VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

STATEMENT OF BASIS

Former Intermet Radford Foundry
1605 W Main Street
Radford, Virginia

EPA ID NO. VAD010063006

June 2025

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1 Introduction

The Virginia Department of Environmental Quality (DEQ) has prepared this Statement of Basis (SB) to solicit public comment on its proposed decision for the Former INTERMET Radford Foundry, also known as the former Radford Foundry and the former Virginia Castings Industries (VCI) Foundry, located at 1605 West Main Street, Radford, Virginia, 24141 (Facility). DEQ's proposed decision generally consists of requiring land use controls for the site.

The Facility is subject to the United States Environmental Protection Agency's (EPA) 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. In October 2024, EPA changed the name of its "Resource Conservation and Recovery Act Corrective Action Program" to the "Hazardous Waste Cleanup Program." This rebranding is intended to increase broad understanding of the purpose of the program. The Cleanup Program is designed to ensure that certain facilities subject to RCRA have investigated and remediated any releases of hazardous waste and hazardous constituents that have occurred at their property.

DEQ is providing a thirty (30)-day public comment period on this SB as discussed in Section 9. DEQ may modify its proposed remedy based on comments received during this period. DEQ 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.

The Administrative Record (AR) for the Facility contains all documents, including data and quality assurance information, on which DEQ's proposed decision is based. See Section 9, Public Participation, for information on how to review the AR.

2 Facility Background

The Facility property consists of approximately 81 acres and is surrounded by the New River along the northern and western boundaries, an industrial site along the southern border, and commercial and residential properties along the eastern border. An inactive railroad track runs adjacent to the eastern boundary of the Facility. A facility layout map is attached as Figure 1.

The Facility was originally associated with the address 1601 First Street. First Street was renamed to West Main Street in the early 21st century, and the address associated with the Facility became 1605 West Main Street. However, current Radford Real Estate GIS maps associate 1605 West Main Street with the adjacent Radford Trading site (Parcel ID 17-(1)-1). The Hazardous Waste Cleanup Program is retaining the historical address of 1605 West Main Street for this Facility to maintain consistency in its records, but is associating this address to Parcel ID 17-(1)-1B.

The Facility currently includes several concrete pads left in place after building demolition within the former Foundry area. In January 2025, the Facility removed lead-contaminated soil in select areas, replaced the soil with fill material, and added a protective soil barrier in a portion of the former Foundry area that includes the soil removal area. According to excavation and backfill drawings, backfill soil consisted of clean soil material. As of April 2025, the Facility is in the process of removing all concrete pads and should similarly replace excavations with backfill soil consisting of clean soil material.

2.1 Operational History and Ownership

The Facility was once part of a larger 137.5-acre property that included two foundries – INTERMET Radford Foundry (VAD010063006, 1605 West Main Street) and New River Castings (now known as Radford Trading, VAD981730930, 1701 West Main Street) – that were owned by subsidiaries of Intermet Corporation. Foundry activity began as early as 1896 and included activities such as producing large castings, cast iron pipes, and automotive parts. INTERMET Radford Foundry in particular used the mold-casting production method to produce automotive parts and components of heavy construction equipment and practice bombs and rockets for the military. The mold-casting process involved melting scrap metal, coke, limestone, and various additives within a cupola at approximately 2800 °F, pouring into molds constructed of sand and binding resins, and grinding and finishing activities to produce the desired products. The two foundries at one time shared a variety of facilities, including onsite waste treatment facilities. The combined foundry property also included three landfills – New Landfill located on the Intermet Radford Foundry property, Southwest Landfill located on the current Radford Trading property, and the Original Landfill, which was contiguous with the Southwest Landfill and New Landfill and did not have clearly defined boundaries. The Original Landfill was officially closed in 1982, and the New Landfill was closed in 2015.

As a result of Intermet Corporation. undergoing multiple bankruptcies, the entire property was purchased by Virginia Casting Industries, Inc. (VCI) in April 2010, and the former New River Castings Site was divested and is no longer part of INTERMET Radford Foundry. A 2016 Annual Fee Revision Request Form later indicated that VCI Radford, LLC had been dissolved as an LLC in the State Corporation Commission database; therefore, there was no longer a viable party to pay fees, and an authorized representative no longer existed. The City of Radford acquired the property from VCI on July 26, 2023 and then transferred it to the Radford Economic Development Authority (EDA) to better market the site for redevelopment.

