UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE – SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

MEMORANDUM

DATE: September 15, 2020

SUBJ: Request for a Removal Action at the Creese and Cook Tannery (Former) NPL Site, 33 Water Street Superfund Site (National Priorities List (NPL Site)), Danvers, Essex County, Massachusetts - **Action Memorandum**

FROM: Michael J. Nalipinski, On-Scene Coordinator
Emergency Response and Removal I Section

THRU: Edward J. Bazenas, Chief
Emergency Response and Removal I Section

EDWARD BAZENAS Digitally signed by EDWARD BAZENAS Date: 2020.09.15 15:20:34 -04'00'

Carol Tucker, Chief
Emergency Planning & Response Branch

CAROL TUCKER Digitally signed by CAROL TUCKER Date: 2020.09.16 09:48:45 -04'00'

TO: Bryan Olson, Director
Superfund and Emergency Management Division

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the proposed removal action at 33 Water Street (Site), at the Creese and Cook Tannery (Former) Superfund Site (NPL Site), located in Danvers, Essex County, Massachusetts.

The Site in one of nine parcels of land which comprise the NPL Site and is located near the southern edge of East Study Area (ESA) of Operable Unit 1. The Site is currently zoned for residential use and consists of a residential condominium complex that is occupied by children and adult residents.

Hazardous substances are present in soil at the Site and not addressed by implementing the response actions selected in this Action Memorandum, will continue to pose a direct and current risk and threat to human health and the environment. There are no nationally significant or precedent-setting issues associated with this Site, and there has been no use of the OSC's $200,000 warrant authority.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID#: MAN000105956
SITE ID#: 01HL
CATEGORY: Time-Critical

A. Site Description

1. Removal site evaluation

EPA's Remedial Program requested the EPA's Removal Program evaluate existing information to determine if a Removal Action could be initiated to address current direct threats to public health and the environment that are associated with contaminated soil on select a residential property within Operable Unit 1. EPA completed a Remedial Investigation (RI) for the East Study Area (ESA), dated, March 1, 2018 and a Feasibility Study (FS), dated September 2018. This data was reviewed specifically pertaining to the 33 Water Street property Site, excluding the area surrounding Building D where an EPA Removal Action occurred in 2012. The data indicates that the following several hazardous substances are present in surface and subsurface soil: arsenic, hexavalent chromium, and PAHs (specifically benzo(a) pyrene).

On August 18, 2020, the Removal and Remedial Program Managers, and staff met with the case team to discuss current Site conditions and evaluated the necessity for a possible removal action. It was agreed that available information was sufficient to support an Action Memorandum to address contaminated surface soil at 33 Water Street Site.

A Site Investigation Closure Memorandum dated September 11, 2020 formally documents the conclusion of the Removal Site Evaluation, and recommends that a Removal Action is appropriate because conditions at the Site meet the criteria in the National Contingency Plan (NCP) for initiating a Removal Action.

2. Physical location

The address for this Removal Action is 33 Water Street in Danvers, Massachusetts. This address is identified on the Town of Danvers Assessor's Number Map 59 as Lot Nos. 072-001 through 072-028. The geographic coordinates are approximately 42.3311 degrees north latitude, 70.5533 degrees west longitude. The location of the proposed Removal Action is near the southern tip of the ESA of the Creese and Cook Tannery (Former) NPL Site, and to the east of the MBTA Property (which is adjacent to the Crane River), north of the Creese & Cook Tannery (Former) 3 Site located at 45 Water Street, west of Water Street (Route 35) and south of the condominium Building D area (on the 33 Water St parcel) where EPA completed a Time Critical Removal Action, previously in 2012.

