UNITES STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION III

STATEMENT OF BASIS

CONCAST METAL PRODUCTS COMPANY
MARS, PENNSYLVANIA
PAD000765651

Section 1: 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 Concast Metal Products Company (Concast) facility (Facility) located at 134 Myoma Road, Mars, Pennsylvania. EPA's proposed remedy consists of groundwater and surface water monitoring for boron contamination to confirm that a boron groundwater plume located beneath the Facility remains stabilized and does not adversely impact the surrounding environment. Furthermore, EPA is proposing compliance with and maintenance of institutional controls (ICs) that restrict certain groundwater uses at the Facility. Levels of constituents of concern detected in surface and subsurface soils do not pose a significant exposure health risk and will not require corrective action. EPA proposes to implement the final remedy for the Facility through an enforceable mechanism such as an permit, order, or an Environmental Covenant pursuant to the Pennsylvania Uniform Environmental Covenants Act (UECA), 27 Pa. C.S. " 6501-6517.

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. The Commonwealth of Pennsylvania (the Commonwealth) is not authorized for the Corrective Action program under Section 3006 of RCRA, 42 U.S.C. § 6906. 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 remedy is based. The Index to the AR is found at the end of this SB. See Section IX, Public Participation, for information on how you may review the AR. Information on the Corrective Action Program as well as a fact sheet for the Facility can be found by navigating through the EPA website http://www.epa.gov.reg3wcmd/correctiveaction.htm.

Section 2: Facility Background

The Facility property consists of approximately 45 acres located in rural Adams Township, Butler County, Pennsylvania. It is surrounded by undeveloped wooded areas and some residential and industrial properties. Breakneck Creek is located approximately 600 feet downgradient of the Facility. A map of the Facility is presented in Attachment A.

Until 1986, Concast operated as a secondary smelter and refiner of brass and bronze metals. The manufacturing process involved the melting of copper, copper-based alloys and scraps in two Lindberg gas-fired rotary furnaces. The alloys were then casted into ingots for shipment.

Presently, Concast manufactures specialty and continuous cast copper based alloys and wrought products. Their primary production is the fabrication of copper alloys in bars, rods, tubes and rectangles, as well as custom alloys. All products are produced with state-of-the-art horizontal and vertical continuous-casting technology.

Section 3: Summary of Environmental Investigation

From 1986 to 1996, Concast implemented the closure of six solid waste management units (SWMUs) and two underground storage tanks (USTs) at the Facility. The Pennsylvania Department of Environmental Protection (PADEP) oversaw and certified the closures of the SWMUs and the USTs as these units were progressively completed from 1986 to 1996.

As part of the closure of the former cooling water impoundment, which was one of the six aforementioned SWMUs, contaminated soils containing elevated heavy metals were excavated and four post-closure monitoring wells were installed to evaluate the groundwater. Data collected from the monitoring wells indicated the presence of low levels of heavy metals below the EPA Maximum Contaminant Levels (MCLs), promulgated at 40 C.F.R. Part 141 pursuant to Section 1412 of the Safe Drinking Water Act, 42 U.S.C. Section 300g-1, and confirmed that the operation of the former cooling water impoundment did not adversely impact the groundwater. However, boron, which is not directly associated with the former impoundment, was detected in groundwater at the Facility above the EPA Risk Based Concentration (RBC) of 3.3 milligrams per liter (mg/L). Boron was screened against the EPA RBCs because boron does not have an applicable MCL. Boron concentrations were detected as high as 33 mg/L. Boron in groundwater was likely attributable to the past use of borax as a flux in the gas furnace rotary process at the Facility. In 1986, the Facility discontinued the use of borax when they upgraded their furnaces. There is no longer a source of boron contamination to groundwater.

