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September 21, 2016

Ms. Elizabeth Lohman Virginia Department of Environmental Quality 3019 Peters Creek Road Roanoke, VA 24019

Re: Steel Dynamics Facility, Roanoke, Virginia

Dear Beth:

Enclosed are the following documents regarding the Steel Dynamics:

1. EPA approval of RFI Report dated August 13, 2014;

2. EPA Statement of Basis dated June 18, 2015; and

3. EPA Final Decision and Response to Comments dated August 13, 2015.

Let us know if you have any questions or need anything further.

Sincerely,

GENTRY LOCKE

Charles L. Williams

CLW:lbs

Enclosures

cc: Mr. Thomas Stinson



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION III 1650 Arch Street Philadelphia, Pennsylvania 19103-2029

August 13, 2014

Mr. Tom Stinson Steel Dynamics – Roanoke Bar Division 102 Westside Boulevard Roanoke, Virginia 24017

RE: RCRA Facility Investigation Report for Steel Dynamics Facility, dated July 2014 Administrative Order on Consent 3008(h) Docket # RCRA-3-087CA

Dear Mr. Stinson,

EPA has reviewed the RCRA Facility Investigation (RFI) Report referenced above, and hereby approves the RFI Report. In accordance with Section VI.C of the Administrative Order on Consent, Steel Dynamics has sixty days to submit a Corrective Measures Study.

If you have any questions, you can contact me at 215-814-3435.

Sincerely,

Michael A. Jacobi Office of Remediation (3LC20)

cc: Bob Williamson (APEX) Jutta Schneider (VDEQ)



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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION III

STATEMENT OF BASIS

STEEL DYNAMICS ROANOKE BAR DIVISION FACILITY 102 WESTSIDE BOULVARD

ROANOKE, VIRGINIA

EPA ID NO. VAD003122553

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List of Acronyms

AOC	Areas of Concern
AR	Administrative Record
AST	Above Ground Storage Tank
CMS	Corrective Measures Study
COIs	Contaminants of Interest
COCs	Contaminants of Concern
COPECs	Contaminants of Potential Ecological Concern
DEQ	Virginia Department of Environmental Quality
IP	Electronic Interface Probe
EPA	Environmental Protection Agency
FDRTC	Final Decision Response to Comments
HI	Hazard Index
HSWA	Hazardous and Solid Waste Amendments
HHRA	Human Health Risk Assessment
ICs	Institutional Controls
MCLs	Maximum Contaminant Levels
NWS	National Weather Service
PCBs	Polychlorinated biphenyls
RCRA	Resource Conservation and Recovery Act
RSL	Regional Screening Level
SB	Statement of Basis
SDI	Steel Dynamics, Inc.
SVOCs	Semi-Volatile Organic Compounds
UECA	Uniform Environmental Covenants Act
VOCs	Volatile Organic Compounds

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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 Steel Dynamics, Inc. (SDI), Roanoke Bar Division facility (hereinafter referred to as the Facility). The approximate 63 acre Facility is located at 102 Westside Boulevard in Roanoke, Virginia. Prior to 2006, the Facility was called Roanoke Electric Steel Corporation, but was bought by SDI in 2006.

The Facility is subject to the 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. The Corrective Action program is designed to ensure that certain facilities subject to RCRA have investigated and addressed any releases of hazardous waste and hazardous constituents that have occurred at or from their property. In addition, information on the Corrective Action program as well as a fact sheet for the Facility can be found at http://www.epa.gov/reg3wcmd/correctiveaction.htm.

This SB explains EPA's proposed remedy to require the Facility to develop and maintain property restrictions to be implemented through Institutional Controls (ICs), maintain the existing security fence around Facility property, and to develop, and implement, a Materials Management Plan.

The proposed ICs are detailed in Section 5 below. The proposed use restrictions will assure that there will be no human exposure to Facility-related contaminants and no interference with EPA's final remedy.

As described more fully in Section 8 below, EPA is providing a 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 document entitled Final Decision and Response to Comments (Final Decision or FDRTC) after the public comment period has ended.

Before EPA makes a final decision on its proposed remedy 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 the complete set of reports that document Facility conditions, including a map of the Facility, in support of EPA's proposed remedy. EPA encourages anyone interested in this matter to review the AR. The AR is available at the EPA Region III office, the address of which is provided in Section 8, below.

EPA will address all significant comments received during the public comment period. If EPA determines that new information or public comments warrant a significant modification to the proposed remedy, EPA will modify the proposed remedy or select other alternatives based on such new information and/or public comments and will solicit public comment on its modified proposed remedy. If the final remedy is substantially unchanged from the one proposed, EPA will issue a Final Decision and inform all persons who submitted written comments or requested notice of EPA's final determination.

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Section 2: Facility Background

The Facility is located at 102 Westside Boulevard within the corporate limits of the City of Roanoke, Virginia. Steel Dynamics, Inc., Roanoke Bar Division (formerly Roanoke Electric Steel Corporation) operates an electric arc furnace steel mill facility on parcel of property about 63 acres in size. Roanoke Electric Steel Corporation began operating the steel mill on this property in 1955. Prior to 1955 the site was used as farmland. Surrounding land uses include residential properties to the north and Norfolk Southern Railroad line and rail yard to the west, south and east. See Figure 1.

In 1955, Roanoke Electric Steel Corporation was founded to provide steel products to manufacturers and distributors in the metal industry. In 2006, SDI acquired the Facility, which produces steel billets and high quality finished steel products, such as angles, channels, rounds, and flat bars. All finished steel products are made from a feedstock of scrap metal and alloys.

The Facility and surrounding properties are served by public utilities, including municipally supplied water provided by the Roanoke City Water Department. The source of potable water for the Facility and its vicinity is Crystal Spring, which serves the southwest area. Crystal Spring is located at the base of Mill Mountain, approximately four miles southeast from the Facility and across the Roanoke River.

The City of Roanoke has a local ordinance which prohibits the installation of private or community supply wells when municipally-supplied water is available, as is the case in the area of the Facility. SDI operates one non-potable well at the Facility, which is not required to be permitted by the Virginia Department of Health or other regulatory agencies. The well, which is completed in competent bedrock at a depth of 160 feet (well below the water table aquifer), yields up to 600 gallons per minute of flow. The well is used solely for process cooling purposes and all discharge is routed through the SDI permitted wastewater treatment facility.

In 1999, EPA issued an Administrative Order on Consent ("Consent Order") under Section 3008(h) of RCRA, 42 U.S.C. §6928 to Roanoke Electric Steel Corporation which requires that the Facility perform a Resource Conservation and Recovery Facility Investigation (RFI), a Corrective Measurement Study (CMS), and any interim measures at the Facility necessary to protect human health and the environment. All work requirements under the Consent Order have been met.

Section 3: Summary of Environmental Investigations

3.1 Environmental Investigations

For all environmental investigations under the RFI, groundwater concentrations were screened against Federal Maximum Contaminant Levels (MCLs) promulgated pursuant to Section 42 U.S.C. §§ 300f et seq. of the Safe Drinking Water Act and codified at 40 C.F.R. Part 141, or EPA Region III Screening Levels dated October 2007 for tap water for chemicals for which there are no applicable MCLs. Soil concentrations were screened against EPA Region III Screening Levels dated October 2007 for tap water for chemicals for which there are no applicable MCLs. Soil concentrations were screened against EPA Region III Screening Levels dated October 2007 for residential soil and industrial soil. The RFI Report used EPA

Region III Risk-Based Screening criteria dated October 2007, because the soil data was sampled and screened before 2008. In 2008, EPA switched to the Regional Screening Level (RSL) Table for use in screening constituents. For this SB, EPA uses the updated RSL. For the purpose of screening, the list of Constituents of Interest (COIs) would not have changed with the RSL, as compared to using Risk-Based Screening criteria.

3.2 Soil Sampling

Under the RFI, five areas of the Facility were targeted for surface soil sampling: (1) a portion of the northwest Facility property boundary in an electric utility power easement (Power Line Right-of-Way); (2) an undeveloped residential tract located on Cherry Hill Circle owned by SDI (which abuts the residential properties located to the northwest of the Facility); (3) the Baghouse Area; (4) the power substation located at the north end of the property; and (5) the closed Aboveground Storage Tank (AST) perimeter.

In the spring of 2001, a total of 25 surface soil samples were collected within the Baghouse Area, which was divided into 5 plots, with sampling locations distributed in a diagonal 2-3-2-3 pattern. An additional 4 samples were collected from a depth of two feet below the depth of surface samples in the Baghouse Area. Samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals (otherwise referred to as inorganic compounds). In June 2001, a total of 20 samples (surface and subsurface) were collected within the Power Line Right-of-Way (15 samples) and the Cherry Hill Circle parcel (5 samples). Soil samples from the Power Line Right-of-Way were analyzed for PCBs and metals. Soil samples taken from Cherry Hill Circle parcel were analyzed for Metals. Six soil samples from the former 500,000-gallon AST area, spaced approximately 28.5 feet apart and at a distance of four feet from the perimeter of the tank system, were analyzed for total petroleum hydrocarbons (TPH). Three soil samples collected from the SDI owned portion of the power substation area and were analyzed for PCBs. Sampling locations were selected based on topographically low areas, electrical equipment locations, and recommendations.

Results of the soil analysis can be seen in Tables 1 thru 3. For the Baghouse Area, soil contaminant concentrations above the RSLs for residential soil included: aluminum, antimony, cadmium, copper, iron, lead, manganese, thallium, and vanadium. Arsenic was the only metal that exceeded its RSL for industrial soils at a maximum detection of 23.60 mg/kg (RSL for industrial soils of 3.0 mg/kg). The Power Line Right-of-Way also contained an arsenic concentration of at 8.8 mg/kg above the RSL for industrial soil. While these numbers are higher than the industrial RSL of 3.0 mg/kg for arsenic, they still fall within background soil ranges for arsenic, which typically range from 1 to 40 mg/kg. Arsenic is not used in the making of steel, therefore concentrations in soil would be from natural occurring conditions. Manganese concentrations exceeded the RSL for residential soil, but did not exceed the industrial level and were further investigated (Section 3.3). The Cherry Hill Circle parcel had one soil sample (SS-42) for manganese (1870 mg/kg) that exceeded the residential RSL of 1,800 mg/kg.