3. Site characteristics

The Site is currently privately owned by the Crane River East Condominiums, is approximately 3.45 acres, and is located in a mixed residential/commercial area. The Site (excluding Building D) includes three buildings each consisting of 28, two-story condominium units, (Buildings A, B, C). The remainder of the Site consists of paved roadways and parking areas, landscaped areas and grass lawn areas, and abuts the MBTA right of way. Vehicle and pedestrian access to the property is unrestricted. Each condominium unit is individually owned but manages operations pursuant to a condominium association, the Crane River East Condominiums. Arsenic, chromium and PAH contaminated soil was identified in the lawn areas surrounding Buildings A, B and C in surface and subsurface soils. This removal action is consistent with the 2019 Record of Decision (ROD) required remedy and will only involve an action in the 0-3 ft surficial soils. This parcel is an open recreation area and access is unlimited.

The Site was one of several properties formerly owned by or located adjacent to the Creese and Cook Tannery (Former) Company, which operated a tannery and finishing facility from 1903 to approximately 1914, based on historical records. The property was used as the offices for the tannery from 1914 until 1984. Operations included the use and disposal of hazardous substances. Hazardous substances identified by EPA Remedial Program include but are not limited to arsenic, chromium and PAH's.

From 1986 to 1987, the 33 Water Street property was redeveloped into the Crane River East Condominium complex.

Based on EPA's EJSCREEN environmental Justice screening tool, ten of the eleven Environmental Justice Indexes for the area within a one-mile radius of the Site do not exceed the 50^{th} percentile on a national basis. No value is provided for the eleventh category on a national basis, Superfund Proximity.

Approximately, 12,000 people live within a one-mile radius of the Site. According to the 2010 US Census the population in Danvers, MA, was 26,493 people. A day-care facility located at 28 Water Street, which is located approximately 300 feet from the Site. The nearest public school, the Riverside Elementary School, is located approximately 0.6 mies northeast of the Site.

The operational status of the tannery is inactive. The incident category is residential condominium housing complex. The owner-operator type is a private condominium association.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

The analytical results of tests performed on samples collected at this Site during the RI reveal that several hazardous substances are present, including but not limited to those listed below. Each is identified as a hazardous substance in 40 CFR 302.4. A comparison to relevant published standards is provided later in this document.

High concentrations of arsenic, chromium, hexavalent chromium, and benzo(a)pyrene were detected in both surface and subsurface samples from sample locations in several areas of this property. The highest concentrations were generally detected in borings near the western border of the parcel and along the eastern side, beneath the former tannery footprint.

The hazardous substance benzo(a) pyrene has been detected at the concentration of 30,000 ppm in one surface (0-3 ft bgs) sample in exceedance of EPA's RML of 11,000 ppm. Arsenic has been identified in 3 surface (0-3 ft bgs) samples which exceed the NPL Site Clean-up Goal of 20 ppm. One concentration of 2040 ppm for chromium exceeds the NPL Site Clean-up Goal of 1000 ppm in a surface sample.

5. NPL status

The Site was proposed for inclusion on the NPL in September 2012 and included in the final listing of the NPL sites on May 24, 2013. The remedial program has completed the following investigations, reports and documents for the NPL Site:

- Record of Decision (ROD), Operable Units (OU) 1 and 2, September 22,2019
- Feasibility Study (FS), East and West Study Areas, September 01, 2018
- Supplemental Human Health Risk Assessment (HHRA) Evaluations, April 01, 2018
- Remedial Investigation (RI), East Study Area, March 01, 2018
- Final Human Health Risk Assessment (HHRA), September 01, 2017
- Final Screening Level Ecological Risk Assessment (SLERA) - East Study Area, August 01, 2017

6. Maps, Pictures and other Graphic Representations

For maps, pictures and graphic representations, refer to the sampling report: *Phase II Sampling and Activities Memorandum for the Creese and Cook NPL Site (45 Water Street property) Danvers, Essex County, Massachusetts, 13 through 16 May 2019,* September 2019. For characterization of chromium species, refer to *Chromium Speciation Sampling Activities at the Creese & Cook NPL Site (45 Water Street Property) in Danvers, Massachusetts. TDD Number*

