



UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
REGION III

STATEMENT OF BASIS

ROCKWOOD PIGMENTS INC.  
7011 MUIRKIRK ROAD

BELTSVILLE, MARYLAND 20705

EPA ID NO. MDD062011796

Prepared by  
RCRA Corrective Action Branch #1  
Land, Chemicals and Redevelopment Division  
July 2021

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## List of Acronyms

AR	Administrative Record
COC	Contaminant of Concern
EPA	Environmental Protection Agency
FDRTC	Final Decision Response to Comments
GPRA	Government Performance and Results Act
MCL	Maximum Contaminant Level
MDE	Maryland Department of the Environment
MNA	Monitored Natural Attenuation
CAO	Corrective Action Objective
RCRA	Resource Conservation and Recovery Act
RSL	Regional Screening Level
SB	Statement of Basis

## Section 1: Introduction

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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 Rockwood Pigments Inc. Beltsville Plant located in Beltsville, Maryland (hereinafter referred to as the Facility). EPA's proposed remedy for the Facility consists of the following components: 1) excavation and off-Facility disposal of soil containing concentrations of hexavalent chromium greater than 100 milligrams per kilogram (mg/kg); 2) in situ treatment followed by monitored natural attenuation (MNA) for groundwater until the federal Maximum Contaminant Level (MCL), promulgated pursuant to Section 42 U.S.C. §§ 300f et seq. of the Safe Drinking Water Act and codified at 40 CFR Part 141, of 100 µg/L for total chromium and the EPA Regional Screening Level (RSL) of 0.35 micrograms per liter (µg/L) for hexavalent chromium in tapwater have been achieved ; 3) compliance with and maintenance of groundwater and land use restrictions to be implemented through institutional controls. This SB highlights key information relied upon by EPA in proposing its remedy for the Facility.

The Facility is subject to EPA's Corrective Action program under the Solid Waste Disposal Act, as amended, commonly referred to as the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6901 et seq. The Corrective Action program requires that owners or operators of facilities subject to certain provisions of RCRA investigate and address releases of hazardous waste and hazardous constituents, usually in the form of soil or groundwater contamination, that have occurred at or from their property. Maryland is not authorized for the Corrective Action Program under Section 3006 of RCRA. Therefore, EPA retains primary authority in the State of Maryland for the Corrective Action Program.

EPA is providing a thirty (30) day public comment period on this SB. EPA may modify its proposed remedy based on comments received during this period. EPA will announce its selection of a final remedy for the Facility in a Final Decision and Response to Comments (FDRTC) after the public comment period has ended.

Information on the Corrective Action program as well as a fact sheet for the Facility can be found by navigating <http://www.epa.gov/reg3wcmd/correctiveaction.htm>. The Administrative Record (AR) for the Facility contains all documents, including data and quality assurance information, on which EPA's proposed remedy is based. See Section 8, Public Participation, below, for information on how you may review the AR.

## Section 2: Facility Background

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### 2.1 Introduction

The Facility consists of 3.5 acres located at 7011 Muirkirk Road in Beltsville, Maryland. The Facility, formerly operating under the names Laporte Pigments and Mineral Pigments, operated a pigment manufacturing facility, located approximately two miles north of Beltsville, Maryland. Historically, the Facility was owned by a brick manufacturing firm and later as a

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pigment manufacturing plant, which produced chromium pigments and iron oxide. In 1972, Rockwood Industries obtained the property. Facility activities included the manufacturing of zinc phosphate, and the milling and blending of iron oxides. The Facility ceased manufacturing in April 2019.

The Facility owner is Excalibur Realty Company (Excalibur Realty), a wholly owned subsidiary of Rockwood Holdings Inc. (Rockwood Holdings). Rockwood Holdings was acquired in its entirety by Albemarle Corporation (Albemarle) on January 13, 2015, and Albemarle is now 100% owner of the subsidiary Excalibur Realty. The Facility is currently vacant and for sale, with the expected future land use to remain industrial/commercial.

### **Section 3: Summary of Environmental Investigations**

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#### **3.1 Environmental Investigations**

For all environmental investigations conducted at the Facility, groundwater contaminant concentrations were screened against applicable MCLs, or if a contaminant does not have an MCL, against EPA RSLs for tapwater. Soil concentrations were screened against RSLs for residential soil and industrial soil.

##### **3.1.2. Groundwater Sampling from 2008-2017**

Field activities were completed between August 5 and 11, 2008, and included the installation of the borings and collection of groundwater samples. Groundwater samples were collected via eight temporary Geoprobe well points and analyzed for total chromium and hexavalent chromium. The data collected as compared to the MCL for total chromium and the RSL for hexavalent chromium are included in Table 1 below and illustrated in Figure 1.

