



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

CONTAINS ENFORCEMENT-SENSITIVE INFORMATION

MEMORANDUM

DATE: September 7, 2016

SUBJ: Request for a Removal Action at the EWR Site,
Waterbury, New Haven County, Connecticut - **Action
Memorandum**

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Emergency Response and Removal Section I

THRU: Edward J. Bazen, Chief *EJB*
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ACT
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TO: Bryan Olson, Director *BO*
Office of Site Remediation and Restoration

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the proposed removal action at the Environmental Waste Resources (EWR) Site (the Site), which is located at 130 Freight Street in Waterbury, New Haven County, Connecticut. Hazardous substances present in tanks, vaults and drums 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. 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#: CTD072138969
SITE ID#: 01NB
CATEGORY: Time-Critical

A. Site Description

1. Removal site evaluation

On May 11, 2016, Connecticut Department of Energy and Environmental Protection (CT DEEP), Remediation Division of the Bureau of Water Protection and Land Reuse formally requested that EPA Region 1 Emergency Planning and Response Branch (EPRB) evaluate the subject Site for a potential removal action under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The EWR Site is comprised of two parcels, one parcel is privately owned by Ridan Enterprises, Inc. and the other parcel is privately owned by Environmental Waste Resources, Inc. (EWR).

On 16 June 2016, EPA On-Scene Coordinator (OSC) Daniel Burgo and Weston Solutions, Inc., EPA's Superfund Technical Assessment and Response Team (START) contractor, mobilized to the Site to conduct a site reconnaissance and review potential sampling locations. During the site walk approximately 37 aboveground storage tanks (AST), eight secondary containments structures, four concrete vaults, an estimated two dozen drums, and previously stockpiled surface soils were identified as potential sampling locations. Two locations were identified as potential asbestos-containing material (ACM).

On 21-22 June 2016, OSC Burgo and START mobilized to the Site to conduct surface soil, product, water, and asbestos sampling activities. START personnel collected five product samples, six stockpiled soil samples, two sludge samples, and thirteen aqueous samples for volatile organic compounds (VOC), semivolatile organic compound (SVOC), metals, cyanide, pesticide, and polychlorinated biphenyl (PCB) analysis. Two suspected incidental ACM samples were collected for polarized light microscopy (PLM) analysis. The highest concentrations are summarized in the following Tables.

pH Values in Aqueous Samples	
Sample Locations	AQ-04B
Sample Number	R1-16050001-0008
pH	14

Cyanide in Aqueous Samples	
Sample Locations	AQ-09
Sample Number	R1-16050001-0013
COMPOUND	µg/L (ppb)
Cyanide	5,400,000

pH Values in Aqueous Samples	
Sample Locations	AQ-03B
Sample Number	R1-16050001-0006
pH	<3

Asbestos	
Sample Locations	AS-02
Sample Number	R1-16050001-0029
COMPOUND	%
Amosite	1
Chrysotile	3

VOCs in Product Samples	
Sample Locations	PR-04
Sample Number	R1-16050001-0017
COMPOUND	µg/kg (ppb)
2-Propanone (acetone)	1,490,000
Methylene Chloride	1,010,000
Methyle-t-Butyl Ether	1,000,000
1,1-dichloroethane	300,000
2-Butanone (MEK)	2,660,000
Benzene	260,000
Toluene	20,000,000
Trichloroethylene	1,610,000
4-Methyl-2-Pentanone (MIBK)	2,690,000
Tetrachloroethylene	4,110,000
Ethylbenzene	2,780,000
M/P Xylene	11,800,000
Ortho Xylene	3,340,000
N-Propylbenzene	280,000
1,3,5-Trimethylbenzene	540,000
1,2,4-Trimethylbenzene	1,430,000
Naphthalene	270,000

Metals in Product Samples	
Sample Locations	PR-04
Sample Number	R1-16050001-0017
COMPOUND	mg/kg (ppm)
Copper	6,000
Chromium	2,100
Lead	560
Nickel	630
Arsenic	52
Mercury	ND (31)
Selenium	35
Barium	1,100