3.3 Air Emissions Fallout Model

Manganese concentrations in soil became a subject of investigation after that constituent showed up in Baghouse Area, the Power Line Right-of- Way and the Cherry Hill Circle parcel. Past emissions from the Facility mill stacks could have contributed to higher manganese concentrations in soil. This model assessed the potential total manganese air emission concentrations associated with mill emissions and the likelihood that previous soil sampling locations are representative of potential highest concentrations. The model predicted consistent dispersion based on meteorological data from the National Weather Service (NWS) for each year. The highest theoretical concentrations of manganese deposits are located to the immediate southeast of the stacks, which would be toward the Norfolk Southern rail yard. Also, the model confirms that previous sampling locations at Cherry Hill parcel and the Baghouse Area are ideal locations for assessing maximum manganese concentrations from air emissions to the northwest and southeast, respectively.

3.4 Sediment Sampling

Previous sampling events conducted in Peters Creek by Roanoke Electric (1992) and under the RCRA Facility Assessment (1989) were supplemented by additional assessment performed during the RFI. Sediment samples were collected from Peters Creek, which transects the Facility. Sediment samples were collected immediately upstream, downstream, and at the point of discharge of each of three outfalls. All samples were preserved and submitted for analysis of metals, pH, PCBs, VOCs, and SVOCs. Analytical results showed exceedances of the EPA's sediment quality guidelines. Contaminants identified as sediment Contaminants of Potential Ecological Concern (COPECs) were refined on the basis of frequency of occurrence, contaminant distribution, and toxicity data from literature sources. The following constituents are considered COPECs for sediment following the refinement process:

SVOCs - 4-Methylphenol, benzoic acid, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, pyrene, benzo(a)anthracene, chrysene, and total PAHS;

PCBs - total PCBs; and

Metals - arsenic, barium, cadmium, chromium, iron, lead, and nickel.

It is important to note that the potential ecological impacts associated with COPECs for sediment appears to be limited to areas associated primarily with Outfall 003, especially sample location SS-9, and, to a lesser extent, Outfall 002. The COPECs are carried further in the Ecological Risk Assessment. See Section 3.9 for Ecological Risk Assessment results.

3.5 Surface Water Sampling

Three surface water samples were collected at each outfall area from locations coincident to those described in the sediment sampling. Surface water samples were collected prior to the collection of the sediment samples. Samples were collected immediately upstream, downstream and at the point of discharge of each of three outfalls. All samples were preserved and submitted for analysis of Metals, pH, PCBs, VOCs, and SVOCs. Constituents identified as surface water COPECs were refined on the basis of frequency of occurrence, contaminant distribution, and directly measured toxicity in literature sources. The COPEC for surface water is manganese, which was carried further in the Ecological Risk Assessment. See Section 3.9 for Ecological Risk Assessment results.

3.6 Monitoring Wells Installation

Under the RFI, two additional groundwater monitoring wells were installed at the Facility in March of 2001. One well (MW-12) was installed in the vicinity of a closed former settling pond, south of where Peters Creek and Miller Street intersect at the southeastern boundary of the Facility. A monitoring well, MW-13, was also installed near the former maintenance shop which is southeast of the melt shop. Eight existing monitoring wells, numbered MW-1, MW-2, MW-3, MW-4, MW-7, MW-9, MW-10 and MW-11 were installed prior to the EPA Consent Order.

3.7 Groundwater Elevation Measurement / Sample Collection

In June 2001, all new and existing monitoring wells were gauged with an electronic interface probe (IP) which can detect the air/liquid and oil/water interfaces with an accuracy of 0.01 feet. Mapping contours of the groundwater elevations demonstrated that groundwater flows from west to east towards the Roanoke River. Selected monitoring wells MW-3, MW-7, MW-11, MW-12 and MW-13 were sampled for VOCs, SVOCs, PCBs and metals. Metals were analyze for both dissolved (filtered) and total metals.

For groundwater, manganese was the primary Constituent of Concern (COCs), exceeding the RSL of 430 ug/L for tap water for MW-11 at 3,280 ug/L and MW-12 at 1,020 ug/L. In September 2002, a second round of sampling was conducted at monitoring wells MW-3, MW-7, MW-11, MW-12 and MW-13. Manganese concentrations in MW-11 and MW-12 exceeded the RSL for tap water at 1,600 ug/L and 2,400 ug/L respectively. Additional groundwater sampling was conducted in 2004, 2008 and 2010. Several wells were found to be inadvertently destroyed in 2010, including MW-3, MW-7, MW-11 and MW-12.

In June 2011, three new off-site wells (MW-1NS, MW-2NS, and MW-3NS) were installed on the Norfolk Southern rail yard, located southeast of the Facility, to characterize the extent of the groundwater plume. In addition to those wells, two other wells were installed at the Facility property, MW-12R and MW-1A. See Figure 2 for groundwater monitoring well locations.

Waste piles of K061 hazardous waste (baghouse dust) were previously stored onsite in the early 1980s, but later removed by 1984. Currently SDI stabilizes approximately 30 tons of dust per day, five days per week, in a totally enclosed treatment system. Once stabilized, the baghouse dust is sent off to a Subtitle D landfill.

3.8 Human Health Risk Assessment and Evaluation of Exposure Pathways

Chemical compounds in soil and groundwater samples were evaluated in the 2014 EPAapproved Human Health Risk Assessment (HHRA). COCs were identified for direct contact with soil and groundwater based on a comparison of the analytical data to EPA Region III Risk-Based Screening criteria dated October 2007. The HHRA considered the following potential receptors: on-site Facility workers, current construction workers, future construction workers, and residents located in the vicinity of the Facility, including both children and adults.

• Under both current and future use, an on-site worker may be exposed to COCs via direct contact with soil (ingestion and dermal contact), and from inhalation of particulates and vapor. The HHRA demonstrates a cumulative potential cancer risk of 1×10^{-4} , which is within

the EPA acceptable risk range of 1×10^{-4} to 1×10^{-6} . The total Hazard Index (HI) for the current and future worker is 3, which exceeds the target benchmark of 1.

• Under both current and anticipated future use, a Facility resident may be exposed to chemicals of concern via direct contact with soil or from inhalation of volatiles from the subsurface into indoor air of the residence. A Facility resident was assumed to occupy a home for 30 years. Child and adult risks were evaluated separately. The total non-cancer HI (without groundwater ingestion) is equal to 1 and the potential cancer risk is 2×10^{-5} , which is within EPA acceptable risk range. While groundwater ingestion was evaluated in the risk estimates, this pathway is not complete on or near the Facility.

• Under current and anticipated future use, a construction worker may have direct contact with soil while completing construction activities involving excavation. Current construction workers were evaluated for a three-month exposure period, while future construction workers were evaluated for a twelve-month exposure period. The cumulative potential cancer risk estimate for the current construction worker was 3×10^{-6} and the total HI was 2. For the future construction worker was 1×10^{-5} and the total HI was 9. Ingestion of soil was the biggest driver for the HI of both current and future construction workers. Both estimates of potential cancer risk are within the target risk range. The total HI for the current construction worker may indicate the need for protective controls (dust mask, etc.) if a long term construction project is proposed for the property in the future.

3.9 Ecological Risk Assessment and Evaluation of Exposure Pathways

The ecological Risk Assessment findings support a conclusion that no significant risk to ecological receptors exists. There are a limited number of COPECs associated with sediment and surface water at the Facility. The spatial extent of any potential impact of the chemicals is limited, primarily to Outfall 003. Additionally, risk from organic constituents present in Peters Creek sediment is driven by the presence of these constituents from upstream sources. Since ecological risks are negligible and the source of contamination is off-site, there is no need for remediation on the basis of ecological risk.

Section 4: Corrective Action Objectives

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

1. Soils

EPA's Corrective Action Objective for Facility soils is to attain RSLs for Industrial Soils and to control exposure to the hazardous constituents remaining in soils by requiring the compliance with and maintenance of land use restrictions.

2. Groundwater

EPA's Corrective Action Objectives for Facility groundwater are 1) to restore the groundwater to drinking water standards, otherwise known as MCLs, or to the relevant RSL for tap water for each contaminant that does not have an MCL and, 2) until such time as drinking water standards are restored, to control exposure to the hazardous constituents remaining in the groundwater by requiring the continued implementation of the groundwater monitoring program and compliance with and maintenance of groundwater use restrictions.

Section 5: Proposed Remedy

5.1 Introduction

EPA's proposed remedy is comprised of monitored natural attenuation and land and groundwater use restrictions.

1. Soils

EPA's proposed remedy for Facility soils is to prohibit residential use of the Facility and limit exposure of on-site workers to contaminants that remain in soil at the Facility. EPA's proposed remedy therefore requires compliance with and maintenance of the following land use restrictions:

- 1. Use of Facility property shall be restricted to commercial and/or industrial purposes and shall not include residential purposes unless it is demonstrated to EPA, in consultation with DEQ, that such use will not pose a threat to human health or the environment or adversely affect or interfere with the selected remedy and EPA, in consultation with DEQ, provides prior written approval for such use.
- 2. All earth moving activities, including excavation, drilling and construction activities in known contaminated areas at the Facility where any contaminants remain in soils above EPA's Screening levels for non-residential use or in groundwater above health based RSL for tap water, shall be conducted in accordance with an EPA and DEQ approved Materials Management Plan.

