



PROPOSED PLAN OF REMEDIAL ACTION

CitiSteel (Former EVRAZ-Claymont Steel) Operable Unit #4
Claymont, Delaware
DNREC Project No. DE-0046



June 2016

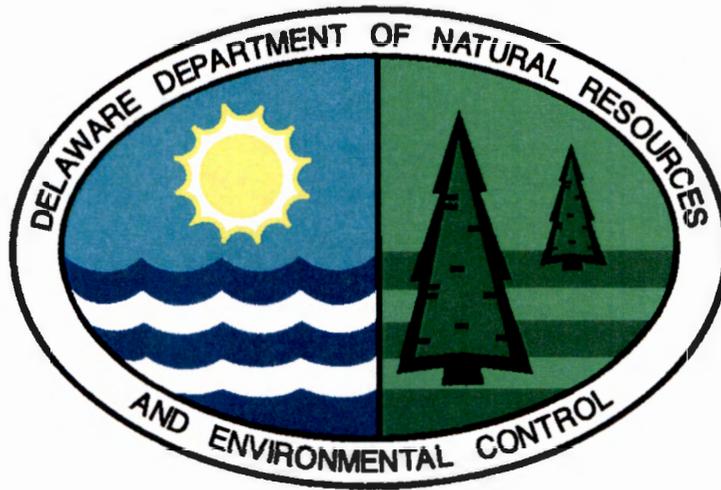
Delaware Department of Natural Resources and Environmental Control
Division of Waste and Hazardous Substances
Site Investigation & Restoration Section
391 Lukens Drive
New Castle, Delaware 19720

CONTENTS

- Figures: 1 & 2
- Glossary of Terms

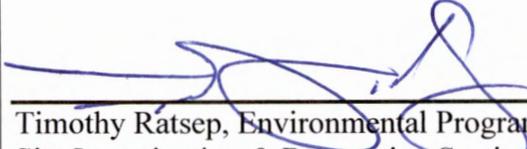
PROPOSED PLAN OF REMEDIAL ACTION

CitiSteel (Former EVRAZ-Claymont Steel) Operable Unit #5
Claymont, Delaware
DNREC Project No. DE-0046



Approval:

This Proposed Plan meets the requirements of the Hazardous Substance Cleanup Act.

Approved by:

Timothy Ratsep, Environmental Program Administrator Site Investigation & Restoration Section
Date <u>June 6, 2016</u>



What is the Proposed Plan of Remedial Action?

The Proposed Plan of Remedial Action (Proposed Plan) summarizes the clean-up (remedial) actions that are being proposed to address contamination found at the Site for public comment. A legal notice is published in the newspaper for a 20-day comment period. DNREC considers and addresses all public comments received and publishes a Final Plan of Remedial Action (Final Plan) for the Site.

What is the CitiSteel (Former EVRAZ Claymont Steel) Site?

The Site is located at 4001 Philadelphia Pike in Claymont, New Castle County, Delaware, and is bounded by Interstates 95 and 495, Naamans Road and the Delaware River. Currently, the Site consists of approximately 420 acres. Since the early 1900s, production and manufacturing of steel was conducted at the Site. Surrounding properties are used for a mix of residential and commercial uses (Figure 1).

Topography at the Site has been altered over the last century and during steel production activities. Naamans Creek has been relocated and new land has been added to near shore areas along the Delaware River. Generally, the Site slopes from west to east towards the Delaware River. Drainage at the Site is collected in a series of culverts, underground pipes and drainage ditches/ponds.

For purposes of environmental cleanup and redevelopment, the Site has been divided into five operable units (OUs). OU-1 is comprised of approximately 32 acres, formerly used as a scrap yard. OU-2 is comprised of approximately 165 acres east of the railroad tracks and adjacent to the Delaware River. OU-3 is comprised of the former steel production area, is approximately 112 acres in size, and is located on both sides of Philadelphia Pike. OU-4 is the approximate 12 acre former cooling water/sedimentation lagoon located within OU-2. OU-5 is 23 acres in size and was a former steel production/material handling and storage area at the Site. All operable units and their boundaries are shown on Figure 2. This Proposed Plan of Remedial Action is for OU-4 only. Proposed Plans of Remedial Action will be developed for OU-1, OU-2, OU-3 and OU-5 separately.

