



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

MEMORANDUM

DATE: 9/14/20

SUBJ: Request for a Removal Action Amendment to increase the budgetary ceiling and request a consistency exemption from the \$2 million statutory limitation at the Creese & Cook Tannery (Former) 3 Site, Water Street, Danvers, Essex County, MA - **Action Memorandum Amendment**

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TO: Bryan Olson, Director
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I. PURPOSE

The purpose of this Action Memorandum is to request a budgetary ceiling increase of \$2,663,000, and an exemption from the \$2 million statutory limitation based on the consistency exemption criteria for the removal action at the Creese & Cook Tannery (Former) 3 Superfund Site (the Site), which is located at 45 Water Street in Danvers, MA. Hazardous substances present in soil at the Site, if not addressed by implementing the response actions selected in this Action Memorandum, will continue to pose a threat to human health and the environment. The original Action Memorandum was signed on September 24, 2018, with a budget of \$1,117,000.

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#: MAD001031574
SITE ID# : 01HL
CATEGORY : Time-Critical

A. Site Description

1. Removal site evaluation

The Creese & Cook Tannery (Former) Superfund Site is the location of a former tannery and was placed on the National Priority List (NPL) on May 24, 2013. Remedial actions included soil and ground water sampling as part of the Remedial Investigation/Feasibility Study (RI/FS). The RI/FS report, *Creese & Cook Tannery (Former) Superfund Site, East Study Area, Danvers, Massachusetts, Remedial Investigation/Feasibility Study, EPA Task Order No. 0095-RI-CO-01HL* was dated March 2018. The *Record of Decision (ROD) Creese and Cook Tannery (Former) Superfund Site CERCLIS EPA ID#: MAD001031574 Operable Unit 1 – East Study Area (ESA) Operable Unit 2 – West Study Area (WSA) Danvers, Massachusetts, July 2019*, was signed on July 22, 2019.

On September 5th, 2018 Removal and Remedial Program Managers and staff met to discuss Site conditions and determine if a removal action was warranted at the property. It was agreed that the information available in the Remedial sampling efforts was sufficient to support an Action Memorandum to address arsenic-contaminated soil at 45 Water Street. Other potential contaminants of concern included lead (Pb), polyaromatic hydrocarbons (PAHs) (specifically benzo(a)pyrene), and dioxin. An Action Memorandum was prepared and signed on September 24, 2018.

During the weeks of May 13, and October 16, 2019, EPA's Removal program conducted soil sampling to determine the extent of contamination at the property. The sample analytical results confirmed the presence of arsenic and dioxin at levels that may present a threat to human health and the environment. In addition, it identified chromium (+3) at levels exceeding the Massachusetts Contingency Plan (MCP) Method One Risk Assessment standards. The concentrations of lead (Pb) and benzo(a)pyrene were below levels which may present a health threat. The results were documented in the START 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.

Because field screening identified surface soil impacted with arsenic above the Massachusetts Department of Environmental Protection's (MassDEP's) imminent hazard level, on May 30, 2019, EPA conducted a limited response action using the START contractor to cover bare soil impacted with elevated levels of arsenic around the condominium with mulch to protect residents from direct contact with the soil until a removal action could be initiated.

2. Physical location

The address for this Removal Action is 45 Water Street in Danvers, Massachusetts. The geographic coordinates are approximately 42.4418 degrees north latitude, 70.9258 degrees west longitude. The location of the Removal Action is at the southern tip of the East Study Area of the Creese & Cook Tannery (Former) NPL Site. The cleanup is limited by the boundaries of the 45 Water Street Property which is identified by the Town of Danvers on Map 64, Lot 23. To the north is residential property and the balance of the NPL Site, and to the east, south, and west is the Crane River. This is not an EJ area.

3. Site characteristics

The property consists of a privately owned 0.89-acre parcel located in a residential/commercial area. It is bounded to the north by town-owned property, to the west and south by MBTA property, and to the east by the Crane River. It contains a single 5-unit condominium building and includes level paved parking and landscaped areas adjacent to the building. An unmaintained wetland area slopes down to the Crane River on the east side, a portion of which is in the 100-year flood plain and intertidal zone. From the level area, it is approximately eight feet to groundwater, mean sea level. All areas are accessible. Receptors may include residents, maintenance workers, and trespassers.