**Table 1: Groundwater Sampling Results for Chromium (August 2008)**

<b>Sample Location</b>	<b>Total Chromium- milligrams per liter (mg/L) (MCL=.1 mg/L)</b>	<b>Hexavalent Chromium (mg/L) (RSL=.000035 mg/L)</b>
<b>GW-1</b>	8.86	9.17
<b>GW-2</b>	0.103	<0.010
<b>GW-3</b>	0.001	<0.010
<b>GW-4</b>	0.994	0.227
<b>GW-5</b>	0.002	<0.200
<b>GW-6</b>	1.962	2.170
<b>GW-7</b>	<0.001	<0.010
<b>GW-8</b>	<0.001	<0.200

On May 30, 2017, a well gauging and sampling event was conducted at the Facility monitoring well network, which consists of several monitoring points (MPs) that are

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permanently part of the monitoring network. Groundwater samples were collected from MP-3 and MP-7 for total chromium and hexavalent chromium analysis. MP-3 had 4.77 mg/L of total chromium and 4.16 mg/L of hexavalent chromium. MP-7 had 4.93 mg/L of total chromium and 3.89 mg/L of hexavalent chromium.

### **3.1.3 Soil Sampling from 2017-2019**

Soil and groundwater samples were collected from ten on-site borings between September 30 and October 11, 2019. The soil boring locations were placed near likely source areas based on a review of historical plans, building usage, and tenant interviews.

#### Soil

Total and hexavalent chromium analyses were performed on soil samples collected at ten locations on the Facility, and the results were compared against EPA industrial RSLs for soil. Soil analytical results are summarized below and shown in Figure 4:

- Zinc: No industrial RSL exceedances in soil were detected.
- Total chromium: No industrial RSL exceedances in soil were detected.
- Hexavalent chromium:
  - Concentrations exceeded the soil industrial RSL of 6.3 milligrams per kilogram (mg/kg) at six locations (SB-02, SB-03, SB-06, SB-07, SB-08, and SB-11).
  - Hexavalent chromium detections exceeded 1,000 mg/kg in two samples: SB-07 and SB-08. These samples were collected below the Building 6 sub-slab floor. Soil concentrations exceeding the industrial RSL were also detected near Building 9 (SB-02 and SB-06).
  - In general, higher soil concentrations were detected within the first 5 feet of ground surface and decreased with depth. Soil detections were greater within the first 5 feet of ground surface and decreased with depth. Historical floor drains and sumps were identified in these buildings and may have served as a conduit for sub-slab impacts and were later investigated in 2019-2020 as discussed in Section 3.1.4.

### **3.1.4 Soil and Groundwater Sampling from 2019-2020**

#### Soil

The 2019-2020 soil sample results were used to assess current concentrations in subsurface soil below paved areas within former manufacturing areas at the Facility. The results indicate that hexavalent chromium is the contaminant of concern (COC) for onsite soil. Hexavalent chromium was detected onsite at concentrations exceeding the industrial RSL within or near Building 6, Building 9, east of Building 9, and north of Building 14. Greater

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concentrations of hexavalent chromium in soil were detected within the first 5 feet of ground surface and decreased with depth.

The results are summarized as follows:

- Building 6 and Building 9: Greater chromium concentrations in soil were detected in shallow soil below the sub-slab floors within the Building 6 and Building 9. Historical chromium processing activities occurred in these buildings before being phased out in 2007. Historical floor drains and sumps in these buildings may have served as a conduit for sub-slab impacts and are planned for closure.
- Building 14: Building 14 was previously used for warehousing. At SB-11, located directly north of Building 14, shallow hexavalent chromium detections in soil (19 mg/kg at 2.5 feet) exceeded the industrial RSL of 6.3 mg/L, while groundwater concentration of chromium (at MP-18, which was installed at SB-11) was 0.0325 mg/L. This elevated soil detection could be from past residual chromium particulates washed down the storm drain during active operations.

Overall, the distribution of onsite subsurface chromium detections suggests that former manufacturing operations are the likely source of total and hexavalent chromium contamination in groundwater.

#### Groundwater

- 2019-2020 groundwater sampling results show total and hexavalent chromium are the COCs in onsite and offsite groundwater, as summarized below and depicted in Figure 5. The chromium plume is approximately 115 acres while the plume core is approximately 9.2 acres and extends to the industrial/commercial and agricultural areas downgradient from the Facility.
- The 2019-2020 investigation results suggest that chromium impacts to groundwater likely originated from Building 9, although other sources on the Facility could exist. Historical floor drains and sumps within Building 9 may have served as a conduit for sub-slab groundwater impacts.
- Within the Building 6 area, hexavalent chromium has not been detected in groundwater above 0.001 mg/L.
- Observed detections in soil underlying Building 6 were greater than observed detections in soil underlying Building 9.
- The presence of more abundant silts and clays underlying Building 6 and low hexavalent chromium detections (0.0426 to 0.0523 mg/L) in new downgradient monitoring wells (MP-24 and MP-19) suggest limited soil to groundwater

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leaching occurs in this area.

- Elevated hexavalent chromium concentrations (7.83 and 8.62 mg/L) were detected in groundwater at new well MP-23 along with elevated concentrations of total chromium (7.1 mg/L). This well was installed in Building 7A along the southern Facility property boundary between wells MP-24 and MP-7.

