

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029**

SUBJECT: Request for Funding and 12-Month Exemption for a Non-Time-Critical Removal Action at the Threemile Run Tar Site in Mt. Alton, McKean County, PA

FROM: Ann DiDonato, On-Scene Coordinator
Eastern Response Section (3SD31)

THRU: Mike Towle, Chief
Preparedness and Response Branch (3SD30)

TO: Paul Leonard, Director
Superfund and Emergency Management Division (3SD00)

I. PURPOSE

The purpose of this memorandum is to request approval to proceed with a Non-Time-Critical Removal Action (NTCRA) at the Threemile Run Tar Site in Mt. Alton, McKean County, PA (the Site) to remove chemical wood tar which is located in and above sediments in wetlands and located in a waterway that flows to the Kinzua Creek, portions of which are considered a high-quality cold-water fishery. Removal Site Evaluation activities were performed from 2017 to 2019, in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. Part 300. The Removal Site Evaluation documented a threat to public health or welfare or the environment due to the presence of a significant volume of chemical wood tar located in and adjacent to Threemile Run. Based upon information obtained from the Removal Site Evaluation, a NTCRA is necessary to mitigate threats posed by the release and/or substantial threat of release of hazardous substances from the Site and to protect public health, welfare, and/or the environment.

To mitigate the threat, Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (CERCLA), 42 U.S.C. §§ 9601, et seq., funding in the amount of \$1,540,000.00 is requested of which \$1,100,00.00 is from the Regional Allowance. Due to information obtained during the Removal Site Evaluation and the seasonal nature of mitigating/restoring a sensitive wetland environment an extension to the 12-Month Statutory Limit is additionally being requested.

II. SITE DESCRIPTION AND BACKGROUND

A. Site Description

1. Removal Site Evaluation

Approximately 70 wood chemical manufacturing plants are known to have operated throughout Pennsylvania in the late 1800s to mid-1900s, primarily in western Pennsylvania counties including McKean County. All of these facilities were abandoned by ~1950. The Site includes an abandoned chemical wood tar deposit associated with



a former wood chemical plant located in and adjacent to Threemile Run which is the main tributary to Kinzua Creek.

Historically, wood chemical manufacturing facilities produced charcoal, methanol, and acetate lime. The basic process was to heat hardwood in the absence of oxygen to a very high temperature, which would drive off its chemicals and turn the remaining wood to charcoal. The chemicals were captured and treated to produce methanol and acetate lime. The charcoal was then cooled and most of it was subsequently sold to iron producers. A by-product of the process was wood tar, a complex mixture that contained at least 200 different compounds. Generally, the wood tar by-product was deposited directly on ground surfaces, in pits, in waterways or in lagoons within the vicinity of the wood chemical plants.

From 2017 to 2019, EPA conducted investigations on several former tar facilities in the Kinzua Creek Watershed. Wood tar was observed to be oozing and flowing into the streams and in the associated watershed at several locations in Kinzua Creek. Hardened lenses of wood tar were observed along the banks and within Threemile Run. Surface water, sediment and tar product samples were collected along Kinzua Creek and Threemile Run. Results of these investigations confirmed the presence of semi-volatile organic compounds (SVOCs), volatile organic compounds (VOCs) and metals associated with the chemical wood tar in both Kinzua Creek and Threemile Run. Additionally, biota surveys were completed, including micro and macro-invertebrate sampling and a creel survey. An Engineering Evaluation/Cost Analysis (EE/CA) was issued for public comment on August 10, 2020. The EE/CA summarized all data, reports and conclusions of impacts to Threemile Run and detailed three alternatives for mitigation of tar (no action, partial removal and complete removal) and was finalized without changes to the document on September 9, 2020.

The 2018 Final Site Inspection Report for the Kinzua Watershed Creek Tar Sites, specific to Threemile Run Site, revealed that the tar samples in Threemile Run contained VOCs such as toluene, ethylbenzene, and total xylene, as well as benzene, isopropylbenzene, styrene, and methyl acetate. The tar samples also contained numerous SVOCs, particularly PAHs. Benzo(a)pyrene, one of PAHs more adverse to human health and the environment, was detected in all the tar samples.