In 1996 and subsequent to the closure of the former cooling water impoundment, the four post-closure monitoring wells were decommissioned and were no longer available for sampling to further assess the boron levels in groundwater. In the absence of the post-closure monitoring wells, EPA utilized a spatial groundwater sampling program in 2000 that employed available sample points to assess the extent of boron in groundwater. The locations of the sampling points consisted of upgradient residential wells, two plant wells, the Facility inlet and several surface water sampling points along Breakneck Creek, located approximately 600 feet downgradient of the Facility and where the groundwater is expected to discharge. Results from the groundwater and surface water sampling are provided below.

Sampling Locations	**Boron Concs. (mg/L)**
Residential Well #1 (upgradient)	0.07 - 0.20
Residential Well #2 (upgradient)	0.05 - 1.10
Plant well #1 (North Side Well)	0.01 - 11.0
Plant well #2 (West Side Well)	5.15 - 13.57
Plant Inlet (plant)	1.06 - 33.60

Breakneck Creek (upstream)	0.04 - 0.24
Breakneck Creek (downstream)	0.10 - 0.38
Unnamed Tributary (Adjacent)	0.03 – 6.86

The groundwater and surface water results collected since 2000 indicate that the boron levels in groundwater have not adversely impacted the nearby residential wells and the surrounding environment. Levels detected in the offsite residential wells and surface water are below the EPA RBC level. The boron levels in groundwater have gradually decreased over the years and have not migrated beyond its original footprint. Currently, there are no residential wells in the area. Public water is being provided to all residents in the area. Therefore, there are no longer the potential for direct residential human exposures to boron in groundwater. The Facility will continue to monitor boron in groundwater and surface water.

Section 4: 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. On June 6, 2001, EPA has determined that the Facility met these indicators (i.e., there is no contamination problem that creates an unacceptable risk to human health nor is there any evidence of adverse groundwater contamination impact to the environment). Based on the decreasing trend of boron concentrations in groundwater and surface water, EPA concluded that the boron groundwater plume is expected to remain stabilized between the Facility and the Breakneck Creek and does pose an adverse impact to human health or the environment.

Section 5: Corrective Action Objectives

EPA's overall Corrective Action Objectives for the Facility are as follows:

A. Groundwater

EPA's proposed corrective action objective for groundwater at the Facility is to attain EPA's RBC of 3.3 mg/L for boron and until such time as boron meets its RBC, to control exposure to that contaminant in the groundwater by requiring the compliance with and maintenance of groundwater use restrictions at the Facility while it remains above the EPA RBC.

B. Surface water

EPA's corrective action objective for surface water is to control the potential impacts to Breakneck Creek while boron levels remain above EPA RBC level of 3.3 mg/L in groundwater.

Section 6: Proposed Remedy

EPA is proposing groundwater and surface water monitoring and implementation of ICs as the final remedy for the Facility as set forth below:

A. Groundwater

EPA's proposed remedy for groundwater at the Facility is Monitored Natural Attenuation with Institutional Controls. Natural attenuation refers to a system where a variety of physical, chemical, or biological processes act without human intervention to reduce the mass, toxicity, mobility, volume, or concentration of contaminants in soil or groundwater. As decomposition of the contaminants takes place, compounds called "breakdown products" are produced. Ultimately, the breakdown products are also decomposed resulting in compounds which are not a threat to human health or the environment. Monitored Natural Attenuation simply refers to the act of collecting samples to "monitor" the natural attenuation process.

Because boron will remain in the groundwater at the Facility above its RBC, EPA's proposed remedy includes groundwater use restrictions to be implemented through enforceable Institutional Controls (ICs). ICs are generally non-engineered mechanism such as administrative and/or legal controls that minimize the potential for human exposure to contamination and/or protect the integrity of a remedy. Under this proposed remedy, some concentrations of boron may remain in the groundwater at the Facility above levels appropriate for residential and domestic uses. As a result, the proposed remedy will require the Facility to implement groundwater use restrictions to prohibit use of the Facility groundwater for potable use while boron remains in the groundwater above its RBC.