2.2 Regulatory History and Permits

The Facility through its history has treated, stored, and/or disposed of the following hazardous wastes: cupola emission dust, baghouse dust, and carbide slag. Until 1993, the cupola emission and baghouse dusts were hazardous wastes with identification numbers D006 (cadmium) and D008 (lead). Until 1989, the carbide slag was a hazardous waste with identification number D003 (arsenic). The Radford Foundry first submitted a Notification of Hazardous Activity to the EPA on August 15, 1980 and subsequently submitted two RCRA Part B permit applications with the first submitted to the EPA on September 20, 1982, and the second to the Virginia Bureau of Hazardous Waste Management on October 30, 1985. In 1989, the facility submitted the initial application for the closure of waste piles at the site. A closure plan was prepared, and in July 1997, DEQ approved the Closure Plan for terminating all operations and activities associated with the hazardous emission dusts and carbide slag. During the closure process, reported sampling data beside the baghouse dust mixing area showed lead concentrations above EPA's acceptable lead level for soil. The EPA determined that the presence and/or release of hazardous waste may present a hazard to human health or environment and therefore issued a corrective action Administrative Order on Consent (Consent Order) in January 2002. The Consent Order directed the Facility to perform interim measures if needed, to perform a RCRA Facility Investigation (RFI) and Corrective Measures Study (CMS), to provide a SB for public review, and to implement corrective measures following selection of corrective measures and issuance of the Final Decision and Response to Comments (FDRTC).

During this period of time, an 8-acre landfill was permitted on the site in 1982 (Solid Waste Permit (SWP) No. 355), and active placement of industrial waste began in 1987. In addition to this landfill, the Facility had landfills permitted as SWP361 and SWP407, but both were closed in 1988 and were therefore not subject to post-closure care obligations under the current solid waste regulatory program. In a February 2001 RCRA state inspection, the DEQ discovered that the facility had placed baghouse dust, which was determined to be hazardous waste, in the landfill permitted under SWP355. A 2003 "Description of Current Conditions" report identified the landfill as SWMU No. 63, and a 2009 DEQ memo stated, "The DEQ and the EPA subsequently agreed to address the closure and CA of the SWMU No. 63 under the primary oversight of the EPA with concurrent review and concurrence, as appropriate, by the DEQ's West Central Regional Office [now the Blue Ridge Regional Office (BRRO)], Solid Waste Permitting, as the unit was also under SWP No. 355". Because of INTERMET Corp entering bankruptcy in 2008, DEQ secured financial assurance monies established under SWP355 for closure and post-closure care activities and oversaw this work performed. DEQ BRRO approved the closure certification on August 26, 2015.

In addition, the facility historically discharged wastewater to the New River under NPDES Permit No. VA0000213. The permit was first issued by the EPA on July 28, 1974 and was reissued on July 28, 1979 by the Virginia State Water Pollution Control Board (VSWPCB). The most current VPDES permit reissuance was April 3, 2011 and was allowed to expire in 2016. The Facility had three outfalls associated with the property: 001, 002, and 003. An unknown outfall called "Outfall 004" was found south (upstream) of Outfall 003 but was removed from service February 11, 2011. Outfall 001 appears to be connected to the former wastewater pond and SWP355 landfill, Outfall 002 appears to receive on- and off-site stormwater, and Outfall 003 appears to be on Radford Trading property and therefore not within Facility boundaries.

The Facility was enrolled in DEQ's Voluntary Remediation Program (VRP) (VRP01062) on May 8, 2023 as part of an effort to redevelop the property. Hazardous Waste Cleanup Program requirements are being met through the mechanism of the VRP because DEQ formalized a Memorandum of Understanding (MOU) with EPA in 2019 that allows for Corrective Action (Cleanup) obligations to be addressed through the VRP as long as the end results are as stringent as those in the Cleanup Program. To accomplish this goal, actions to meet VRP and Cleanup Program requirements along with terminating SWP355 post-closure care and revoking the permit were necessary. A SWP355 post-closure care termination final approval letter was issued, and the permit was revoked, on April 24, 2025. DEQ is overseeing any remaining solid waste permit actions under the Cleanup Program and VRP processes. The requirement for land use restrictions will be imposed by a future Uniform Environmental Covenants Act (UECA) covenant and will address any long-term stewardship requirements related to the former SWP.

3 Summary of Environmental Investigations and Cleanup Activities

3.1 RCRA Investigations and Activities and Identified SWMUs

Multiple RCRA investigations and activities were conducted to identify SWMUs across the Facility. Two RCRA Facility Assessments (RFAs) were prepared by A.T. Kearney in August 1986 and by PRC Environmental Management, Inc. (PRC) in June 1989. The 1989 RFA previously identified 37 individual SWMUs at the two foundries.