2. Groundwater

Historical groundwater analytical results from monitoring wells throughout the Facility and the adjoining CSX property has shown that the extent of manganese contamination in groundwater attributable to the Facility is decreasing or stable. Concentrations of total manganese are decreasing and below the RSL for tap water (430 ug/l) in CSX property wells MW-1NS, MW-2NS and MW-3NS (ranging from ND to 20.6 ug/l). In wells MW-13 and MW-1A concentrations have decreased over time. In MW-13 concentrations have decreased from a high of 3000 ug/l in 2010 to 41.2 ug/l in 2014. In MW-1A concentrations have decreased from 1920 ug/l in 2011 to 565 ug/l in 2014. Well MW-12R located downstream of the former setting pond has stable concentrations over time ranging from 980 ug/l to 759 ug/l. Groundwater results are provided in Section 4.0 Appendix D of the Final RFI Report dated July, 2014 and Groundwater Monitoring Well Sampling dated May 7, 2014.

The most contaminated groundwater is less than ten times levels appropriate for use as drinking water. Therefore, the proposed remedy for groundwater consists of natural attenuation with continued monitoring until the manganese health based RSL for tap water is met, and compliance with and maintenance of groundwater use restrictions, to be implemented through institutional controls, at the Facility to prevent exposure to manganese while levels remain above the health based RSL for tap water. EPA's proposed remedy includes the following groundwater use restrictions:

- 1. Groundwater at the Facility shall not be used for any purpose other than the operation, maintenance, and monitoring activities required by DEQ and/or EPA, unless it is demonstrated to EPA in consultation with DEQ, 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 wells shall be installed on Facility property unless it is demonstrated to EPA, in consultation with DEQ, that such wells are necessary to implement the final remedy and EPA provides prior written approval to install such wells; and
- 3. Owner shall comply with the EPA-approved groundwater monitoring program.

The property will not be used in a way that will adversely affect or interfere with the integrity and protectiveness of the final remedy selected by EPA in the Final Decision and Response to Comments (FDRTC);

EPA, VADEQ, and/or their authorized agents and representatives, shall have access to the Facility property to inspect and evaluate the continues effectiveness of the final remedy and if necessary, to conduct additional remediation to ensure the protection of the public health and safety and the environment based upon the final remedy selected in the FDRTC.

EPA proposes to implement the land and groundwater use restrictions through an institutional control (IC) such as an enforceable order, permit and/or an Environmental Covenant pursuant to the Virginia Uniform Environmental Covenants Act (UECA), Title 10.1, Chapter 12.2, \$10.1-1238 - 10.1-1250 of the Code of Virginia. If an Environmental Covenant is selected, it will be recorder in the chain of the title for the Facility property and, once recorded, will be enforceable against future land owners.

In addition, the Commonwealth of Virginia State Board of Health Private Well Regulations, 12 VAC 5-630-10 et seq. (Regulations) and its implementing statue set forth at the Code of Virginia, Title 32.1 (Health), Chapter 6 (Environmental Health Services), Va. Code §32.1, is an institutional control mechanism that will reduce potential human exposure to contaminated groundwater attributable to the Facility. Pursuant to Section 12 VAC 5-630-30, the purpose of these Regulations is to "ensure that all private wells are located, constructed and maintained in a manner which does not adversely affect groundwater resources, or the public welfare, safety and health.

Accordingly, Sections 12 VAC 5-630-230 through VAC 5-630-270 of the Regulations prescribe the process by which construction permits for the installation of private well are received and issued. Pursuant to the Regulations, if a private well is installed or modified without a permit, Section VAC 5-630-150 sets forth an enforcement mechanism which provides for the notification of violations of the Regulations, the issuance of orders requiring cessation and correction of violation, appropriate remedial action to ensure that the violation does not recur, and any appropriate corrective action to ensure compliance with the Regulations.

3. Additional Requirements

1. On an annual basis and whenever requested by DEQ and EPA, the then current owner shall submit to DEQ and EPA a written certification stating whether or not the groundwater and land use restrictions are in place and being complied with.

2. Within one month after any of the following events, the then current owner of the Facility shall submit, to DEQ and EPA written documentation describing the following: observed noncompliance with the groundwater use restrictions; transfer of the Facility; changes in use of the Facility.

3. The Facility shall not be used in a way that will adversely affect or interfere with the integrity and protectiveness of the final remedy.

4. In addition, the Facility shall provide DEQ and 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.

Development and Implementation of a Materials Management Plan

EPA's proposed remedy requires the development and implementation of a Materials Management Plan to be submitted for review and approval by EPA before any earth moving activities, including construction and drilling, can be conducted on areas known to contain contaminants. The Materials Management Plan will detail how soil and groundwater will be managed during any future subsurface activities conducted at the Facility. The Materials Management Plan will detail how all excavated soils will be handled and disposed. Emphasis shall be placed on preventing exposure to contaminated soil during construction activities associated with airborne dust. All soils that are to be disposed of shall be sampled and disposed of in accordance with applicable State and Federal regulations. The Materials Management Plan will require analysis of the full suite of VOCs, SVOCs, PCBs, and metals.

Soil remediation cleanup standards will be EPA's RSL for industrial soil. In addition, the Materials Management Plan will include soil stabilization requirements to minimize contact between storm water runoff and Facility soils. Soil stabilization measures may include the construction of berms to prevent storm water from flowing onto certain areas as well as the construction of sumps with pumps to remove ponded water from low lying areas.

Section 6: 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.

Threshold Criteria	Evaluation
1) Protect human health and the environment	EPA's proposed remedy protects human health and the environment by eliminating, reducing, or controlling potential unacceptable risk through the implementation and maintenance of ICs. For Facility soils, EPA is proposing ICs to restrict land use to commercial or industrial purposes at the Facility and to require compliance with a Materials management Plan. With respect to groundwater, while low levels of manganese remain in the groundwater beneath the Facility, the contaminant are contained in the aquifer and decreasing through attenuation or are stable, depending on location, at the Facility as shown by groundwater monitoring. In addition, groundwater monitoring will continue until groundwater clean- up standards are met. 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. In addition, the existing City of Roanoke ordinance on groundwater use for potable use when municipal water is available restricts the installation of wells in contaminated water sources.
2) Achieve media cleanup objectives	EPA's proposed remedy meets the media cleanup objectives based on assumptions regarding current and reasonably anticipated land and water use(s). The remedy proposed in this SB is based on the current and future anticipated land use at the Facility as commercial or industrial. As such, industrial media cleanup objectives were selected and the Facility soils contain contaminant concentrations that are below EPA's industrial soil RSLs. The HHRA for the Facility concluded that there would be no risk associated with the soil as long as protective controls are in place for workers during long-term construction projects and the Facility remains industrial.

	The groundwater plume appears to be stable (not migrating); although manganese concentrations are above the RSL tap water value, they are either stable or declining over time. In addition, groundwater monitoring will continue until groundwater clean-up standards are met. The Facility meets EPA risk guidelines for human health and the environment. EPA's proposed remedy requires the implementation and maintenance of institutional controls to ensure that groundwater beneath Facility property is not used for any purpose except to conduct the operation, maintenance, and monitoring activities required by DEQ and EPA
3) Remediating the Source of Releases	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. Controlling the sources of contamination relates to the ability of the proposed remedy to eliminate or reduce, to the maximum extent practicable, further releases. Roanoke Electric modified its manufacturing process in early 1980s to collect and treat air emissions containing manganese, which significantly reduce further releases to on-site soils as well as the source of the groundwater contamination, with respect to prior releases. Natural attenuation processes are preventing the migration of COCs in concentrations that would pose an unacceptable risk.
Balancing Criteria	Evaluation
4) Long-term effectiveness	The long term effectiveness of the proposed remedy for the Facility will be maintained by the continuation of the groundwater monitoring program and implementation of land and groundwater use restrictions through institutional controls until the RSL for manganese is achieved though natural attenuation.
5) Reduction of toxicity, mobility, or volume of the Hazardous Constituents	The reduction of toxicity, mobility and volume of hazardous constituents will continue by attenuation at the Facility. Reduction has already been achieved, as demonstrated by the data from the <i>Final RFI Report</i> and groundwater monitoring. In addition, the groundwater monitoring program already in place will continue.

6) Short-term effectiveness	EPA's proposed remedy does not involve any activities, such as construction or excavation, which would pose short-term risks to workers, residents, and the environment. EPA anticipates that the land and groundwater use restrictions will be fully implemented shortly after the issuance of the Final Decision and Response to Comments. The groundwater monitoring program is already in place and will continue.
7) Implementability	EPA's proposed decision is readily implementable. The groundwater monitoring is already in place and operational. EPA does not anticipate any regulatory constraints in implementing its proposed remedy. EPA proposes to implement the institutional controls through an enforceable mechanism such as an Environmental Covenant.
8) Cost	EPA's proposed decision is cost effective. The costs associated with this proposed remedy and the continuation of groundwater monitoring have already been incurred and the remaining costs are minimal. The costs to record an environmental covenant in the chain of title to the Facility property are minimal. The costs associated with issuing an order are 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	DEQ has reviewed and concurred with the proposed remedy for the Facility.

Section 7: Financial Assurance

EPA has evaluated whether financial assurance for corrective action is necessary to implement EPA's proposed remedy at the Facility. Given that EPA's proposed remedy does not require any further engineering actions to remediate soil or groundwater contamination at this time and given that the costs of implementing institutional controls at the Facility will be approximately \$30,000, and are, therefore, de minimis, EPA is proposing that no financial assurance be required.

Section 8: Public Participation

Interested persons are invited to comment on EPA's proposed remedy. The public comment period will last 30 calendar days from the date that notice is published in a local newspaper. Comments may be submitted by mail, fax, e-mail, or phone to Mr. John Hopkins at the address listed below.

A public meeting will be held upon request. Requests for a public meeting should be made to Mr. John Hopkins at the address listed below. A meeting will not be scheduled unless one is requested.

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

U.S. EPA Region III 1650 Arch Street Philadelphia, PA 19103 Contact: Mr. John Hopkins (3LC20) Phone: (215) 814-3437 Fax: (215) 814-3113 Email: hopkins.john@epa.gov

Date:

6.18.15

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

Section 9: Index to Administrative Record

Administrative Order on Consent for Roanoke Electric Steel Corporation, dated September 29, 1999

RCRA Facility Investigation Report for Steel Dynamics Facility, dated July 2014.