(No.) TO1-01-18-11- 0006; Task No. 0275; Document Control No. (DCN) R-00734, dated March 12, 2020:

- Figure 1 - Site Locus
- Figure 2 - Site Record of Decision Plan
- Figure 3 - RI Areas for Soil Excavation

B. Other Actions to Date

1. Previous actions

From April 2012 to September 2012 EPA completed a Time Critical Removal action at the northern portion of 33 Water Street, addressing arsenic contaminated soils surrounding condominium Building D. Approximately 450 tons of arsenic contaminated soil was excavated, shipped off site for proper disposal and clean fill was backfilled to restore the area. A Final POLREP (#5) was completed on September 20, 2012, to document the completion of all activities related to this removal action.

The information below is a subset of the Remedial Actions. Items identified are those associated with the East Study Area where the Remedial actions have taken place and are currently on-going.

- Site assessment activities to support an evaluation for possible inclusion on the NPL;

- Remedial Investigation (RI) sampling activities on the East Study Area (ESA) of the Site, which included taking over 350 soil borings, installing 13 groundwater monitoring wells, and obtaining 60 groundwater samples, 15 sediment samples, and including a tidal survey of the Crane River;

- A human health and baseline ecological risk assessment for the ESA;

- A combined feasibility study for the East and West Study Areas to evaluate different means of addressing unacceptable risk(s) posed by the contaminants; and

- A ROD signed July 22, 2019.

2. Current actions

In accordance with the 2019 ROD, the remedial program at EPA is currently executing a federal fund lead remedial design scope of work contract, to award for the remedial design at the other eight properties at the Site.

EPA's Removal Program is conducting a Time Critical Removal Action at 45 Water Street parcel of land, which is adjacent to the southern boundary of the 33 Water Street parcel. The removal action at 45 Water Street includes the excavation and offsite disposal of arsenic, chromium and dioxin contaminated soil.

C. State and Local Authorities' Roles

1. State and local actions to date

For approximately 20 years, MassDEP used its regulations to have investigations and response actions implemented by responsible parties. However, ultimately, MassDEP requested EPA to determine eligibility for inclusion on the NPL. The Site was proposed for inclusion on the NPL in September 2012 and included in the final listed of NPL sites on May 24, 2013.

In February 2012, prior to the initiation of the EPA Removal Action, at the northern portion of 33 Water Street, the MassDEP required the MBTA to install fencing to restrict public access to contaminated soil between the condominium complex and the MBTA right of way property.

2. Potential for continued State/local response

EPA is the lead agency at this NPL Site and does not anticipate that the State will participate directly in the Removal Action. The Removal Program will work with the Remedial Project Manager (RPM) and Community Involvement Coordinator (CIC) to maintain established relationships.

The Town of Danvers will continue its commitment to assist EPA for this Time Critical Removal Action through participation in public meetings, public outreach events and commitment of town resources where appropriate.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Information about the principle contaminants of concern at this Site is provided below. Potential exposure routes and health effects identified are sourced from the Federal Agency for Toxic Substances and Disease Registry's (ATSDR) Toxicological profiles or ToxGuides™.

Arsenic

Arsenic is a naturally occurring element widely distributed in the earth's crust. It can be present in inorganic form or as an organic arsenic compound. Inorganic arsenic compounds are mainly used to preserve wood and in pesticides.

Breathing high levels of inorganic arsenic can give you a sore throat or irritated lungs. Ingesting very high levels of arsenic can result in death. Exposure to lower levels can cause nausea and vomiting, decreased production of red and white blood cells, abnormal heart rhythm, damage to blood vessels, and a sensation of "pins and needles" in hands and feet. Ingesting or breathing low levels of inorganic arsenic for a long time can cause a darkening of the skin and the appearance of small "corns" or "warts" on the palms, soles, and torso. Skin contact with inorganic arsenic may cause redness and swelling. Several studies have shown that ingestion of inorganic arsenic can increase the risk of skin cancer and cancer in the liver, bladder, and lungs. Inhalation of inorganic arsenic can cause increased risk of lung cancer. The Department of Health and Human Services (DHHS) and the EPA have determined that inorganic arsenic is a known human carcinogen. The International Agency for Research on Cancer (IARC) has determined that inorganic arsenic is carcinogenic to humans.

