VIRGINIA DEPARTMENT OF ENVIRONMENT QUALITY

DIVISION OF LAND PROTECTION AND REVITALIZATION

OFFICE OF REMEDIATION PROGRAMS

STATEMENT OF BASIS

GRIFFIN PIPE PRODUCTS
EPA ID NO. VAD065417008

LYNCHGURG, VIRGINIA

JUNE 26, 2017

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Attachments

1.0 INTRODUCTION

1.1 Facility Name

The Virginia Department of Environmental Quality (VDEQ) has prepared this Statement of Basis (SB) for the Griffin Pipe Products (Griffin Pipe) facility located at 10 Adams Street, Lynchburg, Virginia 24504 (hereinafter referred to as the Facility).

The Facility is subject to the Corrective Action (CA) 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. Sections 6901 to 6992k. The Corrective Action Program is designed to ensure that certain facilities subject to RCRA have investigated and cleaned up any releases of hazardous waste and waste constituents that have occurred at their property.

Information on the Corrective Action Program can be found by navigating https://www.epa.gov/hwcorrectiveactionsites/corrective-action-resources-specific-epas-region-3.

VDEQ has prepared this SB in cooperation with the United States Environmental Protection Agency (EPA) and is providing the opportunity for public comment and review on its proposal and the associated permit modification.

1.2 Proposed Decision

This Statement of Basis explains VDEQ's proposed decision that further actions to remediate soil and groundwater, also known as corrective measures, are necessary to protect human health and the environment given current and reasonably anticipated future land use. VDEQ's proposed decision requires the facilty to perform long-term groundwater monitoring, maintain a cover at two Areas of Concern (AOCs) and the maintenance of certain property mechanisms known as Institutional Controls (ICs) and Engineering Controls (ECs). ICs are generally non-engineered mechanisms such as administrative and/or legal controls that minimize or eliminate the potential for human exposure to contamination. Engineering Controls are generally engineered mechanisms such as protective covers or caps. The proposed corrective measures objectives are discussed in Section 4.0 and the proposed remedy and controls are discussed in Section 5.0 below.

This Statement of Basis summarizes information that can be found in greater detail in the work plans and reports reviewed by VDEQ and EPA, which can be found in the Administrative Record (AR). Attachments contain an index of documents for the AR and figures showing site location and the locations of Institutional Controls.

1.3 Public Participation

Interested persons are invited to comment on VDEQ's proposed decision by reviewing this SB and the documents contained in the AR. The information presented in this SB

can be found in greater detail in the work plans and reports submitted by the Facility to VDEQ and EPA. To gain a more comprehensive understanding of the RCRA activities that have been conducted at the Facility, VDEQ encourages the public to review these documents, which are found in the AR. A copy of the AR is available for public review, in paper or electronic format, from the VDEQ contact person, the address and telephone number of which is provided in Section 8.0 below.

When making a determination regarding the proposed decision, VDEQ will consider all written comments received during the comment period (see Section 8.0), and requirements of the Virginia Hazardous Waste Management Regulations and 40 CFR Part 124. Each person who has submitted comments will receive a written response from VDEQ. VDEQ will then incorporate the applicable portions of the final remedy into the Permits after comments have been addressed.

2.0 FACILITY BACKGROUND

The Griffin Pipe facility is located in an industrial area along the banks of the James River in Lynchburg, Virginia. A Facility Location Map is provided as Figure 1. The Facility developed into its current industrial status throughout the late 1800s and early 1900s. At various times during the property's development, an ice plant and three separate foundries (described below) have been in operation on the property.

Lynchburg Foundry and Machine Works

The original foundry was known as the Lynchburg Foundry and Machine Works, and began operations in about 1882. Due to the lack of records, relatively little is known about the specifics of the Lynchburg Foundry and Machine Works' waste generation or waste handling procedures.

Glamorgan Pipe and Foundry Company

In 1883, the Lynchburg Foundry and Machine Works was renamed as the Glamorgan Pipe and Foundry Company. Existence of the foundry is first shown on the 1885 Sanborn map. The southern and western portions of the property during that time were developed by Adams Brothers & Payne and John P. Pettyjohn & Company for use as lumber yards and planing mills as evidenced on the Sanborn map. Between 1885 and 1951, the foundry operations at the property expanded, eventually occupying the entire property. Relatively little is known about the specifics of the waste generation or waste handling procedures at the property at this time.

Griffin Pipe Products Foundry

In 1971, Griffin Pipe Products took over the Glamorgan Pipe and Foundry Company. The Griffin Pipe Products Foundry has operated continuously since 1972, manufacturing ductile cast iron pipes for use in both potable water and sewer systems. The facility is capable of producing pipes that range from 3 to 16 inches in diameter and up to 18 feet in length. Previously, fittings and soil pipe were manufactured at the Lynchburg facility;

however, these operations have been discontinued. In 2014, Griffin Pipe Products Company was purchased by U.S Pipe. Since then, the facility has been operating as Griffin Pipe Products DBA as U.S Pipe.

Facility Process

Griffin Pipe uses 100% scrap metal in their pipe making operation. Scrap metal is received at the facility primarily by truck and consists of scrap automobiles and other shredded steel. The scrap metal is melted in a cupola with coke, dolomite limestone, and other additives to produce molten iron. The molten iron then goes through a desulfurization process which is conducted in a "bubbling ladle." Powdered lime and fluorspar are added to the molten iron. Sulfur adsorbs to the lime, forming a layer of "slag" on top of the molten iron, allowing for easy removal. Liquid nitrogen is then added to the "bubbling ladle" which causes a bubbling effect that mixes the contents and keeps the mixture consistent. Once the sulfur has been skimmed from the molten iron, it is transferred to a holding furnace, or "forehearth." The molten iron is then placed into a "pouring ladle" which contains carbon, silica, and scrap pipe. The scrap pipe is used to reduce the temperature of the molten iron since it is at a higher temperature in the cupola than is desired for the casting process.

After the desulfurization process, magnesium is added to the molten iron in the pouring ladle by way of a "plunging block," which results in a chemical reaction necessary for the production of ductile iron. The molten iron is then transferred to one of the facility's three casting machines. The ductile iron pipes are centrifugally cast in metal molds cooled by water. Once the pipes have been cast, they are transferred to a pressure pipe annealing oven. After a 45-minute cycle in the oven, the pipes have completed the ductile process. After leaving the annealing oven, the pipes are conveyed through a water spray cooling process to reduce temperature.

After exiting the cooling process, the pipes are sent to the finishing line where the spigot and bell ends of the pipe are cut and ground if necessary. The pipes are then pressure tested, weighed, and lined with cement. The pipes are then transferred to the painting lines where the pipes are painted inside and out with an asphalt-based paint.

