UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

ACTION MEMORANDUM – RV2

DATE: SEP 23 2013

SUBJECT: Request for a Removal Action and Ceiling Increase for the E.C. Electroplating Site (aka, Garfield Groundwater Contamination Site), City of Garfield, Bergen County, New Jersey

FROM: Donald R. Graham, On-Scene Coordinator
Removal Action Branch

for DG

TO: Judith A. Enck
Regional Administrator

THRU: Walter E. Mugdan, Director
Emergency and Remedial Response Division

Site ID: TN

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval for a removal action and a ceiling increase at the E.C. Electroplating Site ("Site") in the City of Garfield, Bergen County, New Jersey. This is the second removal action undertaken by the U.S. Environmental Protection Agency ("EPA") at the Site. The Action Memorandum approved on January 25, 2012, confirmed two prior verbal authorizations to conduct removal actions and requested a 12-month exemption and $2 million exemption. The two prior verbal authorizations were granted by the Director of the Emergency and Remedial Response Division on January 12, 2010 and July 13, 2011. The Action Memorandum established a total project ceiling of $4,520,000, of which $3,600,000 is for mitigation contracting (see Attachment 1). The Action Memorandum herein requests approval of an additional $1,450,000, of which $1,150,000 is for mitigation contracting. Approval of the requested ceiling increase will raise the total project ceiling to $5,970,000, of which $4,750,000 is for mitigation contracting.

The scope of work for the action described herein includes the excavation and off-site disposal of hexavalent chromium contaminated concrete building structures and contaminated soils from under and adjacent to the former E.C. Electroplating building. The facility was demolished as part of the on-going removal action. The hexavalent chromium contaminated soils and concrete are a source of groundwater contamination which migrates from the Site into the basements of residences down-gradient of the facility.

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The Site was added to the National Priorities List on September 16, 2011. Conditions at the Site meet the criteria for a removal action under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), as described in Section 300.415(b)(2) of the National Contingency Plan ("NCP").

There are no nationally significant or precedent-setting issues associated with this removal action.

II. SITE CONDITIONS AND BACKGROUND

This Action Memorandum documents the proposed time-critical action for the Site. The Comprehensive Environmental Response, Compensation and Liability Information System Identification Number for the Site is NJN000206317.

A. Site Description

1. Removal site evaluation ("RSE")

The E.C. Electroplating was a chrome plating facility which experienced a 3,600 gallon release of a chromium plating solution in December of 1983. Although approximately 29% of the spill was recovered, the remaining 71% entered the soils and fractured bedrock underlying the Site. Recovery efforts continued at the facility until May of 1985, at which time the New Jersey Department of Environmental Protection ("NJDEP") issued a letter to the facility permitting them to cease the recovery operations, but requiring the continuation of on-site groundwater monitoring. E.C. Electroplating failed to comply with the sampling requirements specified by the NJDEP. Operations at the facility were discontinued in March of 2009.

EPA initiated the first removal action at this site on January 21, 2010, and continues to investigate and mitigate the threat of exposure to hexavalent chromium to residents being impacted by the intrusion of hexavalent chromium contaminated groundwater emanating from the Site and into the basements of down-gradient residences. Determinations as to which residences require mitigation are based upon sampling values which exceed the site-specific Removal Action Level ("RAL") which was developed and documented in the "E.C. Electroplating (Garfield Chromium Groundwater Contamination Site) Determination of Significant Threat", as well as an evaluation of historic and anticipated groundwater infiltration events at each residence. The RAL's developed by EPA for basement areas are 1.2 ug/wipe and 8.7 ug/wipe for high and low usage, respectively. Decisions regarding the eligibility of properties for mitigation are being made by the Removal Action Branch ("RAB") in consultation with the New Jersey Remediation Branch ("NJRB") and risk assessment staff within the Program Support Branch ("PSB"). To date, EPA's basement investigation has included the evaluation and/or sampling of more than 500 residences, of which it was determined that 13 residences required mitigation to address the intrusion of hexavalent chromium contaminated groundwater.

