



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:
LU-9J

CERTIFIED MAIL: 7009 1680 0000 7663 8838
RETURN RECEIPT REQUESTED

September 10, 2014

Mr. Gary McKinney
Brownfield Coordinator
Anderson Redevelopment Commission
Department of Economic Development and Long Range Planning
P.O. Box 2100
Anderson, Indiana 46018-2100

RE: Final Decision and Response to Comments
Anderson Redevelopment Commission, Scatterfield Road Facility
IND 980 503 825

Dear Mr. McKinney:

Enclosed please find the U.S. Environmental Protection Agency's Final Decision and Response to Comments for the selected remedy at the Anderson Redevelopment Commission Facility, located at 2900 South Scatterfield Road, Anderson, Indiana.

Please contact me at (312) 353-1248 or by e-mail at heller.donald@epa.gov if you have questions.

Sincerely,

A handwritten signature in cursive script that reads "Donald A. Heller".

Donald A. Heller, Corrective Action Project Manager
Corrective Action Section 1
Remediation and Reuse Branch

Enclosures

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

FINAL DECISION
AND RESPONSE TO COMMENTS
REMEDY SELECTION FOR SOIL AND GROUND WATER CONTAMINATION

FOR

ANDERSON REDEVELOPMENT COMMISSION
2900 South Scatterfield Road
Anderson, Indiana

IND 980 503 825

FINAL DECISION AND RESPONSE TO COMMENTS
REMEDY SELECTION FOR SOIL AND GROUND WATER CONTAMINATION

FOR

ANDERSON REDEVELOPMENT COMMISSION
2900 South Scatterfield Road
Anderson, Indiana

I. INTRODUCTION

The U.S. Environmental Protection Agency, Region 5 (EPA), presents this Final Decision and Response to Comments (FD/RC), which identifies the final remedy selected for an area known as Former Plant 7, Area 7 (Area 7), within the Anderson Redevelopment Commission (ARC) Facility (formerly the Delphi Energy & Engine Facility) located in Anderson, Indiana (the ARC Facility or the Facility), pursuant to the Resource Conservation and Recovery Act (RCRA) Section 3008(h). Included in this FD/RC is a summary of conditions found at the Facility, the risks posed by those conditions, the interim measures taken, and the final corrective action alternatives that EPA considered. Additional details relating to the Facility conditions, the measures taken and alternatives considered are available in the Statement of Basis (Attachment I) issued by EPA on April 8, 2013. Prior to issuing this FD/RC, EPA presented the Statement of Basis to the public for review and comment for 45 days from April 8, 2013, to May 23, 2013. Comments received by EPA are addressed in this FD/RC.

II. FACILITY CONDITIONS, RISKS POSED, AND INTERIM MEASURES TAKEN

The ARC Facility is located at 2900 South Scatterfield Road on the southeast side of the City of Anderson, Indiana. While operated by General Motors Corporation (GM), the former 220 acre Facility produced electronic components such as ignitions, turn signals, distributors, horns, and alternators for the automotive industry. Manufacturing began in the late 1930s and ceased in the late 1990s. GM intended to decommission and divest itself of the Facility.

The soils found at the ARC Facility consist of variable layers and lenses of silty clay and gravelly sand with a total depth ranging from 25 to 53 feet. A thick formation of dense and dry gravelly clay, known as basal till, lies beneath the soil layers. Depth to the water table ranges between 15 to 17 feet below ground surface. A surface water body known as the Pittsford Ditch runs south to north through the Facility. Within the Facility boundaries, the Pittsford Ditch is either lined with concrete or flows underground through culverts.

