



UNITED STATES

ENVIRONMENTAL PROTECTION AGENCY

REGION III

STATEMENT OF BASIS

Former Kaiser Aluminum and Chemical Facility

ERIE, PENNSYLVANIA

PAD 005 031 737

I. Introduction

The United States Environmental Protection Agency (EPA) has prepared this Statement of Basis (SB) to solicit public comment on its proposed remedy for the former Kaiser Aluminum and Chemical facility (Facility) located on East 12th Street in Erie, Pennsylvania. EPA's proposed remedy consists of a soils component and groundwater component. For soils, EPA's proposed remedy is the operation, maintenance and inspection of a 2-foot thick soil cover over a 0.24-acre lagoon at the Facility ("Former Pond") and the compliance with and maintenance of institutional controls that restrict certain land uses on the entire Facility. For groundwater, EPA is proposing the compliance with and maintenance of institutional controls to minimize and/or prevent human contact with contaminated groundwater. All of the components of EPA's proposed remedy are being implemented and are enforceable under a Consent Order and Agreement entered into by the PADEP, the Greater Erie Industrial Development Corporation (GEIDC), ELH Corporation and Accuride-Erie dated June 17, 2005. This SB highlights key information relied upon by EPA in making its proposed remedy.

The Facility is subject to EPA's Corrective Action Program under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) of 1976, and the Hazardous and Solid Waste Amendments (HSWA) of 1984, 42 U.S.C. §§ 6901 et seq. (Corrective Action Program). The Corrective Action Program is designed to ensure that certain facilities subject to RCRA have investigated and cleaned up any releases of hazardous waste and hazardous constituents that have occurred at their property. Commonwealth of Pennsylvania (Commonwealth) is not authorized for the Corrective Action Program under Section 3006 of RCRA. Therefore, EPA retains primary authority in the Commonwealth for the Corrective Action Program.

The Administrative Record (AR) for the Facility contains all documents, including data and quality assurance information, on which EPA's proposed decision is based. See Section VIII, (Public Participation), below, for information on how you may review the AR.

II. Facility Background

The Facility property consists of approximately 50.5 acres and is surrounded entirely by industrial and/or commercial properties. There are no residences or recreational facilities in the immediate vicinity. A location map, a site layout, and a property diagram are attached as Figures 1 – 3, respectively.

The Facility has been used for industrial/manufacturing operations since approximately 1888. Most operations have been metal-related, including forging, machining, and boiler-making. During World War II, the Department of Defense operated the Facility under the name Aluminum Forgings Inc. In 1956, Kaiser Aluminum and Chemical (Kaiser) purchased the Facility to manufacture various aluminum products. The primary wastes generated by Kaiser included oil sludge from the cupping and hydraulic presses and wastes from the aluminum etching lines. These wastes were drummed and sent off-site for waste neutralization, sedimentation, and disposal. Bonderlube (lube oil) waste was discharged to the Erie city sewer system. Additional wastes generated by Kaiser included:

- Process wastewater
- Waste caustic sludge with high levels of lead, aluminum, and sodium hydroxide
- Asbestos (as result of remediation/demolition activities)
- Glass beads
- Contaminated wood block (as result of demolition/plant upgrades)
- Sulfuric acid related to process battery packs
- Welding dust solid NOS (weld dust, filters, chromium)
- Mineral spirits
- Mixture of used crankcase oil and antifreeze
- Transformer oil (Non-Polychlorinated Biphenyl (PCB))

Prior to 1980, Kaiser disposed of caustic and oily wastes in the Former Pond that was located on south central part of the Facility. Kaiser also stored chemical materials, such as gas oil, glycol water, used oil, fuel oil, and caustic waste in aboveground storage tanks (ASTs) and underground storage tanks (USTs) at the Facility. Those ASTs and USTs have been removed and/or closed in place.

In 2002, Kaiser filed a voluntary petition for relief under Chapter 11 of the Bankruptcy Code in the United States Bankruptcy Court for the District of Delaware. The Facility is currently owned by GEIDC, a non-profit economic development agency, which purchased the Facility from Kaiser in 2005. PADEP has designated the Facility as a Special Industrial Area under Pennsylvania's Land Recycling and Environmental Remediation Standards Act of May 19, 1995, P.L. 4, No.2, 35 P.S. § 6026.101 *et seq.* (Act 2).