### 3.1.5 Potential Offsite Receptors

There are no known groundwater users within the chromium groundwater plume boundary (Figure 5). Historical groundwater use at the facility and the results of a 2017 offsite potable water user survey in conjunction with Prince George’s Health Department indicated groundwater use for irrigation purposes on an agricultural research farm (University of the District of Columbia’s Firebird Research Farm [FRF]) and at the Department of Agriculture Beltsville Research Center (BARC). Within the chromium groundwater plume (Figure 1), an inactive irrigation supply well is present at FRF directly southeast of the Facility. This well was installed in 2014 and groundwater withdrawal was discontinued in 2016 after the FRF agreed to stop using the irrigation well. Chromium concentrations detected in soil and select plant crops were found to be within background levels.

Downgradient of the chromium groundwater plume, active irrigation water supply wells are present approximately 1.1 miles south of the site at the BARC, as shown on Figure 1. On May 10, 2017, groundwater samples were collected off-site from the BARC shown in Figure 3. Wells 3, 5, and 6 were sampled for total and hexavalent chromium. The data collected are shown below in Table 2. On July 12, 2017, a confirmatory sampling event was conducted of BARC wells 3, 4, and 6 for total and hexavalent chromium. Both total chromium and hexavalent chromium were detected at concentrations less than the MCL of 0.1 mg/L.

**Table 2: Groundwater Sampling Results for Chromium in BARC Wells (July 2017)**

<b>Sample Location</b>	<b>Total Chromium - milligrams per liter (mg/L) (MCL=.1 mg/L)</b>	<b>Hexavalent Chromium (mg/L) (RSL=.000035 mg/L)</b>
<b>BARC Well 3</b>	Non-detect	0.023
<b>BARC Well 5</b>	Non-detect	Non-detect
<b>BARC Well 6</b>	Non-detect	0.000037

### 3.2 Environmental Indicators

Under the Government Performance and Results Act (GPRA), EPA has set national goals to address RCRA corrective action facilities. Under GPRA, EPA evaluates two key environmental clean-up indicators for each facility: (1) Current Human Exposures Under Control, and (2) Migration of Contaminated Groundwater Under Control. The Facility met Current Human Exposures Under Control on July 26, 2018 and Migration of Contaminated

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Groundwater Under Control on May 8, 2018.

## Section 4: Corrective Action Objectives

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EPA's Corrective Action Objectives (CAOs) for the specific environmental media at the Facility are the following:

### 1. Soil

COCs remain in soil at levels creating an unacceptable risk to human health and the environment. Therefore, EPA's CAOs for soil are to: 1) prevent human exposure to COC concentrations above the EPA acceptable risk range of  $1 \times 10^{-4}$  to  $1 \times 10^{-6}$  and a non-cancer hazardous index of 1 for an industrial exposure scenario and 2) reduce soil to groundwater leaching (for total chromium above the MCL of 100  $\mu\text{g/L}$  and hexavalent chromium above the tapwater RSL of 0.35  $\mu\text{g/L}$ ).

### 2. Groundwater

EPA expects final remedies to return groundwater to its maximum beneficial use within a timeframe that is reasonable given the particular circumstances of the Facility. Therefore, EPA's CAOs for Facility groundwater are 1) to restore the groundwater to the applicable drinking water standard, otherwise known as the MCL, for total chromium and to the applicable tapwater RSL for hexavalent chromium and 2) until these cleanup standards are met, to control exposure to the hazardous constituents remaining in the groundwater.

## Section 5: Proposed Remedy

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EPA's proposed remedy for the Facility consists of the following components:

### 1. Soil

EPA's proposed remedy for soil at the Facility consists of:

- Excavation and off-Facility disposal of highly impacted soil beneath Building 6 and Building 9 areas where hexavalent chromium concentrations are greater than 100 mg/kg;
- Compliance with an EPA-approved Soil Management Plan for any planned subsurface soil disturbance activities (including excavation, drilling and construction) in locations where COCs remain at levels above EPA's screening levels for non-residential use; and
- Compliance with an EPA-approved Corrective Measures Implementation (CMI)

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Plan requiring the maintenance of impermeable caps existing at the Facility.

## **2. Groundwater**

EPA's proposed remedy for groundwater at the Facility consists of:

- Biological and/or chemical in situ treatment introduced through injection wells in areas where hexavalent chromium remains in groundwater in concentrations greater than 1000 ug/L until conditions are favorable for reduction of hexavalent chromium to trivalent chromium, and
- Long-term groundwater monitoring throughout the plume in compliance with an EPA-approved CMI work plan until the MCL of 100 µg/L for total chromium and the tapwater RSL of 0.35 µg/L for hexavalent chromium have been achieved throughout the plume.