During EPA's assessment of the site, hexavalent chromium, a known carcinogen, was found to be present in elevated concentrations in the soil, concrete and groundwater at the location of the former E.C. Electroplating Facility. Analytical results for soil samples identified hexavalent

chromium at concentrations up to 1,660 parts per million (ppm). Analytical results for samples collected from concrete at the Site have identified hexavalent chromium at concentrations up to 65,800 ppm. Analytical results for groundwater samples collected from monitoring wells located immediately adjacent to the down-gradient property boundary have identified hexavalent chromium at concentrations up to 171 (ppm).

Due to its mobility in groundwater and the resulting impact on down gradient residential basements, hexavalent chromium has been determined to be the primary contaminant of concern at the Site. However, other CERCLA- designated hazardous substances, including antimony and lead, have been found to be co-located with the hexavalent chromium in elevated concentrations at the Site. Analytical results for sub-slab soil samples collected at the Site have also identified antimony at concentrations up to 582 ppm and lead at concentrations up to 11,600 ppm.

In April of 2013, RAB conducted a comprehensive soil sampling event in order to determine the extent of hexavalent chromium soil contamination present beneath the concrete slab of the former facility (see Attachment 2, Figures 2-5). This sampling event included the installation of 40 soil borings which progressed to below groundwater and encompassed the entire foot-print of the Site. Based upon the analytical results from this sampling event, it was determined that approximately 3,500 cubic yards of soil and 750 cubic yards of concrete exceed the 20 ppm site cleanup goal for hexavalent chromium and will require excavation and off-site disposal. The excavation and off-site disposal of the soils and concrete will eliminate these materials as a source of hexavalent chromium groundwater contamination from the Site.

NJRB has installed and sampled a network of 48 monitoring wells on and around the Site to determine the extent of hexavalent chromium groundwater contamination in the southwest section of Garfield. Sampling of these wells was completed in 2013 and a Remedial Investigation ("RI") report is currently being drafted. A Feasibility Study ("FS"), which evaluated various technologies and assembled potential groundwater remediation alternatives, is also being drafted. A groundwater pump test and pilot study are the remaining field activities to be conducted as part of the RI/FS, and will be initiated upon completion of the soil removal activities described herein.

2. Physical location

The E.C. Electroplating facility is located at 125 Clark Street in the City of Garfield, Bergen County, New Jersey at a latitude of 40.872556 and a longitude of -74.102719 (see Attachment 2, Figure 1). It is situated on a parcel approximately ¾ of an acre in size and located within a densely developed, residential/commercial community. The nearest residence is located within four feet of the south wall of the building, and other residences and commercial properties closely surround the facility. The Roosevelt Elementary School is located approximately 200 feet to the northwest of the Site. Also nearby are Midland Avenue, a main thoroughfare in Garfield, and a New Jersey Transit passenger rail line. Several small apartment buildings and a senior living center are also located within 1,000 feet of the facility.

Greater than 90% of the ¾ acre parcel had been occupied by a single building prior to its demolition by EPA in 2012. The building had consisted mainly of a process area, with an office section located in the northeast corner. A concrete slab, which was not removed during the 2012 demolition, still covers more than 90% of the property. There are also two basements located beneath the slab, both of which contain standing water contaminated with hexavalent chromium.

3. Site characteristics

E.C. Electroplating was a chrome plating facility which experienced a 3,600 gallon release of a chromium plating solution in December of 1983. The release contained approximately 5,560 pounds of hexavalent chromium, of which, approximately 29% of the solution was recovered. The remaining 71% entered the soils and fractured bedrock underlying the Site. Recovery efforts continued at the facility until May of 1985, at which time the New Jersey Department of Environmental Protection ("NJDEP") issued a letter to the facility permitting them to cease the recovery operations, but requiring the continuation of on-site groundwater monitoring. E.C. Electroplating failed to comply with the sampling requirements specified by the NJDEP. Operations at the facility were discontinued in March of 2009.

The actions requested herein are for the second EPA removal action being undertaken at the Site. No other State, municipal or private party removal actions are planned for the Site.