SVOCs in Aqueous Samples	
Sample Locations	AQ-08B
Sample Number	R1-16050001-0012
COMPOUND	µg/L (ppb)
Pyridine	2,000
Phenol	590
Benzyl alcohol	1,300
1,2-Dichlorobenzene	ND (250)
Benzoic acid	290,000
Dimethyl phthalate	ND (250)
Diethylphthalate	2,400
Di-n-butylphthalate	ND (250)
Fluoranthene	330
Pyrene	ND (250)
Diethylhexyl Phthalate	290

2. Physical location

The EWR Site, which consists of two parcels (Parcel A and Parcel B), is located at 130 Freight Street in Waterbury, New Haven County, Connecticut. The two parcels total approximately 14.38 acres and listed as Map, Block, Lot 272-22-24 (Parcel A) and Map, Block, Lot 272-22-22 (Parcel B), also identified as West Main Street, of the City of Waterbury's land records. Parcel A is an industrial-zoned 10.56 acre property containing an office, warehouse, drum division and stabilization area, Phoenix Soil maintenance building, and Ingersall building. Parcel B is an industrial-zoned 3.82 acre property containing a wastewater treatment plant, guard house, scale, and railroad tracks. Parcel A is presently owned by Ridan Enterprises, Inc. (Ridan), formerly known as D'Addario Enterprises, Inc. One tenant, DiMichele's Autobody, continues to operate

in portions of the 130 Freight Street facility. Parcel B is presently owned by Environmental Waste Resources, Inc. (EWR), formerly known as Environmental Waste Recovery, Inc. and Environmental Waste, Inc.

The geographic coordinates of the Site at the approximate center are 41° 33' 19" north latitude and 73° 02' 51" west longitude.

The Site is bordered by Connecticut Department of Children and Families (DCF) parking lot and railroad tracks to the east, a mix of commercial and industrial properties to the west, Freight Street and a mix of commercial and industrial properties to the south, and commercial properties and West Main Street to the north.

Inferred groundwater flow at the Site is south-southwest, based upon regional topography and drainage conditions, towards the Naugatuck River. The Naugatuck River is approximately 100 yards to the west of Parcel B.

3. Site characteristics

The Waterbury Brass Company operated a brass rolling mill and various associated operations at the Site from 1867 through 1959. From 1960 through 1974, Anaconda American Brass Company operated at the Site. Anaconda's operations consisted primarily of eyelet stamping, cleaning, pickling, and electroplating of copper, zinc, and chromium.

From 1974 through 1998, EWR operated as a permitted Resource Conservation and Recovery Act (RCRA) Treatment, Storage, and Disposal Facility (TSDF) at the Site. There are eight known hazardous waste Solid Waste Management Units (SWMUs), as defined under RCRA, on the EWR property, including SWMU-1, a stabilized metal hydroxide sludge waste pile, SWMU-2, a metal hydroxide sludge pile contaminated with polychlorinated biphenyls, and SWMU-8, the above ground storage tank farm consisting of approximately 30 tanks. EWR performed treatment of industrial wastewater, solvent recycling and recovery, waste oil blending and recovery, chemical fixation and stabilization, cyanide treatment, and chromium reduction. EWR went out of business in February 1998 and abandoned the Site, leaving regulated waste in containers, tanks, vaults, and piles.