The property was one of several properties formerly owned by or adjacent to the Creese & Cook Tannery Company, which operated a tanning and finishing facility on 33 Water Street from 1903 to 1981. Operations included the use and disposal of hazardous substances. A fire burned a portion of the former tannery building in 1983 prior to development.

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

The operational status is inactive. The incident category is housing area. The owner/operator type is private.

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

The analytical results for soil samples reveal that several hazardous substances as defined by section 101(14) of CERCLA, or pollutants or contaminants as defined by section 101(33) of CERCLA known to be present at the Site are listed below.

Hazardous Substances	Matrix	Depth (ft bgs)	Maximum Concentration (ppm)
Arsenic	Soil/Waste ^A	0-0.5	488
Chromium ⁺³	Soil/Waste ^A	0-0.5	150,000
Dioxin	Soil	0-0.5	520 ^B

^A Waste indicates Leather scraps.

^B Dioxin Reported as Toxicity Equivalents (TEQ) in ng/kg.

bgs = Below ground surface

Two waste streams exist on Site. The first is soil containing arsenic, chromium, and dioxin. The second waste stream is scrap leather wastes containing chromium and arsenic. The leather scrap waste is present on the surface of the riverbank which is eroding into the Crane River. The leather wastes contain the highest concentrations of arsenic and chromium.

5. NPL status

The Site listed on the National Priorities List on May 24, 2013

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.

B. Other Actions to Date

1. Previous actions

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 - Remedial

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.

3. Current Actions - Removal

EPA's ERRs and START contractors mobilized to the Site on July 20, 2020. Actions to date include:

- Removal of trees and shrubs;
- Site set-up including receipt of heavy equipment, office trailer, electrical, security fencing, etc.;
- Excavation of grids 1-14 to between 1 and 3 feet below ground surface. Each grid is approximately 25 x 25 feet;
- Stockpiling approximately 500 yards of contaminated soil on-site;
- Disposal analyses;
- Field Screening for arsenic and chromium;
- Laying down warning barrier in grids;
- Backfilling with clean fill to grade;
- Documentation of excavations and field screening results; and
- Excavation of test pit to determine depth of waste. Clean soil was found at ten feet below ground surface.

The ceiling increase is required to fund the following tasks. These tasks were part of the original Scope of Work but took additional time and added costs:

- Phase II extent of contamination investigation;
- Emergency action to cover surface soil contaminated with arsenic at concentrations exceeding the State's imminent hazard level;

- Disposal of waste soil containing dioxin;
- Treating hazardous waste (soil containing elevated levels of chromium);
- Crane River shoreline restoration (engineering design and construction);
- Repaving the driveway for site restoration; and
- Longer cleanup schedule than originally estimated.

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.

2. Potential for continued State/local response

EPA is the lead agency at this NPL Site and does not anticipate that the State will not 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.

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.

Dioxin

Chlorinated Dibenzo-p-Dioxins (CDDs) are a family of 75 chemically related compounds commonly known as chlorinated dioxins. One of these compounds is called 2,3,7,8-TCDD. It is one of the most toxic of the CDDs and is the one most studied. CDDs are not intentionally manufactured by industry except for research purposes. They (mainly 2,3,7,8-TCDD) may be formed during the chlorine bleaching process at pulp and paper mills. CDDs are also formed during chlorination by waste and drinking water treatment plants. They can occur as contaminants in the manufacture of certain organic chemicals. CDDs are released into the air in emissions from municipal solid waste and industrial incinerators or during uncontrolled fires.

Exposure to dioxin can occur through: eating food, primarily meat, dairy products, and fish; breathing low levels in air and drinking low levels in water; skin contact with certain pesticides and herbicides; living near an uncontrolled hazardous waste site containing CDDs or incinerators releasing CDDs; and working in industries involved in producing certain pesticides containing CDDs as impurities, working at paper and pulp mills, or operating incinerators.

The most noted health effect in people exposed to large amounts of 2,3,7,8-TCDD is chloracne, a severe skin disease with acne-like lesions that occur mainly on the face and upper body. Other skin effects noted in people include skin rashes, discoloration, and excessive body hair. Changes in blood and urine that may indicate liver damage. Exposure to high concentrations of CDDs may induce long-term alterations in glucose metabolism and subtle changes in hormonal levels.