Corrective Measures Study for Steel Dynamics, dated November 2014.

Groundwater Monitoring Well Sampling Results, contained in an APEX letter dated May 7, 2014

Groundwater Monitoring Well Sampling Results, contained in an APEX letter dated July 6, 2010

Attachments:

Figure 1: Map of Facility

Figure 2: Groundwater Monitoring Well Locations

Table 1: Summary of Soil Analytical Results: Baghouse Area

Table 2: Summary of Soil Analytical Results: Power Right of Way

Table 3: Summary of Soil Analytical Results: Cherry Hill

Table 4: Summary of Groundwater Analytical Results for Manganese





Summary of Soil Analytical Results Baghouse Roanoke Electric Steel Corporation 102 Westside Boulevard Roanoke, Virginia

	Number Numb	Number		Minimum	Location of Minimum (mg/kg)	Maximum		EPA Region III Risk-Based Criteria (Chemical of
Compound	of Detects	of Samples (a)	Frequency of Detect	Detect (mg/kg)		Detect (mg/kg)	Detect (mg/kg)		Industrial (mg/kg)	20 DAF Soil to Groundwater (mg/kg)	Notes	Chemical of Potential Concern (c)
Volatile Organic Compound	ds (VOCs)										
Methylene Chloride	4	4	100%	0.003	BH-19, 24"	0.011	BH-6, 24"	85	380	0.019		no
Acetone	4	4	100%	0.019	8H-19, 24"	0.045	BH-14, 24"	7,000	92,000	2.2		no
Carbon Disulfide	2	4	50%	0.0008	BH-22, 24"	0.006	BH-14, 24"	780	10,000	1.9		no
Chloroform	4	4	100% ·	0.0006	BH-6, 24"	0.005	BH-14, 24"	78	1,000	0.0009		yes
2-Butanone	. 3	4	75%	0.003	BH-19, 24"	0.013	BH-14, 24"	4,700	61,000	2.9		no
Benzene :	2	4	50%	0.0005	BH-19, 24"	0.002	BH-14, 24"	12	52	0,0019		yes
4-Methyl-2-Pentanone	1	4	25%	0.010	BH-14, 24"	0.010	BH-14, 24"			5.9		no
Toluene	3	4	75%	0.0009	BH-22, 24"	0.004	BH-19, 24"	630	8,200	2.7		no
Ethylbenzene	1	4	25%	0.002	BH-19, 24"	0.002	BH-19, 24"	780	10,000	1.5		no
Xylene (total)	2	4	50%	0.0005	BH-14, 24"	0.003	BH-19, 24"	1,600	20,000	0.3		no
Semi-Volatile Organic Com	npounds (SVOCs)					· · · · · · · · · · · · · · · · · · ·					
Naphthalene	1	4	25%	0.014	BH-19, 24"	0,014	BH-19, 24"	160	2,000	0.015	ſ	no
2-Methylnaphthalene	2	4	50%	0.019	BH-19, 24"	0.022	BH-22, 24"	31	410	0.44		no
Phenanthrene	3	4	75%	0.043	BH-22, 24"	0.056	BH-14, 24"	310	4,100	630	e	no
Fluoranthene	2	4	50%	0.012	BH-22, 24"	0.034	BH-19, 24"	310	4,100	630		no
Pyrene	1	4	25%	0.050	BH-19, 24"	0.050	BH-19, 24"	230	3,100	68		no
bis(2-Ethylhexyl)phthalate	2	4	50%	0.100	BH-19, 24"	0.130	BH-22, 24"	46	200	2,900		no
Polychlorinated Biphenyls	(PCBs)											
Aroclor-1242	4	4	100%	0.007	BH-6, 24"	0.800	BH-19, 24"	0.32	1.40		Γ	yes
Arocior-1254	1	4	25%	0.032	BH-14, 24"	0.032	BH-14, 24"	0.32	1,40	1,10	t	no
Aroclor-1260	3	4	75%	0.061	BH-14, 24"	0.760	BH-19, 24"	0.32	1.40			yes
Inorganics							·				<u></u>	have been a second as a second se
Aluminum	25	25	100% /	6.330	BH-11.6"	27,100	BH-13, 6"	7,800	100.000		T	ves
Antimony	4	25	16%	0.81	BH-24, 6"	1.80	BH-21.6"	3.1	41	1.3		ves
Arsenic	25	25	100%	4,40	BH-12, 6"	23.60	BH-17.6"	0.43	1,90	0.026		ves
Barium	25	25	100%	62.90	BH-3.6"	536	BH-23, 6"	1,600	20,000	600		no
Beryllium	6	25	24%	0.44	BH-25, 6"	0.54	BH-23, 6"	16	200	120		no
Cadmium	6	25	24%	0,46	BH-20, 6"	8.30	BH-23, 6"	7.8	100	5.5	1	Ves
Calcium	25	25	100%	1,780	BH-18, 6"	211,000	• BH-23, 6"		***		1	no (EN)
Chromium (total)	25	25	100%	26.60	BH-20, 6"	1,880	BH-19, 6"	23	310	4.2	1	ves
Cobalt	25	25	100%	2.10	BH-4, 6"	19.70	BH-11, 6"				1	yes
Copper	25	25	100%	15.50	BH-20, 6"	667	BH-11, 6"	310	4,100	1,100	1	Ves
Iron	25	25	100%	30,800	BH-4, 6"	199,000	BH-11, 6"	5,500	72,000		1	yes
Lead	25	25	100%	14.30	BH-3, 6"	859	BH-11, 6"	400	400		(d)	yes
Magnesium	25	25	100%	1,430	BH-3, 6"	86,200	BH-4, 6"				1.	no (EN)
Manganese	6	25	24%	245	BH-20, 6"	24,100	BH-23. 6"	160	2.000	950	1	Ves

TABLE 1

TABLE 1 Summary of Soil Analytical Results Baghouse Roanoke Electric Steel Corporation 102 Westside Boulevard Roanoke, Virginia

	Number				EPA Region III Risk-Based Criteria (b)							
Compound	of Detects	of Samples (a)	Frequency of Detect,	Detect (mg/kg)	Location of Minimum	Detect (mg/kg)	Location of Maximum	Residential (mg/kg)	Industrial (mg/kg)	20 DAF Soil to Groundwater (mg/kg)	Notes	Potential Concern (c)
Inrganics (continued)	Î			<u></u>]			· · · · · · · · · · · · · · · · · · ·		
Мегсигу	25	25	100%	0.0041	BH-4, 6"	0.28	BH-11, 6"	2.30	31			no
Nickel	25	25	100%	11.30	BH-20, 6"	224	BH-11, 6"	160	2,000			yes
Potassium	25	25	100%	243	BH-19, 6"	2,250	_BH-3, 6"					no (EN)
Silver	4	25	16%	0.26	BH-25, 6"	3.20	BH-11, 6"	39	510	3		yes
Sodium	25	25	100%	69	BH-18, 6"	1,020	BH-23, 6"					no (EN)
Thallium	1	25	4%	8.10	BH-24, 6"	8.10	BH-24, 6"	0.55	7.2	0.36		yes
Vanadium	25	25	100%	27.10	BH-25, 6"	219	BH-19, 6"	7.8	100	5,100		yes
Zinc	23	25	92%	50	BH-3, 6"	4,590	BH-11, 6"	2,300	31,000	1,400		yes

Notes:

mg/kg = milligrams per kilogram

--- = not available

Only detected compounds shown above.

(a) = Includes samples SS-41 to SS-45 taken 6/25/01.

(b) = EPA Region III RBC Table (October 2007). Noncancer-based RBCs adjusted by 0.1 to reflect a hazard index of 0.1.

(c) = Selected as a chemical of potential concern (COPC) if maximum detect was higher than lowest RBC.

(d) = Interim soil lead action level residential (EPA, August 1994. OSWER Directive #9355.4-12. Memorandum, OSWER Directive: Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities. Office of Solid Waste and Emergency Response, Washington, D.C.).

(e) = Value for fluoranthene substituted.

Bold Indicates that constituent was selected as a COPC. EN = Constituent ruled out as a COPC as it is an essential nutrient.

This table is copied from Table 1 of the July 2014 RCRA Facility Investigation Report prepared by Apex Companies, LLC.

TABLE 2

Summary of Soil Analytical Results Power Right of Way Roanoke Electric Steel Corporation 102 Westslde Boulevard Roanoke, Virginia

	Compound Number of Samples (a) Frequency of Detect (mg/kg) Minimum Detect (mg/kg) Maximum	Number			•			EPA Region III Risk-Based Criteria (b)				
Compound		Maximum Detect ·(mg/kg)	ximum letect ng/kg) Maximum (Industrial (mg/kg)	20 DAF Soil to Groundwater (mg/kg)	Notes	Chémical of Potential Concern (c)				
Polychlorinated Biphenyls (PCBs)									· · ·		
Aroclor-1248	1	1	100%	0.065	SS-26, 2"	0.065	SS-26, 2"	0.32	1.40			no
Aroclor-1254	1.	1	100%	0.022	SS-26, 2"	0.022	SS-26, 2"	0.32	1.40	1.10		no
Aroclor-1260	1	1	100%	0.012	SS-26, 2"	0.012	SS-26, 2"	0.32	1.40			по
Inorganics				····								
Aluminum	23	23	100%	11,400	SS-30, 2"	19,200	SS-38, 2"	7,800	100,000			yes
Arsenic	23	23	100%	4.7	SS-30, 12"	8.8	SS-31, 12"	0.43	1.90	0.026		yes
Barium	23	23	100%	102	SS-34, 2"	225	SS-33, 6"	1,600	20,000	600		no
Beryllium	23	23	100%	0.55	SS-27/40, 2"	0.8	SS-37, 2"	16	200	120		no
Cadmium	18	23	78%	0.20	SS-36, 2"	10	SS-31, 12"	7.8	100	5.5		yes
Calcium	23	23	100%	347	SS-30, 12"	16,500	SS-31, 12"			***		no (EN)
Chromium (total)	23	23	100%	18.1	SS-32, 6"	153	SS-31, 12"	23	310	4.2		yes
Cobalt	23	23	100%	8.3	SS-40, 2"	18	SS-31, 6"					yes
Copper	23	23	100%	9.1	SS-30, 12"	83	SS-31, 12"	310	4,100	1,100		no
Iron	23	23	100%	17,800	SS-32, 6"	44,200	<u>SS-31, 12"</u>	5,500	72,000			yes
Lead	23	23	100%	22.3	SS-30, 12"	297	SS-31, 12"	400	400	***	d	no
Magnesium	23	23	100%	660	SS-30, 12"	6,280	SS-31, 12"					no (EN)
Manganese	23	23	100%	1,240	SS-27, 2"	4,960	SS-31, 12"	160	2,000	950		yes
Mercury	23	23	100%	0.03	SS-32, 12"	0.10	SS-30, 2"	2.30	31.00	*		no
Nickel	23	23	100%	7.3	SS-30, 12"	26	SS-31, 12"	160	2,000			no
Potassium	23	23	100%	874	SS-30, 12"	2,180	SS-38, 2"	·				no (EN)
Selenium	2	23	9%	1.2	SS-39/40, 2"	1.20	SS-39/40, 2"	39	510	1.9		no
Silver	4	23	17%	0.27	SS-35, 2"	0.68	SS-31, 12"	39	510	3.1		no
Sodium	23	23	100%	17	SS-32, 12"	407	SS-40, 2"					no (EN)
Vanadium	23	23	100%	28.9	SS-32, 6"	53	SS-31, 12"	7.8	100	5,100		yes
Zinc	23	23	100%	43.9	SS-30, 12"	1,470	SS-31, 12"	2,300	31,000	1,400		yes