Physical Setting

The Facility is located on a wedge of fill and adjacent to the James River. Sanborn Maps indicate this area was industrial and the fill was in place prior to 1885. The fill is generally a silty sand consistency. Alluvial sediments deposited by the ancestral James River underlie the fill. The sediments are generally sands and gravels. More recent river sediments are deposited along the riverbank at the Facility. Crystalline bedrock (Biotite Gneiss – Ashe Formation) underlies the sediments. The water table lies within the fill on the Facility. Groundwater flows towards the James River with some downstream flow component.

The majority of the Facility is capped with hardscape consisting of buildings and pavement and located within the James River floodplain. The Facility is bounded on the

north and east by the James River and on the west by a railroad yard and a bluff that rises out of the floodplain. The southern portion of the Facility is bounded by other industrial property. The Facility is fenced on the west and south and access is restricted by a guard house and gate. The James River side of the Facility is protected by a steep overgrown river bank with no trespassing signs.

3.0 SUMMARY OF ENVIRONMENTAL HISTORY

The Phase I RCRA Facility Investigation (RFI) identified a number of solid waste management units (SWMUs) and Areas of Concern (AOCs) at the Facility. A Facility map is included as Figure 2 showing the location of each SWMU and AOC. The following table lists each SWMU and AOC.

SWMU and AOC Identification Table

Identification	SWMU/AOC Name
SMWU-1	Harsell Cupola Baghouse
SWMU-2	Harsell Baghouse Treatment Unit
SWMU-3	90-day Hazardous Waste Accumulation Area
SWMU-4	Former Holding Area for Treated Baghouse Dust
SWMU-5	Solid Waste Bin
SWMU-6	Cement Settling Basins
SWMU-7	Holding Area for Baghouse Dust
SWMU-8	Roll-off Box
SWMU-9	Leaking Piping from Fuel Oil Aboveground Storage Tank
SWMU-10	Temporary Solid Waste Staging Area
SWMU-11	Old GMD baghouse
SWMU-12	Waste units from former Fittings Foundry
SWMU-13	ETA Baghouse
SWMU-14	GMD Baghouse
SWMU-15	Grinding Dust Collector
SWMU-16	Metal Scrap Dumpster
SWMU-17	Waste Dumpster
SWMU-18	Slag Piles
SWMU-19	Lime Slag Storage Area
SWMU-20	Used Oil Storage Areas
SWMU-21	Groundwater Treatment System Recovery Tank
SWMU-22	Satellite Accumulation Area #1
SWMU-23	Satellite Accumulation Area #2
SWMU-24	Satellite Accumulation Area #3
SWMU-25	Former Incinerator
SWMU-26	Universal Waste Storage Area
SWMU-27	General Refuse Dumpster #1
SWMU-28	General Refuse Dumpster #2

SWMU-29	Casting Ditch Recycle System
AOC-1	Stormwater System
AOC-2	Raw Materials Pile #1
AOC-3	Raw Materials Pile #2
AOC-	Raw Materials Pile #3
AOC-	Raw Materials Pile #4
AOC-	Raw Material Silo #1
AOC-	Raw Material Silo #2
AOC-	Raw Material Silo #3
AOC-	Raw Material Silo #4
AOC-	Paint Storage Area
AOC-	Fittings Foundry Paint Dip Tanks
AOC-	Mill Room Paint Dip Tanks
AOC-	Cupola Used Oil Tank
AOC-14	Paint line #1
AOC-15	Paint line #3
AOC-	Machine Shop Parts Cleaner
AOC-	Finishing Area Parts Cleaner
AOC-	Diesel AST
AOC-	Sanitary System
AOC-	Former Fluorescent Bulb Crusher
AOC-	Small-quantity Paint / Oils Storage Area
AOC-	Oil Storage Building
AOC-	Oil/Water Separator
AOC-24	Former AST-1
AOC-25	Former AST-2
AOC-26	Former AST-3
AOC-27	Former AST-4
AOC-	Gasoline AST
AOC-	Former UST-1R
AOC-	Former UST-2R
AOC-	Former UST-3R
AOC-	Former UST-4R
AOC-	Former UST-5R
AOC-	Former UST-6-Asphalt
AOC-	Former UST-6-Heating Oil
AOC-36	Former Resin and Acid Tanks
AOC-	Hydraulic Shear and Oil Sump
AOC-	Existing Electrical Substation
AOC-39	Former Hydro Plant Transformers
AOC-	Former Oil Storage Area
AOC-	Compressor Room
AOC-	Cement Sump
AOC-	Overall Facility Cooling System
AOC-	Fittings Foundry Sand Silos

* Shaded SWMUs and AOCs - Based on operating history and records, it was determined by VDEQ during the Phase I RFI that no further investigation or action was necessary for these SWMUS/AOCs in order to meet the goals of the Corrective Action program.

Below is a summary of the Facility's closure activities and environmental investigations.

RCRA Permitting and Closure Activities

On June 27, 1986, the facility was issued a Hazardous Waste Management Permit for the Storage and Treatment of Hazardous Waste (EPA ID No. VAD065417008) which provided for the storage of the Harsell baghouse dust (characteristic waste codes D006 and D008) in the Harsell baghouse steel hoppers. The Permit was renewed and effective May 15, 1997. The hazardous waste managed under this Permit was limited to the two process wastes which included the cupola dust emissions generated in the iron melting process and the dust emissions generated during the molten iron desulphurization and magnesium treatment process. Used air pollution control bags were also identified as hazardous waste due to the accumulated dust that permeated the bags.

The VDEQ received notification from Griffin Pipe on October 13, 2005 that no additional hazardous wastes would be treated in the facility and that closure would be initiated. Griffin Pipe notified the VDEQ that the installation of the in-duct dust treatment system and construction of a new melting baghouse had rendered the permitted activity unnecessary because the dusts that were generated were non-hazardous.

On November 20, 2006, Clayton Group Services (Clayton), on behalf of Griffin Pipe, submitted the RCRA Clean Closure Report (Closure Report) of the Harsell Baghouse. The report documented on-site closure activities that commenced on July 24, 2006 and were completed on September 27, 2006. Upon review of the closure activities and completion of a site visit, the VDEQ approved the Closure Report associated with the Harsell Baghouse (SWMU-1 and SWMU-2) in a letter dated April 5, 2007.

Subsequently, the Griffin Pipe facility was required to maintain a facility permit under the corrective action (CA) requirements of the Virginia Hazardous Waste Management Regulations (VHWMR) and RCRA. Therefore, on May 16, 2007, Griffin Pipe submitted Parts A and B of the Hazardous Waste Permit Application. The final Hazardous Waste Management Permit for Corrective Action was issued on November 30, 2007, effective until November 30, 2017.

