities on both properties; the Fimbel property includes a landfill that contains sludge waste from the Site's operations. To facilitate a re-development proposal that is currently under review by EPA, NHDES, and the City of Nashua, the ACM at both properties and the sludge waste at the Fimbel Door Landfill needs to be addressed. Should the re-development proposal fail to be approved and/or implemented, EPA will consider other proposals, if available, or will proceed with listing of the Site on the NPL.

This Fact Sheet summarizes the proposed sludge and soil encapsulation and impermeable capping action, along with the other removal actions evaluated in the EE/CA Amendment. The EPA's EE/ CA Amendment, proposes to consolidate and encapsulate with an impermeable cap, approximately 100,000 cubic yards of combined contaminated sludge and soils from the Site and one other adjacent property. Of this total volume, approximately 68,000 cubic yards are already located in the area where all the sludge and soils will be consolidated and encapsulated. All consolidation and encapsulation will take place on the Site. This action is currently planned to start in the Summer of 2019. At the end of this action, EPA will perform a risk assessment of the Site to confirm that it poses no unacceptable risks to human health and the environment, and will de-propose the Site from the National Priorities List. Once de-proposed, groundwater will be managed under a Groundwater Management Permit under NHDES authority.

SITE HISTORY

The former Mohawk Tannery, also known as Granite State Leathers, produced tanned hides for leather between 1924 and 1984. The Site consists of two contiguous parcels of approximately 15 acres each. The northern parcel housed the tannery and waste disposal operations, while the southern parcel remained undeveloped. The tannery produced sludge and acidic residues much of which was disposed in two lagoons and other areas on the Site. One of the two lagoons remains open; this lagoon and the other disposal areas could result in adverse effects to humans and the ecosystem, including the adjacent Nashua River. The Chester Realty Trust is the current owner and both parcels are under a purchase and sale agreement with a local private developer.

The Site was proposed to the NPL in May 2000; however as mentioned earlier, EPA did not move forward with the final NPL listing nor the Non-Time Critical Removal Action (NTCRA) selected after the 2002 EE/CA. EPA prefers the concurrence from both the State and the City before taking any action and believes that the NTCRA proposed in the current EE/CA Amendment meets this condition.

HISTORIC CONTAMINATION

For approximately 60 years, the former Mohawk Tannery disposed of tannery process waste in the lagoons that were not designed to contain such waste. Tannery operations also disposed of residues in a series of pits and drainage basins in and around the buildings that existed at the time. The sludge and the soils in these areas are contaminated with heavy metals, dioxin, and semi-volatile organic compounds. Additionally, EPA has determined that some of the areas discussed above and areas at the Site's southern parcel hold ACM on the surface and within the subsurface soil. These contaminants are presently exposed in the open lagoon and surficial soils in various locations at the Site. Most of the waste lies in the northern parcel in the former lagoons adjacent to the Nashua River (See Figure 2 for Site features).

The Site is fenced, but its security has been compromised; squatters/trespassers have been observed through the years.

The 2002 EE/CA included a streamlined human health and ecological risk evaluation that focused on the seven sludge waste disposal areas of the Site. In 2005 additional studies were completed to further evaluate contamination at the Site, and the risks posed by the Site contaminants. Also, in 2013, EPA further evaluated the risks posed by soils, sediments, surface water and groundwater within the southern parcel of the Site. These risk evaluations looked at non-cancer and cancer risks to human health and concluded that the sludge waste areas within the northern parcel pose the greatest risks as they are readily accessible to trespassers. The major contributors to excess non-cancer risks to human health in these areas was the sludge waste, which contains in addition to other constituents, 4-methylphenol, arsenic, antimony, cadmium, and manganese. The major contributors to excess cancer risks were dioxins, pentachlorophenol, arsenic, and benzo(a)pyrene. They also concluded that the sludge waste at the Site poses a concern for ecological receptors.