## **3. Institutional Controls**

EPA's proposed remedy includes the following activity and use restrictions:

- Groundwater at the Facility shall not be used for any purpose other than the operation, maintenance, and monitoring activities required by EPA, 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;
- No new 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;
- All earth-moving activities at the Facility property shall comply with an EPA-approved Soil Management Plan;
- All impermeable barriers over the groundwater impact area at the Facility property shall be maintained in accordance with an EPA-approved CMI plan;
- The Facility property shall only be used for non-residential purposes such as commercial or industrial uses unless it is demonstrated to EPA that another use will not pose a threat to human health or the environment and EPA provides prior written approval for such use. Non-residential purposes do not include schools, day care centers, nursing homes or other residential-style facilities or recreational areas; and
- The then-current Facility property owner shall conduct an annual well survey and

annually notify EPA, the Prince George’s County Health Department, and all affected off-Facility property owners of current groundwater contamination conditions, and whether these conditions should prevent groundwater use, until EPA determines that the MCL of 100 µg/L for total chromium and the tapwater RSL of 0.35 µg/L for hexavalent chromium have been achieved.

The above-listed restrictions shall be implemented through a permit, order, or an environmental covenant. In addition to the activity and use limitations EPA is proposing above, the State of Maryland Well Construction Regulations, codified at Code of Maryland Regulations 26.03.01.05, prohibits installation of individual water systems where adequate community systems are available. The off-Facility FRF property has discontinued use of its agricultural well. The off-Facility BARC property has also implemented groundwater use restrictions prohibiting potable use of groundwater and groundwater well installation for any purpose.

Finally, the Facility owner or operator shall provide EPA with a coordinate survey as well as a metes and bounds survey, of the Facility boundary. Mapping the extent of the land use restrictions will allow for presentation in a publicly accessible mapping program such as Google Earth or Google Maps.

## Section 6: Evaluation of Proposed Remedy

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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 that meet the threshold criteria, EPA then evaluates seven balancing criteria.

Threshold Criteria	Evaluation
1) Protect human health and the environment	<p>EPA’s proposed remedy for the Facility protects human health and the environment by eliminating, reducing, or controlling potential unacceptable risk through the implementation and maintenance of use restrictions and in situ soil and groundwater treatment.</p> <p>With respect to soil, the proposed remedy is protective of human health and the environment through excavation of soils containing concentrations of hexavalent chromium greater than 100 mg/kg and implementation of land use restrictions.</p> <p>With respect to groundwater, levels of COCs remain in the groundwater beneath the Facility, the COCs contained in the aquifer are decreasing through natural attenuation as shown by groundwater monitoring data. In addition, in situ treatment will</p>

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	<p>create reducing conditions favorable to the natural attenuation of chromium. Groundwater monitoring will continue until the MCL of 100 µg/L for total chromium and the tapwater RSL of 0.35 µg/L for hexavalent chromium have been achieved. The existing State of Maryland well construction regulations will aid in minimizing exposure to contaminated groundwater by prohibiting the installation of individual water systems where adequate community systems are already available.</p> <p>Additionally, the FRF Farm has discontinued groundwater use, and BARC has already implemented restrictions preventing potable use of groundwater and well installation for any purpose. Consequently, the Facility and surrounding area are already being provided with potable water from the City of Beltsville’s public water supply system. With respect to future uses, the proposed remedy requires groundwater use restrictions to minimize the potential for human exposure to contamination and protect the integrity of the remedy. Therefore, EPA’s proposed remedy protects human health and the environment.</p>
<p>2) Achieve media cleanup objectives</p>	<p>EPA’s proposed remedy meets the media cleanup objectives based on assumptions regarding current and reasonably anticipated land and groundwater uses. The remedy proposed in this SB is based on the current and future anticipated land use at the Facility as commercial or industrial.</p> <p>The groundwater plume migration appears to be stabilizing, although total chromium still exceeds its MCL of 100 µg/L and hexavalent chromium still exceeds its tapwater RSL of 0.35 µg/L. In situ treatment will create reducing conditions for chromium attenuation and groundwater monitoring will continue until total chromium’s MCL and hexavalent chromium’s RSL are met. Therefore, EPA’s proposed remedy satisfies this criterion.</p>
<p>3) Remediating the Source of Releases</p>	<p>In all proposed remedies, EPA seeks to eliminate or reduce further releases of hazardous wastes and hazardous constituents that may pose a threat to human health and the environment.</p> <p>EPA’s proposed remedy requires excavation and off-Facility disposal of highly impacted soil and in situ treatment of</p>

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	<p>groundwater to address sources of releases.</p> <p>Therefore, EPA has determined that this criterion has been met.</p>
4) Long-term effectiveness	<p>The proposed remedy is long-term effective. Soil will be excavated, and groundwater will be remediated via in situ treatment until CAOs are met. Additionally, EPA's proposed remedy requires compliance with and maintenance of land use and groundwater use restrictions. EPA anticipates that these restrictions will be implemented through an enforceable permit, order, or an environmental covenant. The long-term effectiveness of the proposed remedy for the Facility will be maintained by the implementation of such restrictions.</p>
5) Reduction of toxicity, mobility, or volume of the Hazardous Constituents	<p>The reduction of toxicity, mobility and volume of hazardous constituents will continue through excavation of soil and in situ remediation of groundwater. Reduction in the volume of total chromium and hexavalent chromium in groundwater has already been achieved, as demonstrated by the data from the groundwater monitoring, and in-situ treatment of groundwater will further create reducing conditions for chromium attenuation. In addition, groundwater monitoring will be required until total chromium's MCL and hexavalent chromium's RSL are achieved.</p>
6) Short-term effectiveness	<p>EPA's proposed remedy of excavation for soil and in situ treatment of groundwater poses limited short-term exposure risk to workers and the community. Therefore, EPA's proposed remedy meets this criterion.</p>
7) Implementability	<p>EPA's proposed remedy is readily implementable; however, access to install in-situ treatment wells is complicated by widespread existing infrastructure. The groundwater monitoring wells are already in place and operational. EPA proposes to implement the remedy through an enforceable mechanism such as an environmental covenant, permit or order.</p>
8) Cost	<p>The cost associated with the remedy, including in-situ treatment and continued groundwater monitoring is estimated at \$5,436,693.</p>
9) Community Acceptance	<p>EPA will evaluate community acceptance of the proposed remedy during the public comment period, and it will be</p>