III. Summary of Environmental Investigation

In 2000, Kaiser became aware of soil contamination under Facility buildings while replacing flooring. Kaiser subsequently removed 144 tons of oil contaminated soil and debris from under the buildings. In addition, by 2007, Kaiser removed and or closed in place 8 USTS and 7 ASTs and excavated and disposed of several hundred tons of contaminated soil from the Former Pond.

GEIDC and two current lessees, the ELH Inc. and Accuride-Erie LP, have performed environmental investigations and remedial activities at the Facility under the oversight of PADEP. In March 2005, GEIDC submitted a Work Plan to PADEP for the remedial investigation of a 16-acre golf driving range located on Facility property. The objective of the investigation was first, to provide data to establish a reference point (i.e., a baseline) to document contamination, if any, that existed prior to redevelopment, and second, to identify any immediate threats to human health or the environment that must be addressed as part of, or prior to, redevelopment. On March 24, 2005, PADEP approved the Work Plan.

On June 17, 2005, a Consent Order and Agreement (COA) was executed among PADEP, Kaiser, GEIDC, Accuride-Erie LP, and Erie Land Holdings, Inc. Pursuant to the COA, GEIDC agreed to perform a Baseline Environmental Remedial Investigation (BER Investigation) in order to determine the nature and extent of the contamination at the Facility and to propose remediation alternatives. On October 26, 2006 PADEP approved the BER Investigation Report (Final Report).

The PADEP-approved Final Report divided the property into 6 parcels as follows:

1. Plant Parcel – approximately 17.5 acres where buildings and other improvements were used for industrial activities. A portion of the Plant parcel is currently used by Accuride pursuant to a lease with Kaiser.
2. Driving Range Parcel – approximately 16 acres at the far eastern end of the Facility property which has been operated by a third party as a golf driving range
3. Option Parcel – approximately 5.1 acres located south of the Plant Parcel.
4. Leased Parcel - approximately 1.35 acres located within the Option Parcel which is used as an equipment storage area by Liberty Iron and Metal pursuant to a lease with Kaiser.
5. Permanent Easement Parcel – approximately 4 acres located to the immediate east of the Plant Parcel.
6. Former Pond Parcel – approximately 7.9 acres located in the south central part of the Facility that is currently unoccupied, but includes the former 0.24-acre Former Pond (also known as a “lagoon” or “pit”).

A. Soils

A total of 72 soil samples were taken throughout the Facility and were analyzed for volatile organic compounds (VOCs), semi-volatile compounds (SVOCs), metals, and polychlorinated biphenyl (PCB) compounds. GEIDC compared soil results for those compounds with the Pennsylvania’s non-residential statewide health standards for direct contact with soils. Two samples exceeded statewide health standards, one for arsenic and one for lead.

GEIDC conducted additional sampling throughout the Facility to determine the extent of the soil contamination. Those additional sample results were below Pennsylvania’s non-residential statewide health standards for direct contact with soils. Based on those results, PADEP determined that two samples that exceeded Pennsylvania’s non-residential statewide health standards were localized anomalies based on the vertical and horizontal extent of contamination.

In 1980, Kaiser installed a soil cover over the Former Pond with PADEP approval. Surface and subsurface soil samples were collected for VOCs, SVOCs, metals and PCBs from within the Former Pond during the BER Investigation. The sample results did not indicate any exceedence of Pennsylvania’s non-residential statewide health standards for direct contact with soils. In 2007, GEIDC observed that the soil cover showed signs of erosion and stressed vegetation. Even though sampling results did not indicate any exceedence of Pennsylvania’s non-residential statewide health standards for direct contact with soils, GEIDC repaired the 2-foot thick soil cover.