The proposed groundwater use restrictions will be implemented through an IC such as an enforceable order, permit or an Environmental Covenant pursuant to the Pennsylvania Uniform Environmental Covenants Act, 27 Pa. C.S. §§ 6501-6517 (UECA) and recorded with the deed for the Facility property. EPA proposes that the groundwater use restrictions include the following:

1) Groundwater at the Facility shall not be used for any potable purpose unless it is demonstrated to EPA that such use will not pose a threat to human health or the environment or adversely affect or interfere with the final remedy and EPA provides prior written approval for such use;

2) No new domestic wells shall be installed on Facility property unless it is demonstrated to EPA that such wells are necessary to implement the final remedy and EPA provides prior written approval to install such wells;

B. Surface water

Surface water monitoring at Breakneck Creek shall be continued to demonstrate that the boron contaminated groundwater plume associated with the Facility is not adversely impacting that surface water body or to determine if additional measures are necessary.

Section 7: Evaluation of Proposed Remedy

This section provides a description of the criteria EPA used to evaluate the proposed remedy consistent with EPA guidance. The criteria are applied in two phases. In the first phase, EPA evaluates three decision threshold criteria as general goals. In the second phase, for those remedies which meet the threshold criteria, EPA then evaluates seven balancing criteria to determine which proposed remedy alternative provides the best relative combination of attributes.

A. Threshold Criteria

1. Protect Human Health and the Environment

The primary human health and environmental threats posed by elevated boron concentrations in groundwater are direct consumption of the contaminated groundwater and the potential to adversely impact Breakneck Creek, the nearby surface water body. Historic groundwater and surface water monitoring results indicate that the boron groundwater plume is stabilized at and in the vicinity of the Facility and does not adversely impact the surrounding environment. Boron levels detected in the offsite wells and surface water are below the EPA RBC level. The boron levels in groundwater have gradually decreased over the years. Therefore, EPA is satisfied with the determination that Monitored Natural Attenuation with ICs is and will be protective of human health and the environment. Under the proposed remedy, EPA will require monitoring of boron in groundwater and surface water to confirm that the boron groundwater plume remains stabilized and does not adversely impact the surrounding environment. In addition, EPA's proposed final remedy requires the implementation and maintenance of institutional controls to prohibit use of on-site groundwater for any potable purpose unless the groundwater is treated to meet RBC concentration for boron.

2. Achieve Media Cleanup Objectives

There is no direct human exposure to the contaminated groundwater. Residences in the area are connected to public water. The Facility utilizes the groundwater for industrial purposes only. The boron levels in groundwater have gradually decreased over the years. The Facility will continue to monitor the groundwater and surface water for boron to the EPA RBC of 3.3 mg/L to confirm that the boron groundwater plume remains stabilized, boron concentrations in groundwater continue to decrease, and boron does not adversely impact the surrounding environment. The EPA RBC standard meets EPA risk guideline for human health and the environment at the Facility. EPA's proposed remedy also requires the implementation and maintenance of institutional controls to prohibit on-site groundwater for portable use.

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. The Facility no longer uses borax, which eliminates the source of boron contamination. EPA's proposed remedy requires the continued monitoring of groundwater and surface water to demonstrate that the boron concentrations in groundwater have not migrated beyond its current location and continue to decrease or to determine if additional measures are necessary.

B. Balancing/Evaluation Criteria

4. Long-Term Effectiveness

The proposed remedy will maintain protection of human health and the environment over time by controlling exposure to boron in groundwater. EPA's proposed remedy requires the compliance with and maintenance of groundwater use restrictions at the Facility. EPA anticipates that the groundwater use restrictions will be implemented through an enforceable mechanism such as a permit, order or environmental covenant to be recorded with the deed for the Facility property. If the mechanism selected will be an environmental covenant, the covenant shall run with the land and as such, will be enforceable by EPA and the State against future land owners.