From 1992 through 2006, GM demolished the buildings at the Facility. GM and EPA identified locations throughout the Facility at which residual industrial wastes were present, and which merited further evaluation. These areas are called Areas of Interest (AOIs). Between 1992 and 2006, GM investigated the AOIs and removed contamination from these areas. The predominant organic contaminant was Trichloroethene (TCE). EPA defines these cleanup actions as Interim Measures. A summary of the Interim Measures at the AOIs is presented below in Table 1:

Table 1 – Interim Measures Taken by GM at Areas of Interest

Area	Interim Measures Taken	Contaminant Levels Remaining	Standards	Rationale
Former Plant 3 Area 3	Soil vapor extraction to remove TCE in soil at initial maximum concentration of 950 mg/kg (Action taken in 1999-2001)	Average remaining TCE concentration 3 mg/kg in soil. Average TCE ground water concentration 0.03 mg/L.	Industrial screening level for TCE in soil 61.2 mg/kg Residential screening Level for TCE in soil 23.2 mg/kg Site-specific screening level for TCE in ground water 0.005 mg/L.	Remaining contamination meets calculated site-specific human health risk goals approved by EPA for industrial/commercial reuse of property.*
Former Plant 11 Chrome Plater and Degreaser	Concrete floor removed as hazardous waste characteristic for chromium (Action taken 1998-2000)	Average remaining chromium concentration in soil 142.31 mg/kg Average remaining TCE concentration in soil 14.85 mg/kg Average concentration of TCE in ground water 0.016 mg/L	Industrial screening level for TCE in soil 61.2 mg/kg Industrial screening level for chromium in soil 4,480 mg/kg Site-specific screening level for TCE in ground water 0.005 mg/L	Remaining contamination meets calculated site-specific human health risk goals approved by EPA for industrial/commercial reuse of property*
Former Plant 17 Area 24	Soil vapor extraction performed 1999 – 2000 to remove TCE (Action taken in 1999-2000)	Average remaining TCE concentration in soil 15.17 mg/kg Average concentration TCE in ground water 0.39 mg/L	Industrial screening level for TCE in soil 61.2 mg/kg Site-specific screening level for TCE in ground water 0.005 mg/L	Remaining contamination meets calculated site-specific human health risk goals approved by EPA for industrial/commercial reuse of property *
Former Plant 7 Area 1	Waste cutting oil and metal chips removed from concrete drip pads (1999)	Average TCE concentration in soil 0.6 mg/kg Average lead concentration in soil 234 mg/kg	Industrial screening level for TCE in soil 61.2 mg/kg Industrial screening level for lead in soil 750 mg/kg	Remaining contamination meets calculated site-specific human health risk goals approved by EPA for industrial/commercial reuse of property *
Area 5 – Pittsford Ditch	Stream that traverses site in underground culverts and concrete swales – sediment and water sampled in 1998	Average lead concentration in water 0.005 mg/L Average lead concentration in sediment 381.67 mg/kg	Screening level for lead in water 0.015 mg/L Screening level for lead in sediment 400 mg/kg	Remaining contamination meets calculated site-specific human risk goals approved by EPA for industrial/commercial reuse of property*

mg/kg = milligrams per kilogram soil mg/L = milligrams per liter water * Cumulative cancer risk of 1×10^{-4} (one in 10,000) and non-cancer hazard index of 1.0

This final remedy for Area 7 included installation of an in-ground bentonite clay barrier (slurry wall) to depths exceeding 40 feet around the area where TCE concentrations in soil were at or greater than the protective standard of 15 mg/kg. The objective was to anchor the bottom of the slurry wall at least 2.5 feet into the basal clay. When saturated, bentonite clay expands and fills voids between soil grains, thereby preventing the flow of ground water through the barrier. In order to alleviate pressure against the slurry wall created by ground water within the enclosure, GM installed a pumping well within the containment. The extracted ground water was temporarily held in a 5,000 gallon underground storage tank and periodically removed off-site for treatment and disposal. The containment area was covered by an engineered cap consisting of a synthetic membrane and compacted clay. Construction of the containment system at Area 7 began in September 2006 and was completed in July 2007. Operation of the internal ground water extraction system began on July 11, 2007.