What happened at the CitiSteel (Former EVRAZ Claymont Steel) Site?

The Site has been used historically for iron and steel production, including raw material and scrap metal handling, steel production, and semi-finished and finished product preparation. Operations changed ownership many times since the early 1900s, and production ceased permanently in the fall of 2013. Specifically, the OU-4 portion of the Site is a man-made lagoon formerly used to store, treat and circulate water for industrial cooling purposes in the steel mill.

During steel making operations, process wastewater from the mill passed through an oil/water separator before being discharged to an unlined drainage swale (former Naamans Creek) which then transported the water to the cooling water/sedimentation lagoon. During plant operation, water from the lagoon was recirculated to the facility through underground piping to be reused.

What is the environmental problem at the CitiSteel (Former EVRAZ Claymont Steel) Site?

Several previous environmental investigations occurred at the Site between 1979 and 2007. A Surface Impoundment Assessment was completed in 1979. A Preliminary Assessment (PA) and Site Inspection (SI) were conducted by USEPA in 1981 and 1982, respectively, on the electric arc furnace dust landfill on the area of the current OU-2 portion of the Site. A second PA was conducted by DNREC in 1983 to review the findings of the previous USEPA investigations. In 1987, USEPA performed a second SI of the entire facility and identified 18 areas of concern (AOCs) at the Site, several of which required immediate action. The owner at the time, Phoenix Steel, subsequently declared bankruptcy. In 1988, after the facility was purchased by CitiSteel USA, DNREC and CitiSteel entered into an Administrative Consent Order to address the 18 areas of concern identified in the 1987 SI. In 2001, DNREC-SIRS performed an SI of the eastern portion of the Site, along the Delaware River. Soil, sediment, and groundwater samples were collected at the time to evaluate whether a release of hazardous substances occurred on the property. Although exceedances of applicable HSCA criteria were identified, the restricted access to the property resulted in the issuance of a No Further Action determination at that time, contingent upon land use remaining the same. A current change in potential land use through proposed redevelopment has resulted in the need to conduct additional assessment activities. A Facility Evaluation (FE) was conducted on the scrap yard in 2007 to assess surface soils for PAHs and PCBs, and to assess groundwater conditions. The assessment found exceedances of applicable criteria, but since the Site was still an active scrap yard, a No Further Action was issued, again contingent upon land use remaining the same. A current change in potential land use through proposed redevelopment has resulted in the need to conduct additional assessment activities.

Between August 2015 and April 2016, the new owner of the Site conducted a Remedial Investigation (RI) of OU-4 which was overseen by DNREC-SIRS. SVOCs, metals and PCBs were detected in surface water at concentrations exceeding applicable human health and/or ecological screening criteria. Metals and pesticides were detected in sediments at concentrations exceeding applicable human health and/or ecological screening criteria. SVOCs, metals, pesticides and PCBs were detected in soil and groundwater samples collected around the perimeter of OU-4 at concentrations exceeding applicable human health screening criteria. Subsequent risk evaluation indicated that Site contaminants in sediment would pose an unacceptable risk under a residential exposure scenario and to a child recreator, but did not pose an unacceptable risk to excavation workers or adult recreators. Comparison of surface water concentrations to DNREC-SIRS ecological screening levels indicated exceedances of SVOCs, metals and PCBs. In addition, discharge water from the lagoon to the Delaware River contains concentrations of PCBs at a concentration almost 50 times greater than the criterion established by the Delaware River Basin Commission (DRBC) for Zone 5 of the Delaware Estuary for

protection of human health from carcinogenic effects of exposure through drinking water and fish consumption.

Soil and groundwater surrounding OU-4 will be evaluated further during the assessment of OU-2.

What clean-up actions have been taken at the CitiSteel (Former EVRAZ Claymont Steel) Site?