Notes:

mg/kg = milligrams per kilogram

--- = not detected or not applicable

(a) = Includes samples SS-26 for PCBs and SS-26 through SS-40 for inorganics.

(b) = EPA Region III RBC Table (October 2007) unless otherwise noted. Noncancer-based RBCs adjusted by 0.1 to reflect a hazard index of 0.1.

(c) = Selected as a chemical of potential concern (COPC) if maximum detect was higher than lowest RBC.

(d) = Interim soil lead action level residential (EPA, August 1994. OSWER Directive #9355.4-12. Memorandum, OSWER Directive: Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities. Office of Solid Waste and Emergency Response, Washington, D.C.).

Bold indicates that constituent was selected as a COPC. EN = Constituent ruled out as a COPC as it is an essential nutrient.

This table is copied from Table 4 of the July 2014 RCRA Facility Investigation Report prepared by Apex Companies, LLC.

TABLE 3 Summary of Soil Analytical Results Cherry Hill Roanoke Electric Steel Corporation 102 Westside Boulevard Roanoke, Virginia

	Number Of		Number of Frequency		Location of	Maximum	Location of	EPA Region III Risk-Based Criteria (b)				Chemical of
Compound	of Detects	Samples (a)	of Detect	Detect (mg/kg)	Minimum (mg/kg)	(mg/kg)		Industrial (mg/kg)	20 DAF Soil to Groundwater (mg/kg)	otes	Potential Concern (c)	
Inorganics												
Aluminum	6	6	100%	10,900	SS-41, 2"	18,500	SS-43, 6"	7,800	100,000			yes
Arsenic	6	6	100%	6	SS-41, 2"	8.5	SS-43, 6"	0.43	1.90	0.026		yes
Barium	6	6	100%	127	SS-41, 2"	174	SS-45, 2"	1,600	20,000	600		no
Beryllium	6	6	100%	0.37	SS-42, 2"	0.63	SS-45, 2"	16	200	120		no
Cadmium	6	6	100%	1.3	SS-43, 2"	2.8	SS-45, 2"	7.8	100	5.5		no
Calcium	6	6	100%	2,700	SS-43, 2"	6,090	SS-45, 2"					no (EN)
Chromium (total)	6	6	100%	25.8	SS-43, 2"	62	SS-45, 2"	23	310	4.2		yes
Cobalt	6	6	100%	7.4	SS-41, 2"	15	SS-43, 6"		-*-			yes
Copper	6	6	100%	26	SS-43, 2"	49.4	SS-45, 2"	310	4,100	1,100		no
Iron	6	6	100%	23,300	SS-41, 2"	32,300	SS-45, 2"	5,500	72,000			yes
Lead	6	6	100%	75.1	SS-43, 2"	161	SS-45, 2"	400	400		d	no
Magnesium	6	6	100%	944	SS-43, 2"	1,420	SS-45, 2"		****			no (EN)
Manganese	6	6	100%	1,010	SS-41, 2"	1,870	SS-43, 6"	160	2,000	950		yes
Mercury	5	6	83%	0.09	SS-43, 2"	0.29	SS-45, 2"	2.30	31.00			no
Nickel	6	6	100%	12.2	SS-43, 2"	18.2	SS-45, 2"	160	2,000			no
Potassium	6	6	100%	1,540	SS-41, 2"	2,300	SS-43, 6"					no (EN)
Selenium	5	6.	83%	1.2	SS-44, 2"	1.70	SS-43, 6"	39	510	1.9		no
Silver	3	6	50%	0.21	SS-42, 2"	0.32	SS-45, 2"	39	510	3.1		no
Sodium	6	6	100%	31	SS-41, 2"	477	SS-44, 2"					no (EN)
Thallium	3	6	50%	2.5	SS-43, 6"	2.8	SS-45, 2"	0.55	7.2	0.36		yes
Vanadium	6	6	100%	29.3	SS-41, 2"	47.9	SS-43, 6"	7.8	100	5,100		yes
Zinc	6	6	100%	187	SS-43, 6"	489	SS-45, 2"	2,300	31,000	1,400		no

Notes:

mg/kg = milligrams per kilogram

--- = not detected or not applicable

(a) = Includes samples SS-41 to SS-45 taken 6/25/01.

(b) = EPA Region III RBC Table (October 2007) unless otherwise noted. Noncancer-based RBCs adjusted by 0.1 to reflect a hazard index of 0.1.

(c) = Selected as a chemical of potential concern (COPC) if maximum detect was higher than lowest RBC.

(d) = Interim soil lead action level residential (EPA, August 1994. OSWER Directive #9355.4-12. Memorandum, OSWER Directive: Revised Interim Soil Lead Guidance CERCLA Sites and RCRA Corrective Action Facilities. Office of Solid Waste and Emergency Response, Washingt

Bold indicates that constituent was selected as a COPC. EN = Constituent ruled out as a COPC as it is an essential nutrient.

This table is copied from Table 5 of the July 2014 RCRA Facility Investigation Report prepared by Apex Companies, LLC.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION III

FINAL DECISION AND RESPONSE TO COMMENTS

STEEL DYNAMICS ROANOKE BAR DIVISION FACILITY 102 WESTSIDE BOULVARD

ROANOKE, VIRGINIA

EPA ID NO. VAD003122553

I. FINAL DECISION

The United States Environmental Protection Agency (EPA) is issuing this Final Decision and Response to Comments ("Final Decision") under the authority of 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. Sections 6901 to 6992k, regarding the remedy for the Steel Dynamics Roanoke Bar Division facility (Facility) located at 102 Westside Boulevard Roanoke, Virginia.

On June 18, 2015 EPA issued a Statement of Basis ("SB") in which it described its proposed remedy for the Facility. The SB is hereby incorporated into this Final Decision by reference and made a part hereof as Attachment A. EPA's proposed remedy for the Facility consists of the following components: 1) natural attenuation 2) performance and maintenance of a groundwater monitoring program; and 2) compliance with and maintenance of existing Institutional Controls (ICs) that restrict certain land and groundwater uses at the Facility.

II. PUBLIC COMMENT PERIOD

On July 1, 2015, EPA published the SB in The Franklin News Post newspaper and on EPA Region III's website and announced the commencement of a thirty (30)-day public comment period in which it requested comments from the public on the remedy proposed in the SB. The public comment period ended on July 31, 2015.

III. RESPONSE TO COMMENTS

EPA received no comments on its proposed remedy for the Facility. Consequently, EPA's Final Remedy did not change from the remedy it proposed in the SB.

IV. FINAL REMEDY

The Final Remedy, the components of which are explained in detail in the SB, restricts the Facility to non-residential use through compliance with and maintenance of institutional controls, restriction on groundwater use, continued monitoring of groundwater, natural attenuation, and a soil management plan to restrict activities in known contaminated areas.

V. DECLARATION

Based on the Administrative Record compiled for the Corrective Action at the Steel Dynamics Roanoke Bar Division, EPA has determined that the Final Remedy selected in this Final Decision and Response to <u>Comments</u> is protective of human health and the environment.

John À. Armstead, Director Land & Chemicals Division U.S EPA Region III

8.13.15

Date

Attachment A: Statement of Basis, dated June 18, 2015

Virginia Administrative Code Title 9. Environment Agency 15. Department of Environmental Quality Chapter 90. Uniform Environmental Covenants Act Regulation

9VAC15-90-10. Definitions.

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The following words and terms used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

"Activity and use limitations" means restrictions or obligations created under this chapter with respect to real property.

"Agency" means the Department of Environmental Quality or other state or federal agency that determines or approves the environmental response project pursuant to which the environmental covenant is created. The agency may be considered a grantee for purposes of indexing in the land records.

"Applicant" means the owner or owners of the property to which the covenant attaches or a person or persons who are lawfully authorized to execute and submit a proposed environmental covenant, amendment, termination, or other UECA document to the department or other agency pursuant to this chapter. The applicant may be considered a grantor for purposes of indexing in the land records.

"Common interest community" means a condominium, cooperative, or other real property with respect to which a person, by virtue of the person's ownership of a parcel of real property, is obligated to pay property taxes or insurance premiums for maintenance or improvement of other real property described in a recorded covenant that creates the common interest community.

"Department" means the Department of Environmental Quality.

"Environmental covenant" or "covenant" means a servitude arising under an environmental response project that imposes activity and use limitations.