RCRA Facility Investigation Activities

Soil

Soil samples were collected at the Facility during several events between January and June 2010 by the Facility's consultant as part of the Phase I RFI in accordance with the Phase I RFI Workplan – Revision 02 dated August 2009. During the Phase I RFI, 26 shallow soil borings were installed as part of the investigation of nine SWMUs and eleven AOCs at the Facility. The results of this investigation were presented to VDEQ in

the Phase I RFI Report dated June 17, 2011. The Phase I RFI revealed that additional investigation was necessary, therefore the facility submitted a Phase II RFI Workplan to VDEQ on December 16, 2011 which was approved on February 23, 2012.

Additional soil samples were collected at AOC-14 (Paint Line #1) in June 2013 during the Phase II RFI to confirm the elevated lead concentrations detected at a specific sample location during the Phase I RFI. This work was conducted in accordance with the Phase II RFI Workplan – Part I Additional Field Sampling. The results of this investigation were presented to VDEQ in the Phase II RFI Report – Part I Additional Field Sampling – Lead Evaluation, dated July 26, 2013. Concentrations in soil samples were detected below the EPA Regional Screening Level (RSL) for lead (800 mg/kg), therefore the evaluation did not confirm the presence of elevated lead concentrations at AOC-14.

Additional confirmation soil samples were collected in January 2015 in accordance with the RCRA Corrective Action – Confirmation Sampling Work Plan, dated October 2014. The results of this confirmation sampling investigation were presented to VDEQ in the RCRA Corrective Action Confirmation Sampling Report, dated June 2015. Four SWMUs and two AOCs were sampled and analyzed for select SVOCs and metals. The confirmation sample results reported were less than their initial sample concentrations, with the exception of only sample (A2-5-1), which reported a lead concentration equal to the previous detection.

The facility's consultant submitted the Adult Lead Methodology (ALM) evaluation for the Facility to VDEQ on February 18, 2016. The ALM evaluation proposed the use of a preliminary remediation goal (PRG) of 2,240 parts per milligrams per kilogram (mg/kg) for the Facility. The lead concentrations at the Facility range from 9 to 1,400 mg/kg, and therefore lead was recommended to not be carried forward as a constituent of concern (COC) for Facility soils under RCRA Corrective Action. VDEQ approved the ALM evaluation for the Facility in a letter dated July 21, 2016.

Groundwater

The Phase I RFI activities in 2010 included the installation of three new monitoring wells and eight replacement monitoring wells to the existing network which was utilized for purposes of investigating historical petroleum releases. Aqueous samples were collected from a total of twenty monitoring wells and one non-potable water supply well.

Due to the detection of SVOCs and metals and at the request of VDEQ, additional groundwater samples were collected from 16 monitoring wells in September 2012 during the Phase II RFI. This work was conducted in accordance with the Phase II RFI Workplan – Part I Additional Field Sampling. The results of this investigation were included in the Phase II RFI Report – Part I Additional Field Sampling for Groundwater, Surface Water, and Sediment, dated May 21, 2013.

EPA and VDEQ utilize drinking water standards, namely EPA drinking water Maximum Contaminant Levels (MCLs), or tap water RSLs for constituents that do not have an

MCL, for groundwater data screening purposes. The results of the groundwater evaluations are as follows:

- No VOCs or PCBs were detected in the groundwater samples above their respective screening criteria.
- The following SVOCs were identified in at least one location in exceedance of applicable screening criteria: benz(a)anthracene; 2-methylnaphthalene; 1,1-biphenyl; bis(2-ethylhexyl)phthalate; dibenz(a,h)anthracene; dibenzofuran; indeno(1,2,3-cd)pyrene; and naphthalene. These SVOCs are suspected to be related to historical petroleum releases and associated Pollution Complaints (PCs) described later in this document.
- The following metals were identified in at least one location in exceedance of screening criteria: arsenic; cobalt; lead; nickel; and vanadium.

Surface Water and Sediment

A total of eight surface water samples were collected from the James River in September 2012 during the Phase II RFI. The results of this investigation were included in the Phase II RFI Report – Part I Additional Field Sampling for Groundwater, Surface Water, and Sediment.

No Polycyclic Aromatic Hydrocarbons (PAHs) or PCBs were detected in the sediment samples above their respective EPA Biological Technical Assistance Group (BTAG) or VDEQ RCRA screening values. Two metals, arsenic and barium, were identified in at least one location in exceedance of EPA BTAG or VADEQ RCRA screening criteria. The arsenic and barium screening level exceedances were detected at similar concentrations in all surface water samples collected (i.e., upgradient, mid-point and downgradient) and therefore are not a result of Facility activities.

A total of eight sediment samples were collected from the James River in September 2012 during the Phase II RFI. The results of this investigation were presented to VADEQ in the Phase II RFI Report – Part I Additional Field Sampling for Groundwater, Surface Water, and Sediment.

Samples were collected from upgradient, mid-point and downgradient locations. The upgradient location is considered representative of conditions of the river prior to any potential release from the Facility. The mid-point and downgradient locations were selected to determine any potential releases from the Facility.

No PCBs were detected in the sediment samples above their respective EPA BTAG screening values. Only one PAH, benz(a)anthracene, was identified at one location in exceedance of EPA BTAG screening criteria. Only one metal, zinc, was identified in at one location in exceedance of EPA BTAG screening criteria. The benz(a)anthracene and zinc screening level exceedance were detected at the duplicate upgradient sample location (i.e., U-2 Duplicate) and not detected in the original U-2 sample. Additionally, there were no exceedances of the BTAG screening criteria in the mid-point and downgradient locations. The upgradient sample location is not considered to be

influenced by the Facility, therefore, the sediment samples are considered below screening criteria and no further action is required.

Storage Tanks

A wide variety of tank storage units have been actively used over the life of the Facility. Currently, the Facility has removed all but one known Underground Storage Tanks (UST), and replaced them with Aboveground Storage Tanks (ASTs). A 3,500-gallon asphalt UST (UST-6R) is the only existing UST and was abandoned in place. The tanks have been used to store gasoline, heating oil, xylene, used oil, motor oil, lube oil, and asphalt, The Phase I RFI Work Plan provides additional operational descriptions, locations, and removal history of the major former USTs and ASTs at the Facility.

Historical Releases and Pollution Complaints

A number of various releases have been documented at the Facility since 1989. Most of the releases were minor events which were immediately corrected by the Facility. The Phase I RFI Work Plan provides information for the known historical releases.

Two historical releases documented in 1989 and 1991 resulted in Pollution Complaint (PC) numbers 1990-0578 and 1991-0122, respectively. PC number 1990-0578 was associated with a leak from a steel gasoline UST (AOC-29) and was closed in 2002 after remedial endpoints were met and VDEQ determined no further action was necessary.