B. Groundwater

Groundwater at the Facility is very shallow, ranging from 1.4 to 8.8 feet below the ground surface. Because of its depth (8 feet or less below ground) and poor quality (naturally

high in total dissolved solids), the aquifer is unsuited as a drinking water source. The groundwater flows in a northeasterly direction toward Lake Erie, following the surface topography. Under the COA, GEIDC installed eleven (11) groundwater monitoring wells at the Facility. Each groundwater well was sampled at least twice from April to September 2005. Samples were analyzed for the same suite of analytes used for soils: VOCs, SVOCs, metals, and PCBs.

Sampling results from September 2005 showed that concentrations of iron, magnesium, and calcium were slightly above Pennsylvania's residential statewide health standards. Those metals are not considered hazardous constituents and are often found in the environment at high levels from natural sources. Furthermore, sampling did not indicate a large or highly contaminated plume within the shallow groundwater, nor was there any indication of off-site migration of contaminants. Based on these results, PADEP determined in January 2008 that the groundwater met the Pennsylvania statewide non-use, non-residential health standard.

GEIDC also compared soil and groundwater sample results to groundwater and soil screening values contained in Pennsylvania's Land Recycling Program Technical Guidance Manual – Section IV-A.4, "Vapor Intrusion into Buildings from Groundwater and Soil under the Act 2 Statewide Health Standard" (effective January 24, 2004). No exceedences of any screening value were found.

On August 16, 2005, EPA conducted a Corrective Action site visit at the Facility. Based on that site visit and EPA's review of the data from the BER Investigation, EPA has determined that Facility conditions are protective of human health and the environment provided that direct contact with residual contamination in the soil and groundwater is restricted through land and groundwater use restrictions.

IV. Corrective Action Objectives

EPA's Corrective Action Objectives for the Facility are the following:

1. Soils

The BER Investigation conducted under PADEP's oversight showed that contaminants remaining in Facility soils are below Pennsylvania's non-residential statewide health standards for direct contact with soils. EPA has compared the Pennsylvania non-residential statewide result standards to EPA's Risk Based Screening levels. For the former Kaiser facility, Pennsylvania standards are slightly more protective for non-residential use. (See Administrative Record for a table comparing values.) EPA has determined that Pennsylvania's non-residential statewide health standards for direct contact with soils are protective of human health and the environment for individual contaminants at this Facility provided that Facility is not used for residential purposes. Therefore, EPA's Corrective Action Objective for Facility soils is to control exposure to the hazardous constituents remaining in soils by requiring the compliance with and maintenance of land use restrictions at the Facility.

2. Groundwater

EPA has determined that Pennsylvania's non-residential statewide health standards for groundwater are protective of human health and the environment for individual contaminants at this Facility provided that consumptive uses of groundwater is prohibited. Therefore, EPA's Corrective Action Objective for Facility groundwater is to control exposure to the hazardous constituents remaining in the groundwater by requiring the compliance with and maintenance of groundwater use restrictions at the Facility.

V. Proposed Remedy

1. Operation, Maintenance and Inspection of Former Pond

For Facility soils, EPA is proposing the operation, maintenance and inspection of the soil cover over the Former Pond in order to assure its continued protection of human health and the environment at the Facility. The operation, maintenance and inspection of the soil cover are already requirements under the July 17, 2005 COA issued and enforceable by PADEP. That COA requires GEIDC to operate and maintain the 2-foot thick soil cover over the Former Pond and to inspect the soil cover annually. For all other soils at the Facility, EPA is proposing compliance with and maintenance of institutional controls as described immediately below.

2. Institutional Controls

Institutional Controls (ICs) are non-engineered mechanisms such as administrative and/or legal controls that minimize the potential for human exposure to contamination and protect the integrity of a remedy. Under this proposed remedy, some contaminants remain in the groundwater and soil at the Facility above levels appropriate for non-residential (industrial) uses. Because some contaminants remain in the soil and groundwater at the Facility at levels which exceed residential use, EPA's proposed remedy requires the implementation and maintenance of institutional controls to restrict activities that may result in human exposure to those contaminants. As a result, the proposed remedy will require the Facility to implement ICs in order to restrict use of the Facility soil and groundwater to prevent human exposure to contaminants while such contaminants remain in place.