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

The Site is a facility as defined in Section 101(9) of CERCLA, 42 U.S.C. §9601(9), and hazardous substances are present at the facility. The 1983 release of a chromium plating solution containing hexavalent chromium constitutes a release as defined in Section 101(22) of CERCLA, 42 U.S.C. §9601(22). In addition, the Site is the source of hexavalent chromium contamination in the groundwater which is entering the basements of residences located down gradient of the Site. Hexavalent chromium is a CERCLA-designated hazardous substance, as listed in 40 CFR Table 302.4. The statutory sources for designation as a Hazardous Substance under CERCLA include the Clean Water Act, Section 307(a), and Section 112 of the Clean Air Act.

During the site assessment, hexavalent chromium, a known carcinogen, was found to be present in elevated concentrations in the soil, concrete and groundwater at the Site. Analytical results for soil samples collected from beneath the Site have identified hexavalent chromium at concentrations up to 1,660 milligrams per kilogram (ppm). Analytical results for samples collected from concrete at the Site have identified hexavalent chromium at concentrations up to 65,800 ppm. Analytical results for groundwater samples collected from monitoring wells located immediately adjacent to the down-gradient property boundary have identified hexavalent chromium at concentrations up to 171 milligrams per liter (ppm).

Due to its mobility in groundwater and the resulting impact on down gradient residential basements, hexavalent chromium has been determined to be the predominant contaminant of concern at the Site. However, other CERCLA- designated hazardous substances, including antimony and lead, have been found to be co-located with the hexavalent chromium in elevated concentrations at the Site. Analytical results for sub-slab soil samples collected at the Site have also identified antimony at concentrations up to 582 ppm and lead at concentrations up to 11,600 ppm. Antimony and lead are CERCLA-designated hazardous substances, as listed in 40 CFR Table 302.4. The statutory sources for their designation as a Hazardous Substance under CERCLA include the Clean Water Act, Section 307(a), and Section 112 of the Clean Air Act.

5. National Priorities List ("NPL") status

The Site was added to the NPL on September 16, 2011. The RI/FS activities are ongoing.

6. Maps, pictures and other graphic representations

See Attachment 2.

B. <u>Other Actions to Date</u>

1. Previous actions

In June of 1993, chromium contaminated groundwater was discovered in the basement of Garfield Firehouse #3, which is located down-gradient of the E.C. facility. In October of 2000, the Bergen County Health Department detected chromium contaminated groundwater in the basements of two residences located down-gradient of the facility. In response to these findings, on October 7, 2002, NJDEP requested that EPA perform an assessment of the groundwater contamination problem in proximity to and down-gradient of the E.C. Electroplating facility.

Since NJDEP's referral of the Site to EPA in October of 2002, EPA has inspected and/or sampled the basements of more than 500 residences for the intrusion of hexavalent chromium contaminated groundwater. Sampling activities have included the collection of wipe samples from stained areas of the floors and walls of the potentially impacted basements, as well as the collection of groundwater samples from sumps when present. Based upon the sampling results, a verbal authorization of funding was approved on January 21, 2010, to begin removal activities in basements where hexavalent chromium was found to be above the site-specific RAL. Since then, EPA has undertaken removal actions at thirteen residential properties to prevent the threat of direct contact with hexavalent chromium resulting from the intrusion of contaminated groundwater into these basements. These removal actions have included the installation of drainage channels and sumps to address the intrusion of hexavalent chromium contaminated groundwater, and/or the decontamination and/or application of sealants on surfaces which exceed the site-specific RAL.

E.C. Electroplating ceased all operations at the Site in March of 2009, and in June of 2011 EPA initiated a Site Assessment of the abandoned facility. EPA's assessment identified containerized hazardous materials within vats, tanks, and drums at the facility which presented an immediate threat to the surrounding community and further identified that the facility was the source of hexavalent chromium contaminating the groundwater in the City of Garfield. A second verbal authorization of funding on July 12, 2011, approved removal action funding for the inventory, categorization, sampling, analysis, and stabilization of hazardous materials located within the facility. These actions eventually culminated in the authorization of additional removal action funds on January 25, 2012, which allowed for the removal and off-site disposal of hazardous materials within the facility as well as the demolition of the contaminated building(s) which comprised the E.C. Electroplating facility.