PC number 1991-0122 is believed to be a release from an underground pipeline near the "Lunchroom Area" and was first detected as an oily sheen seeping from the river bank adjacent to the Facility. Griffin Pipe installed and operated a product recovery system until September 2007 and has since continued to periodically remove product manually using absorbent material. PC Number 1991-0122 is still being addressed under the VDEQ petroleum program.

A third release documented in 2008 resulted in PC number 2009-7045. The release was discovered at a fuel oil dispenser during a routine inspection. Griffin Pipe performed an investigation and subsequently found free petroleum product. PC number 2009-7045 was addressed by the Faciity and closed by VDEQ in 2011.

Risk Assessment

A risk assessment was completed and included as part of the 2016 Comprehensive Site Report – Revision 1, dated March 2017. The risk assessment was completed on soils data collected at nine SWMUs and eleven AOCs during the RFI.

An initial screening evaluation of the soils data was performed which utilized the EPA Regional Screening Levels (RSL) for Industrial Soil, May 2016 version. The results of the screening indicated:

- No Volatile Organic Compounds (VOCs) or Polychlorinated Biphenyls (PCBs) were detected in the soil samples above their respective EPA Industrial RSL.
- The following Semi-Volatile Organic Compounds (SVOCs) were identified in at least one location in exceedance of their respective Industrial RSL: benz(a)anthracene; benzo(a)pyrene; benzo(b)fluoranthene; dibenz(a,h)anthracene; and indeno(1,2,3-cd)pyrene.
- The following metals were identified in at least one location in exceedance of their respective Industrial RSL: arsenic; cobalt; hexavalent chromium; and lead.

The SVOCs and metal which had at least one exceedance of their respective Industrial RSL were retained for further evaluation. Additionally, soils samples which were diluted by the laboratory and resulted in analytical detection limits higher than screening critieria were also carried forward for further evaluation.

The quantitative risk assessment was performed using the REAMS 2.1.2 or VURAM 1.11 software. VURAM was developed by VADEQ in 2016 to replace REAMS. Results of the REAMS and VURAM risk analysis, which include individual and cumulative risks and hazards for constituents of concern (COCs), were compared to the following limits:

- Total cumulative hazard index of 1.0 or less for non-carcinogens;
- Total cumulative risk of 1E-04 or less for all carcinogens.

The total risk and total hazard index results were within acceptable limits for all SWMUs and AOCs, except for AOC-14 and AOC-15. Therefore, the soil for all areas except AOC-14 and AOC-15 is considered acceptable for industrial exposure at the Facility. DEQ approved the results of the risk assessment in a letter dated April 6, 2017. The location and extent of AOC-14 and AOC-15 is shown on Figure 3.

4.0 CORRECTIVE ACTION OBJECTIVES

A. Soil

VDEQ has determined that industrial risk-based levels are protective of human health and the environment for individual contaminants at this Facility provided that the Facility is not used for residential purposes. Deed restrictions prohibiting residential use will be imposed by the existing Hazardous Waste Management Permit or a future Uniform Environmental Covenants Act (UECA) covenant. Accordingly, VDEQ's Corrective Action Objectives for the Facility soils are the following:

1. To control exposure to the hazardous constituents remaining in place by requiring compliance with and maintenance of land use restrictions in the form of institutional controls at the Facility. This restriction will be imposed by the Facility's Permit or in a future UECA covenant; and

2. To prevent infiltration of stormwater and control exposure to the hazardous constituents remaining in place at AOC-14 and AOC-15 by requiring the existing

cover to be maintained at these locations. This restriction will be imposed by the Facility's Permit or future UECA covenant.

B. Groundwater

VDEQ has determined that drinking water standards, namely Maximum Contaminant Levels (MCLs) or tap-water RSLs for constituents that do not have an MCL, for COCs in groundwater at the Facility are protective of human health and the environment. VDEQ's Corrective Action Objectives for Facility groundwater are the following:

1. To control exposure to the hazardous constituents in the groundwater by requiring compliance with and maintenance of a groundwater use restriction at the Facility as long as drinking water standards are exceeded. This restriction will be imposed by the Facility's Permit or future UECA covenant; and

2. To monitor groundwater pursuant to an approved groundwater monitoring plan until such time as it can be shown that the concentrations of hazardous constituents set forth on the chart below achieve the remedial goals or demonstrate a generally stable or decreasing trend.

Constituent	**Remedial Goal***	**Basis**
Arsenic	Highest of 10 ug/L, background or other VDEQ approved risk-based criteria.	EPA Drinking Water MCL
Cobalt	Highest of 6 ug/L, background or other VDEQ approved risk-based criteria.	EPA Tap Water RSL
Lead	Highest of 15 ug/L, background or other VDEQ approved risk-based criteria.	EPA Drinking Water MCL
Nickel	Highest of 39 ug/L, background or other VDEQ approved risk-based criteria.	EPA Tap Water RSL
Vanadium	Highest of 86 ug/L, background or other VDEQ approved risk-based criteria.	EPA Tap Water RSL
benz(a)anthracene	Highest of 0.12 ug/L, background or other VDEQ approved risk-based criteria.	EPA Tap Water RSL

2-methylnaphthalene	Highest of 36 ug/L, background or other VDEQ approved risk-based criteria.	EPA Tap Water RSL
1,1-biphenyl	Highest of 0.83 ug/L, background or other VDEQ approved risk-based criteria.	EPA Tap Water RSL
bis(2-ethylhexyl)phthalate	Highest of 6 ug/L, background or other VDEQ approved risk-based criteria.	EPA Drinking Water MCL
dibenz(a,h)anthracene	Highest of 0.0034 ug/L, background or other VDEQ approved risk-based criteria.	EPA Tap Water RSL
dibenzofuran	Highest of 7.9 ug/L, background or other VDEQ approved risk-based criteria.	EPA Tap Water RSL
indeno(1,2,3-cd)pyrene	Highest of 0.034 ug/L, background or other VDEQ approved risk-based criteria.	EPA Tap Water RSL
naphthalene	Highest of 0.17 ug/L, background or other VDEQ approved risk-based critiera.	EPA Tap Water RSL

* The remedial goal is achieved when the concentration does not exceed the highest of the criteria referenced. The Facility may elect to establish site-specific background concentrations in accordance with established procedures, and utilize the site-specific background concentrations as the remedial goal upon approval by VDEQ. Alternatively, VDEQ may approve other risk-based criteria as the remediation goal.

ug/L = micrograms per liter

5.0 SUMMARY OF PROPOSED REMEDY

A. Summary

Under this proposed remedy, DEQ is requiring the following actions:

1. Maintain a cover, as necessary, at the AOC-14 and AOC-15 areas to include all areas known to have constituents above EPA Region 3 Industrial RSLs. Conduct an inspection of the covered area as prescribed in the future UECA Covenant.