Chromium

Chromium is a naturally occurring element found in rocks, animals, plants, and soil. It can exist in several different forms most commonly chromium (0), chromium (III), and chromium (VI). No taste or odor is associated with chromium compounds. Chromium (VI) and chromium (III) are used for chrome plating, dyes and pigments, leather tanning, and wood preserving. Exposure to chromium can occur through the following: eating food containing chromium (III); breathing contaminated workplace air or skin contact during use in the workplace; drinking contaminated well water; and living near uncontrolled hazardous waste sites containing chromium or industries that use chromium.

Breathing high levels of chromium (VI) can cause irritation to the lining of the nose, nose ulcers, runny nose, and breathing problems, such as asthma, cough, shortness of breath, or wheezing. The concentrations of chromium in air that can cause these effects may be different for different types of chromium compounds, with effects occurring at much lower concentrations for chromium (VI) compared to chromium (III).

Some people are extremely sensitive to chromium (VI) or chromium (III). Allergic reactions consisting of severe redness and swelling of the skin have been noted.

PAHs

PAHs are a group of chemicals that are formed during the incomplete burning of coal, oil, gas wood, garbage, or other organic substances. There are more than 100 different PAHs. The five PAHs identified at the Site (table below) are listed as hazardous substances in federal regulations. PAHs generally occur as complex mixtures as part of combustion products such as soot and not as a single compound. Under normal conditions of environmental exposure, PAHs could enter your body if your skin comes in contact with soil that contains high levels of PAHs. PAHs can enter all the tissues of the body that contain fat. They tend to be stored mostly in the

kidneys, liver and fat. Studies of people show that individuals exposed by breathing or skin contact for long periods to mixtures contain PAHs and other compounds can develop cancer.

Lead

Lead is a toxic heavy metal. The target organs are the eyes, gastro-intestinal tract, central nervous system, kidneys, blood and gingival tissues in both human and animal species. Lead interferes with a variety of body processes and is toxic to many organs and tissues including the heart, bones, intestines, kidneys and reproductive/nervous systems. It interferes with the development of the nervous system and is therefore particularly toxic to children, causing potentially permanent learning and behavior disorders. Symptoms include abdominal pain, confusion, headache, anemia, irritability and in severe cases seizures, coma and death.

Risk Evaluation

Data gathered for the ESA Remedial Investigation was used to generate a Human Health Risk Assessment (HHRA) for the ESA, which includes the Site, 33 Water Street. The HHRA evaluated carcinogenic effects for a current (adult and child) resident exposure scenario via incidental ingestion, dermal contact, and inhalation pathways and the results indicated that the risks were 2.6×10^{-4}, which is not within EPA's acceptable risk range of 10^{-4} to 10^{-6}. The following COC's contributed to the unacceptable risks: Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenz(a,h)anthracene, Indeno(1,2,3-cd)pyrene, Arsenic, and Hexavalent Chromium.

The HHRA also evaluated non-carcinogenic effects for a current (adult and child) resident exposure via incidental ingestion, dermal contact, and inhalation pathways and the results indicated that the HI=7.0, which is not within EPA's remedial acceptable risk range. Arsenic, chromium and PAH's contributed to unacceptable risks. For more detailed information about the HHRA, see section G., Summary of Site Risks, of the 2019 ROD for the NPL Site.