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	described in the FDRTC.
10) State/Support Agency Acceptance	MDE has reviewed and concurred with the proposed remedy for the Facility.

Overall, based on the evaluation criteria, EPA has determined the proposed remedy meets the threshold criteria and provides the best balance of tradeoffs with respect to the evaluation criteria.

## Section 7: Financial Assurance

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The Facility owner or operator will be required to demonstrate and maintain financial assurance established and maintained pursuant to the standards contained in 40 C.F.R. Part 264.

## Section 8: Public Participation

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Interested persons are invited to 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. Comments may be submitted by electronic mail to Ms. Caitlin Elverson at the contact information listed below.

A public meeting will be held upon request. Requests for a public meeting should be submitted to Ms. Caitlin Elverson via e-mail at the contact information listed below. A meeting will not be scheduled unless one is requested. If EPA receives a request for a public meeting, EPA will assess how to hold such a meeting given current public health concerns.

EPA may modify the proposed remedy based on new information and/or public comments. Therefore, the public is encouraged to review the AR and to comment on the proposed remedy presented in this document.

The AR contains all the information considered by EPA for the proposed remedy at this Facility. The AR is available at the following location:

U.S. EPA Region III  
1650 Arch Street  
Philadelphia, PA 19103  
Contact: Ms. Caitlin Elverson (3LD10)  
Phone: (215) 814-5455  
Email: [elverson.caitlin@epa.gov](mailto:elverson.caitlin@epa.gov)

**Attachments:**

Figure 1: Groundwater Sampling Event 2008

Figure 2: Facility Map

Figure 3: Site Location and BARC Wells

Figure 4: Soil Sampling 2019

Figure 5: Site-Wide Hexavalent Chromium Groundwater Plume (Fall 2020)

Date: \_\_\_\_\_

Dana Aunkst, Director  
Land, Chemicals, and Redevelopment Division  
US EPA, Region III