For the contaminated soils and groundwater within the northern parcel, the risk evaluations concluded that cancer risks were largely due to dioxin/furan and arsenic. Non-cancer risks were largely due to arsenic and vanadium. They also concluded that the contaminated soils have a potential to cause adverse effects to ecological receptors. At the southern parcel, the risk evaluation concluded that contaminants in the groundwater exceed risk-based concentrations for residents, while contaminants in the surface and sub-surface soils exceed the risk limit for future residential receptors but not the risk limit for future recreational receptors. It concluded that river bank surface soils and river sediments do not have risk above limits for recreational receptors.

EPA's Removal Action Objectives (RAOS)

- Prevent, to the extent practicable, direct contact with, and ingestion of contaminants in tannery sludge/ waste and associated soil at concentrations exceeding preliminary removal goals (PRGs).
- Prevent, to the extent practicable, direct contact with, ingestion, and inhalation of asbestos fibers present in ACM within the Site.
- Prevent, to the extent practicable, a release of contaminants to the Nashua River from a flooding event.
- Prevent ingestion of on-site groundwater that exceeds NHDES Ambient Groundwater Quality Standards.
- Limit, to the extent practicable, further migration of contaminants from consolidated tannery sludge/waste and associated soil to site groundwater.
- Prevent, to the extent practicable, ecological receptor exposure to tannery sludge/waste which could potentially cause adverse effects.

To view the EE/CA Amendment please go to https://semspub.epa.gov/src/document/01/627479. Please provide written comments, preferably via e-mail to the EPA Remedial Project Manager (Gerardo Millán-Ramos) at millan-ramos.gerardo@epa.gov. You may also send written comments via regular mail at:

Gerardo Millan-Ramos, Remedial Project Manager
USEPA Region 1 New England
5 Post Office Sq. Suite 100
Mail Code: OSRR07-1
Boston MA 02109-3912

A public informational meeting will be held on July 25, 2018, at the Nashua City Hall Auditorium -3rd floor, 6:30 PM, where verbal comments will be transcribed. Written comments will be accepted during the public comment period (July 9th to August 8th, 2018).

For more information, please contact Gerardo Millán-Ramos, EPA Remedial Project Manager at 617-918-1377, or Kelsey Dumville, EPA Community Involvement Coordinator at 617 918-1003 or Dumville.kelsey@epa.gov

SUMMARY OF REMOVAL ACTION ALTERNATIVES EVALUATED

No Action Alternative: No action taken to remove or limit exposure to the contaminated sludge and soils. Cost: $0.0

Alternative 1: Excavation with Off-Site Disposal
This alternative relies on excavating all the sludge and soils at the former lagoons and disposal areas that exceed the PRGs, and transporting them to a regulated facility in Canada or a RCRA Subtitle C Landfill, if necessary. Excavation voids would be replenished with clean fill. Site Access and Road Construction would initiate at the Broad Street Parkway entrance to the Fimbel Door property and would extend across the City-owned Parkway Right of Way. Former building concrete slabs would be removed, crushed and used as aggregate material for the construction of on-Site roads or disposal off-Site if necessary. Stockpile and staging areas would be prepared. Dewatering would be pumped and discharged to a fractionation tank, and eventually to the publicly owned treatment works. Asbestos, dust and odor suppression would be performed via water and odor reduction solution spraying. Perimeter Air Monitoring would be done for sulfide, dioxin, and asbestos. Excavation confirmatory sampling for dioxin, semi-volatile organic compounds, volatile organic compounds, and metals, would be analyzed via the Toxicity Characteristic Leaching Procedure.

Cost: $32,600,000.00

Alternative 4: On-Site Treatment (Solidification/Stabilization)
This alternative relies on the consolidation of all the sludge and soils and treatment at the Lagoon Areas 1 & 2.
Pre-construction activities would include a pre-design investigation, engineering and removal designs and specifications, establishment of the contractor's performance and payment bonds, and preparation of project-specific plans. Project management and staffing would be required for the duration of the construction. Mobilization of heavy equipment, Site preparation and Temporary facilities would be needed. Same elements as Alternative 1 except the dewatering. Prior to treatment, the excavation of an expansion cell to accommodate increase in volume after treatment. The solidified monolith would be covered with a cap and vents. Institutional controls to protect the integrity of the treated area and prevent the use of groundwater, and groundwater monitoring would be required.