2. Monitor groundwater pursuant to an approved groundwater monitoring plan, and any revisions thereto, until such time as it can be shown that the concentrations of

hazardous constituents set forth on the chart above meet the remedial goals or demonstrate a generally stable or decreasing trend.

3. Maintain compliance with land use restrictions and institutional controls. Institutional controls include:

    A. The Facility shall not be used for residential purposes or for children's (under the age of 16) daycare facilities, schools, or playground purposes.
    B. Groundwater shall not be used for any purposes except for environmental monitoring and testing, or for non-contact industrial use as may be approved by VDEQ. Any new groundwater wells installed must be approved VDEQ.
    C. Excavation and/or management of soil shall be conducted in accordance with a VDEQ-approved Materials Management Plan.

    Future modifications at the Facility that could be reasonably understood to adversely affect or interfere with the integrity or protectiveness of the final remedy will be evaluated to identify and address those potential impacts or interferences. No removal, disturbance, or alteration shall occur to any corrective action components installed at the Facility, including, but not limited to groundwater monitoring wells, without VDEQ approval.

B. Implementation

VDEQ proposes to implement the remedy through the RCRA Hazardous Waste Management Permit or future UECA covenant. Therefore, DEQ does not anticipate any regulatory constraints in implementing its remedy.

C. Reporting Requirements

Compliance with and effectiveness of the proposed remedy including the institutional and engineering controls shall be evaluated, certified and reported to VDEQ in accordance with reporting requirements in the RCRA Permit or in a future UECA covenant.

6.0 ENVIRONMENTAL INDICATORS

Under the Government Performance and Results Act ("GPRA"), EPA has set national goals to address RCRA corrective action facilities. Under GPRA, EPA evaluates two key environmental clean-up indicators for each facility: (1) Current Human Exposures Under Control and (2) Migration of Contaminated Groundwater Under Control. The Facility met the Human Health indicator on September 9, 2011. The Facility met the Groundwater indicator on September 26, 2011.

7.0 FINANCIAL ASSURANCE

Financial assurance for corrective action is not warranted or required for the Facility since the final remedy for the Facility does not include any active remediation and is limited to institutional and engineering controls.

8.0 PUBLIC PARTICIPATION

Before DEQ makes a final decision on its proposed final remedy for the Facility, the public may participate in the decision selection process by reviewing this SB and documents contained in the Administrative Record for the Facility. The Administrative Record contains all information considered by DEQ in reaching this proposed decision. Interested parties are encouraged to review the Administrative Record and comment on DEQ's proposed decision. For additional information regarding the proposed remedy, please contact Mr. Ryan Kelly at (804) 698-4045 or ryan.kelly@deq.virginia.gov.

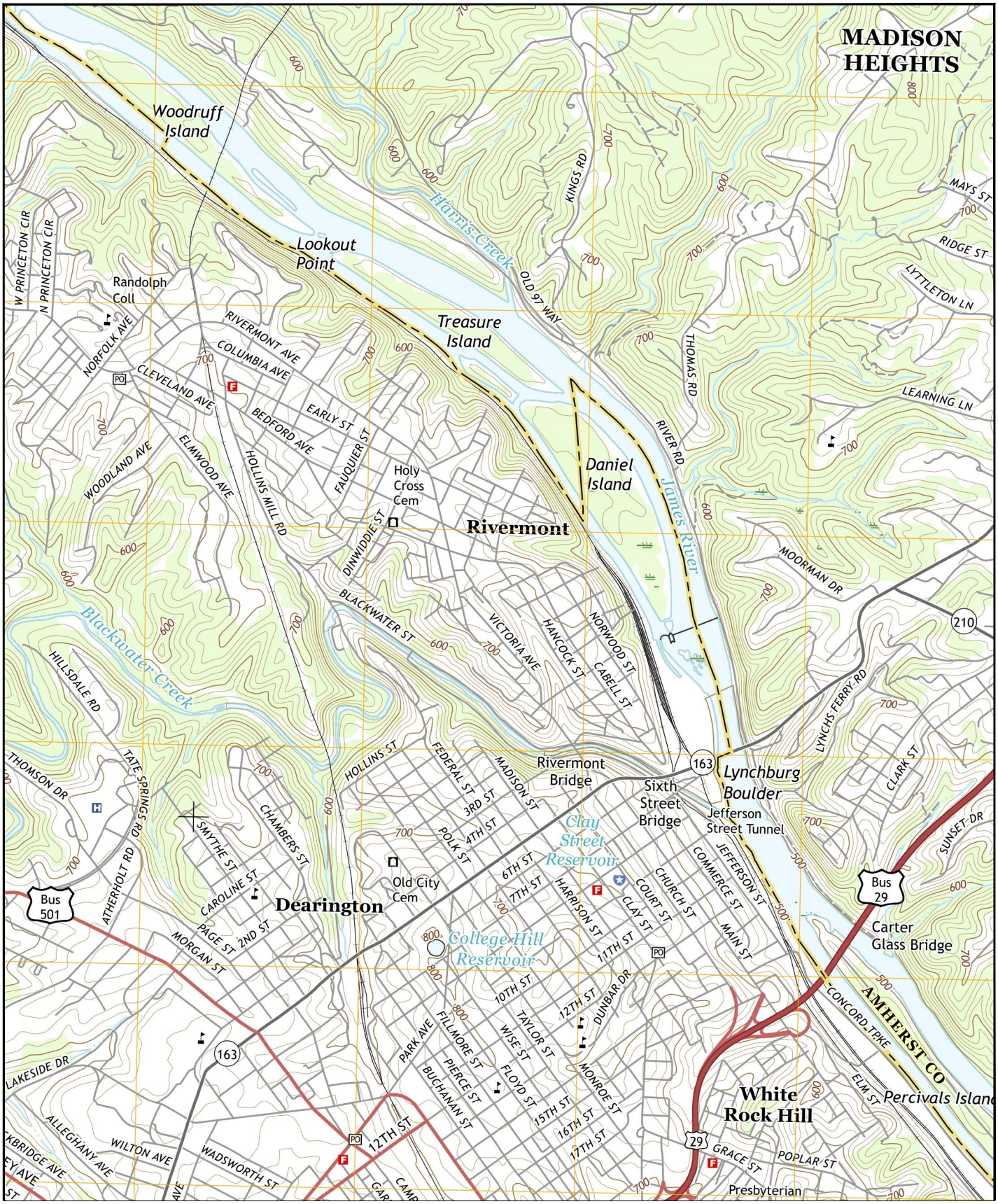
The public comment period will last sixty (60) calendar days from the date the notice is published in a local newspaper. Comments may be submitted by mail, fax, or e-mail to Mr. Ryan Kelly at the address listed below.