"Environmental remediation" means the actions required by the agency as part of an environmental response project. Activity and use limitations alone may constitute "environmental remediation."

"Environmental response project" means a plan or work performed for environmental remediation of real property and conducted:

1. Under a federal or state program governing environmental remediation of real property;

2. Incident to closure of a solid or hazardous waste management unit, if the closure is conducted with approval of an agency; or

3. Under a state voluntary clean-up program including the Brownfield Restoration and Land Renewal Act, Chapter 12.1 (§ <u>10.1-1230</u> et seq.) of the Title 10.1 of the Code of

Virginia.

"Holder" means the grantee of an environmental covenant. A person, including a person that owns an interest in the real property, the agency, or a municipality or other unit of local government, may be a holder. The holder shall be considered a grantee for purposes of indexing in the land records. I.

"Owner" means the fee simple owner of the property to which the covenant attaches. There may be more than one owner. The owner shall be considered a grantor for purposes of indexing in the land records.

"Person" means an individual, corporation, business trust, estate, trust, partnership, limited liability company, association, joint venture, public corporation, government, governmental subdivision, agency or instrumentality, or other legal or commercial entity.

"Record," used as a noun, means information that is inscribed on a tangible medium or that is stored in an electronic or other medium and is retrievable in perceivable form.

"State" means a state of the United States, the District of Columbia, Puerto Rico, the United States Virgin Islands, or any territory or insular possession subject to the jurisdiction of the United States.

"UECA" means the Uniform Environmental Covenants Act, Chapter 12.2 (§ <u>10.1-1238</u> et seq.) of Title 10.1 of the Code of Virginia.

"Virginia UECA Template" means the form and content of an environmental covenant executed in Virginia as prescribed by <u>9VAC15-90-30</u> C.

Statutory Authority § <u>10.1-1250</u> of the Code of Virginia.

Historical Notes Derived from <u>Volume 28, Issue 03</u>, eff. November 9, 2011.

9VAC15-90-20. Authority and Applicability.

This regulation is issued under the authority of Chapter 12.2 (§ <u>10.1-1238</u> et seq.) of Title 10.1 of the Code of Virginia, the Uniform Environmental Covenants Act (UECA). The regulation contains requirements for UECA environmental covenants.

When the owner, holder, and agency agree that a UECA environmental covenant shall be executed as part of an environmental response project, then the environmental covenant shall fulfill all of the requirements of this chapter.

Statutory Authority

§ <u>10.1-1250</u> of the Code of Virginia.

Historical Notes

Derived from Volume 28, Issue 03, eff. November 9, 2011.

9VAC15-90-30. Virginia Ueca Template.

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A. Where the department is the agency or the holder of a UECA environmental covenant, the following requirements shall be met:

1. The applicant shall submit the UECA environmental covenant to the department in accordance with this chapter. In order to meet the regulatory submission requirements, applicants shall utilize the Virginia UECA Template as provided in subsection C of this section.

2. Provisions in the Virginia UECA Template that are marked with an asterisk (*) are required by law for all environmental covenants executed pursuant to the UECA. Other provisions in this Virginia UECA Template shall be included unless the department grants permission for particular provisions to be omitted, added, or modified.

B. Where the department is neither the agency nor the holder of a UECA environmental covenant, applicants desiring to execute a UECA environmental covenant may utilize the Virginia UECA Template or another instrument that meets the requirements of § <u>10.1-1240</u> of the Code of Virginia.

C. Virginia UECA Template.

{INSTRUCTIONS are italicized and provided in brackets {}. The applicant may delete these instructions after filling out the template in order to create a more readable document. All provisions other than instructions remain a part of the UECA environmental covenant. As provided in <u>9VAC15-90-30</u> A 2, provisions marked with an asterisk (*) are required by law for all environmental covenants executed pursuant to the UECA, and other provisions within this Virginia UECA Template should be included unless the Department grants permission for particular provisions to be omitted or modified (or for additional provisions to be included). This regulation provides notice that the Department intends to require inclusion of all provisions in the Virginia UECA Template whenever the Department is a necessary party to a UECA covenant, unless other parties present persuasive alternatives to which the Department agrees. The Department strongly recommends use of all provisions of the Virginia UECA Template even when the Department is not a necessary party to the UECA covenant. All statutory references are to the Code of Virginia (1950), as amended.}

Tax Map or GPIN No.: _____

Prepared by: _____

Remediation Program Site ID #:_____

UECA ENVIRONMENTAL COVENANT

This environmental covenant is made and entered into as of the ____day of _____, ____, by and between ______, whose address is ______ (hereinafter referred to as the "Grantor" or "Owner"), and ______, (hereinafter referred to as the "Grantee" or "Holder") whose address is ______.

_____, whose address is ______ (hereinafter referred to as the "Agency")

also joins in this environmental covenant.

*This environmental covenant is executed pursuant to the Virginia Uniform Environmental Covenants Act, § <u>10.1-1238</u> et seq. of the Code of Virginia (UECA). This environmental covenant subjects the Property identified in Paragraph 1 to the activity and use limitations in this document.

{INSTRUCTIONS: See § <u>10.1-1240</u> A 1 of the Code of Virginia. Note: If the parties agree that the Agency shall be an Additional Grantee, then this sentence should be added to the covenant after the sentence containing the Agency's name and address: "The Agency shall be considered as an Additional Grantee for recordation purposes."}

*1. Property affected. The property affected (Property) by this environmental covenant is located at ______, _____, Virginia, and is further described as follows:

{INSTRUCTIONS: Provide a legally sufficient description of the real property subject to the covenant above as required by § <u>10.1-1240</u> A 2 of the Code of Virginia. Include the street address of the property (if available), the recorded location of a metes and bounds description or survey plat of the Property (normally the Deed into the current owners), or attach any previously unrecorded survey as an exhibit to this environmental covenant. Note that, if the street address is different from the locality in which the land records are kept (for example, the mailing address is in Ashland but the land records are Hanover), then include both pieces of information.}

2. Description of Contamination & Remedy.

*a. Identify the name and location of any administrative record for the environmental response project reflected in this UECA environmental covenant.

b. Describe the contamination and remedy relating to the Property, including descriptions of the Property before remedy implementation; contaminants of concern; pathways of exposure; limits on exposure; location and extent of contamination; and the remedy/corrective action undertaken.

{INSTRUCTIONS: Unless otherwise agreed by the Department, a copy of the remediation decision document shall be attached as an exhibit. Note: If the decision document is subsequently changed, then the applicant shall submit the updated decision document, probably in conjunction with an amendment or termination of the covenant.}

3. Activity & Use Limitations.

*a. The Property is subject to the following activity and use limitations, which shall run with the land and become binding on Grantor(s) and any successors, assigns, tenants, agents, employees, and other persons under its (their) control, until such time as this covenant may terminate as provided by law:

{INSTRUCTIONS: Describe each specific restriction on land use, such as whether the property can be used only for non-residential purposes or whether the groundwater may be

used as potable water; describe each obligation, such as groundwater monitoring, maintenance of a fence or cap. If the activity and use limitations are stated within the remediation decision document that is incorporated in the applicant's response to 2b, then the applicant shall respond to 3a by referring to the appropriate sections of that decision document and/or by attaching those provisions from within the decision document as an exhibit. If the decision document is lengthy, then the Agency may choose to stipulate which sections must be included in the environmental covenant, rather than requiring that the entire decision document be included. Although it is not generally recommended, the Agency may stipulate another method for compliance with this section if including all or parts of the decision document is not practicable. The Department requires that the UECA environmental covenant be consistent with the decision document. A description of the activity and use limitations is required by § 10.1-1240 A 3 of the Code of Virginia.}

b. Geographic coordinate lists defining the boundary of each activity and use restriction, depicted as a polygon.

{INSTRUCTIONS: The applicant shall attach the required coordinates as an exhibit to the covenant in response to 3b in the following format:

Exhibit _

Activity and Use Limitation Area(s)

{INSTRUCTIONS: For each activity and use restriction, geographic coordinate lists that define the boundary of each activity and use restriction as a polygon shall be developed. The longitude and latitude of each polygon vertex shall meet the following requirements, unless otherwise agreed by the signatories:

Decimal degrees format

At least seven decimal places (to achieve a precision of approximately 0.04 ft based on a typical survey precis 0.01 ft)

Negative sign for west longitude

WGS 1984 datum

Validate by saving the file as: filename.kml and opening in Google Earth

An example coordinate list and polygon are shown below:}

-74.xxxxxxxxxx822,40.yyyyyyyyy762,0 (Point of Beginning)
-74.xxxxxxxxxx822,40.yyyyyyyyy762,0 Point of Beginning
-74.xxxxxxxxxx309,40.yyyyyyyyy341,0
-74.xxxxxxxxxx325,40.yyyyyyyyy32,0
-74.xxxxxxxxx727,40.yyyyyyyyy201,0
-74.xxxxxxxxx162,40.yyyyyyyyyy337,0
-74.xxxxxxxxxx101,40.yyyyyyyyyy337,0
-74.xxxxxxxxxx101,40.yyyyyyyyyy528,0
-74.xxxxxxxxxx378,40.yyyyyyyyyy114,0
-74.xxxxxxxxxx145,40.yyyyyyyyy279,0

-74.xxxxxxxx822,40.yyyyyyyyy762,0 Point of Beginning}

4. Notice of Limitations in Future Conveyances. Each instrument hereafter conveying any interest in the Property subject to this environmental covenant shall contain a notice of the activity and use limitations set forth in this environmental covenant and shall provide the recorded location of this environmental covenant.