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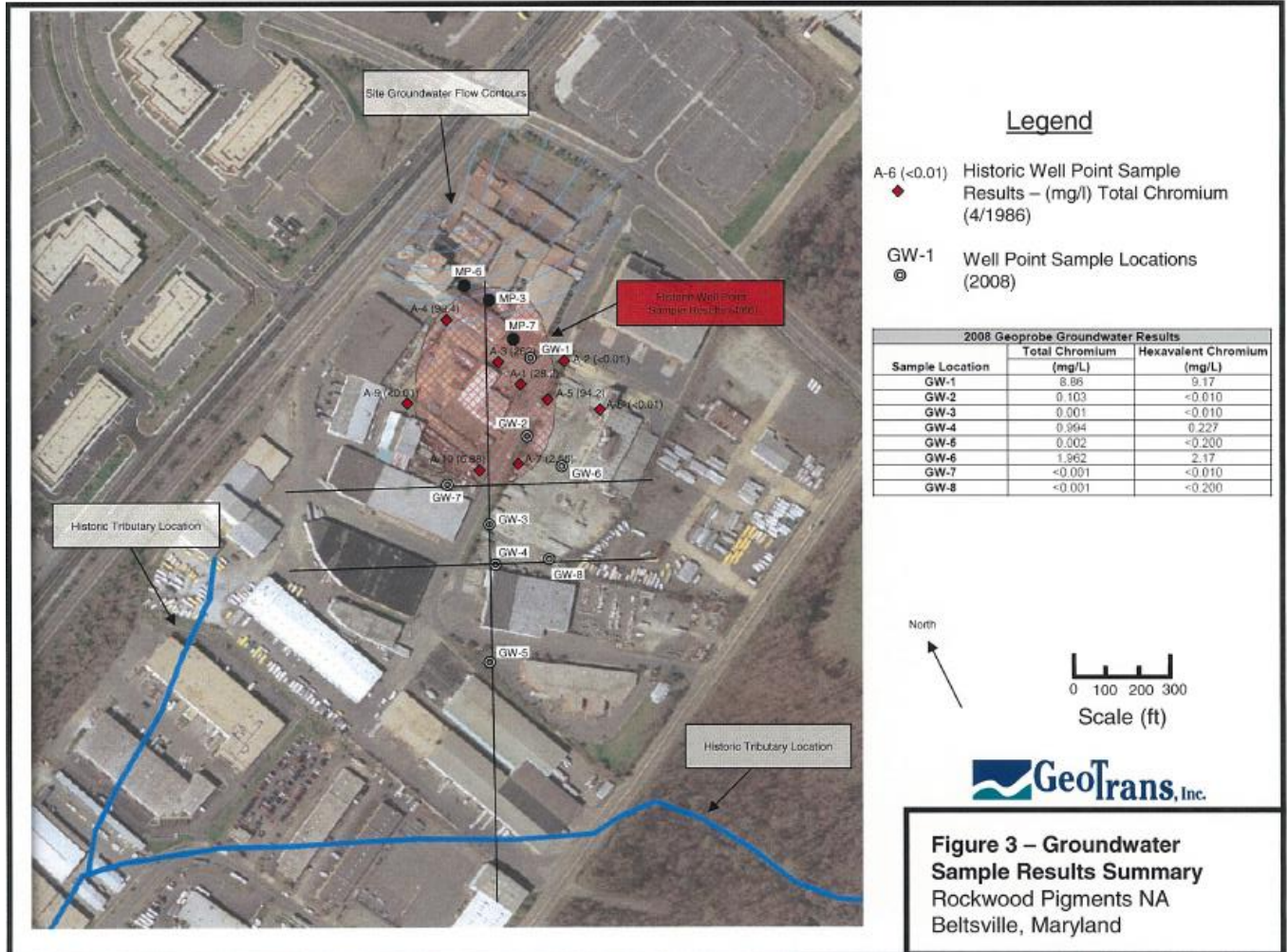
- 2000, July; A Guide to Developing and Documenting Cost Estimates During the Feasibility Study, EPA 540/R-00/002, USEPA.
- 2005, March 10; RCRA Site Inspection Report, Rockwood Pigments, Beltsville, MD, USEPA.
- 2007, February 23; RCRA Site Inspection Report. Rockwood Pigments, Beltsville, MD. February 23, MDE
- 2016, March 7; Off-site Groundwater Characterization Report, Beltsville Site, 7101 Muirkirk Road, Beltsville, Maryland, TetraTech.
- 2018, January 29; 2016-2017 Groundwater Sampling Results, Former Rockwood Pigment Plant, Beltsville, Maryland, Arcadis.
- 2018, May 8; Environmental Indicator Groundwater for Hunstman P-A Americas LLC (Formerly: Rockwood Pigments NA) in Beltsville, Maryland, USEPA.
- 2018, July 28; Environmental Indicator Human Exposure for Hunstman P-A Americas LLC (Formerly: Rockwood Pigments NA) in Beltsville, Maryland, USEPA.
- 2019, July; Phase I Environmental Site Assessment. Rockwood Pigments, Beltsville, MD, Arcadis.
- 2020, March 9; Proposed CMS Corrective Action Objectives, Former Rockwood Pigments Plant, Beltsville, MD, Arcadis.
- 2020, March 11; Current Conditions Report, Former Rockwood Pigments Plant, Beltsville, Maryland. March 11, Arcadis.
- 2020, June 2020; Corrective Measure Study Report, Former Rockwood Pigments Plant, Beltsville, Maryland. June 4, Arcadis.
- 2020, August 11; USEPA Comments on the June 2020 Corrective Measure Study Report. Former Rockwood Pigments Plant, Beltsville, Maryland, USEPA.
- 2020, September 11; Response to Comments on the June 2020 Corrective Measure Study Report, Former Rockwood Pigments Plant, Beltsville, Maryland, Arcadis.