Exposure to lower levels can cause a variety of effects in animals, such as weight loss, liver damage, and disruption of the endocrine system, weakened immune system, reproductive damage and birth defects, and miscarriages. The offspring of animals exposed to 2,3,7,8-TCDD during pregnancy often had severe birth defects including skeletal deformities, kidney defects, and weakened immune responses.

Based on the Site conditions and information available on the hazardous substances present, the Site poses the threats to public health and the environment outlined 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)];

Lab analyses reveals the presence of several hazardous substances, including but not limited to, those listed above in Section II A.4. The residents of the condominium on the Site are the most likely to be exposed. Observations by the OSC show that young children/adults play in the yard in the exposed dirt. Other potential groups that may be exposed include friends or the residents, maintenance workers, utility workers, trespassers, and pets.

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)];

Laboratory analyses of samples collected in the surface soil show that hazardous substances are present at levels exceeding the Removal Management Levels (RMLs) and the MCP Imminent Hazard Levels and S1 Soil Standards. Exposure can occur by direct contact with the surface soil, tracking impacted soil into residences, and by ingestion through hand to mouth contact. Since the contamination is widespread across the property, exposure to elevated levels may occur on any part of the property. However, the highest levels were detected along the shoreline.

Hazardous Substances	Matrix/Depth	Maximum Concentration	EPA ROD Cleanup Goal	DEP Imminent Hazard	MCP S1
	(ft bgs)	(ppm)	(ppm)	(ppm)	(ppm)
Arsenic	Soil/Waste (0-0.25)	488	20	40	20
Chromium ⁺³	Soil/Waste (0-0.25)	150,000	N/A	N/A	1000
Dioxin	Soil (0-0.25)	520^A	51^B	N/A	0.02^B

^A Dioxin Reported as Toxicity Equivalents (TEQ) in ng/kg.

^BUnits = ng/kg

bgs = Below ground surface

Bold indicates cleanup goals are exceeded.

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

Erosion of the riverbank along the Crane River is causing soil and leather scrap wastes to migrate into the river. As a result, wastes containing high concentrations of chromium and arsenic are entering the river. Precipitation and storm water run-off may also carry arsenic, chromium and dioxin from the soil into the river. Flooding may also cause additional migration of contaminants into the river as some of the land is located within the flood plain.

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 to abate the threats outlined above, so 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 the Action Memorandum and this Amendment, 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. EXEMPTION FROM STATUTORY LIMITS

CERCLA Section 104(c) states that removal actions can exceed the \$2 million statutory limits if conditions meet either the emergency exemption criteria or the consistency exemption criteria. The consistency exemption requires that the proposed removal action be appropriate and consistent with the remedial action to be taken. As described below, conditions at the Site meet the criteria for the consistency exemption, as follows:

A. Consistency Exemption

Under CERCLA § 104(c)(1)(C), continued response actions are otherwise appropriate and consistent with the remedial action to be taken, as described below.

- The cleanup goals are consistent with the goals in the Record of Decision;
- The remedy, excavation to 3 feet bgs and off-site disposal, is consistent with the presumptive remedy in the ROD; and
- This remedy will provide a permanent solution to mitigate the threat to human health and welfare posed by the contamination

VI. 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 conducted provided that sampling results indicate levels of contaminants above the cleanup goals (Note: this is a change from the previous Action Memorandum at the request of the MassDEP to comply with the MCP). 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 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.

The field screening will be for As and Cr using XRF. Dioxin cannot be analyzed via a field screening method. Rather, removal of dioxin containing soils will be inferred via As and Cr field screening. A regression analysis was performed to determine a correlation between the dioxin data and the metals data from the Phase II investigation. The results indicated a high positive correlation between the dioxin and chromium concentrations. A correlation was also found between the dioxin and arsenic results, although not as high. The correlations indicated that dioxin is below the cleanup goal of 51 ng/kg when arsenic is less than 15 ppm and chromium is less than 100 ppm. Therefore, soil will be excavated until residual concentrations of these metals meet these targets.

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.