Based upon the results of EPA's June 2016 PA/SI, the presence of corrosive acids and bases, cyanide, toluene, methylene chloride, benzoic acid, tetrachloroethylene, 2-butanone (MEK), amongst other hazardous substance and hazardous waste, are present at this abandoned Site. These identified hazardous substances pose an actual or potential exposure threat to nearby human populations, animals, and/or the food chain. The Site has been abandoned for 18 years, and there has been documented accounts and evidence of numerous trespassers and homeless people living on the Site. This population could be potentially exposed to hazardous conditions. There are frequent fires on the Site every year, and if hazardous wastes and/or hazardous substances were released toxic fumes could impact the nearby neighborhoods. These abandoned containers currently pose a threat of release which may be exacerbated by weather conditions, such as extreme heat, lightening, or precipitation. In addition, a release from the abandoned containers could potentially migrate off-Site and due to the surface water drainage pathway from

the building into the Naugatuck River. Within a quarter mile of the Site there are multiple receptors including 1,600 residents, one school, and one day care. Within a half mile of the Site there are 7,300 residents, three day cares, and two schools. The Naugatuck River is 100 yards to the west of the Site.

Based on information in EPA's EJSCREEN environmental justice screening tool, 10 out of 11 Environmental Justice Indexes for the area within a one mile radius of the Site exceed the 80th percentile on a national basis. The Environmental Justice Indexes that exceed the 80th percentile on a national basis are the following: PM 2.5; Ozone; National-Scale Air Toxics Assessment (NATA) Diesel PM; NATA Cancer Risk; NATA Respiratory HI; Traffic Proximity; Lead Paint Indicator; Superfund Proximity; Hazardous Waste Proximity; and Water Discharger Proximity.

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

The following hazardous substances, defined by Section 101(14) of CERCLA, 42 U.S.C. §9601(14), have been identified at the Site: 2-propanone; methylene chloride; 2-butanone (MEK); tetrachloroethylene; M/P xylene; 1,2,4-trimethylbenzene; cyanide; benzoic acid; ACM. Corrosive liquids as identified RCRA characteristic hazardous waste in 40 C.F.R. 261 Subpart C are identified at the site. Due to the Site being abandoned and in a deteriorated state there is a threatened release of hazardous substances.

Based on the information gathered during the investigations, along with information provided by CT DEEP, and historical documents, there are an estimated 240,000 gallons of hazardous substances, hazardous waste, and waste material at the Site that pose a threat to human health or the environment on the property. Of the 240,000 gallons the following has been identified: 3,500 gallons of 5,400 ppm cyanide liquids; 20,000 gallons of corrosive liquids; and 15,000 gallons of 290 ppm benzoic acid have been confirmed during the PA/SI. Also during the PA/SI, an estimated 125,000 gallons of an oily waste was identified in numerous vaults and secondary containment structures. In the historical documents and their respective field assessments reports, many of these oils contained PCB concentrations up to 50ppm and other hazardous substances.

The abandoned and degraded containers on the Site present an increased threat of additional fire or explosion, which could lead to a release of toxic fumes into the nearby neighborhoods. These containers currently pose a threat of release which may be exacerbated by weather conditions, such as extreme heat, lightening, or precipitation.

5. NPL status

The Site is not currently on the National Priorities List, and has not received a Hazardous Ranking System rating.

B. Other Actions to Date

1. Previous actions

Dewatered metal hydroxide sludge waste was stored on the parking lot located north of the plant from ± 1975 to 1983. Analytical results of samples of the sludge collected in 1982 by EPA's contractor indicated PCB concentrations ranging from 44.8 to 78 ppm. By EPA consent decree, the sludge was removed and disposed of at the CECOS RCRA facility in Niagara, New York. The sludge storage area was closed as a RCRA Solid Waste Management Unit (SWMU) in 1983. Approximately 9,800 cubic yards of sludge was removed from the area.

In February 1998, Connecticut Department of Environmental Protection (CT DEP) [now (CT DEEP)] Emergency Response and Spill Prevention, and the Division of Waste Engineering and Enforcement Division's RCRA Section contracted with Excavation Technologies of North Haven, Connecticut to remove accumulated hazardous wastes and containers from the Site following EWR's bankruptcy filing. By June 7, 1998, approximately 1,000 containers of waste, a sludge pile, two 4,500 gallon tanks of acid and caustic and a combination of 40,000-gallons of other liquid waste was removed by CT DEEP. Since the removal was limited in scope, CT DEEP was not able to remove all of the waste nor decontaminate any of the container storage areas, tank storage systems, wastewater treatment equipment, waste pile storage/processing areas, hazardous waste boiler, or secondary containment systems. According to a July 15, 2010 memorandum from CT DEEP, the total cost of the clean-up was in the range of \$500,000.