5. Compliance and Use Reporting.

a. By the end of _______, *{INSTRUCTIONS: Insert interval for reporting determined to be necessary by the Agency; e.g., "every January following the Agency's approval of this environmental covenant until the specified remediation standards are met and the Agency agrees in writing that reporting is no longer required," or "every fifth January following the Agency's approval of this environmental covenant"} and whenever else requested in writing by the Agency, the then current owner of the Property shall submit, to the Agency and any Holder listed in the Acknowledgments below, written documentation stating whether or not the activity and use limitations in this environmental covenant are being observed. This documentation shall be signed by a qualified and certified professional engineer who has inspected and investigated compliance with this environmental covenant.*

{INSTRUCTIONS: See § 10.1-1240 B 2 of the Code of Virginia.}

b. In addition, within one (1) month after any of the following events, the then current owner of the Property shall submit, to the Agency and any Holder listed in the Acknowledgments below, written documentation describing the following: noncompliance with the activity and use limitations in this environmental covenant; transfer of the Property; changes in use of the Property; or filing of applications for building permits for the Property and any proposals for any site work, if such building or proposed site work will affect the contamination on the Property subject to this environmental covenant.

{INSTRUCTIONS: See § <u>10.1-1240</u> B 1 of the Code of Virginia. Note that transfer of the property also requires payment of a fee pursuant to <u>9VAC15-90-40</u> C.}

6. Access by the Holder(s) and the Agency. In addition to any rights already possessed by the Holder(s) and the Agency, this environmental covenant grants to the Holder(s) and the Agency a right of reasonable access to the Property in connection with implementation, inspection, or enforcement of this environmental covenant.

{INSTRUCTIONS: See § 10.1-1240 B 3 of the Code of Virginia.}

7. Subordination.

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If there is an agreement to subordinate one or more prior interests in the Property to this environmental covenant, then the subordination agreement(s) is/are set forth as follows:

{INSTRUCTIONS: The applicant shall additionally provide to the Agency and the Holder(s) a list of all encumbrances on the property based upon a title review conducted by a title insurance company or attorney at law. The Agency and Holder may consider which, if any, of these encumbrances need to be subordinated prior to the Agency's or the Holder's signing the proposed covenant. At the direction of the Agency or the Holder, the subordination agreement for such encumbrances shall be reproduced within the covenant in the applicant's response to paragraph 7 or attached as an exhibit.}

8. Recording & Proof & Notification.

*a. Within 90 days after the date of the Agency's approval of this UECA environmental covenant, the Grantor shall record, or cause to be recorded, this environmental covenant with the Clerk of the Circuit Court for each locality wherein the Property is located. The Grantor shall likewise record, or cause to be recorded, any amendment, assignment, or termination of this UECA environmental covenant with the applicable Clerk(s) of the Circuit Court within 90 days of their execution. Any UECA environmental covenant, amendment, assignment, or termination recorded outside of these periods shall be invalid and of no force and effect.

{INSTRUCTIONS: Recordation of UECA environmental covenants, amendments, and termination is required by § <u>10.1-1244</u> A of the Code of Virginia; however, the deadline for doing so is not specified in the statute. Pursuant to this regulation, the specified Virginia UECA documents shall be recorded within 90 days unless the Agency and other signatories agree otherwise.}

*b. The Grantor shall send a file-stamped copy of this environmental covenant, and of any amendment, assignment, or termination, to the Holder(s) and the Agency within 60 days of recording. Within that time period, the Grantor also shall send a file-stamped copy to the chief administrative officer of each locality in which the Property is located, any persons who are in possession of the Property who are not the Grantors, any signatories to this covenant not previously mentioned, and any other parties to whom notice is required pursuant to the Uniform Environmental Covenants Act.

{INSTRUCTIONS: Notice to the parties specified above is required by § <u>10.1-1243</u> of the Code of Virginia "in the manner required by the agency." Pursuant to this regulation, notice of the specified UECA documents shall be provided in the time and method described above

unless otherwise directed by the Department or by another Agency in cases where the Department is not the Agency.]

*9. Termination or Amendment. This environmental covenant is perpetual and runs with the land unless terminated or amended (including assignment) in accordance with UECA.

10. Enforcement of environmental covenant. This environmental covenant shall be enforced in accordance with § <u>10.1-1247</u> of the Code of Virginia.

ACKNOWLEDGMENTS:

*GRANTOR(S) (All Fee Simple Owners)

{Name of Owner}, Grantor

Date

By (signature):

Name (printed):

Title:

COMMONWEALTH OF VIRGINIA {other state, if executed outside Virginia}

CITY/COUNTY OF _____

On this ____day of ______, 20__, before me, the undersigned officer, personally appeared ______ {*Owner, Grantor*} who acknowledged himself/herself to be the person whose name is subscribed to this environmental covenant, and acknowledged that s/he freely executed the same for the purposes therein contained.

In witness whereof, I hereunto set my hand and official seal.

My commission expires: _____

Registration #: _____

Notary Public

{REPEAT AS NECESSARY}

*HOLDER(S)

{Name of Owner}, Grantee

Date

By (signature):

Name (printed):

Title:

COMMONWEALTH OF VIRGINIA {other state, if executed outside Virginia}

CITY/COUNTY OF _____

On this _____day of ______, 20__, before me, the undersigned officer, personally appeared _______ {*Holder, Grantee*} who acknowledged himself/herself to be the person whose name is subscribed to this environmental covenant, and acknowledged that s/he freely executed the same for the purposes therein contained.

In witness whereof, I hereunto set my hand and official seal.

My commission expires:

Registration #:_____

Notary Public

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{REPEAT AS NECESSARY}

*AGENCY

APPROVED by the {*Department of Environmental Quality and/or other Agency*} as required by § <u>10.1-1238</u> et seq.of the Code of Virginia.

Date

By (signature):

Name (printed):

Title:

{REPEAT AS NECESSARY}

SEEN AND RECEIVED by the Department of Environmental Quality *{if the Department is not the Agency or the Holder}*

{INSTRUCTIONS: In accordance with <u>9VAC15-90-40</u>, notice and payment of a fee to DEQ is required for every UECA environmental covenant in Virginia. However, when DEQ is not the Agency or Holder, no approval of the UECA document by DEQ is necessary or will be provided.}

Date

By (signature):

Name (printed):

Title:

{END of Virginia UECA Template}

D. The department requires submittal of the appropriate fee in accordance with the fee schedule provided in <u>9VAC15-90-40</u> before the department approves or signs a UECA environmental covenant. The department may require submittal of this fee before the department reviews a UECA document.

Statutory Authority

§ <u>10.1-1250</u> of the Code of Virginia.

Historical Notes

Derived from Volume 28, Issue 03, eff. November 9, 2011.

9VAC15-90-40. Fees.

A. Purpose. The purpose of this section is to establish schedules and procedures pertaining to the payment and collection of fees from a fee simple owner or applicant in accordance with this chapter.

B. Fee payment and deposit. Fees related to UECA environmental covenants shall be paid by the fee simple owner or applicant as follows:

1. Due date. Where the department is the agency or the holder of the UECA environmental covenant, all fees are due upon submittal to the department of the proposed environmental covenant, covenant amendment, termination, or notification of property transfer. Where the department is neither the agency nor the holder of the UECA environmental covenant, a copy of the environmental covenant, covenant amendment, termination, or notification of property transfer of property transfer and the accompanying fee are due prior to recordation.

2. Method of payment. Fees shall be paid by check, draft, or postal money order made payable to "Treasurer of Virginia/DEQ" and shall be sent to the Department of Environmental Quality, Receipts Control, P.O. Box 1104, Richmond, VA 23218.

3. Incomplete payments. All incomplete payments shall be deemed nonpayments.

4. Late payment. No environmental covenant, environmental covenant amendment, or termination under UECA and this chapter may be recorded until the department receives proper payment.

C. Fee schedules. Each UECA environmental covenant, UECA environmental covenant amendment, termination of a UECA environmental covenant, or transfer of a property encumbered by a UECA environmental covenant is a separate action and shall be assessed a separate fee. The amount of the fee is based on the costs associated with the implementation of UECA as required by this chapter. The fees required for UECA transactions where the department is either the agency or the holder are due whenever the department is the sole agency or the sole holder or when the department is one of multiple parties serving in either of these capacities. Where the department is both an agency and a holder, only the fees specified for the department as holder shall obtain. The fee schedules are shown in the following table:

Type of Action	Fee
1. UECA environmental covenants where the department is the agency:	
a. Initial submittal	\$4,000
b. Amendment	\$4,000
c. Termination	\$4,000
d. Property transfer	\$100

24,000
24,000
24,000
100
1,000
1,000
1,000
100

D. Use of fees. Fees collected pursuant to this section shall be used for the purposes specified in this chapter and UECA.

E. Fund. The fees, received by the department in accordance with this chapter, shall be deposited in the UECA Environmental Covenants Fund, as established by § 10.1-1248 B of the Code of Virginia.

F. Periodic review of fees. Beginning July 1, 2013, and periodically thereafter, the department shall review the schedule of fees established pursuant to this section to ensure that the total fees collected are sufficient to cover the department's costs associated with this chapter.

Statutory Authority

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§ <u>10.1-1250</u> of the Code of Virginia.

Historical Notes

Derived from <u>Volume 28, Issue 03</u>, eff. November 9, 2011; amended, Virginia Register <u>Volume 29, Issue 23</u>, eff. August 14, 2013.

9VAC15-90-50. Amendment and Termination.

A. A UECA environmental covenant is perpetual unless terminated or modified by court action in accordance with the provisions of § 10.1-1245 of the Code of Virginia.

B. A UECA environmental covenant may be amended or terminated by consent in accordance with § <u>10.1-1246</u> of the Code of Virginia.

Statutory Authority

§ <u>10.1-1250</u> of the Code of Virginia.

Historical Notes

Derived from Volume 28, Issue 03, eff. November 9, 2011.

9VAC15-90-60. Enforcement.

A. Power to enforce. Environmental covenants executed pursuant to this chapter and UECA shall be enforced in accordance with § 10.1-1247 of the Code of Virginia.

B. Limitations. The UECA and this chapter do not limit the regulatory authority of the agency or the department under law with respect to an environmental response project.

C. Liability. A person is not responsible for or subject to liability for environmental remediation solely because he has the right to enforce a UECA environmental covenant.

Statutory Authority

§ <u>10.1-1250</u> of the Code of Virginia.

Historical Notes

Derived from Volume 28, Issue 03, eff. November 9, 2011.