The VOC ethylbenzene was detected in the source (tar) samples from the Site and was detected at elevated concentrations in surface water above background concentrations. The VOCs toluene and xylenes (o-, m, p-), which were detected in the source samples, were detected at elevated concentrations, significantly above background concentrations, in both surface water and sediment samples. The VOC acetone was detected in the source samples and was detected at elevated concentrations in sediment.

The SVOCs naphthalene, 2-methylnaphthalene, 2-4-dimethylphenol, acenaphthylene and acenaphthene, which were detected in the source samples from the Site, were also detected in elevated concentrations, above background concentrations, in the surface water samples. Benzo (a) pyrene, 2-4-dimethylphenol and 4-methylphenol and other SVOCs, were detected at elevated concentrations in sediment samples. In addition, naphthalene, 2-methylnaphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, pyrene, chrysene, and benzo(a)anthracene were detected in sediment samples above the Biological Technical Assistance Group (BTAG) freshwater sediment screening criteria. A release of hazardous substances attributable to source areas to the surface water migration pathway has been documented at the Site.

All data collected and reports generated, as well a discussion on the impacts to Threemile Run, are detailed in the EE/CA.



2. Physical Location

Threemile Run is a tributary of Kinzua Creek and is located in a primarily rural area that encompasses several small towns and portions of the Allegheny National Forest, Kinzua Bridge State Park, Kinzua Valley Trail, and Pennsylvania State Game Lands. All these areas are used for recreational activities such as fishing, hunting, hiking, and camping. Threemile Run is located south of Rt 59 and west of the main branch of Kinzua Creek and is accessed by a gravel and dirt road through State Game Lands.

3. Site Characteristics

Threemile Run is located within the Kinzua Creek Watershed and is the main tributary to the Kinzua Creek. The Kinzua Creek Watershed is used for recreational activities such as fishing, hunting, hiking, and camping. The Kinzua Creek is a major tributary to the Allegheny River and is classified as a cold-water fishery supporting three trout species, sculpins, and other fish species. It is a wild trout stream that acts as a brook trout breeding and nursery area. The Site is partially contained on lands owned by Pennsylvania Game Commission (State Game Land 62) and private property. The area is utilized for seasonal hunting and is open for fishing. Brick debris from what may have been a wood tar facility is scattered through portions of the impacted area. The Site is contained primarily within Threemile Run and its adjacent wetlands. Tar deposits are scattered throughout the creek, creek banks/bed and in wetlands. The impacted site was not owned previously by an industrial facility. A title search performed by EPA Cost Recovery reveals only private ownership from the 1880's through the time that the tar was deposited. The surveys completed during the EE/CA, identified an estimated 3,774 yd³ of chemical wood tar deposits at the 4.3-acre wetland area. The estimated tar impact area and depth was developed based upon information gathered during the assessment, primarily using hydraulic assisted hand coring. Due to difficulties experience during the assessment with access to the waterway and wetland, as well as the desire to reduce physical impacts to the wetlands, some uncertainty remains in this volumetric estimate.

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

Sampling in Threemile Run has documented the presence of numerous VOCs and SVOCs. Tar samples in Threemile Run contained VOCs such as toluene (maximum concentration of 72,000 µg/kg), ethylbenzene (maximum concentration of 65,300 µg/kg), and total xylene (maximum concentration of 297,000 µg/kg), as well as benzene, isopropylbenzene, styrene, and methyl acetate. The tar samples also contained numerous SVOCs, particularly PAHs. Benzo(a)pyrene, one of PAHs more adverse to human health and the environment, was detected in all the tar samples at concentrations ranging from 7,270 µg/kg to 12,300 µg/kg. Additional SVOCs detected in the tar include acenaphthylene (maximum concentration of 125,000 µg/kg), naphthalene (maximum concentration of 306,000 µg/kg), 2-methylnaphthalene (maximum concentration 411,000 µg/kg), mp-cresol (maximum concentration of 1,900,000 µg/kg), o-cresol (maximum concentration 1,220,000 µg/kg), and phenol (maximum concentration of 561,000 µg/kg) among others.

The VOC ethylbenzene was detected in the source (tar) samples and was detected at elevated concentrations in surface water above background concentrations. The VOCs toluene and xylenes (o-, m, p-), which were detected in the source samples, were detected at elevated concentrations, significantly above background concentrations, in both surface water and sediment samples. The VOC acetone was detected in the source samples and was detected at elevated concentrations in sediment.