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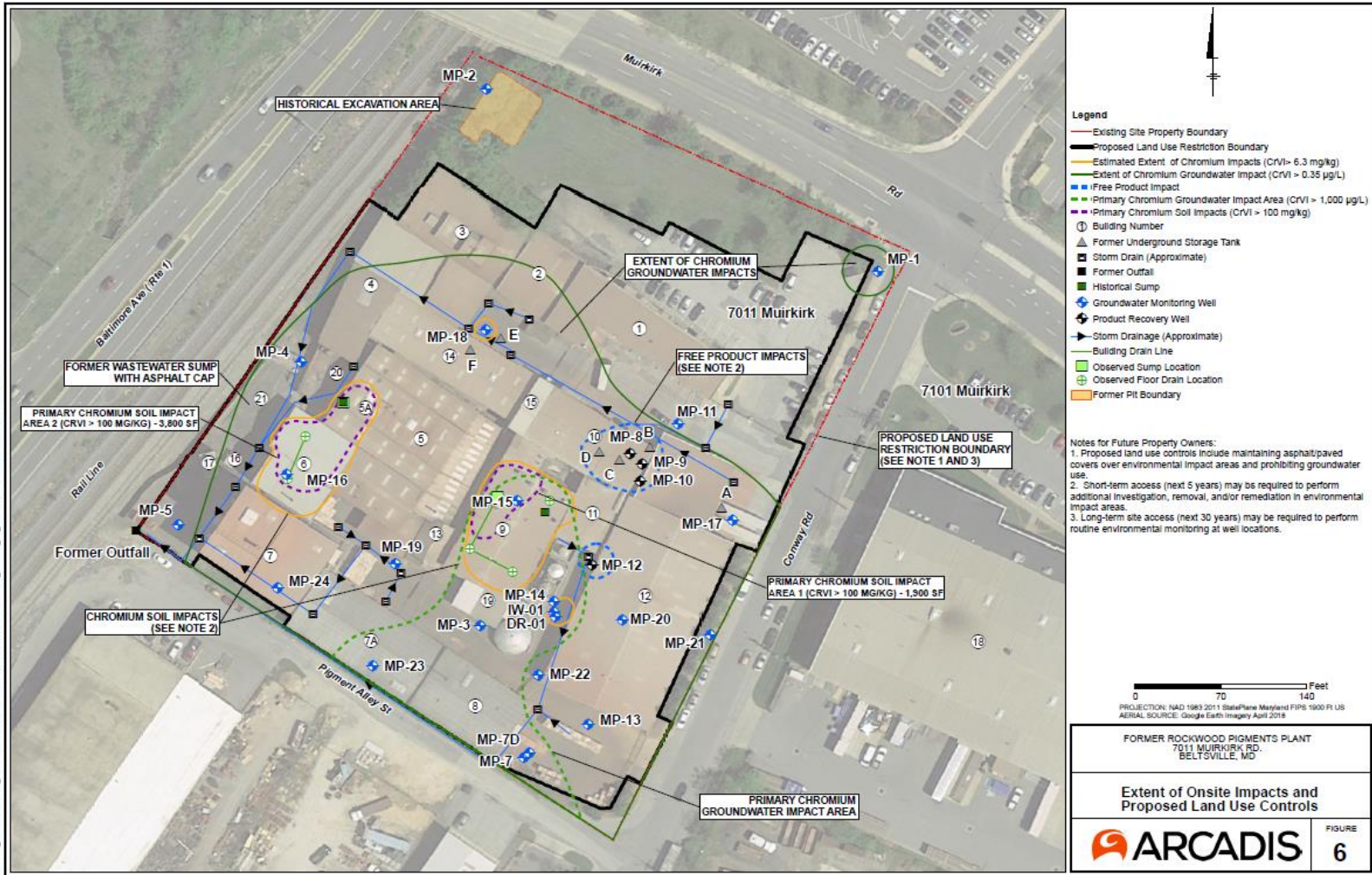


**Figure 1: Groundwater Sampling Event 2008**





**Figure 2: Facility**



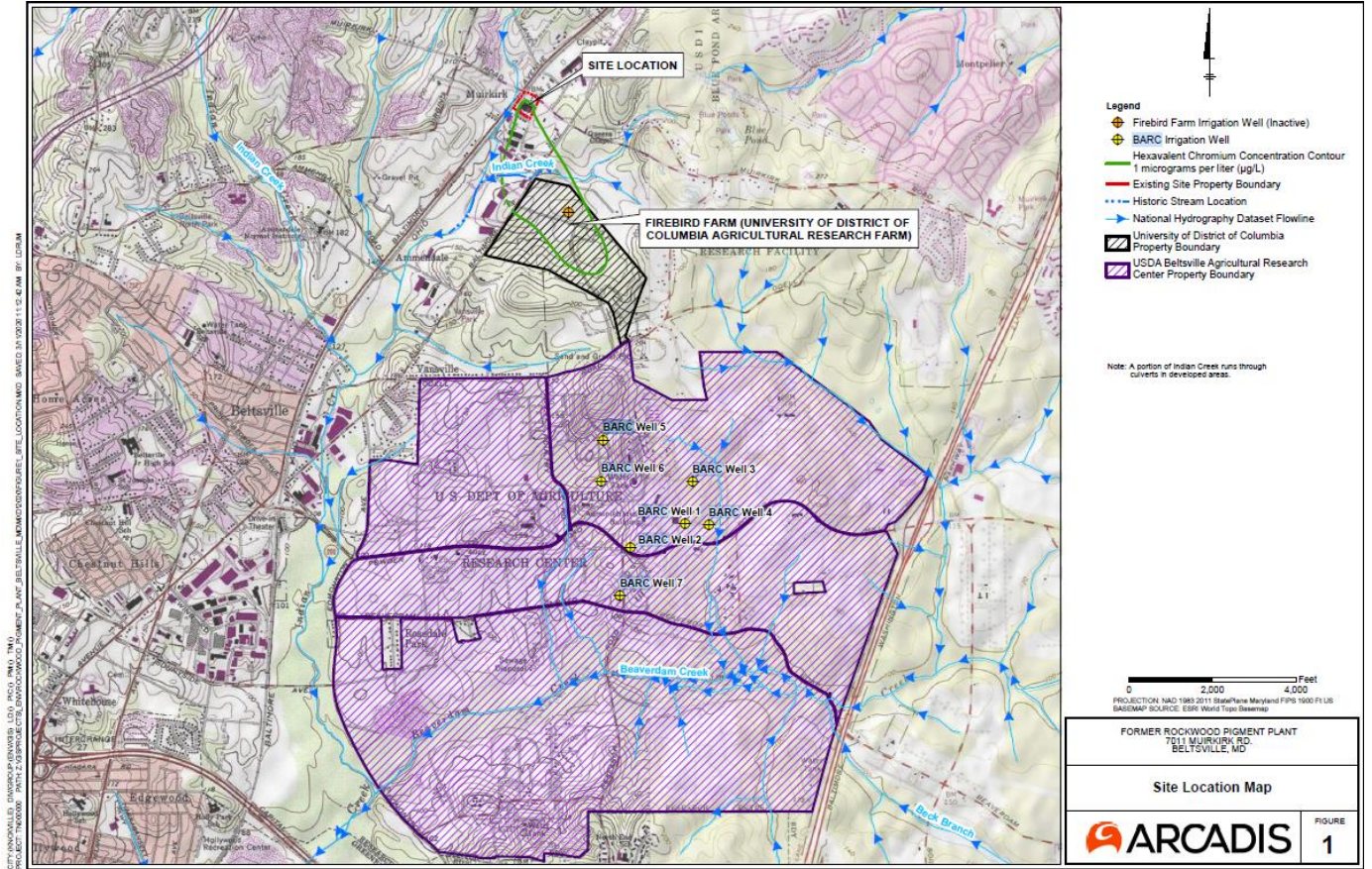
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**Figure 3: Site Location and BARC Wells**