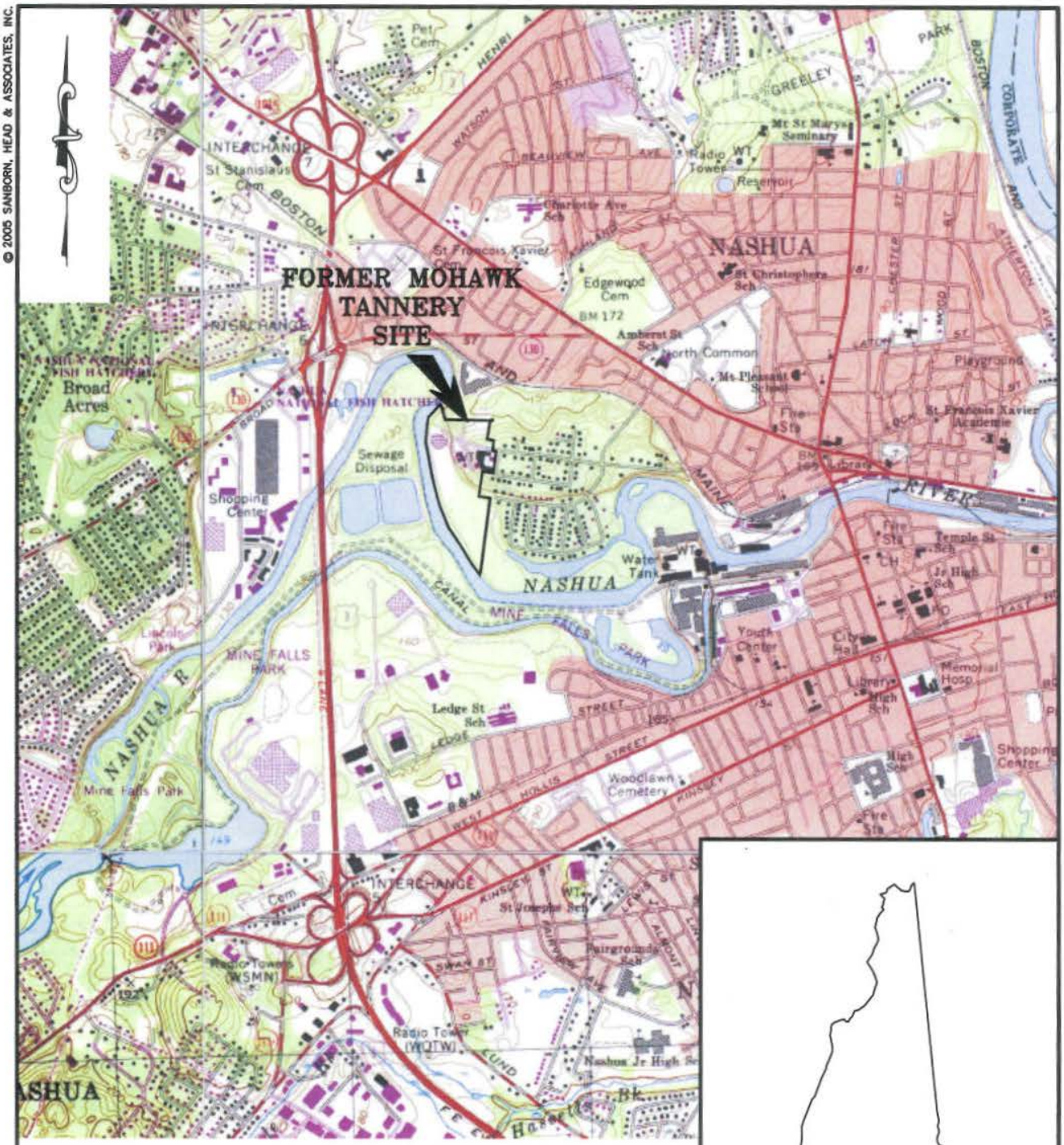
Cost: $18,700,000.00

Alternative 5: EPA's Preferred Alternative
Waste Encapsulation and Impermeable Capping (See Figure 3-last page of fact sheet) This alternative relies on the consolidation of all the sludge and soils and encapsulation at the Lagoon Areas 1 & 2 by using one of three vertical containment technologies and an impermeable cap over the material. Pre-construction activities, project management and staffing, excavation and removal of soils, sludge consolidation, backfill & site restoration, and decontamination/temporary facilities removal/de-mobilization tasks, would be essentially the same as Alternative 4. The vertical containment and cap would be designed to withstand a 500-year flood event. Mitigation structures (e.g. drainage swales, detention areas etc.) would be built on Site to compensate for the flood storage loss that may result in a 100-year flood event. Institutional controls to protect the integrity of the encapsulated area and prevent use of groundwater, and groundwater monitoring would be required.

Cost: $8,000,000.00 – 14,200,000.00

Why Does EPA Recommend This Alternative?