On June 22, 2005, a "Quitclaim Deed" between Kaiser (the Grantor) and the GEIDC (the Grantee) was recorded in the Erie County Recorder of Deeds Office for Erie, Pennsylvania, which imposes certain reservations, covenants, restrictions and conditions regarding the use of the Facility. In the Quitclaim Deed, Kaiser reserved a perpetual easement of ingress and egress to and across the Facility for the purpose of performing any activity required by PADEP or any other governmental entity or authority relating to the investigation and/or remediation of environmental conditions at the Facility. The restrictions and conditions described in the deed include the following:

- The Property and each portion thereof shall be used solely as non-residential property, as defined under Act 2, unless Grantee or any transferee or other owner of the Property demonstrates to PADEP that the Property or any portion thereof meets acceptable

cleanup standards for residential use under ACT 2 and PADEP approves such residential use. Neither the Grantee nor any transferee or other owner of all or any portion of the Property shall seek or apply for a zoning use change, variance, subdivision or other discretionary governmental act, approval or permit that would or may be contrary to the forgoing restriction.

- . . . each part or portion of any building structure, paved surface or protective soil cover, existing on the date hereof or constructed hereafter, which serves as an engineering control to eliminate pathways of exposure to “Pollutants,” as defined herein, to meet an Act 2 remediation standard shall not be demolished, removed or modified in a manner that will allow exposure to Pollutants in concentrations or quantities that exceed the risk-based standards of Act 2, unless other measures, proposed to and accepted by DEP, are undertaken to replace the affected engineering control or to otherwise eliminate the unacceptable risk.
- Groundwater beneath the Property shall not be used for any purpose.

In addition, in the Quitclaim Deed, Kaiser reserved a perpetual easement of ingress and egress to and across the Facility for the purpose of performing any activity required by PADEP or any other governmental entity or authority relating to the investigation and/or remediation of environmental conditions at the Facility.

Additionally, the Codified Ordinances of the City of Erie, Pennsylvania (December 3, 2010), Article 947, Non-Use Aquifer Ordinance of the City of Erie, Pennsylvania, prohibits, regulates, and restricts the use of groundwater for drinking or agricultural purposes within the City. It also requires all properties in the City of Erie to connect to a community water supply for drinking or agricultural purposes. Specifically, Article 947.06 sets forth the following restrictions:

- (1) No well or spring located on a property shall be used as a groundwater source for drinking water or agricultural purposes.
- (2) No owner, lessee or other person shall use any groundwater source for drinking water or agricultural purposes.
- (3) In accordance with the City's adoption of the 2003 International Plumbing Code and as further required by this article, all buildings located within the boundaries of the City of Erie are mandated to connect to the public drinking water system servicing the area.
- (4) No building permit shall be issued by the City without verification of the availability of public drinking water service to the building.
- (5) No building may be occupied without verification that the building has connected to the public drinking water system and there are no other water supply sources connected to the building for use in supplying water for drinking water or agricultural purposes to the building, including but not limited to, groundwater sources.

While the operation, maintenance and inspection requirements in the COA, the land and groundwater use restrictions in the Quitclaim Deed, and the Non-Use Aquifer Ordinance are

sufficient to minimize the potential for human exposure to contamination at the Facility and to protect the integrity of the soil cover over the Former Pond, if the Facility fails to meet and maintain its obligations under the COA and/or the Quitclaim Deed, or if EPA, in its sole discretion, deems that additional operation and maintenance and monitoring activities and/or institutional controls are necessary to protect human health or the environment, EPA has the authority to require and enforce additional corrective actions.

VI. Evaluation of EPA's Proposed Decision

EPA evaluates a proposed remedy using three threshold criteria to determine whether it meets EPA's corrective action objectives. The following is a summary of EPA's evaluation of the proposed remedy for the Facility:

1. Protect Human Health and the Environment

Prior to Kaiser's excavation and disposal activities, the primary human health and environmental threats posed by contaminated soils at the Facility were related to direct contact with those soils. Additional threats were related to the potential for migration of contamination in the soils via soil erosion, surface water run-off and leaching to the ground water. Since Kaiser removed USTs and ASTs and several hundred tons of contaminated soil from the Former Pond, there are no remaining large, discrete sources of waste from which constituents would be released to the environment. Kaiser's excavation and disposal activities are protective of human health and the environment provided that land and groundwater restrictions are implemented and maintained.