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**Figure 4: Soil Sampling 2019**

Soil Boring ID	Building Location	Existing Barrier Thickness	Sample Depth (feet bgs)	Sample Date	Laboratory Report Number	Total Chromium (mg/kg)	Hexavalent Chromium (mg/kg)	Zinc (mg/kg)	Field Observations (no staining unless noted)
<b>USEPA Region 3 Industrial Screening Level</b>						180,000	6.3	35,000	
<b>MDE Non-Residential Soil Cleanup Standard</b>						180,000	6.3	35,000	
SB-01	Building 12	12" (concrete)	4-4.5	10/7/2019	180-96841-1	26	0.58	--	
			10-10.5	10/7/2019	180-96841-1	60	3.9	--	
			24.5-25	10/7/2019	180-96841-1	82	6	--	
SB-02	Near Building 9	10" (concrete)	1-1.5	10/2/2019	180-96618-1	11,000	48	--	
			4-4.5	10/2/2019	180-96618-1	56	30	--	
			20-20.5	10/2/2019	180-96618-1	13	2.2	--	
SB-03	Building 9	6" (concrete)	3.5-4	10/4/2019	180-96779-1	110	12	100	
			5-5.5	10/4/2019	180-96779-1	11	26	13	
			12.5-13	10/4/2019	180-96779-1	130	9.8	59	
SB-04	Near Building 9	3" (asphalt) 6" (concrete)	1-1.5	10/2/2019	180-96618-1	33	1.6	--	
			3-3.5	10/2/2019	180-96618-1	14	1.3	--	
			15-15.5	10/2/2019	180-96618-1	40	6.2	--	
SB-06	Building 9	8" (concrete)	3-3.5	10/1/2019	180-96552-1	2,400	100	2,100	Green soil
			4-4.5	10/7/2019	180-96841-1	410	34	60	Green soil
			17-17.5	10/7/2019	180-96841-1	120	8.6	13	
SB-07	Building 6	16" (concrete)	4-4.5	10/1/2019	180-96552-1	220	1,700	52	Slight green sand
			10-10.5	10/10/2019	180-97154-1	110	4.2	31	
			24.5-25	10/10/2019	180-97154-1	23	1.7	4	
			24.5-25	10/10/2019	180-97154-1	9.4	0.91	2	
SB-08	Building 6	10" (concrete)	1-1.5	10/2/2019	180-96618-1	8,700	1,400	2,600	Heavy green staining
			4-4.5	10/2/2019	180-96618-1	1,400	380	220	Green soil
			8-8.5	10/2/2019	180-96618-1	230	15	52	
SB-09	Near Building 12	4" (asphalt) 8" (concrete)	4-4.5	10/8/2019	180-96981-1	12	0.92	6.7	
			10-10.5	10/9/2019	180-97056-1	0.021	0.49	--	
			18-18.5	10/4/2019	180-96779-1	2.9	0.62	--	
			24.5-25	10/9/2019	180-97056-1	6.6	0.88	--	
SB-10	Building 12	12" (concrete)	2-2.5	10/4/2019	180-96779-1	27	0.98	--	
			5-5.5	10/4/2019	180-96779-1	22	0.4 J	--	
			22-22.5	10/4/2019	180-96779-1	7.5	0.82	--	
SB-11	Near Building 14	4" (asphalt) 8" (concrete)	2.5-3	10/3/2019	180-96681-1	640	19	--	
			2.5-3	10/3/2019	180-96681-1	150	120	--	
			4-4.5	10/3/2019	180-96681-1	200	2.7	--	
			9-9.5	10/3/2019	180-96681-1	41	0.52	--	



**Figure 5: Site-Wide Hexavalent Chromium Groundwater Plume (Fall 2020)**