CitiSteel Completed the following actions associated with the 1988 Consent Order across the entire Site:

- Removal of Asbestos from the Open Hearth Building in 1989
- Cleanout of nickel plating tanks in 1989
- Capping of the electric arc furnace dust landfill in 1991
- Removal and disposal of approximately 50 cubic yards of PCB impacted soils in 1989
- Removal of approximately 3,000 abandoned drums in 1989
- Removal of oil stained soil around the Oil House in 1989
- Removal of two USTs in 1989
- Removal of 1,000,000 gallon AST in 2004

There have been no specific historic clean-up actions taken at the OU-4 portion of the Site.

What does the owner want to do at the CitiSteel (Former EVRAZ Claymont Steel) OU-4 Site?

The owner wants to close/fill the lagoon comprising OU-4. OU-4 and surrounding properties are anticipated to be used for commercial/industrial purposes.

What additional clean-up actions are needed at the CitiSteel (Former EVRAZ Claymont Steel) OU-4 Site?

DNREC proposes the following remedial actions for the Site, which need to be completed before a Certificate of Completion of Remedy (COCR) can be issued.

1. A Remedial Action Work Plan must be submitted to DNREC for approval within 60 days of the issuance of the Final Plan of Remedial Action.
2. The former cooling water lagoon must be closed/filled to eliminate potential human health and ecological impacts associated with its sediments and surface waters.
3. Upon closure, the Site must be capped with at least one foot of clean fill or impervious material (e.g. buildings, asphalt, or concrete) pursuant to the schedule indicated in the DNREC approved Remedial Action Work Plan.

4. A proposed Environmental Covenant must be submitted to DNREC for approval within 60 days of the issuance of the Final Plan of Remedial Action.
5. The Environmental Covenant, consistent with Delaware's Uniform Environmental Covenants Act (7 Del.C. Chapter 79, Subchapter II), must be recorded in the Office of the New Castle County Recorder of Deeds within 30 days of DNREC's approval of the proposed Environmental Covenant. The Environmental Covenant must include the following activity and/or use restrictions:
 - [a.] Use Restriction. Use of the Property shall be restricted solely to those non-residential type uses permitted within Commercial, Manufacturing, or Industrial Districts;
 - [b.] Interference with Remedy. There shall be no digging, drilling, excavating, grading, constructing, earth moving, or any other land disturbing activities within the operable unit without the prior written approval of DNREC;
 - [c.] Limitation of Groundwater Withdrawal. No groundwater wells shall be installed and no groundwater shall be withdrawn from any well within the boundaries of OU-4 without the prior written approval of DNREC-SIRS and DNREC Division of Water;
 - [d.] Compliance with the Long Term Stewardship Plan. All work required by the Long Term Stewardship Plan must be performed to DNREC's satisfaction in accordance with the Plan; and
 - [e.] Compliance with Contaminated Materials Management Plan. All work required by the Contaminated Materials Management Plan must be performed to DNREC's satisfaction in accordance with the Plan.
6. A Contaminated Materials Management Plan (CMMP) must be submitted to DNREC within 60 days of the issuance of the Final Plan of Remedial Action. The CMMP will provide guidance to enable construction workers to safely handle any potential contaminated materials at the Site.
7. The CMMP will be implemented upon its approval by DNREC.
8. A Long-Term Stewardship Plan shall be submitted to DNREC for approval in accordance with the schedule set forth in the approved Remedial Action Work Plan. The LTS plan will detail the site-inspection schedule to be followed in order to ensure the long-term integrity of the remedy.
9. The LTS Plan must be implemented within 60 days of its approval by DNREC.
10. A Remedial Action Completion Report must be submitted to DNREC within 60 days of the completion of the remedial actions required in this Proposed Plan.

11. A request for a Certification of Completion of Remedy (COCR) must be submitted to DNREC within 60 days of approval of the Remedial Action Completion Report.

What are the long term plans for the Site after the cleanup?

The Site will be utilized for commercial and/or industrial purposes.

How can I find additional information or comment on the Proposed Plan?