On 20 May 2002, CT DEEP Waste Engineering and Enforcement Division, conducted an inspection of the Site to evaluate the conditions of the vacant site. The process plant, containing the quality control laboratory, hazardous waste boiler, wastewater treatment plant, fuel blending process, and most of the waste/process chemical storage tanks, were inspected and the condition of remaining tanks and basins was documented. Pretreatment, cyanide, hazardous waste fuel, decanting, sodium hydroxide, and metal hydroxide sludge tanks were identified and inspected. It was noted that many of the tanks had filled with precipitation since the CT DEEP removal and relocation of waste was conducted in February and March of 1998.

On 17 and 28 June 2010, CT DEEP conducted an inspection of the Site and noted the Site buildings had continued to deteriorate, including collapsing roofs in multiple locations, siding that had blown or fallen off buildings, deteriorated catwalks and metal gratings, and tank piping that had been cut and removed. Due to the theft of metal piping systems, the waste remaining at the bottom of some storage tanks had been released into secondary containment systems. Some of the secondary containment structures had overflowed due to precipitation, other secondary containment structures appeared to have leaked, and others contained what appeared to be mixtures of precipitation and waste. There was evidence that the Site had been vandalized and that people were living on-site.

Through EPA's Brownfields Program, the Waterbury Development Corporation used a community-wide assessment grant awarded in 2009 to conduct a Phase I and Phase II Environmental Site Assessment. On April 1, 2011, GeoDesign, Inc. (GeoDesign) conducted the

Phase I on behalf of the Waterbury Development Corporation. The Phase I identified that the Site has a long history of heavy industrial use primarily as a brass rolling mill. The Phase I identified twenty-one generalized Recognized Environmental Conditions (RECs) or Areas of Concern (AOCs) at the Site, which included the tank farm (aka Process Plant) and other vats, tanks, drums, and USTs located on site that continue to be a source of pollution to soil and groundwater.

From August 23 through September 12, 2011, GeoDesign completed a limited Phase II investigation at the Site. The Phase II consisted of twenty-nine geoprobes and eleven hollow stem auger borings throughout the Site. The investigation identified significant groundwater contamination in monitoring wells downgradient of the tank farm, including Light Non-Aqueous Phase Liquid (LNAPL), chlorinated VOCs, PCBs, and SVOCs throughout the Site.

In 2013 CT DEEP's Site Assessment and Support Unit conducted limited shallow groundwater investigations on the potential migration of VOCs and LNAPL onto the property downgradient of the Site and the Naugatuck River, and confirmed that the migration of substances does not yet appear to have reached the river

2. Current actions

Currently, the Waterbury Police Department is actively monitoring the Site to limit the amount of unauthorized access. The Waterbury Water Department is working to stop all city water from entering the Site. During the PA/SI it was evident that the trespassers were tampering with the water mains and using the water for washing clothes and bathing.

C. State and Local Authorities' Roles

1. State and local actions to date

As noted above in Section II.B.1 there have been a number of state and local actions taken at the Site. Most recently in 2015 the City initiated a hazardous building materials assessment under its 2012 assessment grant. The Draft aboveground & Underground Storage Tank Assessment Report (TRC Environmental Corporation, November 2015) identified the presence of hazardous wastes within the tank farms ASTs and berms. Based on all of the information gathered during these actions and site conditions, CT DEEP, Remediation Division of the Bureau of Water Protection and Land Reuse formally requested assistance from EPA Region 1 EPRB.

2. Potential for continued State/local response

The City of Waterbury has a strong interest in the redevelopment and revitalization of the Site due to its proximity to the Naugatuck River and the downtown corridor. At this time the Waterbury Police Department will continue to patrol the area of the Site to restrict access until the threat to human health and the environment has been mitigated. Once EPA has completed this proposed removal action, CT DEEP will continue to be the lead agency for any long-term regulatory oversight of this Site.