To address the unacceptable risks, EPA's remedial program developed the following clean up levels in the 2019 ROD for the NPL Site which are applicable for this removal action:

Contaminant of Concern	Proposed Soil Cleanup Levels for East Study Area	
	Concentration	**Basis**
Arsenic*	**20** mg/Kg	Background[1]
Hexavalent Chromium	**40** mg/Kg	Background[1]
Benzo(a)pyrene	**7000** µg/Kg	Background[1]
Benzo(a)anthracene	**9000** µg/Kg	Background[1]
Benzo(a)fluoranthene	**8000** µg/Kg	Background[1]
Dibenz(a,h)anthracene	**1000** µg/Kg	Background[1]
Indeno(1,2,3-cd) pyrene	**3000** µg/Kg	Background[1]
Lead[3]	**600** mg/Kg	Background[1]

Notes:

mg/Kg = milligrams per kilogram; ng/Kg = nanograms per kilogram µg/Kg - micrograms per kilogram
HQ = Hazard Quotient for non-cancer risks
COC = Contaminant of Concern. COCs are contaminants that are major contributors to the actionable human health risks identified for the East and West Study Areas.
"—" = Not applicable/no criterion
1. MassDEP Ash fill background levels. Historic Fill / Anthropogenic Background Levels in Soil, Draft Technical Update. (MassDEP, May 2016).
2. MassDEP Natural background levels. Historic Fill / Anthropogenic Background Levels in Soil, Draft Technical Update. (MassDEP, May 2016).
3. Lead is a COC for the 20 Cheever Street Lead Hot Spot area only.
* = Primary COC - COC that most frequently exceeds PRGs and drives soil volume estimates. Other COCs are often co-located with the primary COCs.
+ = The risk-based PRG for dioxins/furans was developed based on the EPA 2012 non-cancer reference dose (RfD) for 2,3,7,8 TCDD (IRIS, 2012) because EPA considers this to be the best available value RfD for use at Superfund sites. EPA anticipates that cleanup levels developed based on this RfD will be within the EPA target cancer risk range of 10^{-6} to 10^{-4}

Conducting an EPA removal action at 33 Water Street instead of conducting the remedial action under the remedial program would prevent direct exposure to contaminated surface soil for current residents that reside at the Site and cleanup this property in an expeditious manner.

As described below, the conditions at the Site meet the general criteria for a removal action, as set forth in 40 C.F.R. §300.415(b)(1), in that "there is a threat to public health or welfare of the United States or the environment," and in consideration of the factors set forth in 40 C.F.R. §300.415(b)(2) as described below.

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants; [§300.415(b)(2)(i)];

PAHs, Arsenic and Chromium are present in surface soils at levels. The PAHs exceed 30,000 ppm, the EPA RML 11,000 ppm threshold established for determination of possible threat to public health based on direct exposure to surface soils. The resident of the condominium units on the Site are the most likely to be exposed.

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate [§300.415(b)(2)(iv)];

The COCs at the Site are in the 0-3 ft surface soils. Due to the site being located in the FEMA 100-yr flood plain due to the proximity to the Crane River there is a potential for inundation of the Site and migration of the contamination into the river or distributed on to the two prior Time Critical Removal Action Sites e.g. 45 Water Street and 33 Water Street Building D area.

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released [§300.415(b)(2)(v)];

Precipitation and storm water run-off may also carry arsenic, chromium and PAHs from the soil into the river. Flooding may also cause additional migration of contaminants into the Crane River.

The availability of other appropriate Federal or State response mechanisms to respond to the release [§300.415(b)(2)(vii)];

EPA's Remedial Program requested the Removal Program abate the threats outlined above, in order that that they are addressed more quickly than would otherwise be possible. Due to the limited scope of the Removal Action and because EPA is the lead Agency at this NPL Site, it is not reasonable to expect that the State would participate directly in the execution of the Removal Action.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances or pollutants or contaminants from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment. In accordance with OSWER Directive 9360.0-34 (August 19, 1993), an endangerment determination is made based on "appropriate Superfund policy or guidance, or on collaboration with a trained risk assessor," which is outlined and discussed in Section III above.