The complete file on the Site, including the April 2016 Remedial Investigation Report – Revision 1, and the various other historic reports are available at the DNREC office, 391 Lukens Drive in New Castle, 19720. Most documents are also found on:

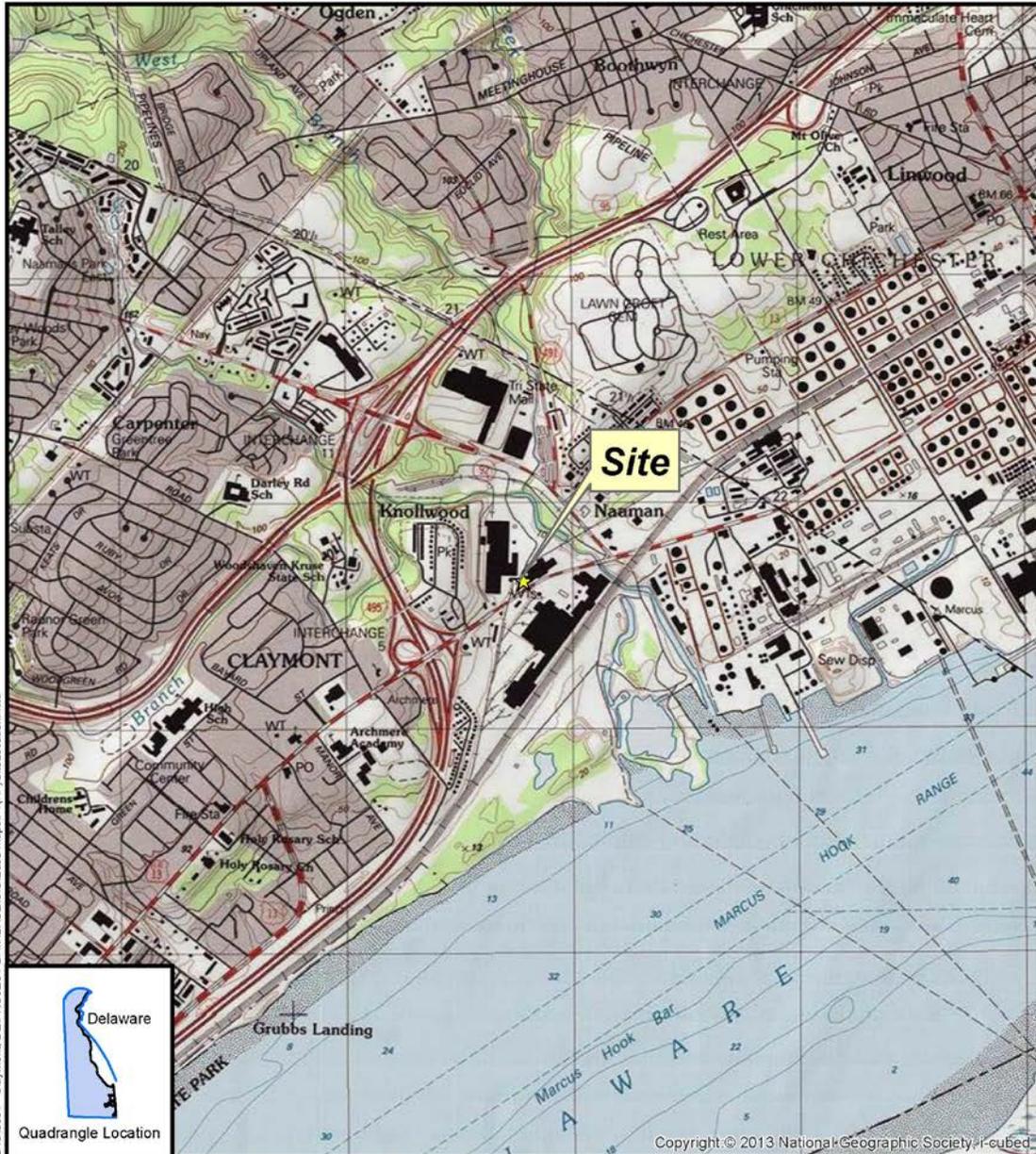
<http://www.nav.dnrec.delaware.gov/DEN3/>

The 20-day public comment period begins on June 8, 2016 and ends at close of business (4:30 pm) on June 27, 2016. Please send written comments to the DNREC office at 391 Lukens Drive, New Castle, DE 19720 to John G. Cargill, Project Officer or Robert Newsome, Public Information Officer.