During the remainder of 2007, GM operated the pumping well and measured the depths to the water table within and outside of the containment to determine if inward flow of ground water within the enclosure had been achieved. By early 2008, GM determined that inward flow of ground water was not occurring, and that ground water was likely flowing through the northern and eastern portions of the enclosure. The containment of ground water on-site was not occurring. Over the remainder of the year and into early 2009, GM conducted ground water pumping tests and drilled exploratory soil borings into the areas suspected of leakage. At two locations in the northern and eastern portions of the enclosure, GM discovered that the slurry wall had been anchored into a clay horizon that lies over a permeable sand layer, rather than anchored as intended into the underlying basal till. Ground water had been flowing through the sandy material.

GM continued its investigation of the defective area while evaluating options for repairing the gaps in the slurry wall until June 2009, when the company declared bankruptcy. When this declaration was made, all work ceased at Area 7, including evaluation of the slurry wall and operation of the ground water extraction system.

Presently, access to Area 7 (by trespassers) is restricted by a fence which surrounds the Facility. Exposure to fugitive dust is prevented by an engineered cover which consists of a synthetic membrane, compacted clay, and vegetated top soil installed over the contaminated area. In October 2012, EPA contractors sampled monitoring wells in an off-site residential area approximately 2,800 feet downgradient of Area 7, and did not detect TCE or its degradation products in the ground water. Although releases are occurring from Area 7, the contaminant mass does not currently pose risk to human health or the ecology of the surrounding area.

III. REGULATORY HISTORY AND ADMINISTRATIVE ORDER ON CONSENT

Hazardous waste management and RCRA corrective action at the Facility (then known as GM Delco Remy) had been conducted under a RCRA permit issued by EPA on November 19, 1998. After lapse of that permit, EPA and GM entered into a Consent Agreement and Final Order (CAFO) on May 9, 2002. Under this CAFO, GM conducted the RFI and posted a \$1.2 Million surety bond as financial assurance for the corrective action.

GM intended to decommission and divest itself of the Facility. From 1992 through 2006, GM demolished the plant buildings and removed residual wastes to the cleanup standards described in Table 1 of this FD/RC. The only remaining buildings are owned and operated by Hi-Tech Engineering (former Plant 18) and AMACOR (former Plant 19).

On September 20, 2006, GM deeded the entire Facility in its possession, including Area 7, to ARC. ARC is an Indiana statutory redevelopment commission formed for the purpose of identifying, creating, and funding redevelopment activities that will increase the tax base, create new jobs, and improve the economic conditions for the City of Anderson. By written agreement with ARC, GM retained responsibility to complete RCRA corrective action obligations at Area 7. Prior to the transfer, GM notified ARC of the terms and obligations of the CAFO and provided a copy of the document to ARC.

On June 1, 2009, GM, then known as Motors Liquidation Corporation (MLC) filed for bankruptcy in the United States Bankruptcy Court under Chapter 11 of the United States Code. On October 20, 2009, MLC informed EPA, in writing, that it would default on its obligations under the CAFO and that it would not complete the required RCRA corrective action at the Facility.

Under the CAFO, GM maintained financial assurance in the form of a surety bond issued by Westchester Fire Insurance Company (Westchester) to guarantee its financial ability to perform the corrective action. On February 2, 2010, EPA presented a claim to Westchester for the full amount of the surety bond. On November 19, 2010, Westchester deposited into a trust account at the Bank of New York/Mellon (BNY Mellon as Trustee) the amount of \$1,200,435.09 (the Insurance Trust). EPA is the beneficiary of the BNY Mellon Insurance Trust. The trust money may only be used to reimburse persons specified by the EPA Regional Administrator for expenditures to perform RCRA corrective action at the Facility.

Additionally, on March 7, 2011, the United States Bankruptcy Court entered a Consent Decree and Settlement Agreement among MLC, the United States of America, and the State of Indiana. Under this Consent Decree, MLC was obligated to make a cash payment in the amount of \$3,599,039.00 into a trust account, of which EPA is the beneficiary, to conduct corrective action at the Facility. On April 1, 2011, MLC deposited the funds into a trust account at First Merchants Trust Company (First Merchants as Trustee), known as the Bankruptcy Trust.