The SVOCs naphthalene, 2-methylnaphthalene, 2-4-dimethylphenol, acenaphthylene and acenaphthene, which were detected in the source samples, were also detected in elevated concentrations, above background concentrations, in the surface water samples. Benzo (a) pyrene, 2-4-dimethylphenol and 4-methylphenol and other SVOCs, were detected at elevated concentrations in sediment samples. In addition, naphthalene, 2-methylnaphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, pyrene, chrysene, and benzo(a)anthracene were detected in sediment samples above the BTAG freshwater sediment screening criteria. A release of hazardous substances attributable to source areas to the surface water migration pathway has been documented.

Data from additional sampling/assessment completed by EPA's Freshwater Biology Team shows that Site sediment samples contain multiple PAH compounds that exceeded their respective compound-specific benchmarks and overall ecological effects ratios (EERs) much greater than 1. Additionally, crayfish whole body samples contained detectable concentrations of acenaphthylene, anthracene, fluorene, naphthalene, and phenanthrene.

Chronic sediment toxicity tests on survival and growth with gammarid amphipod, *Hyalella azteca*, indicated significantly lower survival associated with exposures to Site sediment samples relative to the Meade Run reference sediment. Differences in growth endpoints and reproduction endpoints between tar samples taken at the Site and their respective upstream reference sample locations, including total reproduction, were noted.

A release to surface water and sediment have been documented and impacts, including exceedances above BTAG freshwater sediment screening criteria, from the chemical wood tar, have been shown to affect the organisms that live in the Kinzua Creek.

Additionally, as portion of the Site is located on Pennsylvania State Game Lands, the area is open to hunting and fishing for the community.

5. National Priorities List

The Site is not on the National Priorities List (NPL).

B. Other Actions to Date

1. Previous actions

No previous actions have been undertaken at the Threemile Run Tar Site, however, several former chemical wood tar facilities with identical contaminants have been investigated and mitigated over the years on the Kinzua Creek Watershed. The watershed consists of Threemile Run, several other minor tributaries, Kinzua Creek and extends from Westline, Pennsylvania, upstream to Cyclone, Pennsylvania.

Previous investigations and/or removal activities have been conducted at other former wood chemical plants in located within the Kinzua Creek Watershed, most notably at the Westline Superfund Site, which was listed on the NPL in 1983. After removal of over 4000 tons of tar, the Westline Superfund Site was delisted in 1992 despite the presence of more than 4,000 tons of tar deposits remaining.

In 2015, EPA returned to the Westline Site to initiate a removal action to address wood tar along the banks of



Kinzua Creek. In 2018, EPA completed additional removal actions to mitigate the surface seeps of wood tar on both sides of a residential driveway. In 2020, EPA responded to an additional release of remaining wood tar during bridge replacement over the Kinzua Creek. Contractors for PA Department of Transportation completed a cleanup of tar released adjacent to the creek. Only complete removal of the wood tar material eliminates threat to the waterway as migration of tar continues during warm weather or when disturbed.

2. Current actions

In support of the EE/CA, EPA conducted a survey to determine the extent of the wood tar contamination during May and June 2020. On August 10, 2020, EPA published the EE/CA for Site to comply with the 30-day public comment period. No adverse comments to the preferred action selected in the EE/CA were received.

C. State and Local Authorities' Roles

1. State and Local Actions to Date

The Pennsylvania Department of Environmental Protection (PADEP), PA Game Commission, McKean County and the McKean County Conservation District are supportive of the proposed action. In an email dated November 19, 2020, PADEP concurred with EPA's preferred Alternative – complete removal of tar material from Threemile Run.

All agencies listed above have been fully briefed during the Site Inspection and Removal Site Evaluation activities to date and all are supportive of the proposed action but have been unable to take action to mitigate the tar material. EPA will engage the US Fish and Wildlife Service (USFWS) through an Interagency Agreement to provide oversight and approval of the work.

2. Potential for Continued State/Local Response

The removal action at the Site will be conducted under CERCLA authority. All agencies listed above will be provided an opportunity to review and provide comments on project design documents and work plans. Coordination efforts between EPA, USFWS, PADEP, and local authorities will continue throughout the project.