Figure 1: CitiSteel Site Location Map
Figure 2: CitiSteel Site Operable Units

JGC:tlw; JGC16025.doc; DE 0046 II B 8

Figure 1. CitiSteel Site Location Map



G:\PROJECT\5-08-2560 - Enviro Analysis Group - EAG10001 - Claymont_DE\PROJECT DATABASE\SIS\Basis maps\F1(AP) Site Location.mxd



Copyright © 2013 National Geographic Society, i-cubed

SOURCE
Copyright: © 2013 National Geographic Society, i-cubed

NOTES
EASTING (X): 647794.089882
NORTHING (Y): 658852.204277



Title:
SITE LOCATION MAP
4001 PHILADELPHIA PIKE
CLAYMONT, NEW CASTLE COUNTY, DELAWARE

Prepared For:
EVRAZ CLAYMONT STEEL

 ROUX ASSOCIATES, INC. Environmental Consulting & Management	Compiled by: ASM	Date: 6/10/2015	FIGURE 1
	Prepared by: ASM	Scale: 1:24,000	
	Project Mgr: AD	Office: NJ	
	File No: F1(AP)	Project:	

Figure 2. CitiSteel Site Operable Units



Glossary of Terms Used in this Proposed Plan

Area of Concern (AOC)	A discrete section of the Site representing the local bounds of contamination in soil or ground water.
Certification of Completion of Remedy (COCR)	A formal determination by the Secretary of DNREC that remedial activities required by the Final Plan of Remedial Action have been completed.
Contaminated Materials Management Plan (CMMP)	A written plan specifying how potentially contaminated material at a Site will be sampled, evaluated, staged, transported and disposed of properly.
Environmental Covenant (EC)	A document attached to the deed of a property that provides clear rules or restrictions based upon known environmental conditions, and stays with the property during transfers from one owner to another.
Exposure	Contact with a substance through inhalation, ingestion, or direct contact with the skin. Exposure may be short term (acute) or long term (chronic).
Facility Evaluation (FE)	Limited environmental study of a site which includes the sampling of soils, groundwater, surface water, sediment and/or wastes on the property, as appropriate.
Final Plan of Remedial Action (FPRA)	DNREC's adopted plan for cleaning up a hazardous site.
Hazardous Substance Cleanup Act (HSCA)	Delaware Code Title 7, Chapter 91. The law that enables DNREC to identify parties responsible for hazardous substances releases and requires cleanup with oversight of the Department.
No Further Action (NFA)	A determination made by DNREC that no additional remedial actions are warranted at a site based upon existing conditions and current potential receptors.
Operable Unit (OU)	A smaller and distinct area of a larger site. Operable units are often established based upon size, ease of access, and/or redevelopment schedules.
Polycyclic Aromatic Hydrocarbons (PAH)	Organic compounds containing only carbon and hydrogen—that are composed of multiple aromatic rings (organic rings in which the electrons are delocalized).
Preliminary Assessment (PA)	An investigation of a site which includes a site visit, a review of all historic documents associated with a property, current and past uses of the site and surrounding areas, and a review of all applicable state and federal databases, with the intent on identifying whether releases of hazardous substances are likely to have occurred.
Proposed Plan of Remedial Action	DNREC's proposed plan for cleaning up a hazardous site.
Poly chlorinated biphenyls (PCBs)	A synthetic, carcinogenic chemical formerly used in a wide variety of industrial applications but banned from most uses by the US EPA in 1979.
Remedial Investigation (RI)	Thorough environmental study of a site which includes 1) sampling of site environmental media and/or wastes on the property and 2) conducting a preliminary risk assessment using the data collected to determine the risk posed to human health and the environment.

Risk Assessment	A quantitative evaluation of risks at a site
Risk	Likelihood or probability of injury, disease, or death.
Site Inspection (SI)	Environmental study of a site which includes the sampling of soils, groundwater, surface water, sediment and/or wastes on the property, as appropriate.
SIRS	Site Investigation Restoration Section of DNREC, which oversees cleanup of sites that were contaminated by releases of regulated substances as a result of past use.
USEPA	United States Environmental Protection Agency