After the identification of these initial SWMUs, others were identified in subsequent activities. Five additional SWMUs were identified by the EPA during a June 15, 1990 site tour, and six additional SWMUs were identified by INTERMET in its February 28, 1994 response to the EPA 3007(a) request for information. Sine the February 28, 1994 response, 26 additional SWMUs were identified for a total of 74 SWMUs documented at the site.

In April 2003, Groundwater & Environmental Services, Inc. (GES) prepared a Description of Current Conditions report for INTERMET Corporation. Table 1 provides a summary list of Solid Waste Management Units (SWMUs) listed in this document, their original and current SWMU numbers and names as of this document, and its status at the time of this document related to this Facility. Figure 2 shows a map of the SWMU locations. At the time of the 2003 GES report, SWMUs were reported for both foundries. Because of the divesture of the property now known as Radford Trading, SWMUs on that property were evaluated separately and are no longer associated with INTERMET Radford Foundry. Those SWMUs are therefore not included in Table 1.

Table 1. SWMU List

New SWMU No.	New SWMU Name	Previous SWMU No.	Alternate SWMU Names	Recommended Action
23	Radford Dust Collector No. 1	N/A	N/A	NFA
24	Radford Dust Collector No. 2	24	Grinding Building Baghouse System	NFA
25	Radford Dust Collector No. 3	N/A	Finishing Belt Dust Collector	NFA
26	Radford Dust Collector No. 5	N/A	N/A	NFA
27	Radford Dust Collector No. 6	N/A	N/A	NFA
28	Radford Dust Collector No. 7	N/A	N/A	NFA
29	Radford Dust Collector No. 8	28	Closed Shell Foundry Baghouse, New Shell Foundry Baghouse	NFA
30	Radford Dust Collector No. 9	29	Closed Shell Foundry Baghouse	NFA
31	Radford Dust Collector No. 10	AOC 2	N/A	NFA
32	Radford Dust Collector No. 11	25, 27	Inactive Shell Casting Baghouse New Shell Casting Baghouse	NFA
33	Radford Dust Collector No. 12	26	Inactive Shell Casting Baghouse New Shell Casting Baghouse	NFA
34	Radford Dust Collector No. 13	30	Shell Foundry Grit Removal System	NFA
35	Tool Room Degreaser Station	N/A	N/A	NFA
36	Maintenance Shop Degreaser Station	N/A	N/A	NFA
37	Radford Dust Collector No. 15	N/A	Metallurgical Lab Dust Collector	NFA
38	Radford Foundry Cupola Baghouse	5	Shell Foundry Cupola Baghouse Radford Dust Collector No. 16	Retained for RFI
39	Carbide Slag Holding Station	17	N/A	NFA
40	Machine Shop Degreaser Station	N/A	N/A	NFA

New SWMU No.	New SWMU Name	Previous SWMU No.	Alternate SWMU Names	Recommended Action
41	Emission Dust Treatment Area	11	Waste Bin	Retained for RFI
42	Dry Slag Holding Area	N/A	N/A	Retained for RFI
43	Radford Waste Building	N/A	N/A	Retained for RFI
44	Inactive Shell Foundry Cupola Baghouse	6	N/A	Retained for RFI
45	Scrap Iron Holding Area	35	Ironyard	Retained for RFI
46	Slag Quench System	34	N/A	NFA
47	Quencher Discharge Hoppers	N/A	N/A	NFA
48	Scrap Mold Hoppers	N/A	N/A	NFA
58	Process Wastewater Settling Basins	13	N/A	Retained for RFI
59	Polishing Pond	14	N/A	Retained for RFI
60	Settling Basin Sludge Drying Areas	15	N/A	Retained for RFI
61	Inactive Emission Dust Treatment Area	N/A	Baghouse Dust Mixing Area "C"	Retained for RFI
63	New Landfill SWMF Permit 355	4	N/A	Retained for RFI
64	Original Landfill	1	N/A	Retained for RFI
66	Interim Landfill SWMF Permit 407	3	N/A	Retained for RFI
72	Radford Used Oil Storage Area	N/A	N/A	Retained for RFI

NFA = No Further Action

A Phase I Investigation Summary Report prepared by GES in April 2004 summarized the Phase I RCRA Facility Investigation (RFI) that investigated groundwater and soils for 10 SWMUs retained for investigation – SWMUs 38, 42, 43, 44, 45, 49, 50, 51, 61, and 62. Of these SWMUs, 38, 42, 43, 44, 45, and 61 pertain to the INTERMET Radford Foundry. The report noted that, although groundwater sampling results indicated some isolated detections and screening level exceedances in some of the monitoring wells, no large-scale contamination was identified. The report also noted that, based on the presence of the New River as the ultimate groundwater discharge point for the site, groundwater-to-surface water dilution is expected to be very large. Surficial soil samples showed exceedances of screening criteria at several of the subject SWMUs. However, based on the zoning, security, and access control measures in place at the time, potential exposures to surficial soil contamination are well controlled. This report was used to determine Current Human Exposures Under Control (CA725) and Migration of Contaminated Groundwater Under Control (CA750). A Phase II Sampling and Analysis Plan had been prepared but was never implemented due to INTERMET filing for bankruptcy in mid-2008.