5. Reduction of Toxicity, Mobility, or Volume of the Hazardous Constituents

The reduction of toxicity, mobility and volume of hazardous constituents at the Facility has already been achieved. The ongoing groundwater and surface water monitoring activities confirm that the boron levels in groundwater are decreasing and the plume remains stabilized, and does not adversely impact the surrounding environment.

6. Short-Term Effectiveness

EPA's proposed remedy does not involve any additional activities, such as construction or excavation that would pose short-term risks to workers, residents, and the environment. In addition, EPA anticipates that the groundwater use restrictions will be fully implemented shortly after the issuance of the Final Decision and Response to Comments.

7. Implementability

EPA's proposed remedy is readily implementable. The Facility has already implemented annual groundwater and surface water monitoring for boron. EPA does not anticipate any regulatory constraints in requiring continued groundwater and surface water monitoring activities and the implementation of an enforceable IC mechanism.

8. Cost

EPA's proposed remedy is cost effective. The cost in implementing ICs at the Facility is minimal. The only recurring cost that is required by the proposed remedy is annual groundwater

and surface water sampling, which is also minimal.

9. Community Acceptance

EPA will evaluate community acceptance of the proposed remedy during the public comment period and it will be described in the Final Decision and Response to Comments.

10. State/Support Agency Acceptance

EPA will evaluate the Commonwealth's acceptance of the proposed remedy based on comments received from PADEP during the public comment period and it will be described in the Final Decision and Response to Comments.

Section 8: Financial Assurance

EPA has evaluated whether financial assurance is necessary to implement EPA's proposed remedy at the Facility. EPA's proposed remedy does not require engineering actions to remediate groundwater. Given the minimal costs of annual groundwater and surface water monitoring and the implementation of institutional controls at the Facility, EPA is proposing that financial assurance will not be required.

Section 9: 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 remedy. The AR is available for public review during normal business hours at:

U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103
Contact: Khai M. Dao
Phone: (215) 814-5467
Fax: (215) 814-3113
Email: dao.khai@epa.gov

Interested parties are encouraged to review the AR and comment on EPA's proposed remedy. 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 Khai M. Dao. EPA will hold a public meeting to discuss this proposed remedy upon request. Requests for a public meeting should be made to Khai M. Dao at the address listed above. A meeting will

not be scheduled unless one is requested.

EPA will respond to all relevant comments received during the comment period. If EPA determines that new information warrant a modification to the proposed remedy, EPA will modify the proposed remedy 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 remedy will receive a copy of the FDRTC. Others may obtain a copy by contacting Khai M. Dao at the address listed above.