"Appropriate sources include, but are not limited to, relevant action level or clean-up standards, Agency for Toxic Substances and Disease Registry documents or personnel, or staff toxicologists." EPA relied on the soil exposure risks evaluated in the Record of Decision for the NPL Site as well as the MCP Method One S1/GW-3 soil standards.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The presumptive response action is excavation and off-site disposal of contaminated soil to a depth of three feet, the groundwater table, or until the cleanup concentrations are achieved, whichever is less. Excavation under paved areas will be conduct provided that sampling results indicate levels of contaminants above the cleanup goals. No excavation will occur under Condominium buildings or where the presence of utilities make excavation impracticable. The extent of contamination will be verified by sampling and analyses including on-site field screening followed by an appropriate percentage of laboratory analyses and will be properly documented. The estimated volume of soil for the 0-3 ft excavation is approximately 2200 cyds.

The goal of the cleanup is to meet all EPA and State requirements for a final action documented in the ROD if appropriate under the Removal Program's authorities. Other actions may also be implemented. Removal of the wastes on site will mitigate the potential exposure of the residents and others to hazardous substances.

Prior to disposal, some wastes may require treatment. Heavy metals, including arsenic and chromium, are present at concentrations that may fail the Toxicity Characteristic Leaching Procedure (TCLP) test for disposal in landfills. Wastes that do fail will be treated prior to disposal likely by solidification technologies.

This project will comply with the off-site rule. Off-site disposal of the soils is preferred due to the complexities of potentially consolidating the soil at the designated Consolidation Area proposed in the NPL Site ROD due to logistical trucking concerns, O & M of the Consolidation Area prior to implementation of the rest of the NPL Site remedy, potential exposure to trespassers at the Consolidation Area, community acceptance, etc. Due to the uncertainty of the cost/challenges associated with using the Consolidation Area, off-site disposal will be implemented for this removal action

If wastes are remain buried at depths greater than 3 feet bgs, they will be covered with a warning barrier and buried in place. An Activity Use Limitation may be placed on the property describing

the type and location of the wastes left in place, so that residents and future residents are aware of the dangers they may pose.

Health and Safety of personnel, residents, and neighbors will be a priority. Temporary fencing, caution tape, and/or warning signs will be employed to secure work areas. Water will be used to suppress any potential dust generation and dust monitors will be used to document site conditions during excavation activities. The excavation will also be coordinated with the residents, so they have access to their homes at all times but are safe from moving heavy equipment.

Best management practices will be employed during the response action to avoid or minimize adverse effects on the environment including precautions to prevent or minimize contaminated soil from entering the Crane River. Silt screens, hay bales, etc. will be deployed before excavation begins as necessary.

Specific removal activities will include the following:

- Conduct a site walk with the cleanup contractor;
- Document site conditions prior to commencing work;
- Conduct additional sampling as needed to assess extent of contamination and disposal requirements
- Install security fencing and or provide security guard service as appropriate;
- Clear vegetation and debris as needed;
- Excavate impacted soil;
- Treat and dispose of hazardous substances at EPA-approved off-site disposal facilities; and,
- Repair response-related damage

2. Community relations

EPA will remain involved with the local community during the course of the removal action through press releases, fact sheets, and public meetings, as necessary. The OSC will receive assistance from the EPA Community Involvement Coordinator (CIC) for public relations activities. EPA will work closely with the state, town, government, local businesses, and the community. EPA will work closely with the state, town, government, local businesses, and the community.

3. Contribution to remedial performance

The cleanup proposed in this Action Memorandum is designed to mitigate the threats to human health and the environment posed by the Site. The proposed actions taken at the Site will be consistent with and, to the extent practicable, contribute to the efficient performance of any the

long-term remedial action with respect to the release or threatened releases concerned. The Remedial Project Manager and supervisors participated in the Site Review Meeting, and concurred on the action to be taken.