3.2 Environmental Site Assessments (ESAs) and Identified Recognized Environmental Conditions (RECs)

Additional assessments and studies were performed over multiple years to evaluate the impact of SWMUS and Recognized Environmental Conditions (RECs). A Phase I and II Environmental Site Assessment (ESA) identified RECs and assessed sediment, soil, and groundwater across the Facility. Additional sampling and assessments that incorporated both past and more recent sampling results were conducted later and are described in Sections 3.3 and 3.4.

A Phase I Environmental Site Assessment (ESA) report prepared by Advanced Environmental Solutions, Inc. (AES) in June 2010 identified 22 RECs primarily on the INTERMET Radford Foundry property. The REC number, corresponding SWMU number, and REC description for RECs related to this Facility are listed in Table 2.

A Phase II ESA report prepared for the Environmental Protection Agency (EPA) by AES on July 30, 2012 provided the nature and extent of contamination of the RECs identified in the Phase I through field investigations. The report identified the following areas that may require further assessment and/or remediation based on available data: RECs 21, 22, 23, 25, 26, 28, 29, 30, 31, 41.

Table 2. Phase I RECs and SWMU Number.

REC No.	SWMU No.	REC Description
20	N/A	PVC pipe west of Office Building
21	58, 59	Wastewater settling ponds
22	60	Sludge drying area
23	42	Dry slag holding area/inactive dust treatment area
24	41	Hazardous emission dust mixing area
25	43	Radford Waste Building
26	23-34, 37	Dust collectors
27	45	Scrap metal, coke, and limestone storage
28	38, 44	Radford Cupola Baghouses
29	N/A	Virginia Iron, Coal, and Coke Company
30	36, 72	Maintenance Shop and bulk oil storage area
31	AOC 2	Tar Pit
32	63	New Landfill
33	64, 66	Original, Southwest, and Intermediate Landfills
34	N/A	Veneer facility
35	N/A	Railroad ties on Hammond Property east of Property
36	N/A	Jordan Oil bulk oil storage facility east of Property
37	N/A	Former car repair facility on West Main Street
38	62	Baseball Field Area
39	N/A	Diesel fuel release at Buckos Pantry across street from Property
40	N/A	Storm and wastewater drain features on Property
41	35, 40	Use, storage, and handling of materials containing PCBs on Property

A Phase I ESA prepared by WSSI in April 2024 did not identify any RECs/issues that had not already been identified by previous reports.

3.3 Feasibility Report and Risk Assessments

Additional investigations and risk assessments characterized contaminants and their risks at the site. A Focused Feasibility Report prepared by GES in June 2013 referenced a May 2013 Human Health and Ecological Risk Assessment that consolidated data from the June 2010 Phase I ESA report into five risk assessment exposure areas (Areas A through E) and identified risks in Exposure Areas A and B. These risk exposure areas remain unchanged in more recent assessments (described in Section 3.3). The feasibility report provided four remedial alternatives (soil removal, soil cap, asphalt cap, concrete cap) and their associated costs. This report also identified tasks necessary prior to implementation of the remedial alternatives in order to follow typical Cleanup Program processes, which included a remedial design investigation to delineate the vertical and lateral extent of areas above remedial target goals. A Remedial Design Investigation and Risk-Recalculation report prepared by GES dated February 18, 2014 corrected data errors in the May 2013 Human Health and Ecological Risk Assessment report and included additional soil data as part of the risk re-calculation. The results of the risk assessment showed that risks to the outdoor worker for surface soils in Exposure Area A were below the non-cancer hazard index (HI) criterion of 1 (HI = 0.43) but above the cancer risk criterion of 10^{-4} (risk = 2.0×10^{-4}) after data error corrections and including supplemental soil data. For the outdoor worker for surface soils in Exposure Area B, the cumulative HI slightly exceeded the HI criterion of 1 (HI = 1.2), the cumulative cancer risk did not exceed the Cleanup Program cumulative risk of 10^{-4} (cancer risk = 4.4×10^{-5}), and the fetal blood level marginally exceeded the target fetal blood level (10.6 mg/dL).