All three alternatives would be protective, meet Applicable, Relevant and Appropriate Requirements (ARARs), achieve RAOs, and be effective in the short term and long term. However, only Alternative 5 offers the possibility to meet these requirements, while causing minimal environmental impacts at a reasonable cost. Alternative 4 is the only alternative that provides treatment but the need of additives to the solidification mix makes it cost prohibitive. Also, the complexity/difficulty of future maintenance/repairs puts it at a disadvantage when compared to alternative 5. Short-term environmental impacts within the Site are all similar for Alternatives 4 and 5 but more so for alternative 1 due to the need for transportation off-site. For further information, please see the EE/CA Amendment at https://semspub.epa.gov/src/document/01/627479

Continued Opportunities for Public Involvement beyond the EE/CA Comment Period
EPA will continue to meet with and update the City of Nashua and the New Hampshire Department of Environmental Services over the course of the cleanup and any community concerns will be addressed to the extent possible.



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XREFS:

FILE: G:\CONCORD\2158.0\dwg\2158-locus.dwg
LAYOUT: LOCUS
CTB FILE: SHA STANDARD.CTB
PLOT DATE: 3-16-05

NOTES:

BASE MAP TAKEN FROM 7.5 MINUTE
USGS QUADRANGLE MAPS:
NASHUA NORTH, NH (1965)(PROVISIONAL 1979)
NASHUA SOUTH, NH (1965)(PROVISIONAL 1979)
PEPPERELL, MA (1965)(PROVISIONAL 1979)
SOUTH MERRIMACK, NH (1968)(PHOTOREVISED 1985)