On July 11, 2006, EPA issued a FD/RC which determined that the interim measures taken by GM made the Delphi Energy & Engine Facility suitable for industrial/commercial reuse, with the exception of a location within the former Plant 7, called Area 7.

Area 7 was an in-ground degreaser and associated trench system in which TCE was utilized. This unit operated from 1976 until 1986. It was removed when Plant 7 was demolished in 2004. During the site-wide environmental investigation, known as the RCRA Facility Investigation (RFI), GM determined that Area 7 had released TCE into soil and ground water. In its April 2001 RFI Report, GM noted that TCE at Area 7 was embedded in clay and sand layers at depths of nearly 30 feet, at concentrations ranging from 0.004 to 5,400 mg/kg. TCE was detected in ground water in concentrations from 31 mg/L directly below the former degreaser to non-detect approximately 2,800 feet downgradient of Area 7.

EPA's July 11, 2006, FD/RC specified a remedy for Area 7 which is summarized in Table 2:

Table 2 – 2006 Remedy for Area 7

Corrective Measure	Medium Protected	Protective Standard	Rationale
Slurry Wall Enclosure	soil, ground water	15 mg/kg TCE	TCE concentration calculated by GM and approved by EPA as maximum allowable in soil to prevent mobilization of TCE to ground water at concentrations above threshold calculated for property boundary, and to ensure that indoor vapor intrusion into buildings constructed at the site will not be a human health risk.
Ground Water Extraction within Enclosure	ground water		Ground water extracted through a well in order to reduce internal pressure of ground water within enclosure and prevent stress on the slurry wall. Ground water stored in 5,000 gallon tank and removed off-site for disposal.
Composite Cap	soil, ground water		Cap consisting of clay and synthetic membrane was installed to prevent precipitation from coming into contact with contaminated soil within enclosure, and to prevent release of fugitive dust.
Ground Water Monitoring at Downgradient Property Boundary	ground water	0.520 mg/L TCE 0.483 mg/L cis-1,2 DCE 0.035 mg/L vinyl chloride	Property Boundary Goals were calculated by GM and approved by EPA as threshold concentrations in ground water migrating past property line that will be protective of human health through non-potable dermal contact and will attenuate to Federal drinking water standards (MCLs) off-site of the Facility.
Final Goals for Off-Site Ground Water Protective of Human Health	ground water	0.005 mg/L TCE 0.070 mg/L cis-1,2 DCE 0.002 mg/L vinyl chloride	Federal Maximum Contaminant Levels (MCLs) set by EPA as maximum concentrations allowable for safe drinking water.

On July 11, 2011, EPA and ARC entered into an Administrative Order on Consent (AOC) to select and implement a new and effective remedy for Area 7. Under the terms of the AOC, ARC can apply to EPA for reimbursement of cleanup costs to be made from the Insurance Trust and the Bankruptcy Trust. A copy of the AOC is included as Attachment I to this FD/RC.

IV. REMEDY PROPOSED BY EPA IN APRIL 2013

On April 8, 2013, EPA gave public notice of its proposed remedy for Area 7. This proposal was for repair of the slurry wall in order to provide immediate containment of the contamination, combined with the injection of chemical additives below ground surface within the enclosure. The process of degrading the contaminants via injection of additive is known as In-situ Chemical Oxidation (ISCO). The Statement of Basis (Attachment II) for this proposal included alternative remedies such as air sparging/soil vapor extraction, excavation and removal, and in-situ heating and extraction of the contamination.

The public comment period for the proposed remedy ran from April 8, 2013, to May 23, 2013. EPA received several comments from community leaders, local business interests, and remediation contractors who questioned the benefits of ISCO and recommended either Electrical Resistive Heating (ERH) or excavation and removal of contamination from Area 7. Responses to the public comments are provided below in this FD/RC. EPA has reviewed these comments and considers them significant enough to warrant reconsidering its proposed remedy.