III. Threat to Public Health, Welfare, or the Environment

Section 300.415 of the National Contingency Plan (NCP) lists the factors to be considered in determining the appropriateness of a Removal Action. Paragraphs (b)(2)(i), (iv), (v), and (vii) of Section 300.415 directly apply as follows to the conditions as they exist at the Site.

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

Numerous VOCs and SVOCs contained in the wood tar have been detected in sediment and surface water above the BTAG freshwater sediment screening criteria at the Site. Biological studies have shown measurable impacts to Threemile Run when compared to the unimpacted "reference" creek for the area, Meade Run. EPA



was informed that several years ago that PA GC employee had to extract a turkey poult from the tar material adjacent to the creek as it had become stuck in the material. Additionally, dermal irritation may occur after contact with wood tar and it remains present on the skin for several days after contact with the material.

In April 2017, WESTON conducted a creel survey at locations along Kinzua Creek. Kinzua Creek and the Allegheny Reservoir are fished for human consumption, primarily from locations on the downstream portions of the Kinzua Creek; however, several anglers indicated they fish locations throughout. Threemile Run is the main upstream tributary to Kinzua Creek. Species that inhabit Kinzua Creek and are targeted by anglers include brook trout, brown trout, rainbow trout, walleye, perch, crayfish, and frogs.

Additionally, crayfish whole body samples contained detectable concentrations of the PAHs acenaphthylene, anthracene, fluorene, naphthalene, and phenanthrene using the macroinvertebrate assessment method (EE/CA: Appendix C). During several macroinvertebrate sampling events on Threemile Run, which had the highest PAH contamination in sediments, the Site scored consistently poor in both seasons with the lowest index of biological integrity (IBI) score in being in the July timeframe. Biologists frequently found specimens with tar deposited on gills and body integument or internally, at areas of the Site with contaminated sediment. PAHs may bio accumulate in the food chain thereby posing a risk through human consumption.

300.415 (b) (2) (iv) High levels of hazardous substances or pollutants or contaminants near the surface that may migrate

Wood tar was observed to be flowing into Threemile Run at several locations. Hardened lenses of wood tar were also observed along the banks and within the stream bed of Threemile Run. During the two years of investigation, tar was observed to move into Threemile Run from deposits adjacent to the creek bank and further down into the creek itself in several areas. The movement of the material was observed day to day especially in warm weather. Detectible sheen was noted emanating from numerous deposits during Site visits in warmer temperatures.

Additionally, tar sections were found to break off from the main source area at the Site into Threemile Run and were located some distance downstream. A release of hazardous substances attributable to source areas to the surface water migration pathway has been documented at the Site.

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

Flooding events have caused portions of the original tar source area at the Site to break off into Threemile Run and be transported downstream. Tar deposits have been located by the OSC extending up to one-half mile downstream of the original source area.

The OSC has observed measurable movements of tar shelves in the summer, due to high temperatures and lack of vegetative cover, in various areas of the creek over the past years of field visits.

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

The local and state governments do not have a viable mechanism to address and/or respond to the ongoing releases of tar within the Threemile Run area.



IV. ENDANGERMENT DETERMINATION

Based upon information gathered during the Removal Site Evaluation for the Site, as described above, the actual or threatened releases of hazardous substances from this Site may present an imminent and substantial endangerment to public health, welfare or the environment.

V. EXEMPTION FROM STATUTORY LIMITS

Based upon information obtained by EPA as a result of the Removal Site Evaluation, as described above, an exemption from the 12-month limit for a response action is requested to fully implement the proposed actions described below to mitigate the immediate threats to public health, welfare, and the environment. Pursuant to EPA Delegation 14-2 Section 2.d. (dated 4/15/19), the Regional Administrator may delegate the authority for CERCLA removal actions that meet the requirements of an emergency waiver as set forth in CERCLA § 104(c)(1)(A), 42 U.S.C. § 9604(c)(1)(A), subject to such approval by the Assistant Administrator for the Office of Land and Emergency Management, as may be required, to the Director, Superfund and Emergency Management Division.

Conditions at the Site meet the requirements of the emergency exemption as described below.