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

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.

Corrosive Liquids

During the PA/SI two tanks of corrosive liquids¹ were identified. Corrosive Liquids are identified RCRA hazardous waste in 40 C.F.R. 261 Subpart C. Each tank contained an estimated 10,000 gallons, one tank has a pH of 14 and the other tank has a pH of 2. The tanks are approximately 2 feet apart and share the same secondary containment structure. These abandoned corrosive liquid tanks are in an area where there is unrestricted access to them and they are situated on the boundary of the Site which is 30 feet away from a neighboring business and a parking lot. If these corrosive liquids were to combine or exposed to fire there would be an explosive exothermic reaction that could damage the secondary containment structure releasing 20,000 gallons of highly corrosive liquid and would release a toxic plume that would threaten the nearby workers and residents.

Cyanide

Cyanide compounds are hazardous substances as defined by Section 101(14) of CERCLA, 42 U.S.C. §9601(14). A tank containing an estimated 3,500 gallons of cyanide at a concentration of 5,400 mg/L was discovered during the PA/SI. Follow up analytical determined that cyanide composition was 3,100 mg/L Physiologically Available Cyanide, which are capable of releasing Hydrogen Cyanide (HCN) or the cyanide anion (CN⁻) under reasonably anticipated human gastric conditions.

This abandoned tank is unsecured and missing property access covers. It is located in an area of high traffic for the trespassers living on site and is located within 30 feet of an area that is used for washing clothes and themselves. This cyanide tank is a potential threat to the trespassers through direct contact and to the nearby residents if it is involved in a fire.

An excerpt from the ATSDR Toxicological Profile for Cyanide²:

Dermal exposure to cyanide results in comparable effects, but at higher doses. Based on case report studies, the following acute median lethal exposure levels for humans were estimated: an LC50 of 524 ppm for a 10-minute inhalation exposure to

¹ Per 40 C.F.R. 261.22 *Characteristic of corrosivity (a) (1) It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5.*

² Agency for Toxic Substances and Disease Registry (ATSDR), U.S. Department of Health and Human Services, Public Health Service, *Toxicological Profile for Cyanide*, July 2006. <http://www.atsdr.cdc.gov/toxprofiles/tp8.pdf>

hydrogen cyanide, an LD50 of 1.52 mg/kg for the oral route, and an LD50 of 100 mg/kg for the dermal route, assuming that CN- is readily released from the compound.

Asbestos fibers

During the PA/SI friable chrysotile and amosite asbestos were identified. Due to the deteriorating building structures, the asbestos pipe wrap and boiler wrapping are exposed to the weather and may migrate off site. The friable asbestos is a direct exposure threat to the trespassers on the property and it is threat to the nearby residents due to the possibility of asbestos fibers migrating off-site from weather conditions and fire or explosions.

Asbestos fibers may enter the body by inhalation or ingestion. Asbestos mainly affects the lungs and the membrane that surrounds the lungs. Breathing asbestos can cause asbestosis, a buildup of scar-like tissue in the lungs and in the membrane that surrounds the lungs. Symptoms of asbestosis include shortness of breath, coughing, and sometimes heart enlargement. Asbestosis can lead to disability or death. Asbestos is also a known human carcinogen. Inhalation of high levels of asbestos can cause cancer of the lung tissue itself and mesothelioma, a cancer of the membrane that surrounds the lung and other internal organs.³

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)];

Because the Site has been abandoned for 18 years the buildings have deteriorated over time causing most of the walls and roofs to collapse. All of the tanks and vaults are susceptible to overfilling with precipitation, have been vandalized, and are deteriorating. CT DEEP reports that there have been uncontrolled release from these tanks and secondary containment structures containing oil and hazardous substances. Trespassers, neighboring workers and nearby residents, and ecosystem of the Naugatuck River could potentially be exposed to these oil and hazardous chemicals.

Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release [§300.415(b)(2)(iii)];

The tanks and vaults on the property are abandoned and unsecure. Due to theft, tampering, and overall degradation all of these containers pose a threat of release and many have already released, such as methylene chloride; 2-butanone (MEK); tetrachloroethylene; M/P xylene; and 1,2,4-trimethylbenzene.

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

³ Agency for Toxic Substances and Disease Registry (ATSDR), U.S. Department of Health and Human Services, Public Health Service, Tox FAQs Fact Sheet for Asbestos, September 2001.
<http://www.atsdr.cdc.gov/toxfaqs/tfacts61.pdf>

With the building roofs and walls deteriorating the tanks and vaults are susceptible to overfilling with precipitation which would cause an uncontrolled release.

Threat of fire or explosion [§300.415(b)(2)(vi)];

Waterbury Fire Department has reported that every year they respond to numerous small fires throughout the Site. If a significant fire or explosion were to impact these hazardous substances, the 1,600 residents within ¼ mile of the Site would be exposed to potentially toxic vapors and smoke.

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

State and local agencies do not have resources available to address the contamination at the Site and have requested EPA assistance. In a letter dated May 11, 2016, CT DEEP has requested EPA's assistance to address the two properties at this Site that are determined to have elevated levels of contamination that trigger a removal action.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances or hazardous waste 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, 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, EPA relevant action level or clean-up standards, Agency for Toxic Substances and Disease Registry documents or personnel, or staff toxicologists." In this instance, the appropriate Superfund Policy or guidance is RCRA, 40 C.F.R. 261 Subpart C and CERCLA, 42 U.S.C. §9601(14).

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The actions required to mitigate the threats outlined herein, are given below. The proposed actions will protect public health, welfare, and the environment by removing the hazardous substances from accessible areas of the Site. It is expected that specific removal activities will include, among other things, the following:

- A site walk with EPA contractors to determine appropriate equipment and personnel needed to perform the response and to ascertain the location of utilities;
- Development and implementation of the following plans:

- Site Specific Health and Safety Plan (HASP);
- Sampling and Analysis Plan (SAP);
- Air Monitoring Plan;
- Site Traffic Plan;
- Site Security Plan;
- Site Specific Data Management Plan;
- Conduct public outreach and communication activities, including flyers and meetings or door to door visits, as appropriate;
- Mobilizing of personnel and equipment to the Site;
- Performance of a structural engineering evaluation to determine the stability of the structures on-site ;
- Stabilizing and/or removal of structural debris, as needed;
- Conducting additional sampling, as needed, to better define the extent and type of contamination;
- Identifying, removing, segregating and staging of the drums and containers;
- Identifying, pumping, cleaning and decommissioning of all vaults, tanks, and secondary containment to prevent recontamination of precipitation;
- Controlling releases from the containers and collecting samples for disposal analysis;
- Collecting and removing ACM that pose a threat of off-site migration;
- Disposing of drums, containers, and other small containers of hazardous substances, pollutants, and contaminants, as warranted during the course of the response action;
- If contaminated stockpiled soils, previously stockpiled by the PRPs, are identified then excavating, segregating, and stockpiling contaminated soils and sludge in preparation for off-site disposal;
- Planning for and executing proper sampling, characterization, and disposal of hazardous materials that may be generated during the removal action at EPA approved off-site disposal facilities; and
- Repairing response related damage.

2. Community relations

A Community Involvement Coordinator (CIC) has been assigned to this Site and will assist the OSC by engaging with the local officials, state leaders, and residents, to keep them informed about the removal action. The CIC will prepare press releases and manage community meetings.

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 actions taken at the Site would be

consistent with and will not impede any future responses. Following completion of the removal action, regulatory oversight of the Site will be remanded to the CT DEEP.

4. Description of alternative technologies

Alternative technologies will be considered and incorporated, as appropriate, throughout the conduct of the removal action

5. Applicable or relevant and appropriate requirements (ARARs)

Pursuant to 40 C.F.R. 300.415(j), removal actions shall, to the extent practicable considering the exigencies of the situation, attain ARARs. Current ARARs identified, but not limited to, are listed below.