EPA reviewed these comments and revisited the remedial alternatives. After conducting its reevaluation, EPA has determined that excavation and off-site removal of the contaminated source material, combined with monitoring of the downgradient ground water for natural attenuation of the contaminants, is the most protective of human health and the environment at Area 7.

V. CORRECTIVE ACTION ALTERNATIVES CONSIDERED

1. Repair of the Existing Slurry Wall

This alternative is a viable option for the hydraulic isolation of the contaminant source area and would take advantage of the extraction and monitoring well network. EPA's estimated cost for this option is \$2,730,000, which is within the ARC remediation budget. However, the persistence of contaminants in the source area soil and ground water will require ongoing barrier maintenance and ground water extraction to isolate known contamination in perpetuity. Costs have been estimated for a period of 30 years, but operation and maintenance may be needed beyond that time. Long-term restrictions on the use of the area would also be required, limiting redevelopment options for ARC. Importantly, this option does not reduce the amount or toxicity of the contaminants, nor does it address contamination outside of the slurry wall enclosure. EPA eliminated this alternative from further consideration.

2. ISCO

EPA's estimated cost for this alternative is \$1,887,000, which is within ARC's remediation budget. A network of injection wells would be installed within the slurry wall enclosure, and the oxidizing solution would be injected into soil and ground water which contains TCE. The oxidizers would degrade the TCE into the non-hazardous compounds ethane and ethene. ARC would periodically sample and analyze the soil to determine if the cleanup goal of 15 mg/kg has been achieved. Additional injections of oxidizer may be necessary to address TCE that may be released after initial treatment, known as "rebound." ARC would monitor ground water downgradient of Area 7 at the property line to assess decreasing contamination levels, after the source has been eliminated.

ISCO is a proven technology which has been successful in eliminating TCE and its degradation products, and it can be readily implemented at Area 7. Before implementing this remedy at Area 7, ARC would have to conduct bench tests (in the laboratory) and pilot tests (in the field) to evaluate any effects the oxidizing chemical solution would have on the slurry wall and on the natural minerals that make up the soil. The bench and pilot tests would also indicate how effectively the oxidizers would eliminate the TCE under actual conditions at Area 7. Although ISCO is effective in degrading TCE and other chlorinated volatile organic compounds (VOCs), the chemical reaction can generate heat and hazardous gases such as chlorine. Bench and pilot tests are necessary to adjust application rates and amounts of the oxidizers in order to minimize generation of these hazardous by-products.

However, direct and sustained contact between the injected oxidizers and the contaminants may be difficult to achieve if the contaminants are embedded in the soil matrix in their undissolved form, known as dense non-aqueous phase liquid (DNAPL). In such cases, DNAPL could persist as an ongoing source of ground water contamination at Area 7. It is also possible that the injected oxidizers may degrade the slurry wall, itself, allowing contamination to migrate from the source area before it can be effectively treated. Heterogeneity of the soil (i.e., random distribution of fine and coarse grained zones) may also hinder the uniform distribution of the injected oxidants. EPA concludes that ISCO would be of limited effectiveness at Area 7.

3. ERH

ERH is a technology that removes organic compounds from soil by heating the soil/contaminant mass with electrodes, volatilizing the contamination, and removing it in its gaseous form. The electrodes are inserted into soil borings at a horizontal spacing that is calculated during the design phase of the project. Electric current is passed through the soil between the electrodes, which heats the material and converts the organic contamination to vapor. This vapor would be captured by a system of vapor extraction wells that would be installed to prevent release to air and to control horizontal migration of the contaminants beyond the treatment zone.

ERH technology has proven effective in removing volatile contaminants in dissolved phase and DNAPL at numerous project locations, and it is not significantly affected by heterogeneity of soil. However, the existing slurry wall at Area 7 may complicate heating. Therefore, the system design would have to allow for installation of electrodes on both sides of the enclosure. ERH requires water to be present in the soil to be effective. Water (typically recirculated condensate) can be injected into the treatment zone where soil is dry.