4. Description of innovative technologies and sustainable approaches

In accordance with the December 23, 2013 Memorandum, updated August 2, 2016, issued by Office of Land and Emergency Management as well as the Region 1 Clean and Greener Policy for Contaminated Sites, greener cleanup practices should be considered for all cleanup projects. Greener cleanup is the practice of incorporating practices that minimize the environmental impacts of cleanup actions and maximize environmental and human benefit. Alternative technologies and sustainable approaches will be considered and incorporated, as appropriate, throughout the implementation of the removal action.

Although the soil to be addressed by the proposed Removal Action has not been fully characterized for disposal, the available data suggests its unlikely that an alternative to landfill disposal can be employed.

Sustainability efforts will include ensuring that contractors are meeting or exceeding the green remediation requirements of their contract. A no-idling policy will be implemented. Solar generators will be utilized if available in the size required.

5. Applicable or relevant and appropriate requirements (ARARs)

Federal ARARs:

Frequently Used (federal) ARARs at Sites:

Clean Water Act, National Pollutant Discharge Elimination System (NPDES), 40 C.F.R. Parts 122 – 125; 122.26: Establishes the specifications for discharging pollutants from any point source into the waters of the U.S. Also, includes storm water standards for construction sites over one acre. Removal activities will be managed to prevent stormwater discharge from the Site.

Clean Water Act, 40 CFR Sections 122.26(c)(ii)(C) and 122.44(k): NPDES regulations for storm water control and management.

Clean Air Act, 40 CFR Part 61, 42 U.S.C. Section 112(b)(1): standards for controlling dust. The regulations establish emissions standards for 189 hazardous air pollutants. Standards set for dust and release sources. If the removal of contaminated soils generate regulated air pollutants, then measures will be implemented to meet these standards.

Clean Water Act Section 404(b), (40 CFR Parts 230 and 231, 33 CFR Parts 320-323, and 33 CFR Part 332): No activity that adversely affects a wetland shall be permitted if a practicable alternative with lesser impacts is available. Controls discharge of dredged or fill material to protect aquatic ecosystems. Any wetlands altered by the cleanup will be restored as required by regulatory standards.

Clean Water Act Federal Water Quality Criteria, Section 304(a), 40 CFR 131.11: National Recommended Water Quality Criteria for chemicals for both the protection of human health and the protection of aquatic life; to be used as water quality monitoring standards for any work in or adjacent to wetlands or water bodies.

Floodplain Management and Protection of Wetlands, (44 CFR Part 9): Regulations that set forth the policy, procedure and responsibilities to implement and enforce Executive Order 11988 (Floodplain Management) and Executive Order 11990 (Protection of Wetlands). Prohibits activities that adversely affect a federally regulated wetland unless there is no practicable alternative and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use. Requires the avoidance of impacts associated with the occupancy and modification of federally designated 100-year and 500-year floodplain.

Fish and Wildlife Coordination (50 CFR Part 297; 16 USC Section 661 et seq.): Any modification of a body of water requires consultation with the U.S. Fish and Wildlife Services and the appropriate state wildlife agency to develop measures to prevent, mitigate or compensate for losses of fish and wildlife. This requirement is addressed under CWA Section 404 requirements.

State ARARs *(Massachusetts)*:

40 C.F.R. Parts 260-262 and 264 Resource Conservation and Recovery Act, Subtitle C-Hazardous Waste Identification and Listing Regulations; Generator and Handler Requirements, Closure and Post-Closure - Massachusetts has been delegated the authority to administer these RCRA standards through its state hazardous waste management regulations. Waste generated will be tested to determine whether it exceeds hazardous waste thresholds and, if so, the hazardous waste will be managed on-site and until such time as it is shipped to an EPA-approved off-site disposal location.

310 CMR 10.00: Wetlands Protection Regulations – standards for work within state wetland resource areas (including vegetated wetlands and 100-year floodplain) or buffer zone (200 feet from a waterway and 100 feet from a wetland). Under this requirement, available alternatives must be considered that minimize the extent of adverse impacts, and mitigation including restoration and/or replication is required.