6.3.13
Date

John A. Armstead, Director
Land and Chemicals Division
US EPA, Region III

Attachment A:
Facility Map

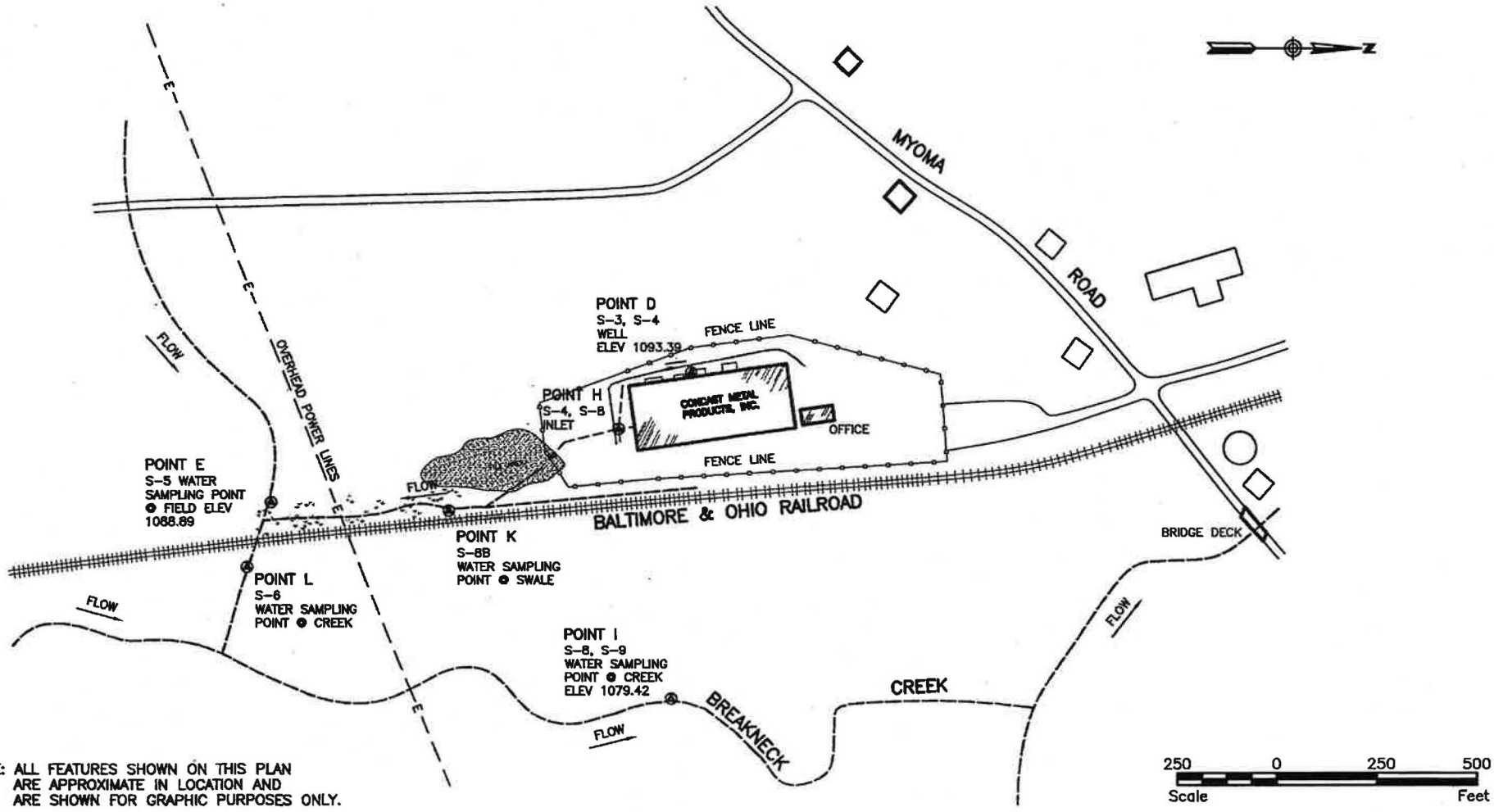
Index to Administrative Record

Closure Report, Roessing Bronze Company, Mars, PA, prepared by Groundwater Technology, Inc., September 9, 1991.

Environmental Indicator Inspection Report, Concast Metal Products Company, Mars, PA, prepared by the United States Army Corps of Engineers, March 1, 2000.

Groundwater and Surface Water Sampling Reports, Concast Metal Products Company, Mars, PA, prepared by Pedersen and Pedersen, 2001-2013.

Attachment A



NOTE: ALL FEATURES SHOWN ON THIS PLAN ARE APPROXIMATE IN LOCATION AND ARE SHOWN FOR GRAPHIC PURPOSES ONLY.

REV.	REVISION DESCRIPTION	DATE	BY	CHKD	APPR
3					
2					
1					

REVISIONS

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CLIENT: ROESSING BRONZE/CONCAST METALS CO.

PROJECT: CURRENT BORON WATER SAMPLING POINTS

SHEET TITLE: PLAN VIEW

DRAWN	BJE
CHECKED	RDS
APPROVED	HCP
DATE	06/04/09
ISSUE DATE	09/25/08
REV. #	0
PROJECT #	93-020
SCALE	1"=250'
DWG #	SP1
SHEET	1 OF 1