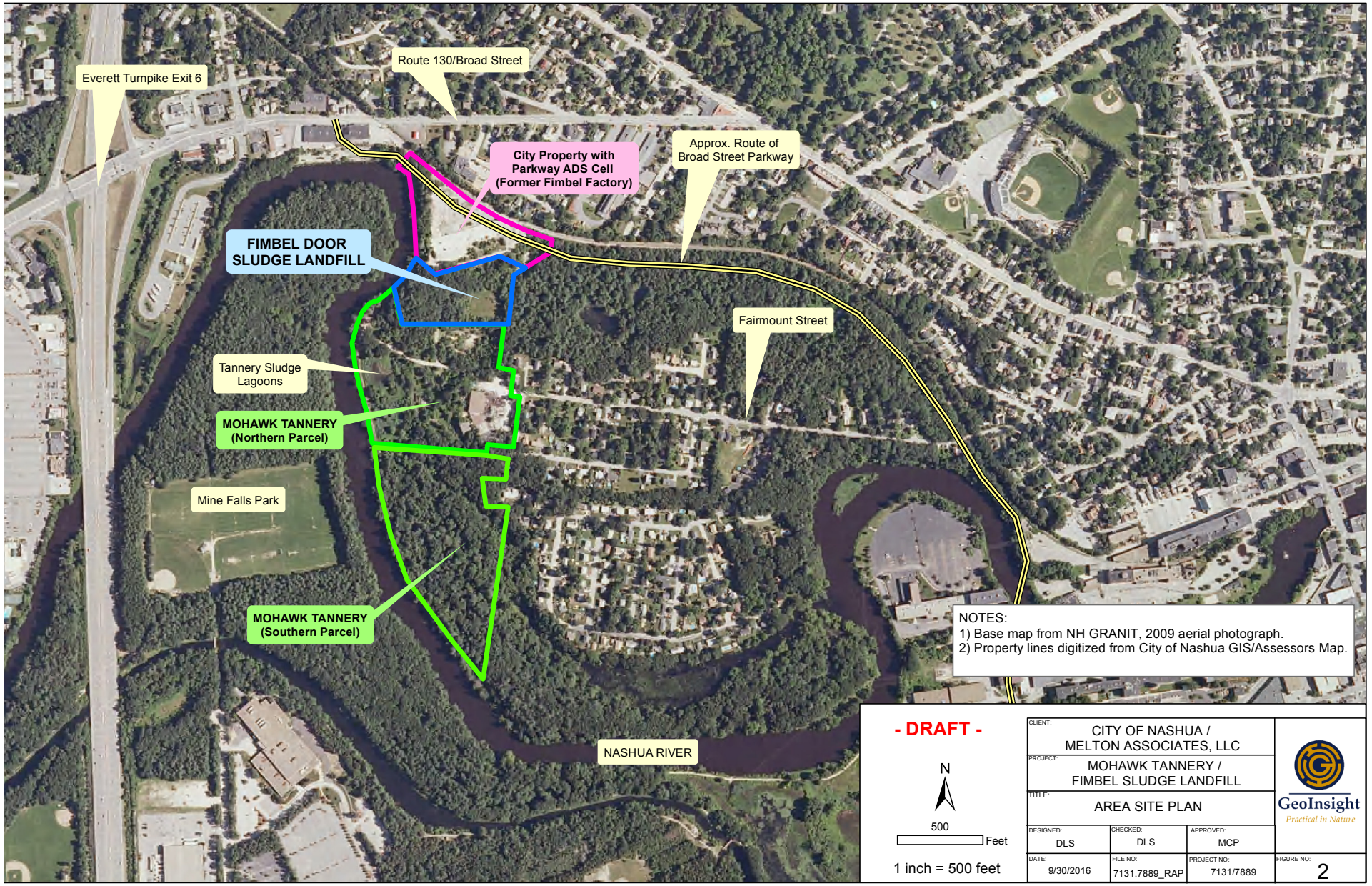
-DRAFT-

FORMER MOHAWK TANNERY SITE
NASHUA, NEW HAMPSHIRE

REMEDIAL INVESTIGATION
OPERABLE UNIT 1
LOCUS PLAN

SHA
Sanborn, Head & Associates
Consulting Engineers & Scientists

SCALE: 1"=2000'	DRAWN BY: PGP	FILE NO. 2158
DATE: MAR 05	CHECKED BY: CAC	FIGURE NO. 1



- DRAFT -

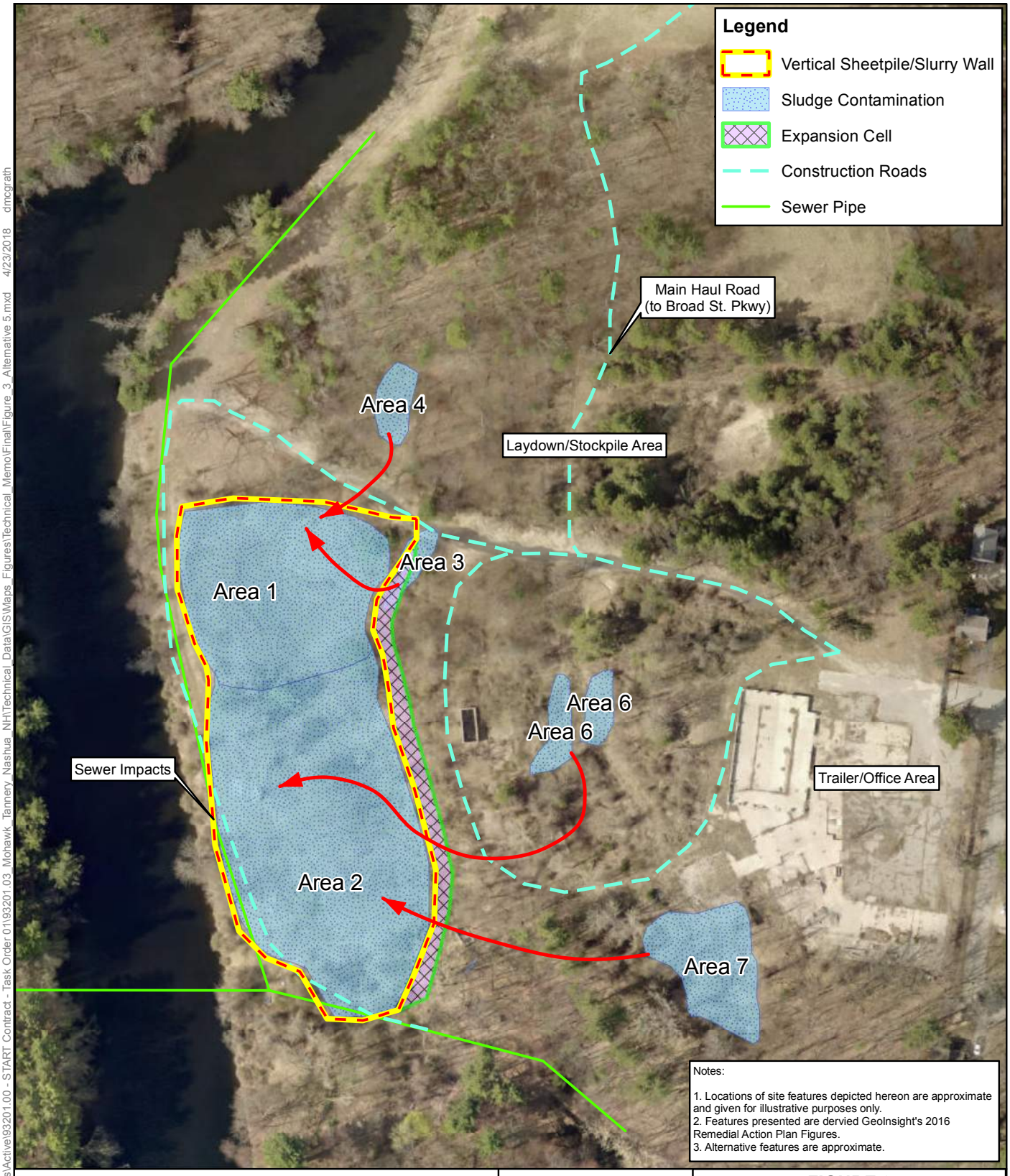
N

500 Feet

1 inch = 500 feet

CLIENT: CITY OF NASHUA / MELTON ASSOCIATES, LLC			
PROJECT: MOHAWK TANNERY / FIMBEL SLUDGE LANDFILL			
TITLE: AREA SITE PLAN			
DESIGNED: DLS	CHECKED: DLS	APPROVED: MCP	
DATE: 9/30/2016	FILE NO: 7131.7889_RAP	PROJECT NO: 7131/7889	FIGURE NO: 2

GeoInsight
Practical in Nature



0 75 150 300

Feet

1 inch = 150 feet

N

KGSNE

FIGURE 3

ALTERNATIVE 5 ENCAPSULATION FEATURES
MOHAWK TANNERY SITE
TDD No. SA-01-17-09-0001

PREPARED BY: DFM	REVIEWED BY: SV
PROJECT NO. 93201.03	DATE: OCT 2017

\\NE-MA-FILER01\files\Projects\Active\93201.00 - START Contract - Task Order 01\93201.03_Mohawk_Tannery_Nashua_NH\Technical_Data\GIS\Maps_Figures\Technical_Memo\Final\Figure_3_Alternative 5.mxd 4/23/2018 dmcgrath