Virginia Department of Environmental Quality
629 East Main Street
P.O. Box 1105
Richmond, VA 23218
Contact: Mr. Ryan Kelly
Phone: (804) 698 - 4045
Email: ryan.kelly@deq.virginia.gov

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 Statement of Basis, 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.

Attachments

Figure 1 – Facility Location Map



SOURCE: USGS QUADRANGLE MAP; LYNCHBURG, VIRGINIA; 2016

0 1000 2000ft

GRIFFIN PIPE PRODUCTS
10 ADAMS STREET
LYNCHBURG, VIRGINIA

11109595-001

Sep 6, 2016

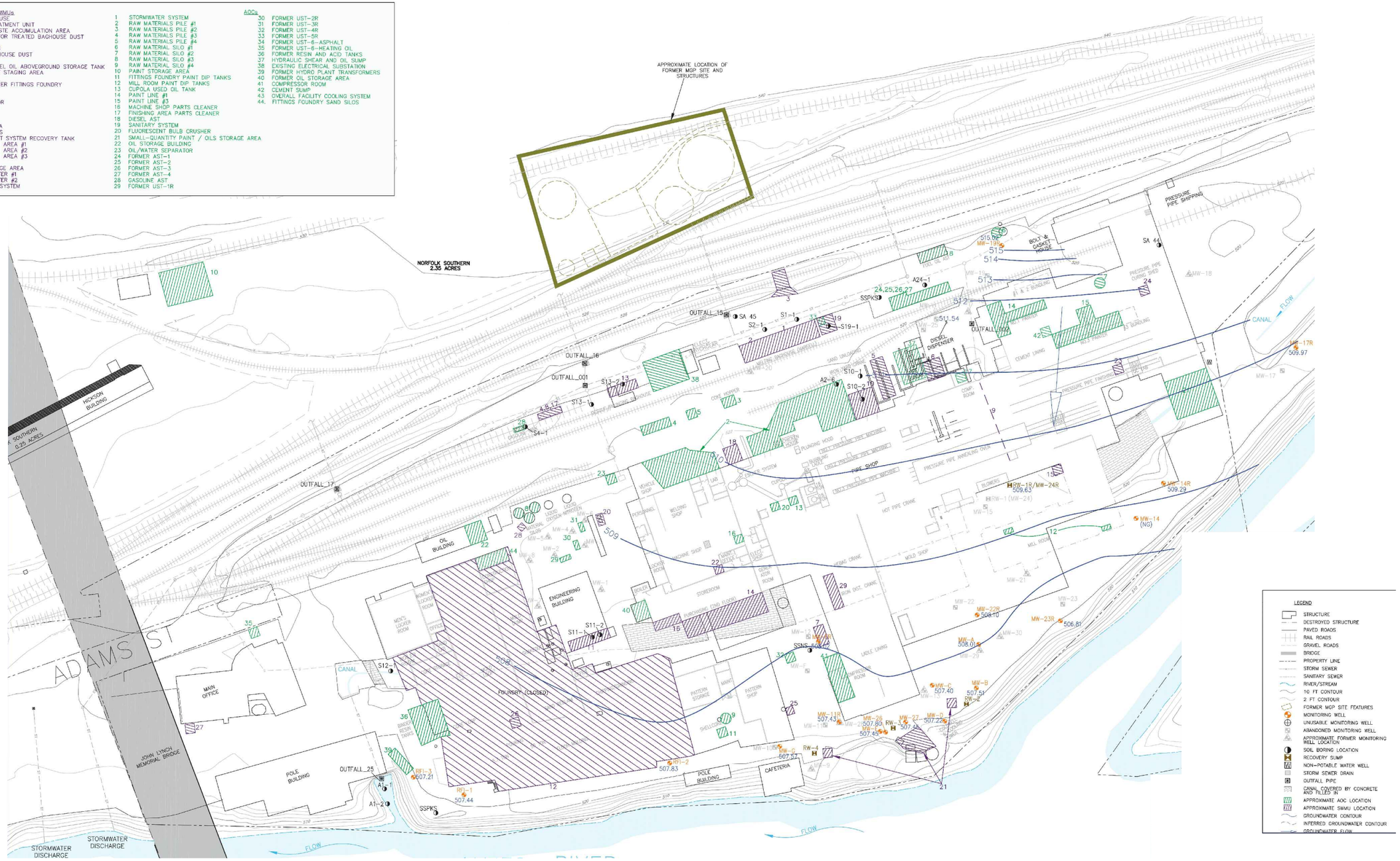
SITE LOCATION MAP

FIGURE 1

CAD File: I:\drawings\11100000s\11109595\11109595-PRES\11109595-001(PRES001)\11109595-001(PRES001)GN\11109595-001(PRES001)GN-DE001.dwg