A set of reports combined with supplemental documentation (discussed in Section 3.4) provide a final and comprehensive risk assessment for the site. The Report on Former Radford Foundry prepared by Haley & Aldrich in March 2019 assimilated a comprehensive list of SWMUs and RECs from the Hazardous Waste Cleanup (RCRA Corrective Action) Program and EPA Targeted Brownfields Assessments and the corresponding data sets for those areas. A map of the exposure areas and sample locations can be found in Figure 2. The report included a quantitative risk assessment that retained Exposure Areas A through D from the 2013 Focused Feasibility Report. Receptors included industrial/commercial worker and construction worker for Exposure Areas A through D and trespasser for Exposure Area D. The report concluded that the Site does not pose risks above DEQ VRP's acceptable cumulative risk thresholds (target HI=1, VRP cumulative target cancer risk = 10^{-4}) for future commercial/industrial use for all four exposure areas and for all applicable media and pathways assuming institutional controls are implemented [e.g., no residential development, groundwater use prohibition, develop a Materials Management Plan (MMP)]. It found individual risk exceedance to commercial/industrial workers and construction workers with direct contact to soil in Exposure Area B at the individual cancer risk criterion of 10^{-6}; however, VRP individual cancer risk criterion is 10^{-5}, which suggests no risk.

The recommendation was to use engineering controls (e.g., concrete/asphalt slab) to eliminate potential exposures. Results of lead analysis using the USEPA Adult Lead Model (ALM) and a target blood lead level of 10 mg/dL indicate lead does not pose concerns in all areas (probability of target blood lead level = 1%; criterion $\leq$ 5%). The ecological screening evaluation found that migration of groundwater to surface water did not pose significant ecological risk and that constituents detected in former wastewater pond sediment did not pose significant risk to higher trophic level receptors via direct contact or food chain exposures.

The Voluntary Remediation Report/Demonstration of Completion, Revision 1, prepared by Haley & Aldrich in April 2024, supplemented the 2019 Haley & Aldrich report with additional groundwater, surface water, and sediment sampling data, risk assessments for additional receptors and media, a Remedial Action Plan (RAP), and Demonstration of Completion (DOC) summary. It summarized the exposure areas and pathways that were below VRP cumulative risk thresholds:

- Direct contact and dust and vapor inhalation to soil at all four exposure areas;
- Vapor intrusion from groundwater to indoor air in a future building constructed anywhere at the Site;
- Construction worker exposure to groundwater (both shallow and deep);
- Trespasser (adult and child) exposure to soil, surface water, and sediment of Exposure Area D;
- Recreational (adult and child) exposure to soil of Exposure Area D; and
- Migration of groundwater to the New River and subsequent exposure to groundwater COPCs in surface water during recreational uses and fishing.

Individual risk exceedances still existed for industrial/commercial worker and construction worker with direct contact to surface soil in Exposure Area B and additionally for recreators with direct contact to surface soil in Exposure Area D. However, these calculated risks were compared to an individual cancer risk criterion of 10^{-6}, and the VRP individual cancer risk criterion is 10^{-5}. Only one contaminant, Aroclor-1248, exceeded the VRP criterion (risk = $3x10^{-5}$) for the industrial/commercial worker for soil. Contaminants in groundwater under a residential drinking use scenario exceeded DEQ VRP thresholds. Conclusions from lead modeling and the ecological screening conclusion remained unchanged from the 2019 report. The RAP provided the following recommendations for the areas and receptors that had limited exceedances:

- For Exposure Area B
    - The use of engineering controls (e.g., concrete/asphalt slab) to eliminate surface soil contact;
    - The imposition of institutional controls (i.e., no residential development, no groundwater usage, managed material handling, and no ground-disturbing activities); and
    - Development of a Materials Management Plan (MMP) to ensure that potential exposures to subsurface soil are managed appropriately
- For Exposure Area D:
    - No use of pond for fishing or swimming (i.e., fencing and signage erected)
    - Reuse of the pond for a detention basin may require additional mitigation depending upon future development plans.
    - The long-term recommendation may be to close the pond depending upon future development plans.

The DOC summary noted that residual risks are within the VRP's acceptable range, that there are no unacceptable risks to the environment, that remediation level objectives for the Site have been achieved, and that no further assessment or evaluation is required. The summary suggested institutional controls to include a MMP (to be incorporated into the Certificate of Satisfactory Completion), Site restriction to commercial/industrial use with the exception of potential recreational use in Exposure Area D, and groundwater use prohibition. The summary also suggested potential protective measures for Exposure

Area D, including no use of the former wastewater pond for fishing or swimming and reuse of the pond for a detention basin.