- (i) *Continued response actions are immediately required to prevent, limit, or mitigate an emergency:*

Due to the location of the contamination, which is in a waterway and wetland area, work will need to be conducted and restored seasonally in order to limit downstream impacts to the greatest extent possible. Immediate action is necessary to work during the winter months when the tar is in a more solid state and prevent further migration of material, but due to the impacts on wetlands and waterways work cannot be conducted during reproductive periods of the aquatic life, including parts of the spring and summer. The action will need to span multiple seasons over multiple years to ensure the least disruption to aquatic populations and adjacent fauna that are dormant during the cooler temperatures.

- (ii) *There is an immediate risk to public health, welfare, or the environment:*

The wood tar is located within and adjacent to Threemile Run which is a main tributary to the Kinzua Creek, a high quality, cold-water fishery. Portions of the Site are located within PA State Game Lands. SVOCs were detected at elevated concentrations in sediment samples above the BTAG freshwater sediment screening criteria. Data shows that Site sediment samples contain multiple PAH compounds that exceeded their respective compound-specific benchmarks and overall ecological effects ratios (EERs) much greater than 1. Crayfish whole body samples contained detectable concentrations of acenaphthylene, anthracene, fluorene, naphthalene, and phenanthrene. These specific compounds are attributed to the wood tar sources at the Site. Macroinvertebrate sampling events have shown the presence of tar in the gut and gills of various species.



(iii) *Such assistance will not otherwise be provided on a timely basis*

Additional resources are not available from PADEP, local or other federal agencies as indicated in EPA communication since May 2017 with McKean County Conservation District, PADEP, US Forest Service, PA Game Commission, Trout Unlimited, and most recently the Western PA Conservancy. Several agencies have historically and recently responded to much smaller chemical wood tar facilities and only EPA has the ability to respond to a Site of this size. EPA has received requests for monetary/response assistance with smaller tar Sites as recently as summer 2020.

This request satisfies the following exemption criteria as set forth in CERCLA § 104(c)(1)(A), 42 U.S.C. § 9604(c)(1)(A), and § 300.415(b)(5)(i) of the NCP, 40 C.F.R. § 300.415(b)(5)(i).

VI. PROPOSED ACTIONS AND COSTS

A. Removal Action Selection Process

The Removal Action proposed for the Site is designed to mitigate the imminent and substantial threat posed to the public health, welfare and the environment by the wood tar present in and adjacent to the watershed. Several alternatives were considered during the development of the Engineering Evaluation/Cost Analysis. Further, a comparison of the alternatives was completed based on the following criteria: (1) Overall Protection of Human Health and the Environment, (2) Compliance with ARARs, (3) Long-term Effectiveness and Permanence, (4) Reduction of Toxicity, Mobility, or Volume; (5) Short-term Effectiveness, (6) Implementability, and (7) Cost.

The following removal action alternatives were identified for the Threemile Run Tar Site:

- Alternative 1: No Action.
- Alternative 2: Excavation and Off-Site Disposal of Identified Wood Tar within 25 Feet of Threemile Run.
- Alternative 3: Excavation and Off-Site Disposal of All Identified Wood Tar in the Threemile Run Site Project Area.

The no action alternative was included as a baseline alternative against which other alternatives are compared. The second alternative consists of the removal and off-site disposal of wood tar deposits located within 25 feet of the top of bank of Threemile Run and the installation of a slurry wall which will protect the receiving water from future wood tar migration or from exposure from future stream meander. The third alternative consists of the excavation and off-site disposal of all identified wood tar deposits, includes standard channel and stream bank stabilization in areas where exposed tar is removed from Threemile Run and the adjacent riparian zone, and does not require sequestration measures to protect the receiving water.

The NCP (40 CFR 300.415) requires that alternatives be developed in sufficient detail to support the technical decision in the administrative record. Based on the detailed analysis of the removal action alternatives presented in the EE/CA, Alternative 3 (complete removal of identified wood tar deposits) is recommended as the selected remedy.