The estimated cost of ERH remediation at Area 7 is \$4,426,000, which is within the scope of ARC's remediation budget, and allows for the extension of electrical utilities to Area 7.

4. Air Sparging/Soil Vapor Extraction

Air Sparging/Soil Vapor Extraction (AS/SVE) is a method for removing VOC contamination from soil. The estimated cost of \$2,377,000 is within ARC's remediation budget. Air Sparging is the injection of compressed air into contaminated soil through a well or hydraulically driven shaft. The pressurized air displaces VOC vapors from the pore spaces of the soil and mobilizes the vapors, which are extracted by screened wells that are connected to vacuum lines. When the extent of VOC contamination is delineated, the network of AS and SVE points is installed to ensure that VOC vapors are driven to the extraction points as effectively as possible.

In locations with uniformly coarse grained permeable soil, such as the Former Plant 3, Area 3 (Ref. Table 1), AS/SVE can be very effective in removing VOCs. However, AS/SVE is much less effective in finer grained soils (e.g., clay, silt, fine sand) with less pore space and permeability. AS/SVE is not effective in contaminated soil below the water table. VOCs tend to bond with organic carbon and become difficult to extract, which makes AS/SVE marginally effective in soils containing high amounts of humus. Because AS/SVE technology removes VOCs only through their vapor phase, the rates of contaminant removal are not as rapid as those for technologies that eliminate VOCs on contact or remove them in bulk form. Costs of an AS/SVE remedy will increase if stronger vacuum and additional treatment time is needed in soils, such as those present at Area 7, which are less conducive to this technology.

AS/SVE will generate vapors and condensed water which are contaminated with VOCs. This water must be managed and disposed as hazardous waste, which poses a challenge similar to the one presented by ERH. Vapors could be captured by vapor extraction wells and contained in vessels such as activated carbon canisters, and removed off-site for disposal.

5. Excavation and Ground Water Monitoring

This alternative is advantageous because soil containing TCE concentrations above 15 mg/kg inside and surrounding the slurry wall would be physically removed from the ARC site. This option would rapidly address soil contamination and eliminate ongoing migration of contaminants to ground water. The estimated cost of \$3,846,572 is within the scope of the ARC remediation budget. During removal actions, representative samples of soil and ground water must be analyzed for regulatory waste characterization. Storage, transportation, treatment, and disposal costs for excavated media that meet the regulatory definition of hazardous waste are substantially higher than the costs for management of non-hazardous wastes. Implementation of

this alternative carries an inherent risk that analytical results may raise the costs of waste management and disposal beyond the initial estimate. Contaminated soil which is excavated below the water table would have to undergo a dewatering process, and the contaminated water managed appropriately. Measures to prevent spillage would have to be taken for trucks that would transport the media off-site on highways. Excavation of Area 7 would expose VOCs to air, and air monitoring and measures to minimize volatilization may be required for the work site.

Following excavation of the contaminants, a plan for monitoring ground water to assess the performance of the remedy should be prepared. This plan should specify the monitoring wells to be sampled, the frequency of sampling, an initial analysis of natural geochemical parameters in the ground water that would aid attenuation of the contaminants, and the list of contaminants to be monitored.

6. Thermal Conductive Heating

Thermal Conductive Heating (TCH) is an electronic heating technology similar to ERH; however, this method treats contaminated media with inserted heating elements, rather than by transmission of current through electrodes. TCH effectively removes VOCs from both dry and saturated soils. However, this technology may create fractures in the soil, through which contamination may unexpectedly migrate. In addition, TCH requires much higher energy input than ERH and subsequently higher costs. EPA's estimated cost for TCH remediation for Area 7 exceeds \$8 million, which is almost twice the estimated cost of ERH. For these reasons, EPA does not consider TCH to be a viable alternative for Area 7.