The Former Radford Foundry Site Supplemental Risk Assessment – Foundry Exposure Areas (Supplemental RA) prepared by Stantec on February 3, 2025 complemented the 2025 H&A report by using more recent VRP screening levels to perform risk assessment across all media, correcting inconsistencies in prior reports, defining more accurate surface/subsurface soil categories, and including additional permutations of receptors and exposure pathways and a more comprehensive and conservative list of contaminants. The report also modeled blood lead levels using ALM at a target blood level of 10 mg/dL and 5 mg/dL as recommended by the EPA. The 2025 supplemental risk assessment calculated more cumulative risk exceedances because of more conservative assumptions (e.g., inclusion of contaminants using maximum Method Detection Limits (MDLs) greater than screening levels and some detections). The report notes that this approach likely overestimates actual site exposure risks and that some contaminants included in the risk calculations and that whose MDLs exceed screening levels in soils were not detected in other media and typically not used in foundry activities. The report states that exposure to Arocolor-1254 in subsurface soils in Exposure Area B by construction workers represents the only quantified exposure risk based on positively identified detections of a COC. Potential contaminants in groundwater included in the construction worker scenario did not exceed individual risk-based performance criteria for carcinogenic risk and hazard index. Finally, the report found that the probability of exceeding a target blood level of 10 mg/dL is less than 5% but the probability of exceeding a target blood level of 5 mg/dL is greater than 5% in Exposure Area B.

3.4 Supplemental Documentation

Documents supporting a soil removal action in Exposure Area B in December 2024 and a Lagoon Conversion Feasibility Assessment report prepared by WSSI in March 2025 were considered along with the feasibility studies and risk assessments mentioned in Section 3.3 in the final remedy decision. One foot of soil was removed in Exposure Area B where lead concentrations were the highest. A 6-inch soil barrier was applied to an even greater area that included the soil removal area. This action reduced lead, PCB, and other contaminant concentrations in this area.

The Lagoon Conversion Feasibility Assessment report included sampling results for lagoon and outfall sediment sampling and outfall discharge sampling. None of the results exceeded VRP Tier III Sediment Screening Levels, VRP Tier II Surface Water-Fresh Screening Levels, or Groundwater Protection Standards (GPS) for SWP355.

3.5 Summary of Findings

The combined information from the 2019 and 2024 reports by Haley & Aldrich, the 2025 supplemental risk assessment by Stantec, and the supplemental documentation described in Sections 3.3 and 3.4 provided the basis for DEQ's remedy decision. DEQ reviewed the information given the criteria of individual and cumulative HI of 1 under both RCRA and VRP, an individual cancer risk of 10^{-5} under VRP, and a cumulative cancer risk of 10^{-4} under both RCRA and VRP. DEQ also reviewed the information with the basis that receptors Industrial/Commercial Worker, Trespasser, and Recreator only encounter surficial soil and surficial soil range is 0-1 ft.

The soil removal action eliminated multiple areas of higher contaminant concentrations, resulting in individual and cumulative HI and cancer risk values below 1 and individual and cumulative cancer risk

below 10^{-5} and 10^{-4}, respectively, in Exposure Area B for all receptor and media categories, including Aroclor-1248 risks. Any remaining individual cancer risks that exceeded VRP criteria did not present a complete pathway to the receptor (e.g., risk at 7-8 ft depth for industrial/commercial worker working at the surface). Contaminants within groundwater exceeded risk for the residential scenario but otherwise did not exceed risks for other receptor scenarios. Institutional controls will restrict residential use of the property.

Based on sediment results from Lagoon Feasibility report compared to VRP Sediment Screening Levels, lagoon sediment appears to not be a source of contamination. Based on the lagoon discharge results from the Lagoon Feasibility report compared to VRP Fresh Surface Water Screening Levels and SWP355 GPS, outfall discharge is not a source of contamination nor a source of leachate contamination.

3.6 INTERMET Closure Certification Report SWMUs No. 41 and 52

INTERMET Closure Certification Report SWMUs No. 41 and 52 prepared by GES on March 2005 provided closure details of SWMUs 41 and 52; only SWMU 41 is located on this Site. Activities to achieve final certification included cleaning and sampling the Emission Dust Treatment Area (SWMU 41). Cleaning of the SWMU 41 included removal of lead-impacted soils, vacuum removal of solid waste, dust, and loose particulates, sealing of cracks in the concrete pad, and rinsing the pad. The report concluded that SWMUs 41 and 52 are considered clean-closed to April 2003 USEPA Region III industrial risk-based standards for metals in soils and RCRA Corrective Action Program screening criteria (Maximum Contaminant Levels (MCLs) or EPA Region 3 Tap Water Risk-Based Concentrations using a Hazard Quotient of 1) for groundwater. The report recommended No Further Action and included a copy of the deed restrictions for the two SWMUs. EPA approved the closure report on November 30, 2005.