The PADEP-approved Final Report evaluated all relevant exposure pathways, including the potential for vapor intrusion into present or future buildings. With respect to groundwater, while low levels of contaminants remain in the groundwater beneath the Facility, PADEP determined that the contaminants are contained in the shallow aquifer and do not migrate beyond the Facility boundary. This aquifer cannot be used as a drinking water source since the City of Erie does not allow the use of private wells for residential use. Moreover, the aquifer is unsuited as a drinking water source due to its depth (8 feet or less below ground) and poor quality (naturally high in total dissolved solids). In addition, since the plume does not migrate beyond the Facility boundary, surface water impacts are not expected.

With respect to Facility soils, low levels of dispersed constituents are present, however, those constituents are often found at high levels from natural sources. On June 22, 2005, Kaiser and the GEIDC recorded a Quitclaim Deed with Erie County which imposes certain reservations, covenants, restrictions and conditions regarding the use of the Facility property. Under the terms of the deed, the Facility property may only be used for non-residential purposes and groundwater beneath the property may not be used for any purpose. These conditions are enforceable by PADEP and provide long-term assurance that the exposure assumptions used in developing EPA's proposed remedy are not changed without State approval.

2. Achieve Media Cleanup Objectives for Soil and Groundwater

The Facility has achieved the non-residential Statewide Health Standards (SHSs) for soils and the non-use SHSs for groundwater. Both of these standards meet EPA risk guidelines for human health and the environment at Kaiser. EPA's proposed final remedy requires the implementation and maintenance of institutional controls to ensure that Facility property is not used for residential purposes and groundwater beneath Facility property is not used for any purpose.

3. Remediating the Source of Releases

In all remedy decisions, EPA seeks to eliminate or reduce further releases of hazardous wastes or hazardous constituents that may pose a threat to human health and the environment. As shown in the PADEP-approved Final Report, the Facility met this objective by removing USTs and ASTs and several hundred tons of contaminated soil from the former lagoon. There are no remaining large, discrete sources of waste from which constituents would be released to the environment. Therefore, EPA has determined that this criterion has been met.

VI. Environmental Indicators

EPA sets national goals to measure progress toward meeting the nation's major environmental goals. For Corrective Action, EPA evaluates two key environmental indicators for each facility: (1) current human exposures under control and (2) migration of contaminated groundwater under control. The Facility met these indicators on August 9, 2009.

VII. Financial Assurance

Annual monitoring and maintenance costs are estimated at \$1,500. As the investigation and remedial activities are complete, EPA is proposing that no financial assurance is necessary for this proposed decision. EPA is aware that the GEIDC has secured an insurance policy for environmental liability coverage. This policy is currently in effect and will expire April 1, 2015. This insurance policy is *not* required under EPA's proposed decision.

VIII. Public Participation

Before EPA makes a final decision on its proposal for the Facility, the public may participate in the remedy selection process by reviewing this SB and documents contained in the Administrative Record (AR) for the Facility. The AR contains all information considered by EPA in reaching this proposed decision. It is available for public review during normal business hours at:

U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103
Contact: Mr. Hon Lee (3LC30)
Phone: (215) 814-3419

Fax: (215) 814-3113
Email: lee.hon@epa.gov

Interested parties are encouraged to review the AR and comment on EPA's proposed decision. The public comment period will last thirty (30) calendar days from the date that notice is published in a local newspaper. You may submit comments by mail, fax, or e-mail to Mr. Hon Lee. EPA will hold a public meeting to discuss this proposed decision upon request. Requests for a public meeting should be made to Mr. Lee.

EPA will respond to all relevant comments received during the comment period. If EPA determines that new information warrant a modification to the proposed decision, EPA will modify the proposed decision or select other alternatives based on such new information and/or public comments. EPA will announce its final decision and explain the rationale for any changes in a document entitled the Final Decision and Response to Comments (FDRTC). All persons who comment on this proposed decision will receive a copy of the FDRTC. Others may obtain a copy by contacting Mr. Lee at the address listed above.

Date:

Abraham Ferdas, Director
Waste and Chemicals Management Division
US EPA, Region III