Federal ARARs:

Clean Water Act, National Pollutant Discharge Elimination System (NPDES), 40 CFR Parts 122 and 125: storm water standards for construction sites over one acre.

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): National Emission Standard 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 Air Act, National Emission Standards for Hazardous Air Pollutants (NESHAPS: 40 CFR § 61.151): Standards for Inactive waste disposal sites that apply to asbestos mills and manufacturing and fabricating. NESHAPS standards for preventing air releases from inactive asbestos disposal sites, including cover standards, dust suppression, and land use controls. Asbestos contaminated materials will be consolidated and shipped off-site for disposal at EPA-approved facility.

Framework for Investigating Asbestos-Contaminated Superfund Sites, OSWER Directive #9200.0-68 (Sept. 2008): Guidance on investigating and characterizing the potential human exposure from asbestos contamination in outdoor soil at Superfund sites.

40 CFR Part 761.61 & 40 C.F.R. Section 761.79: During the PA/SI an estimated 125,000 gallons of an oily waste was identified in numerous vaults and secondary containment structures. In the historical documents and their respective field assessments reports many of these oils contained PCB concentrations up to 50ppm and other hazardous substances. Further analytical will be taken to determine if hazardous substances including but not

limited to PCBs, are present within the oil. If PCBs are identified during the removal action the TSCA requirements for cleanup and disposal of PCBs and decontamination of equipment will be followed.

Other ARARS may be identified during the course of the Removal Action.

State ARARs:

Resource Conservation and Recovery Act, Subtitle C 40 CFR Parts 260-262 and 264: Hazardous Waste Identification and Listing Regulations; Generator and Handler Requirements, Closure and Post-Closure. Connecticut has been delegated the authority to administer these RCRA standards through its state Hazardous Waste Management regulations (RCSA 22a-449(c) 100-101). 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.

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

Once the Action Memorandum has been approved and removal access has been signed by all pertinent parties the OSC plans for removal actions to begin in the fall of 2016. The OSC expects all phases to be completed by September 1, 2017. However, inclement weather, especially during the winter season may significantly impact the completion date.

B. Estimated Costs

COST CATEGORY		CEILING
<i>REGIONAL REMOVAL ALLOWANCE COSTS:</i>		
ERRS Contractor		\$1,100,000.00
<i>OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:</i>		
START Contractor		\$425,000.00
Extramural Subtotal		\$1,525,000.00
Extramural Contingency	20%	\$305,000.00
TOTAL, REMOVAL ACTION CEILING		\$1,830,000.00

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

Delayed action will increase public health risks due to the potential for exposure to human populations, animals, or the food chain, from hazardous substances, hazardous waste, pollutants or contaminants.

VII. OUTSTANDING POLICY ISSUES

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

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 $[\$1,830,000]$ (extramural costs) + $[\$200,000]$ (EPA intramural costs) = $[\$2,030,000]$ X 1.5191 (regional indirect rate) = $[\$3,083,773]$ ⁴.

IX. RECOMMENDATION

This decision document represents the selected removal action for the *EWR Site in Waterbury, CT* 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 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)];

Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release [§300.415(b)(2)(iii)];

⁴Direct Costs include direct extramural costs $[\$1,830,000]$ and direct intramural costs $[\$200,000]$. 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 51.91% x $[\$3,083,773]$, consistent with EPA's full cost accounting methodology effective September 30, 2015. 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.

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

Threat of fire or explosion [§300.415(b)(2)(vi)];

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

Other situations or factors that may pose threats to public health or welfare of the United States or the environment [§300.415(b)(2)(viii)].

I recommend that you approve the proposed removal action. The total extramural removal action project ceiling if approved will be \$[1,830,000].

APPROVAL:  _____

DATE: 9/9/16

DISAPPROVAL: _____

DATE: _____