Figure 2 – SWMU and AOC Location Map

SWMUs		AOCs	
1	HARSELL CUPOLA BAGHOUSE	1	STORMWATER SYSTEM
2	HARSELL BAGHOUSE TREATMENT UNIT	2	RAW MATERIALS PILE #1
3	90-DAY HAZARDOUS WASTE ACCUMULATION AREA	3	RAW MATERIALS PILE #2
4	FORMER HOLDING AREA FOR TREATED BAGHOUSE DUST	4	RAW MATERIALS PILE #3
5	SOLID WASTE BIN	5	RAW MATERIALS PILE #4
6	CEMENT SETTLING BASINS	6	RAW MATERIAL SILO #1
7	HOLDING AREA FOR BAGHOUSE DUST	7	RAW MATERIAL SILO #2
8	ROLL-OFF BOX	8	RAW MATERIAL SILO #3
9	LEAKING PIPING FROM FUEL OIL ABOVEGROUND STORAGE TANK	9	RAW MATERIAL SILO #4
10	TEMPORARY SOLID WASTE STAGING AREA	10	PAINT STORAGE AREA
11	OLD ETA BAGHOUSE	11	FITTINGS FOUNDRY PAINT DIP TANKS
12	WASTE UNITS FROM FORMER FITTINGS FOUNDRY	12	MILL ROOM PAINT DIP TANKS
13	ETA BAGHOUSE	13	CUPOLA USED OIL TANK
14	GMD BAGHOUSE	14	PAINT LINE #1
15	GRINDING DUST COLLECTOR	15	PAINT LINE #3
16	METAL SCRAP DUMPSTER	16	MACHINE SHOP PARTS CLEANER
17	WASTE DUMPSTER	17	FINISHING AREA PARTS CLEANER
18	SLAG PILES	18	DIESEL AST
19	LIME SLAG STORAGE AREA	19	SANITARY SYSTEM
20	USED OIL STORAGE AREAS	20	FLUORESCENT BULB CRUSHER
21	GROUNDWATER TREATMENT SYSTEM RECOVERY TANK	21	SMALL-QUANTITY PAINT / OILS STORAGE AREA
22	SATELLITE ACCUMULATION AREA #1	22	OIL STORAGE BUILDING
23	SATELLITE ACCUMULATION AREA #2	23	OIL/WATER SEPARATOR
24	SATELLITE ACCUMULATION AREA #3	24	FORMER AST-1
25	FORMER INCINERATOR	25	FORMER AST-2
26	UNIVERSAL WASTE STORAGE AREA	26	FORMER AST-3
27	GENERAL REFUSE DUMPSTER #1	27	FORMER AST-4
28	GENERAL REFUSE DUMPSTER #2	28	GASOLINE AST
29	CASTING DITCH RECYCLE SYSTEM	29	FORMER UST-1R
		30	FORMER UST-2R
		31	FORMER UST-3R
		32	FORMER UST-4R
		33	FORMER UST-5R
		34	FORMER UST-6-ASPHALT
		35	FORMER UST-6-HEATING OIL
		36	FORMER RESIN AND ACID TANKS
		37	HYDRAULIC SHEAR AND OIL SUMP
		38	EXISTING ELECTRICAL SUBSTATION
		39	FORMER HYDRO PLANT TRANSFORMERS
		40	FORMER OIL STORAGE AREA
		41	COMPRESSOR ROOM
		42	CEMENT SUMP
		43	OVERALL FACILITY COOLING SYSTEM
		44	FITTINGS FOUNDRY SAND SILOS



Source: GES SITE PLAN DATED 3-12-09

0 40 120ft

GHD

GRIFFIN PIE PRODUCTS
10 ADAMS STREET
LYNCHBURG, VIRGINIA

SITE PLAN

11109595-004

Jun 1, 2017

FIGURE 2

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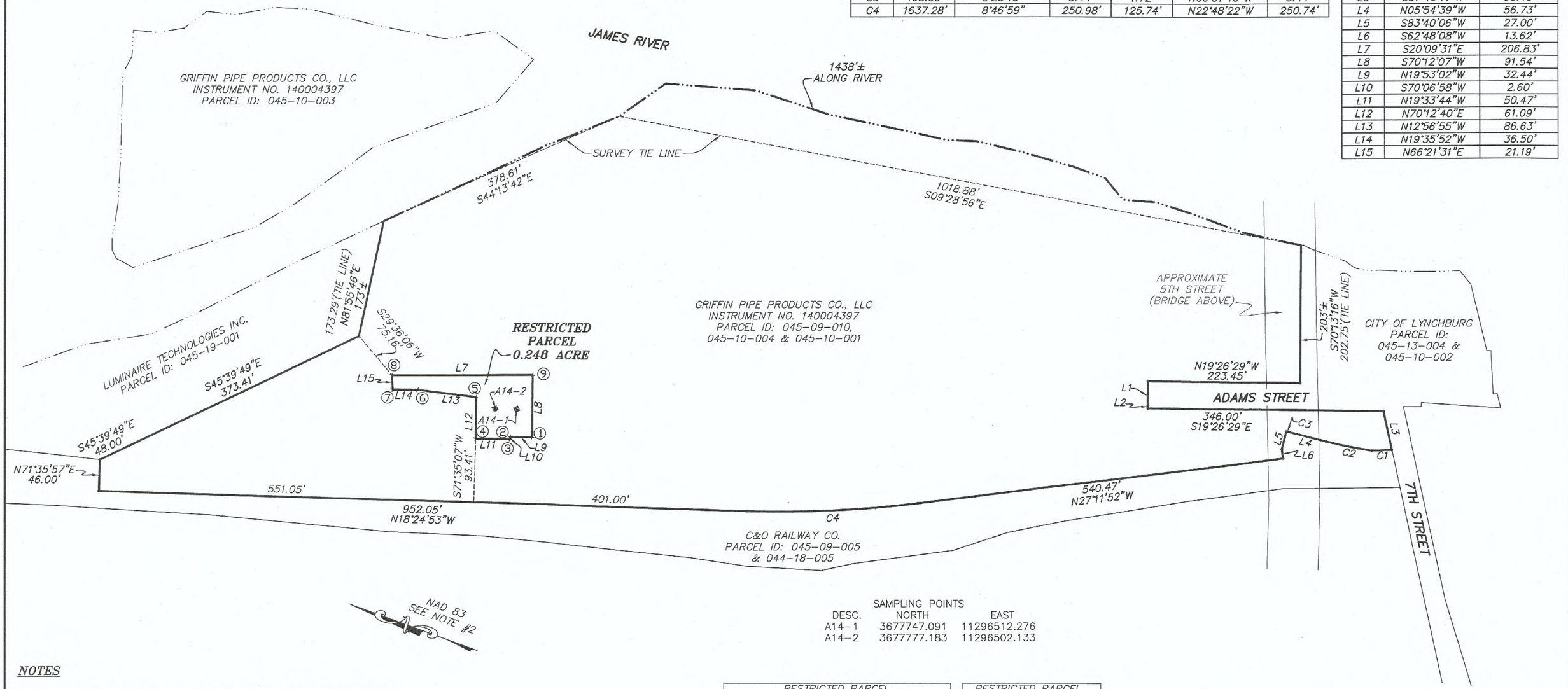
Figure 3 – AOC-14 and AOC-15 Survey Plat

CURVE TABLE						
CURVE	RADIUS	DELTA ANGLE	LENGTH	TANGENT	CHORD BRNG	CHORD
C1	1285.50'	1°19'05"	29.58'	14.79'	N21°50'59"W	29.57'
C2	684.29'	5°43'50"	68.44'	34.25'	N08°46'09"W	68.41'
C3	468.69'	0°25'15"	3.44'	1.72'	N06°07'16"W	3.44'
C4	1637.28'	8°46'59"	250.98'	125.74'	N22°48'22"W	250.74'

LINE TABLE		
LINE	BEARING	DISTANCE
L1	S70°13'16"W	35.50'
L2	S70°33'26"W	4.50'
L3	S57°40'11"W	58.43'
L4	N05°54'39"W	56.73'
L5	S83°40'06"W	27.00'
L6	S62°48'08"W	13.62'
L7	S20°09'31"E	206.83'
L8	S70°12'07"W	91.54'
L9	N19°53'02"W	32.44'
L10	S70°06'58"W	2.60'
L11	N19°33'44"W	50.47'
L12	N70°12'40"E	61.09'
L13	N12°56'55"W	86.63'
L14	N19°35'52"W	36.50'
L15	N66°21'31"E	21.19'