To date, EPA has expended approximately $1,900,000 for removal activities at the Site. These funds have provided for the inspection and/or sampling of more than 500 basements located within the study area, and for removal actions conducted in thirteen basements where hexavalent chromium levels exceeded the RAL. Basement sampling has been effective in identifying locations where the RAL has been exceeded, and removal actions undertaken at these locations have been effective in removing the threat of direct contact to occupants. Notably, funding has also provided for the removal and off-site disposal of all containerized hazardous materials and all hexavalent chromium contaminated debris generated during EPA's demolition of the E.C. Electroplating facility in 2012. These actions were authorized by the Regional Administrator's approval of the 12-month and $2 million exemption Action Memorandum dated January 25, 2012.

2. Current actions

A CERCLA removal action was initiated at the Site on April 27, 2010, and is ongoing. Removal activities were initially limited to the mitigation of hexavalent chromium contaminated basements in residences located down-gradient of the E.C. facility where it was determined that the levels of hexavalent chromium posed a threat to human health. These activities are ongoing and include the installation of drainage channels and sumps to address the intrusion of hexavalent chromium contaminated groundwater, and/or the decontamination and/or application of sealants on surfaces which exceeded the site-specific RAL.

In 2011, EPA expanded its removal activities to include the E.C. Electroplating facility proper. These actions included the inventory, categorization, sampling, analysis, stabilization, and off-site disposal of hazardous materials located within the facility, and culminated in the 2012 demolition of the E.C. facility which had comprised more than 90% of the ¾ acre parcel. In April of 2013, RAB conducted a soil sampling program to determine the extent of hexavalent chromium soil contamination which remained beneath the concrete slab of the former facility. Based upon the sampling results from this event, it has been determined that approximately 750 cubic yards of concrete and 3,500 cubic yards of soil exceed the 20 ppm cleanup goal for hexavalent chromium at the Site. As described and requested in the document herein, excavation

and off-site disposal of the hexavalent chromium contaminated soils and concrete is necessary to eliminate these materials as a source of groundwater contamination which continues to impact basements down gradient of the facility, and a threat of direct contact to residents and pedestrians in close proximity to the facility.

As part of the ongoing RI/FS activities at the Site, NJRB has constructed and sampled a network of 48 monitoring wells to determine the extent of hexavalent chromium groundwater contamination in the southwest section of Garfield. Sampling of these wells was completed in 2013, and the data is being utilized in the development of an RI/FS report which has evaluated various technologies and assembled potential groundwater remediation alternatives. A groundwater pump test & pilot study are the remaining field activities to be conducted as part of the RI/FS.

These activities will be initiated upon completion of the removal action addressing the excavation and off-site disposal of hexavalent chromium contaminated soils and concrete as described herein.

C. State and Local Authorities' Role

1. State and local actions, to date

On October 7, 2002, EPA received a request from the NJDEP to perform an assessment of the groundwater contamination problem in the community surrounding the E.C. Electroplating facility located at 125 Clark Street, Garfield, New Jersey.

2. Potential for continued State/local response

There are no actions planned or being taken by the State or local government agencies to address the hazardous substances present on-site.

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

A. Threats to Public Health or Welfare or the Environment

Analytical results of samples collected by EPA from the soils at the E.C. Electroplating facility and from the groundwater beneath and down-gradient of the E.C. Electroplating facility, have confirmed hexavalent chromium to be the overwhelming contaminant of concern at the Site. Analytical results have identified concentrations of hexavalent chromium up to 1,660 ppm in soil, up to 171 ppm in groundwater, and 65,800 ppm in concrete. Samples collected from down gradient monitoring wells and residential basements have shown the presence of hexavalent chromium in the groundwater as well as numerous basements, thus confirming an active release of hexavalent chromium from the facility. Additionally, the presence of hexavalent chromium contaminated soils and overlying contaminated concrete as described in this memorandum, present a significant threat of direct contact to the surrounding community.