A full evaluation of the alternatives is presented in the EE/CA, which is included in the Administrative



B. Proposed Actions

1. Description of Proposed Actions (Alternative 3)

- a.** Development of detailed design drawings, work plans and narratives to detail removal of the visible tar material in waterways, wetlands and in Site sediment;
- b.** Mobilization and demobilization of crew and equipment;
- c.** Repair of access road as required by state and local departments of transportation;
- d.** Sampling of tar material for disposal purposes;
- e.** Removal, dewatering, and hauling of excavated wood tar deposits;
- f.** Disposal off-site of excavated wood tar, in accordance with Pennsylvania Residual Waste Regulations: 25 Pa. Code §§ 287.1-287.666 and 25 Pa. Code §§288.1-288.625, CERCLA § 121(d)(3) and 40 C.F.R. § 300.440 pursuant to results from (d) above.
- g.** Backfill and establishment of natural grades with imported clean fill material if needed;
- h.** Stabilization of Threemile Run channel bank including restoration by vegetated cover using native species or preserved seed bank; and
- i.** Monitoring of the stream and streambank for a period of at least 2 years to ensure permanence of the Site restoration.

2. Contribution to Remedial Performance

The actions proposed will contribute to any future remedial actions that may be necessary at the Site.

3. Engineering Evaluation/Cost Analysis

The EE/CA Approval Memo, EE/CA and the Responsiveness Summary are included in the Administrative Record for the Site which is located at the Mt. Jewett Memorial Library in Mt. Jewett, PA and at <https://semsub.epa.gov/src/document/03/2303863>. The EE/CA details a discussion of the alternatives and the selected remedy for the Site.

4. Compliance with ARARs

The proposed Removal Action will comply with Federal and State applicable or relevant and appropriate environmental regulations (ARARs) to the extent practicable considering the exigencies of the situation.

The OSC formally requested State ARARs from PADEP in an email dated October 13, 2020. On October 27, 2020, PADEP identified the ARARs for this action via email, which are included in the Administrative Record.

The OSC and PADEP will continue to identify and evaluate ARARs as Site work proceeds. All work will be completed in coordination with the State and local authorities.



B. Project Schedule

Implementation of the proposed scope of work is expected to take 18 to 24 months to complete.

C. Estimated Costs

The proposed distribution of funding is as follows:

Extramural Costs	Ceiling
Regional Allowance Costs (This cost category includes estimates for ERRS contractors, subcontractors, letter contracts, orders for services, notices to proceed, alternative technology contracts, and inter-agency agreements with other Federal Agencies)	1,100,000
Other Extramural Costs Not Funded from the Regional Allowance (START Contractor, US Fish and Wildlife Service)	\$260,000
Contingency	\$180,000
TOTAL REMOVAL PROJECT CEILING	\$1,540,000

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

If the proposed actions at the Site are not taken or are significantly delayed, the threatened release of hazardous substances into the environment will continue. Delayed action will increase the environmental impacts and risks and continual exposure to contaminants present in Site soil, sediment and surface water.

VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues related to the proposed Removal Action at this Site.



IX. ENFORCEMENT

See the attached Confidential Enforcement Addendum.

The total EPA costs for this Removal Action based upon full-cost accounting practices that will be eligible for cost recovery are estimated to be \$2,854,748.¹

Direct Extramural Costs	\$1,540,000
Direct Intramural Costs	<u>\$ 150,000</u>
Total Direct Costs	\$1,690,000
Indirect Cost (68.92% x Direct Costs)	\$1,164,748
Total Costs (Direct and Indirect)	\$2,854,748

X. RECOMMENDATION

This Request for Funding and 12-Month Exemption for a Non-Time Critical Removal Action for the Threemile Run Tar Site was developed in accordance with CERCLA and is not inconsistent with the NCP. Because conditions at the Site meet the criteria in Section 300.415(b) of the NCP for a removal action, I recommend your approval of the proposed Removal Action.

By signing this Action Memorandum, you are also hereby establishing the documents listed in Attachment B as the Administrative Record supporting the selection of the Non-Time Critical Removal Action identified in this document pursuant to Section 113 (k) of CERCLA, 42 U.S.C § 9613 (k), and EPA Delegation 14-22.

APPROVED: _____

DATE: _____

Paul Leonard, Director
Superfund and Emergency Management Division

Attachments:

- A. Confidential Enforcement Addendum
- B. Administrative Record Index

¹Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. 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.



Administrative Record Index

1. Engineering Evaluation Cost Analysis (EE/CA)
2. Public Notice and Fact Sheet for EE/CA
3. Responsiveness Summary for EE/CA
4. PA DEP Identified ARARs: October 27, 2020