4 Cleanup Objectives

EPA's Cleanup Program Objectives for the Facility are the following:

4.1 Soils

DEQ has determined that industrial risk-based screening levels are protective of human health and the environment for individual contaminants at this Facility provided the Facility is not used for residential purposes. Therefore, DEQ's Cleanup Objective for soils at the Facility is to control exposure to hazardous constituents remaining in place by requiring compliance with and maintenance of land use restrictions that are further described in Section 5 below. The controls will limit the Facility to non-residential uses and require compliance with a Materials Management Plan approved by DEQ. Subsequent owners will also be required to comply with these controls. The requirement for land use restrictions will be imposed by a future Uniform Environmental Covenants Act (UECA) covenant.

4.2 Groundwater

DEQ has determined that drinking water standards, namely MCLs or tap water RSLs for constituents that do not have an MCL, are protective of human health and the environment for individual contaminants at this Facility. Therefore, DEQ's Cleanup Objective for groundwater at the Facility is to control exposure to any hazardous constituents in the groundwater by requiring compliance with institutional controls at the Facility that are further described in Section 5 below. The controls will prohibit use of groundwater for potable purposes and require compliance with a Materials Management Plan approved by DEQ. Subsequent owners will also be required to comply with these controls. These controls will remain in effect until data is presented demonstrating that groundwater meets drinking water standards and poses no

risk to human health. The requirement for land use restrictions will be imposed by a future Uniform Environmental Covenants Act (UECA) covenant.

5 Summary of Proposed Remedy

DEQ's proposed decision represents "Corrective Action Complete with Controls" as described in U.S. EPA's "Final Guidance on Completion of Corrective Action Activities at RCRA Facilities", (68 FR 8757, February 25, 2003). A Corrective Action Complete with Controls determination indicates that protection of human health and the environment has been achieved and will continue as long as the necessary operation and maintenance actions are performed and institutional controls are maintained and complied with. Institutional controls are required to restrict the Facility to non-residential uses, control the excavation and management of soil, and prohibit the potable use of groundwater beneath the Facility. DEQ's proposed remedy for the Facility consists of the ICs identified below.

DEQ anticipates that the land use restrictions will be implemented by an environmental covenant pursuant to the Virginia Uniform Environmental Covenants Act (UECA), Title 10.1, Chapter 12.2, Sections 10.1-1238-10.1-1250 of the Code of Virginia (Environmental Covenant).

5.1 Compliance with and Maintenance of Institutional Controls (ICs)

Because contamination remains in the soil and groundwater at the Facility, DEQ's proposed final remedy includes land use restrictions to minimize the potential for human exposure to soil and groundwater that contains contaminants above levels of concern. The land use restrictions will be implemented through institutional controls (ICs). ICs are non-engineered instruments such as administrative and/or legal controls that minimize the potential for human exposure to contamination by limiting land or resource use and inform subsequent purchasers of the environmental conditions at the Facility and of DEQ's final remedy for the Facility.

DEQ is proposing the following ICs be implemented and maintained at the Facility:

- The Facility property shall not be used for residential purposes unless it is demonstrated to DEQ that residential use will not pose a threat to human health or the environment and DEQ provides prior written approval for such use.
- Groundwater beneath the Facility shall not be used for potable purposes unless and until it is demonstrated to DEQ that its use will not pose a threat to human health or the environment and DEQ provides prior written approval of such use.
- To ensure that potential exposures to hazardous constituents in soil and groundwater encountered during construction or other intrusive activities are minimized, the owner of the Property shall comply with, and ensure that its contractors comply with, a Materials Management Plan. Such documents, when developed, shall be provided to the Department for inclusion in the Administrative Record.
- Any future use of the landfill area shall not disturb the integrity of the final cover, liners, or any other components of the containment systems unless necessary to comply with the Virginia Solid Waste Management Regulations, approved by the Department of Environmental Quality, or as necessary to perform work to maintain the integrity of the cap.

Compliance with the ICs shall be reported and maintained in accordance with the forthcoming environmental covenant.

5.2 Implementation

DEQ is proposing that the Facility pursue an environmental covenant pursuant to the Virginia Uniform Environmental Covenants Act (UECA), Title 10.1, Chapter 12.2, Sections 10.1-1238 through 10.1-1250 of the Code of Virginia.