Hexavalent chromium is a known human carcinogen. Exposure to hexavalent chromium may cause an increased risk of lung cancer, dermal irritation, skin ulceration, allergic contact dermatitis, asthma, nasal irritation and ulceration, perforated nasal septa, rhinitis, nosebleed, respiratory irritation, nasal cancer, sinus cancer, eye irritation and damage, perforated eardrums, kidney damage, liver damage, pulmonary congestion and edema, epigastric pain, and erosion and discoloration of the teeth.

In addition to and co-located with hexavalent chromium, EPA's sampling efforts have also confirmed antimony and lead to be present in elevated concentrations in soils beneath the facility. Analytical results for soil samples collected from beneath the facility have identified antimony at concentrations up to 582 ppm and lead at concentrations up to 11,600 ppm.

Based on the presence of contaminated soils and concrete at the E.C. Electroplating facility, and the analysis of samples collected from groundwater monitoring wells located down gradient of the facility, the Site meets the criteria for a CERCLA removal action. Hazardous substances, pollutants, or contaminants present at the Site represent a threat to the public health or welfare as defined by 40 CFR Section 300.415(b)(2) of the NCP, in that there is a high potential for releases to continue to occur due to site conditions. Factors that support conducting a removal action at the Site include:

> ***Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, or pollutants, or contaminants;***

There is an actual exposure to nearby human populations from hazardous substances at the Site. High concentrations of CERCLA hazardous substances are present at the Site. There has been a documented release of chromic acid containing hexavalent chromium from the facility. The analysis of samples from down-gradient monitoring wells indicates that hexavalent is present in high concentrations. Hexavalent chromium contaminated groundwater has entered the basements of residences down gradient of the Site. Soil samples collected and analyzed by EPA have confirmed that hexavalent chromium contamination is present in soils at the facility, and serve as a source of groundwater contamination.

> ***Weather conditions that may cause hazardous substances, or pollutants, or contaminants to migrate or be released; and,***

Weather conditions may cause hazardous substances to migrate or be released. Elevated concentrations of hexavalent chromium have been detected within the concrete slab which overlays more than 90% of the former facility. Loose soils and rainwater may come in contact with the contaminated concrete and migrate to off-site areas via wind dispersion or surface water runoff. Precipitation also accumulates in the basements located beneath the concrete slab of the facility. Water entering these basements is contaminated with hexavalent chromium and may be released to groundwater via drains or seepage through the deteriorated concrete basement floors and walls.

The availability of other appropriate federal or State response mechanisms to respond to the release.

The presence of the hazardous substances as discussed in this Action Memorandum, present a significant threat to the public health. Sample results have confirmed that there is an active release of hexavalent chromium from the facility. Hexavalent chromium is present in the soil and concrete at the Site. The presence of these hazardous substances pose an unacceptable health risk to persons entering the Site who may come in direct contact with the hexavalent chromium. The EPA is the only government agency capable of taking a timely and appropriate action to respond to the threat posed by the presence of hazardous substances on the Site. As discussed in Section II. C., State and local authorities are unable to undertake timely response actions to eliminate all of the threats posed by the Site.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from the Site, if not addressed by implementing the response action described in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The focus of this removal action is the excavation and off-site disposal of an estimated 3,500 cubic yards of hexavalent chromium contaminated soils (>20 ppm). With elevated levels of antinomy and lead also being present, the cleanup goal for these compounds will be 31 ppm and 400 ppm, respectively. These soils are located beneath the concrete floor and basements of the former E.C. Electroplating facility, which was demolished by EPA in 2012 (see Attachment 2, Figures 2-5). These soils have contaminated the groundwater beneath the facility.