This Instrument was prepared by: Charles L. Williams (VSB No. 1145) Gentry Locke 10 Franklin Road, SE, Suite 900 Roanoke, VA 24011

Tax Map No.: 2620101 EPA Site ID No.: VAD003122553

ENVIRONMENTAL COVENANT

This Environmental Covenant is an environmental covenant executed pursuant to the Virginia Uniform Environmental Covenants Act ("UECA"), § 10.1-1238 *et seq.* of the Code of Virginia. This Environmental Covenant subjects the Property identified in Paragraph 1 to the activity and use limitations in this document.

1. <u>Property Affected</u>. The property affected by this Environmental Covenant is located at 102 Westside Boulevard, Roanoke, Virginia 24017, (hereinafter referred to as the "Property") and is further described as in Exhibit A.:

Tract 1, 61.2708 Acres, bounded by corners 1, 2, 3, 6, 17, 18, 19, 20, 21, 22, 29, 30, 60, 61, 62, 63, 64, 59, 31, 32, 33, 35, 36, 37, 40, 41, 42, 44 through 53 Inclusive, 4, 5 to 1 as shown on plat entitled Resubdivision Plat for Roanoke Electric Steel Corporation & Norfolk Southern Railway Company dated December 4, 2007, and recorded in the Clerk's Office of the Circuit Court of Roanoke City, Virginia, beginning at Map Book 1, Page 3332. See Exhibit A attached.

2. Description of Contamination and Remedy.

a. The Administrative Record pertaining to the environmental response project on the Property that is described in this covenant is located at:

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U.S. Environmental Protection Agency, Region III Land and Chemicals Division (3LC20) 1650 Arch Street Philadelphia, PA 19103

b. The contamination and remedy relating to the Property, including descriptions of the Property before remedy implementation; contaminants of concern; pathways of exposure; limits on exposure; location and extent of contamination; and the remedy/corrective action undertaken are described in the Final Decision and Response to Comments (FDRTC) for Steel Dynamics Roanoke Bar Division Facility, 102 Westside Boulevard, Roanoke, Virginia, EPA ID No.: VAD003122553, dated August 13, 2015, attached hereto as Exhibit B.

c. A brief overview of the present environmental conditions summarized in the portion of the administrative record entitled Statement of Basis ("SB"), dated June 18, 2015, is as follows:

(i) Soil sampling in two areas, the baghouse area and a powerline right-of-way indicated arsenic at concentrations exceeding the regional screening level ("RSL"). The values, however, fell within background soil ranges and, since arsenic is not used in steel manufacturing, concentrations thereof would be from naturally occurring conditions.

(ii) Sediment sampling was done and sediment contaminants of potential ecological concern ("COPECs") were based on frequency of occurrence, contaminant distribution and toxicity data and were determined to be semi-volatile organic compounds ("SVOCs"), polychlorinated biphenyls ("PCBs"), and metals (arsenic, barium, cadmium, chromium, iron, lead, and nickel). Potential ecological impacts associated with COPECs for sediment appeared to be limited to areas associated primarily with Outfall 003.

(iii) Surface water sampling was done and analysis was conducted with regard to metals, pH, PCBs, VOCs, and SVOCs. The COPEC for surface water was manganese.

(iv) Groundwater was evaluated using ten (10) groundwater monitoring wells on site and three (3) offsite. Manganese, which does not have a primary drinking water standard, was the primary constituent of concern.

(v) Human health risk assessments and evaluations of exposure pathways were conducted. Analytical data were compared to EPA Region III risk-based screening criteria dated October 2007. The human health risk assessment ("HHRA") considered as potential receptors: On-site facility workers, current construction workers, future construction workers, and residents located in the vicinity of the facility including both children and adults. The HHRA demonstrated cumulative potential cancer risks within the EPA acceptable risk range. The non-cancer total hazardous index ("HI") for current and future workers (long-term subsurface construction [i.e., greater than three months]) exceeded the target benchmark of one (1).

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(vi) Ecological risk assessment and evaluation of exposure pathways were conducted and the ecological risk assessment findings support a conclusion that no significant risk to ecological risk receptors existed from facility operations based on comparison to upstream COPEC concentrations (Peters Creek) as measured by the facility and the Commonwealth of Virginia DEQ.

3. Activity and Use Limitations.

a. <u>Soils</u>

(i) Use of Facility property shall be restricted to commercial and/or industrial purposes and shall not include residential purposes unless it is demonstrated to EPA, in consultation with the Virginia Department of Environmental Quality ("DEQ"), that such use will not pose a threat to human health or the environment or adversely affect or interfere with the selected remedy and EPA, in consultation with DEQ, provides prior written approval for such use;

(ii) All earth-moving activities, including excavation, drilling, and construction activities in known contaminated areas at the Facility where any contaminants remain in soils above EPA's Screening levels for non-residential use or in groundwater above health-based RSI for tap water, shall be conducted in accordance with an EPA and DEQ, the approved Materials Management Plan, attached hereto as Exhibit C.

b. <u>Groundwater</u>

water.

(i) Groundwater at the Facility shall not be used as a source of potable

(ii) Owner shall comply with the EPA-approved Groundwater Monitoring Program, attached hereto as Exhibit D.

c. The coordinates for the Property are shown on Sheet 1 of 6 of the abovereferenced plat, attached hereto as Exhibit A.

4. <u>Notice of Limitations in Future Conveyances</u>. Each instrument hereafter conveying any interest in the Property subject to this environmental covenant shall contain a notice of the activity and use limitations set forth in this environmental covenant and shall provide the recorded location of this Environmental Covenant.

5. <u>Compliance and Use Reporting</u>.

a. Compliance with the institutional controls described in Section 3 of this Environmental Covenant shall be evaluated by the Owner on an annual basis.

b. Thirty (30) days prior to any of the following events, the then current owner of the Property shall submit to the Agency written documentation describing such event:

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(i) transfer of the Property; (ii) changes in use of the Property from industrial use; or (iii) filing of applications for building permits for the Property and any proposals for any Property work, if such building or proposed Property work will affect the known contamination on the Property.

c. Within seven (7) calendar days upon finding of non-compliance with the activity and use limitations described in Section 3 above, the then current owner shall submit to the Agency written documentation describing such non-compliance.

6. <u>Access by the Agency</u>. This Environmental Covenant grants to the Agency and their contractors, employees, agents, and representatives a right of reasonable access to the Property in connection with implementation, inspection, or enforcement of this Environmental Covenant.

7. <u>Subordination. Grantor has conveyed no interest in any portion of the Property</u> that is subordinate to the Environmental Covenant.

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Additional Requirements.

8.

a. On an annual basis and whenever requested by DEQ and EPA, the then current owner shall submit to DEQ and EPA a written certification stating whether or not the groundwater and land use restrictions are in place and being complied with.

b. Within one (1) month after any of the following events, the then current owner of the Facility shall submit, to DEQ and EPA written documentation describing the following: observed noncompliance with the groundwater use restrictions; transfer of the Facility; changes in use of the Facility.

c. The Facility shall not be used in a way that will adversely affect or interfere with the integrity and protectiveness of the final remedy.

d. The Facility herewith provides DEQ and EPA by copy of Exhibit A, a coordinate survey as well as a metes and bounds survey, of the Facility boundary.

<u>98</u>. <u>Recording and Proof & Notification</u>.

a. Within ninety (90) days after the date of the Agency's approval of this UECA Environmental Covenant, the Owner shall record, or cause to be recorded, this Environmental Covenant with the Clerk of the Circuit Court of Roanoke City, Virginia, wherein the Property is located. The Owner shall likewise record, or cause to be recorded, any amendment, assignment, or termination of this UECA Environmental Covenant with the applicable Clerk(s) of the Circuit Court within 90 days of their execution. Any UECA environmental covenant, amendment, assignment, or termination recorded outside of these periods shall be invalid and of no force and effect.

b. The Owner shall send a file-stamped copy of this Environmental Covenant, and of any amendment, assignment, or termination, to the Agency within sixty (60)

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days of recording. Within that time period, the Owner also shall send a file-stamped copy to the chief administrative officer of each locality in which the Property is located, any persons who are in possession of the Property who are not the Owners, any signatories to this covenant not previously mentioned, and any other parties to whom notice is required pursuant to the Uniform Environmental Covenants Act (Va. Code § 10.1-1243).

<u>109</u>. <u>Termination or Amendment</u>. This Environmental Covenant shall run with the land and be binding on the owner(s) thereof until such time as it is terminated or amended (including assignment) in accordance with UECA (Va. Code \S 10.1-1245 and 1246).

110. Enforcement of Environmental Covenant. This Environmental Covenant shall be enforced in accordance with § 10.1-1247 of the Code of Virginia.

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ACKNOWLEDGEMENTS:

ROANOKE ELECTRIC STEEL CORPORATION d/b/a Steel Dynamics Roanoke Bar Division

By (signature):	
Name (printed):	
Title:	

Date:

COMMONWEALTH OF VIRGINIA CITY/COUNTY OF

On this _____day of ______, 2016, before me, the undersigned officer, personally appeared ______, the ______ of Roanoke Electric Steel Corporation, d/b/a Steel Dynamics Roanoke Bar Division, a Virginia corporation, who acknowledged himself to be the person whose name is subscribed to this Environmental Covenant, and acknowledged that he freely executed the same for the purposes therein contained.

In witness whereof, I hereunto set my hand and official seal.

Notary Public

My Commission expires:

Registration number:

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APPROVED by the U.S. Environmental Protection Agency, Region III.

By (signature):	
Name (printed):	Hallestrene a star
Title:	
Date:	

SEEM AND RECEIVED by the Virginia Department of Environmental Quality

By (signature): _____

Name (printed):

Title:

Date:

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EXHIBIT A

Resubdivision Plat and Property Description for Roanoke Electric Steel Corporation & Norfolk Southern Railway Company

EXHIBIT B

Final Decision and Response to Comments

and

Statement of Basis

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EXHIBIT C

Materials Management Plan

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EXHIBIT D

Groundwater Monitoring Program

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