VI. SELECTED FINAL REMEDY

EPA selects excavation, off-site removal, and ground water monitoring as the remedy to address soil and ground water contamination at Area 7 in the ARC facility. The selected Final Remedy includes the following requirements:

- ARC will begin construction of the Final Remedy within 180 days of EPA's written approval of the Final Remedy Construction Work Plan.
- ARC will provide quarterly progress reports to EPA by the fifteenth day of the month after the end of each quarter. The report must list work performed to date, data collected, problems encountered, project schedule, and percent project completed.
- ARC will submit to EPA its Final Remedy Construction Completion Report within 45 days after completion of work at Area 7.
- The Final Remedy Construction Completion Report will include the Operation and Maintenance (O&M) Plan for the Final Remedy, in addition to the Ground Water Performance Monitoring Plan for the Final Remedy. The purpose of the plan is for monitoring ground water to assess the performance of the remedy.

- EPA will review the Final Remedy Construction Completion Report and provide comments to the ARC.
- ARC will implement the O&M Plan and Ground Water Performance Monitoring Plan according to the conditions given in EPA's written approval of the Final Remedy Construction Report.
- In accordance with Paragraph 17 of the AOC, Project Managers can agree in writing to extend, for 90 days or less, any deadline stated in this FD/RC. Extensions of greater than 90 days will require approval from the Chief of the Remedial and Reuse Branch, Land and Chemicals Division.
- ARC will put in place restrictive covenants on the property, recorded at Madison County, which:
 1. Restrict the property to commercial and industrial use;
 2. Prohibit the extraction of on-site ground water for any purpose other than corrective action;
 3. Require any soil, sediment, debris, surface water, ground water or other media to be managed in accordance with all applicable federal, state and local environmental laws; and
 4. Are permanently enforceable on the property, regardless of changes of ownership.
- An Ordinance has been established by the City of Anderson (Ordinance No. 50.070) which prohibits installation of private potable water wells.

The selected Final Remedy of excavation and off-site removal of contamination complies with EPA's performance standards as listed in the Statement of Basis, specifically:

1. Attain media cleanup standards;
2. Control the sources of releases; and
3. Protect human health and the environment.

The selected Final Remedy balances these performance standards with the following criteria also found in the Statement of Basis:

1. Long-term reliability and effectiveness;
2. Reduction of toxicity, mobility or volume of wastes;
3. Implementability;
4. Cost; and
5. State and community acceptance.

Detailed analysis of each can be found in the Statement of Basis (Attachment II).

VII. PUBLIC PARTICIPATION ACTIVITIES

EPA held a 45 day public comment period for the proposed slurry wall repair/ISCO remedy from April 8, 2013, to May 23, 2013. The remedial alternative of excavation and off-site removal was included in the Statement of Basis that was presented for public comment. On April 8, 2013, EPA gave notice of the comment period in the *Anderson Herald-Bulletin*, on local radio station WHBU, and through direct mailings. EPA offered to hold a public meeting if requested by concerned parties. Public comments were to be postmarked by midnight, May 23, 2013.

During the public comment period, the Statement of Basis, Public Notice, and administrative record were available for public inspection at the Anderson Public Library, 111 East 12th Street, Anderson, Indiana, and at the EPA Records Center, 77 West Jackson Boulevard, Chicago, Illinois.

VIII. PUBLIC COMMENTS AND EPA'S RESPONSE TO COMMENTS

EPA received several comments on the proposed remedy. Summaries of the comments and EPA's responses are provided below:

Comment: Three commenters expressed concern over EPA's proposed decision to repair and maintain the existing slurry wall, as a component of the proposed final remedy. The commenters noted that the slurry wall was improperly installed, is leaking, and may continue to leak even after repairs have been made. They have also noted that expenditures for O&M of the slurry wall be necessary for the foreseeable future.

EPA Response: EPA notes these concerns, and has revisited its 2013 proposal. EPA concurs that funds would be better spent on removal of the contaminant source material to the extent that

future containment will not be necessary. This concern is a reason for EPA's decision for off-site removal of the contaminated media for treatment and disposal, as explained in this FD/RC.