Excavation of the hexavalent chromium contaminated soils will be initiated based upon the analytical results obtained during EPA's April 2013 sampling event (see Attachment 2, Figures 2-5). The vertical extent of the excavation was determined by EPA's pre-excavation and post-excavation sampling results, but will not progress beyond the depth at which groundwater intrusion makes excavation impractical. Any residually contaminated soils in the groundwater saturation zone will be addressed by one or more remedial alternatives currently being evaluated by NJRB during the ongoing RI/FS process. With exception to the one residential property, the horizontal extent of the excavation will not progress beyond property lines of the facility. It is estimated that 2,500 cubic yards of these soils will be assigned the Resource Conservation and Recovery Act ("RCRA") waste code for chromium (D007), with the remaining 1,000 cubic yards being designated non-RCRA chromium contaminated soils.

Additionally, the excavation, crushing and off-site disposal of an estimated 1,500 tons of hexavalent chromium contaminated concrete will be completed. The concrete is comprised of the contaminated floor of the former facility, as well as the floors and walls of two underlying basements. It is estimated that at least one half of the 1,500 tons of concrete will be assigned the RCRA D007 waste code and require macro-encapsulation prior to placement in an off-site landfill. Furthermore, the aforementioned basements are located within the soil excavation area and are continually flooded with hexavalent chromium contaminated groundwater which will necessitate the management (i.e. pumping, storage, off-site disposal) of an undetermined quantity of hexavalent chromium contaminated water.

Upon completing the removal of hexavalent chromium soils and associated concrete structures, and confirming the effectiveness of the soil removal through the collection and analysis of post-excavation samples, all excavated areas will be backfilled and compacted to grade with certified clean soil (NJDEP Residential Direct Contact Soil Remediation Standard) and capped with asphalt.

All waste material generated from the cleanup at the Site will require off-site disposal. Facilities that are selected for the off-site management of these wastes will be in compliance with EPA's Off-Site Disposal Rule, 30 CFR Section 300.440. Materials generated from the cleanup of the Site will be sampled as appropriate, placed into DOT-approved trucks and/or roll-offs, and sent to an off-site facility for disposal.

2. Contribution to remedial performance

The removal action at the Site is consistent with the requirement of Section 104(a)(2) of CERCLA, which states, "any removal action undertaken . . . should . . . to the extent practicable, contribute to the efficient performance of any long-term remedial action with respect to the release or the threatened release concerned." The removal actions proposed in this Action Memorandum are consistent with any future remedial action.

3. Engineering evaluation/cost analysis ("EE/CA")

Due to the time-critical nature of this removal action, an EE/CA was not and will not be prepared.

4. Applicable or relevant and appropriate requirements ("ARARs")

ARARs that are within the scope of this removal action will be met to the extent practicable, considering the exigencies. Federal ARARs determined to be applicable for the proposed scope of work include those in the Occupational Safety and Health Act, RCRA waste classification, storage, and disposal requirements, and the Department of Transportation shipment requirements.

5. **Project schedule**

The requested removal action can be completed in approximately six months from authorization of this Action Memorandum.

B. **Estimated Costs**

The estimated costs for the completion of this project are summarized in the table below and include the previous funding ceiling, the ceiling increase amount requested in this memorandum, and the total ceiling proposed in this Action Memorandum.

It is estimated that $2,850,000 will be required to complete the scope of work described in this Action Memorandum (see Cost Estimate Addendum). Presently, approximately $1,900,000 of the $3,600,000 in removal action funds currently authorized has been expended for previously authorized removal activities. Therefore, the remaining $1,700,000, along with the requested increase of $1,150,000, will be required to fund ongoing residential basement mitigation activities as well as complete the required soil removal at the E.C. Electroplating facility as described herein.