SAMPLING POINTS

DESC.	NORTH	EAST
A14-1	3677747.091	11296512.276
A14-2	3677777.183	11296502.133

NOTES

1.) THE BOUNDARY INFORMATION SHOWN ON THIS COMPILED PLAT WAS TAKEN FROM a.) AN UNRECORDED ALTA/ACSM LAND TITLE SURVEY PLAT TITLED "ALTA/ACSM LAND TITLE SURVEY FOR AMSTED-GRIFFIN 10 AND 2 ADAMS STREET LYNCHBURG, VIRGINIA", PREPARED BY THE BAY COMPANIES, JUNE 17, 2014, b.) THE METES AND BOUNDS DESCRIPTIONS FOUND IN THE "AS SURVEYED" DESCRIPTION OF THE REAL ESTATE SECTION OF INSTRUMENT NO. 140004397, DATED JUNE 9, 2014 AND RECORDED AUGUST 4, 2014 IN THE CLERK'S OFFICE, CITY OF LYNCHBURG, VIRGINIA, AND c.) A PLAT PREPARED BY HURT & PROFFITT, INC., PC 2, PG. 140.

2.) THE COMPILED PLAT DATUM AND THE INFORMATION FOR THE SAMPLING POINTS SHOWN HEREON WAS TAKEN FROM AN UNRECORDED PLAT TITLED SAMPLING LOCATION DRAWING FOR ONE ENVIRONMENTAL GROUP, LLC, GRIFFIN PIPE PRODUCTS FACILITY, 10 ADAMS STREET, CITY OF LYNCHBURG, VIRGINIA, DATED JANUARY 28, 2015 PREPARED BY BALZER AND ASSOCIATES INC.

3.) THIS COMPILED PLAT WAS PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT, EASEMENTS MAY EXIST THAT ARE NOT SHOWN HEREON.

4.) THIS COMPILED PLAT DOES NOT REPRESENT BOUNDARY SURVEY.

COMMONWEALTH OF VIRGINIA
6/08/2017
LARI J. KETCHEM
Lic. No. 002478
LAND SURVEYOR

0 100 200 300

RESTRICTED PARCEL STATE GRID COORDINATES NAD 83, VA SOUTH ZONE (SEE NOTE #2)		
POINT	NORTH	EAST
1	3677711.665	11296481.527
2	3677742.166	11296470.495
3	3677741.282	11296468.050
4	3677788.843	11296451.149
5	3677809.525	11296508.630
6	3677893.948	11296489.219
7	3677928.332	11296476.977
8	3677936.828	11296496.384
9	3677742.671	11296567.661

RESTRICTED PARCEL	
POINT	LAT. AND LONG.
1	LAT: 37.4216465 LON: -79.1420074
2	LAT: 37.4217300 LON: -79.1420462
3	LAT: 37.4217276 LON: -79.1420546
4	LAT: 37.4218579 LON: -79.1421139
5	LAT: 37.4219158 LON: -79.1419164
6	LAT: 37.4221472 LON: -79.1419852
7	LAT: 37.4222415 LON: -79.1420282
8	LAT: 37.4222651 LON: -79.1419616
9	LAT: 37.4217332 LON: -79.1417116

COMPILED PLAT SHOWING A RESTRICTED PARCEL ACROSS THE PROPERTY OF GRIFFIN PIPE PRODUCTS CO., LLC, PARCELS 045-09-010, 045-10-004 & 045-10-001

CITY OF LYNCHBURG, VIRGINIA

DATE: JUNE 8, 2017 SCALE: 1" = 100'

DRAWN BY: LJK CHECKED BY: LJK

KOONTZ-BRYANT, P.C.
Site Development Solutions
1703 N. PARHAM ROAD, SUITE 202
HENRICO, VIRGINIA 23229
(804) 740-9200 (804) 740-7338 Fax
kbpc@koontzbryant.com

Administrative Record – Index of Documents for Statement of Basis

GRIFFIN PIPE PRODUCTS
EPA ID NO. VAD065417008
Lynchburg, Virginia

ADMINISTRATIVE RECORD
INDEX OF DOCUMENTS FOR STATEMENT OF BASIS

This index includes documents that the Virginia Department of Environmental Quality (VDEQ) relied upon to develop and propose the final remedy selection determination described in the Statement of Basis. These documents were prepared for the Griffin Pipe Products facility and are listed chronologically by document date.

1. October 13, 2005, *RCRA Permit Closure*, Griffin Pipe Products Co.

2. November 20, 2006, *Griffin Pipe Products Co. Harsell Baghouse RCRA Closure Report*, Griffin Pipe Products Co.

3. April 5, 2007, *Closure Report Approval*, VDEQ

4. May 16, 2007, *Part B Permit Application Griffin Pipe Products Company*, Virginia Geotechnical Services.

5. November 30, 2007, *Hazardous Waste Management Permit for Corrective Action*, VDEQ.

6. August 2009, *Phase I RFI Workplan – Revision 02*, GES Inc.

7. June 17, 2011, *Phase I RFI Report – Revised June 2011*, GES Inc.

8. September 9, 2011, *Documentation of Environmental Indicator Determination – Current Human Exposures Under Control*, VDEQ.

9. September 26, 2011, *Documentation of Environmental Indicator Determination – Migration of Contaminated Groundwater Under Control*, VDEQ.

10. December 16, 2011, *Phase II RCRA Facility Investigation (RFI) Plan – Part I – Additional Field Sampling – DEQ Review*, S&ME

11. February 23, 2012, *Phase II RFI Work Plan Part I – Approval*, VDEQ.

12. May 21, 2013, *Phase II RCRA Facility Investigation Report Part I Additional Field Sampling for Groundwater, Surface Water, and Sediment*, TEC, Inc.

13. July 26, 2013, *Phase II RCRA Facility Investigation Report Part I Additional Field Sampling – Lead Evaluation*, TEC Inc.

14. October 2014, *RCRA Corrective Action – Confirmation Sampling Work Plan*, ONE Environmental Group, LLC.

15. June 2015, *RCRA Corrective Action - Confirmation Sampling Report*, ONE Environmental Group, LLC.

16. February 18, 2016, *Adult Lead Methodology*, GHD.

17. July 21, 2016, *Adult Lead Methodology (ALM) Evaluation – Approval*, VDEQ.

18. March 2017, 2016, *Comprehensive Site Evaluation Report – Revision 1*, GHD.

19. April 6, 2017, *Comprehensive Site Evaluation Report – Approval*, VDEQ.