If wastes are 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. Post-excavation, the riverbank along will be restored in accordance the State and Federal requirements including the Massachusetts Wetland Protection Act.

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 and dewater as needed;
- Treat and dispose of hazardous substances at EPA-approved off-site disposal facilities;
- Prepare various site plans as including for restoration of the Riverbank; 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 CIC to assist with all public relations activities. EPA will work closely with the state, town, government, local businesses, and the community.

EPA has already held two joint resident/Town of Danvers meetings and has two additional meetings planned. EPA will continue to coordinate with these groups. The CIC has issued a Fact Sheet to neighboring businesses and residents so the neighborhood is informed.

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 would 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 release concerned. The Remedial Project Manager and Supervisors participated in the Site Review Meeting held in September 2018 and second review meeting held on September 12, 2019 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 02, 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.

The available Site data indicates it is unlikely that an alternative to landfill disposal can be employed. However, other sustainability efforts can be used such as ensuring that contractors are meeting or exceeding green remediation requirements of their contract including but not limited to, a no-idling policy and an on-site recycling program.

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.

National Historical Preservation Act (16 U.S.C. 469 et seq.; 36 CFR Part 65): When a federal agency finds, or is notified, that its activities in connection with a federal construction project may cause irreparable loss or destruction of significant scientific, pre-historical, historical, or archeological data, the substantive standards under the Act will be met.

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 continue to 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

The contractor mobilized to the Site on July 20, 2020 and the cleanup work is expected to take four months. Site Restoration including the shoreline restoration will be completed by until June 2021. EPA's Remedial program has agreed to perform the maintenance of the site including all restoration work.

B. Estimated Costs

COST CATEGORY	CURRENT CEILING	COSTS TO DATE	PROPOSED CEILING
<i>REGIONAL REMOVAL ALLOWANCE COSTS:¹</i>			
ERRS ² Contractor	\$831,000.00	\$393,218.00	\$2,650,000.00
Interagency Agreement	\$0.00	\$0.00	\$0.00
<i>OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:</i>			
START ³ Contractor	\$100,000.00	\$256,000.00	\$500,000.00
Extramural Subtotal	\$931,000.00	\$0.00	\$3,150,000.00
Extramural Contingency (20%)	\$186,000.00	\$0.00	\$630,000.00
TOTAL, REMOVAL ACTION CEILING	\$1,117,000.00	\$649,218.00	\$3,780,000.00

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

Delayed action will increase public health risks by allowing continued exposure of residents, guests, workers, and trespassers to hazardous substances present in the surface soil at the residential property. In addition, wastes containing high concentrations of heavy metals will continue to erode into the Crane River as outlined in Section III of this Action Memorandum.

VII. OUTSTANDING POLICY ISSUES

There are no precedent-setting policy issues associated with this Site.

¹This cost will be driven by the selected option(s). Should longer term options need to be implemented, additional funding may be required.

²Emergency Rapid Response Services

³ Superfund Technical Assistance and Response Team

VIII. ENFORCEMENT ... For Internal Distribution Only

See attached Confidential Enforcement Strategy. – Enforcement is being managed by the Remedial program

The total EPA costs for this removal action that will be eligible for cost recovery are estimated to be \$3,780,000 (extramural costs) + \$100,000 (EPA intramural costs) = \$3,880,000 X 1.4053 (regional indirect rate) = \$5,452,564⁴.

⁴Direct Costs include direct extramural costs \$3,780,000 and direct intramural costs \$100,000. 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 \$3,880,000, consistent with EPA's full cost accounting methodology effective October 01, 2020. 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.

IX. RECOMMENDATION

This decision document represents the selected removal action for the *Creese & Cook Co. (Former 3) Site, located at 45 Water Street* in Danvers, MA, 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.

Conditions at the Site meet the NCP Section 300.415 (b)(2) criteria for a removal action, and the CERCLA section 104(c) criteria for a consistency exemption from the \$2,000,000 limitation, 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 your approval of the proposed removal action and \$2,000,000 exemption. The total project ceiling if approved will be \$3,780,000. Of this, an estimated \$2,650,000 will be from the Regional removal allowance.

APPROVAL: _____

DATE: _____

DISAPPROVAL: _____

DATE: _____