314 CMR 4.05: Massachusetts Surface Water Quality Standards: These regulations limit or prohibit discharges of pollutants to surface waters to assure that surface water quality standards of the receiving waters are protected and maintained or attained. This may pertain to both discharges to surface water as a result of removal activities and any on-site waters affected by site conditions. On-site discharges to surface waters and adjacent wetlands, shall meet these substantive discharge standards.

310 CMR 30.100: Hazardous Waste Rules for Identification and Listing of Hazardous Wastes: 310 CMR 30.101 through 30.199, cited collectively as 310 CMR 30.100, identify or otherwise describe those wastes which are subject to 310 CMR 30.000, establish provisions for classifying waste as non-hazardous, and prescribe testing methods and procedures.

310 CMR 30.300: Hazardous Waste Management Rules - Requirements for Generators 30.301: Purpose, Scope, and Applicability (1) 310 CMR 30.301 through 30.399, cited collectively as 310 CMR 30.300, prescribe standards for generators of hazardous waste.

The OSC will coordinate with State officials to identify additional State ARARs, if any. In accordance with the National Contingency Plan and EPA Guidance Documents, the OSC will determine the applicability and practicability of complying with each ARAR that is identified in a timely manner.

6. Project schedule

Initiation of Site work is planned to commence during the fall of 2020. The removal activities for this action are estimated to take 60 days of field activity.

B. Estimated Costs

COST CATEGORY		**CEILING**
REGIONAL REMOVAL ALLOWANCE COSTS:		
ERRS Contractor		$1,600,000.00
Interagency Agreement		$ 0.00
OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:		
START Contractor		$100,000.00
Extramural Subtotal		$1,700,000.00
Extramural Contingency	10%	$170,000.00
TOTAL, REMOVAL ACTION CEILING		**$1,870,000.00**

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

In the absence of the response action described herein, conditions at the Site will persist. The hazardous substances identified above will remain at the Site, and continue to pose the threats to public health, welfare, and/or the environment outlined in Section III of this action memorandum.

VII. OUTSTANDING POLICY ISSUES

There are no precedent-setting policy issues associated with this Site that would require a review by EPA headquarters prior to implementation.

VIII. ENFORCEMENT ... For Internal Distribution Only

See attached Confidential Enforcement Strategy.

The total EPA costs for this removal action that will be eligible for cost recovery are estimated to be $*1,870,000.00* (extramural costs) + $*70,000* (EPA intramural costs) = $1,940,000 X 1.4053 (regional indirect rate) = **$2,726,280** [1].

IX. RECOMMENDATION

This decision document represents the selected removal action for the 33 Water Street Site in Danvers, Massachusetts developed in accordance with CERCLA, as amended, and is not inconsistent with the National Contingency Plan. The basis for this decision will be documented in the administrative record to be established for the Site.

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[1]Direct Costs include direct extramural costs $1,870,000 and direct intramural costs $70,000. Indirect costs are calculated by using regional indirect rate in effect at time cost estimate is prepared, and is expressed as a percentage of the direct costs 40.53% x $1,940,000, consistent with EPA's full cost accounting methodology effective October 01, 2019. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

Conditions at the Site meet the NCP Section 300.415 (b) (2) criteria for a removal action due to the following:

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants [§300.415(b)(2)(i)];

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate [§300.415(b)(2)(iv)];

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released [§300.415(b)(2)(v)];

The availability of other appropriate Federal or State response mechanisms to respond to the release [§300.415(b)(2)(vii)];

I recommend that you approve the proposed removal action. The total extramural removal action project ceiling if approved will be *$1,870,000.*

APPROVAL: BRYAN OLSON Digitally signed by BRYAN OLSON Date: 2020.09.17 09:42:17 -04'00' DATE:_____

DISAPPROVAL:_____ DATE:_____