Comment: Two commenters concurred that in-situ treatment to degrade the contamination within the Area 7 enclosure is more protective of human health and the environment than leaving waste in place and relying on the slurry wall to contain the source area. However, the commenters argued that ERH in this situation is a more effective means of treatment than ISCO, and should be applied to Area 7.

EPA Response: As explained in this FD/RC, EPA concurs that ERH would likely be more effective than ISCO in removing the volatile contaminant mass from Area 7. Technical means would still have to be employed to control release of hazardous vapors from the treatment site, but the estimated cost of an ERH remedy would be within ARC's remediation budget. However, EPA has determined that physical removal of the contaminant mass and its off-site treatment and disposal will be a more prompt and final solution for the Area 7 source of ground water contamination. EPA also notes that its estimated cost of excavation and off-site removal is less than that for ERH.

Comment: Six commenters expressed their preference for off-site removal of the waste, versus in-situ treatment and indefinite dependence upon containment.

EPA Response: EPA concurs with these concerns, and has prepared this FD/RC for off-site removal for treatment and disposal to address them.

IX. ADMINISTRATIVE RECORD

A copy of the administrative record for the selected remedy in this Final Decision and Response to Comments is available for review at the Anderson Public Library, 111 East 12th Street, Anderson, Indiana, and at the EPA Region 5 Records Center, 77 West Jackson Boulevard, Chicago, Illinois.

An Index to the Administrative Record is provided in Attachment III. The Administrative Record for this FD/RC includes: (1) the October 30, 2001, RFI Final Report for the GM Delphi Energy & Engine Management Systems Facility, (2) the July 11, 2011, Administrative Order on Consent for corrective action at the ARC facility, (3) the December 16, 2011, ARC Final Corrective Measures Recommendation, (4) the April 8, 2013, Statement of Basis for the proposed ISCO Remedy at the ARC Facility, and (5) all relevant correspondence and reports from or submitted to EPA relating to contamination at the Facility.

X. FUTURE ACTIONS


EPA will implement and oversee this Final Decision either through a new Administrative Order on Consent, a modification of the existing Administrative Order on Consent with ARC, or otherwise through the exercise of its enforcement authorities under RCRA.

XI. CORRECTIVE ACTION COMPLETE DETERMINATION

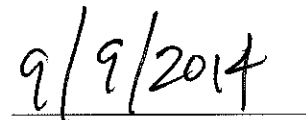
Once ARC believes it has met its corrective measures obligations, it may submit a request with supporting information to EPA Region 5 for a Corrective Action Complete Determination (CACD). Once EPA Region 5 receives this request, EPA may issue a CACD based on the content and completeness of the information provided by ARC, EPA guidance and the terms of this Final Decision and Response to Comments. The request should include a written explanation and supporting documentation demonstrating that the Facility satisfies the criteria for the CACD, the selected measures, contaminant cleanup goals and criteria and other conditions specified in the Final Decision and Response to Comments; and all additional measures, criteria, and conditions specified in the permit, order or consent decree implementing this Final Decision and Response to Comments. At a minimum, the ARC Facility's CACD request must: (1) demonstrate that construction activities are complete; (2) demonstrate that all required institutional controls have been implemented; (3) demonstrate that the cleanup goals and objectives have been achieved for obtaining a CACD; and (4) where the CACD provides for any post-CACD remedial activities such as continuing a pump and treat system or ground water monitoring: (i) identify criteria and standards that would either confirm that these long-term remedial activities are functioning as intended, or would be the basis for additional work; and (ii) identify the criteria for satisfaction and termination of these post-CACD activities.

XII. DECLARATION

Based on the information in this Final Decision and Response to Comments, and the Administrative Record compiled for this corrective action at the Anderson Redevelopment Commission Facility in Anderson, Indiana, EPA has determined that the selected remedy for the Anderson Redevelopment Commission Facility is appropriate and is protective of human health and the environment.



Margaret M. Guerriero
Director
Land and Chemicals Division



Date