6 Evaluation of DEQ's Proposed Decision

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

6.1 Threshold Criteria

This section provides a description of the criteria DEQ used to evaluate the proposed remedy consistent with EPA guidance. DEQ evaluated three remedy threshold criteria as general goals.

6.1.1 Protect Human Health and the Environment

The proposed remedy will prohibit use of the entire Facility property for residential purposes. The proposed residential use restriction for the entire Facility is due to the past industrial use of the property. ICs will be imposed to prevent or minimize exposure to residual contamination.

6.1.2 Achieve Media Cleanup Objectives

The proposed remedy will achieve the media cleanup objectives. Soil removal actions and the addition of a protective soil barrier in Exposure Area B has reduced the volume of soils contaminated with the highest concentrations of contaminants including lead and PCBs as much as practicable. Land use restrictions, as required by the proposed remedy, will control exposure to any hazardous constituents remaining in surface soils and groundwater.

6.1.3 Remediating the Source of Releases

There are no known, unaddressed releases. Previous releases were identified and addressed under DEQ oversight.

6.2 Balancing/Evaluation Criteria

6.2.1 Long-Term Effectiveness

The proposed remedy will provide long-term protection of human health and the environment. In addition, land and groundwater use restrictions prohibiting residential land use and potable use of groundwater beneath the Facility will be maintained until potential risks are demonstrated to be otherwise.

6.2.2 Reduction of Toxicity, Mobility, or Volume of the Hazardous Constituents

Based on the combined risk assessment reports and supplemental documents noted in Sections 3.3 and 3.4, cumulative and individual risks are below criteria.

6.2.3 Short-Term Effectiveness

The Facility is vacant, and there is no current or ongoing risk. Therefore, the short-term effectiveness is high.

6.2.4 Implementability

DEQ's proposed remedy is readily implementable. With respect to the implementation of the ICs and as part of the proposed remedy, the Facility will pursue an environmental covenant under the Virginia Uniform Environmental Covenants Act, Title 10.1, Chapter 12.2, Sections 10.1-1238-10.1-1250 of the Code of Virginia. Therefore, DEQ does not anticipate any regulatory constraints in implementing its proposed remedy.

6.2.5 Cost

DEQ's proposed remedy is cost effective since the only remaining cleanup activities include the recordation of the UECA covenant and ongoing inspection and maintenance of the institutional controls.

6.2.6 Community Acceptance

DEQ will evaluate community acceptance of the proposed remedy during the public comment period, which will last thirty (30) days. DEQ's final decision and comments accepted during the public comment period will be addressed in the Final Decision and Response to Comments (FDRTC).

6.2.7 Federal Agency Acceptance

DEQ and EPA coordinated on the proposed remedy. If EPA provides comments during the public comment period, DEQ will address them in the FDRTC.

7 Environmental Indicators

Under the Government Performance and Results Act (GPRA), EPA has set national goals to address Hazardous Waste Cleanup Program 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 both the Human Health and Groundwater indicators on September 30, 2004.

8 Financial Assurance

Since the final remedy for the Facility is limited to institutional controls, financial assurance for cleanup program activities is not warranted or required for the Facility.

9 Public Participation

Before DEQ makes a final decision on its proposed remedy for the Facility, the public may participate in the decision process by reviewing this SB and documents contained in the AR for the Facility. The AR contains all information considered by DEQ in reaching this proposed decision. Interested parties are encouraged to review the AR and comment on DEQ's proposed decision and comment on DEQ's proposed decision. The Administrative Record, including the SB, is available for review by contacting DEQ at:

Virginia Department of Environmental Quality
1111 East Main St., Suite 1400
Richmond, VA 23219
Contact: Stephanie Houston
Phone: (804)584-3143
Email: stephanie.houston@deq.virginia.gov

The public comment period will last thirty (30) calendar days from the date the notice is published in a local newspaper. Comments may be submitted by mail, or e-mail to Stephanie Houston at the address listed above. DEQ will hold a public meeting to discuss the proposed remedy upon request, which should also be made to Stephanie Houston using the above contact information. DEQ will respond to all relevant comments received during the comment period. DEQ will make a final decision after considering all comments, consistent with the applicable RCRA requirements and regulations. If the decision is substantially unchanged from the one in this SB, DEQ will issue a final decision and inform all persons who submitted written comments or requested notice of DEQ's final determination. If the final decision is significantly different from the one proposed, DEQ will issue a public notice explaining the new decision and will reopen the comment period.