Direct Extramural Costs	Funding Authorized January 25, 2012	Funding Increase Requested	Total Project Ceiling
Regional Allowance Costs (Total clean-up contractor including labor, equipment and materials)	$3,600,000	$1,150,000	$4,750,000
Total RST 2 Costs	$ 300,000	$300,000	$ 600,000
Subtotal, Extramural Costs	$3,900,000	$1,450,000	$5,350,000
20% Extramural Cost Contingency	$ 620,000	$ 0	$620,000
Total Direct Extramural Costs	$4,520,000	$1,450,000	$5,970,000

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

If the proposed actions described in this memorandum are not implemented, the threats posed by the hexavalent chromium at the Site will continue to pose a significant threat to human health and welfare and the environment. Loose soils and rainwater may come in contact with the contaminated concrete at the former facility and migrate to off-site areas via wind dispersion or surface water runoff, thereby posing a threat of direct contact or inhalation to the surrounding population. Contaminated subsurface soils continue to contaminate the underlying groundwater which EPA has determined to be the source of hexavalent chromium in basements located down gradient of the Site.

VII. OUTSTANDING POLICY ISSUES

There are no known outstanding policy issues associated with the Site.

VIII. ENFORCEMENT

In December 1983, 3,600 gallons of a chromium plating solution containing approximately 5,560 pounds of hexavalent chromium was released from an on-site, partially buried underground storage tank. Reports estimate that 29% of the solution was recovered, with the remaining 71% believed to have entered the soils and fractured bedrock underlying the Site. Recovery efforts were undertaken by E.C. Electroplating until May of 1985, at which time the NJDEP's Division of Waste Management issued a letter permitting them to cease recovery operations, but requiring monitoring of the groundwater via the on-site monitoring wells. E.C. Electroplating failed to comply with the monitoring requirements required by the NJDEP.

Plating operations at the facility ceased in March 2009. In May 2011, the President of E.C. Electroplating Company agreed to provide access to EPA to perform a removal assessment at the facility, and in August 2011, he agreed to provide access for EPA to conduct response actions at the facility. Response actions at the facility included the removal of containerized hazardous substances which presented a threat of release to the environment, and demolition of the facility to remove it as a continuing source of contamination for the Site.

EPA sent a CERCLA Section104(e) Request for Information to the E.C. Electroplating Company in August 2005 with a response received in May 2006 and sent another Request in November 2011 when it issued E.C. Electroplating a CERCLA general notice letter. E.C. Electroplating's response to EPA's second Request was dated January 11, 2012.

EPA continues its PRP search for the Site.

The total EPA removal costs that will be eligible for cost recovery are estimated to be $8,610,276.

The following chart describes the costs which EPA believes are eligible for cost recovery.

COST CATEGORY	AMOUNT
Direct Extramural Cost	$ 5,970,000
Direct Intramural Cost	$ 500,000
Subtotal Direct Cost	$6,470,000
Indirect Costs (Indirect Regional Cost Rate 33.08%)	$ 2,140,276
Estimated EPA Costs Eligible for Cost Recovery	$ 8,610,276

Direct 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 full cost accounting methodology effective 2009. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, and may be adjusted during the course of the removal action. The estimates are for illustrative purposes only and their use in this Action Memorandum may not be relied upon by any third party as binding upon EPA. Neither the lack of a total cost estimate nor deviation of actual 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 E.C. Electroplating Site which is located in the City of Garfield, Bergen County, New Jersey. This document was developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

Conditions at the Site meet the NCP in Section 300.415(b)(2) for a removal action, and continue to meet the emergency exemption criteria, which was authorized on January 25, 2012. The total project ceiling authorized to date is $4,520,000, of which $3,600,000 is for mitigation contracting. This Action Memorandum requests approval of an additional $1,450,000, of which $1,150,000 is for mitigation contracting. Approval of this increase will raise the total project ceiling to $5,970,000, of which $4,750,000 is for mitigation contracting.

Please indicate your approval and authorization of funding for a removal action at the E.C. Electroplating Site, as per current delegation of authority by signing below.

Approve: Judith A. Enck — **Date:** 9/23/13
Judith A. Enck
Regional Administrator

Disapprove: _____ **Date:** _____
Judith A. Enck
Regional Administrator

cc: (after approval is obtained)

G. Pavlou, DRA
W. Mugdan, ERRD-D
J. LaPadula, ERRD-DD
J. Rotola, ERRD-RAB
D. Harkay, ERRD-RAB
B. Grealish, ERRD-RAB
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