



VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

FINAL DECISION AND RESPONSE TO COMMENTS

Wood Preservers Inc.
Warsaw, Virginia
(VAD003113750)

I. FINAL DECISION

The Virginia Department of Environmental Quality (DEQ) 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 and 6992k, regarding the remedy for the Wood Preservers Inc. facility (Facility) located at 15939 Historyland Highway, Warsaw, Virginia.

On June 20, 2017, DEQ issued a Statement of Basis (SB) in which it described its proposed remedy for the Facility. The SB is hereby incorporated in this Final Decision by reference and is included in the enclosed.

II. PUBLIC COMMENT PERIOD

On June 28, 2017, a public notice for the SB was published in the Northern Neck News, a newspaper published in Warsaw and having a general circulation in Richmond County. The public notice announced the commencement of a thirty (30)-day public comment period in which comments were requested from the public on the remedy proposed in the SB. On June 28, 2017, DEQ placed the SB on its web page. The public comment period ended on July 28, 2017.

III. RESPONSE TO COMMENTS

DEQ received no comments on its proposed determination for the Facility. Consequently, DEQ's determination did not change from the determination proposed in the SB.

IV. FINAL REMEDY

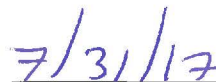
The Final Remedy, the components of which are explained in detail in the SB, requires the completion of a post-closure period, limited groundwater monitoring, and implementation and maintenance of institutional controls in the form of land use controls. Institutional controls will be imposed by an environmental covenant pursuant to the Uniform Environmental Covenants Act, Title 10.1, Chapter 12.2, Sections 10.1-1238 through 10.1-1250 of the Code of Virginia.

V. DECLARATION

Based on the Administrative Record compiled for Corrective Action at the Wood Preservers Facility, DEQ has determined that the Final Remedy selected in this Final Decision and Response to Comments is protective of human health and the environment.



Chris Evans, Director
Office of Remediation Programs
Virginia Department of Environmental Quality



Date

Enclosure: Statement of Basis, June 2017

STATEMENT OF BASIS



STATEMENT OF BASIS

**WOOD PRESERVERS, INC.
WARSAW, VIRGINIA**

VAD003113750

June 2017

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I. 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 Wood Preservers, Inc. (WPI) facility located at 15939 Historyland Highway (Route 3), Warsaw, Virginia (the Facility). WPI is the owner and operator of the property and wood preserving operations. DEQ's proposed decision consists of the following components: 1) continue to monitor groundwater at Areas of Concern (AOCs) 1 and 2 in accordance with the approved groundwater monitoring plan until corrective action objectives have been met; 2) continue to implement the post-closure care program and groundwater monitoring at Solid Waste Management Units (SWMUs) 1 and 2 until objectives in accordance with the Enforcement Order for Post Closure Care have been met; and 3) maintain compliance with the Facility's forthcoming environmental covenant, which will contain land use controls in the form of institutional and engineering controls. In addition, the environmental covenant will meet the requirements of the Uniform Environmental Covenants Act (UECA). This SB highlights key information relied upon by DEQ in making its proposed decision.

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. (Corrective Action Program). The Corrective Action 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.

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 VIII, Public Participation, for information on how you may review the AR.

II. FACILITY BACKGROUND

The WPI Facility is an active wood preserving operation located on a 126.9-acre property at 15939 Historyland Highway (Route 3) in Warsaw, Richmond County, Virginia. The Facility has operated continuously on the property since it was initially constructed in 1975, on a previously undeveloped parcel of farmland (Figure 1).

The Facility has produced a variety of treated wood products during its operation, including poles, pilings, railroad ties, timbers, lumber and plywood. All preservatives used at the facility are U.S. EPA registered pesticides approved for use in wood preservation. Wood preserving operations have been performed in two locations on the property. Between 1975 and 1991, the treating operations were located in what is now referred to as the "old treating area." In 1991, in response to changing environmental regulations for the wood preserving industry, WPI constructed a new wood treating plant, at which wood preserving operations presently take place. The new treating area operations, including preservative unloading from tank trucks, takes place indoors within an area that is fully contained by concrete underlain by a synthetic liner. The new treating facility complies with the EPA's Subpart W (Drip Pad) regulations for wood preserving facilities.

Coal tar creosote (referred to as an "oil-borne" wood preserving process), and chromated copper arsenate (CCA) (a "water-borne" process) were used as wood preservatives throughout the operating life of the old treating area. Pentachlorophenol (an "oil-borne" process) was also

used as a wood preservative at the old treating area between 1975 and 1983. Dricon, a water-borne fire retardant process with boron as the primary ingredient, was used at the old treating area between 1988 and 1991.

At the new treating area, creosote was used between 1991 and 2004. CCA and Dricon have been used throughout the operating life of the new treating area, and in 2004 operations were modified to include the use of copper azole, a water-borne preservative. The preservation process includes pressure injecting preservative solution into the wood, with water used as a carrier. The WPI facility uses five pressurized cylinders (“treating cylinders”) to apply preservatives in a closed loop system. The treatment process involves placing charges of wood into the treating cylinder and applying the preservative under a closed-loop pressure system until sufficient penetration and retention of the preservative into the wood has occurred. Near the end of the treatment cycle, excess preservative is drawn from the wood through a vacuum system, and is pumped back into the process work tanks where it is ultimately re-used and recycled. Fresh preservative is added to the work tanks as needed.

Following the treatment process, the treated wood is staged under a roofed area on concrete underlain by a synthetic liner. When the wood has stopped dripping, it is placed in designated treated wood storage areas until loaded onto trucks for shipment. Both covered, and uncovered outdoor treated wood storage areas are used at WPI. In addition, all CCA-treated roundstock that is produced is placed in the Fixation Chamber following treatment for additional processing. This processing accelerates the naturally occurring “fixation” of the wood preservatives in the wood, and is conducted in accordance with American Wood Protection Association Best Management Practice Standards.

Wastewater generated by the former creosote treatment process originated as moisture in the wood being treated, and was removed from the wood in the conditioning step of the treatment process. This wastewater was held in a surge tank prior to being pumped to an oil-water separator that removed the creosote from the wastewater. Recovered creosote was returned to the wood preserving process for reuse as a preservative. The wastewater from the oil-water separator was then directed to the facility’s immobilized cell bioreactor (ICB) unit, for additional treatment. Treated water from the ICB unit was recycled to the CCA process where it was used to supplement the treating solution.

Prior to the use of the ICB unit, the Facility used a concrete-lined surface impoundment and an earthen spray evaporation pond for the management of process wastewater. These units were closed pursuant to RCRA and are discussed in detail in Section III. Waste streams that have been generated at the Facility during its period of operation include listed hazardous wastes (F032, F034, F035, U051, and K001) and characteristic hazardous wastes (D004 and D007). The Facility also generates “Universal Waste” such as batteries and lighting fixtures/bulbs that are sent off-site for proper disposal or re-use.

In 1981, the Facility filed for RCRA Interim Status for the surface impoundment and the spray evaporation pond, identified as SWMU 1 and 2, respectively. Subsequently, RCRA Interim Status detection groundwater monitoring was implemented. In 1984, environmental assessments of the units were conducted and in 1988 both units were closed as landfills in accordance with RCRA requirements and the DEQ approved closure plan. A deed notation indicating the areas that were used to manage hazardous waste and where land use is restricted, including a survey plat, was filed with Richmond County.

Administratively, the DEQ issued an Enforcement Order for Post-Closure Care of SWMU 1 and SWMU 2, which required WPI to conduct groundwater compliance monitoring and groundwater corrective action at the units. The Order became final in 1994 and subsequent modifications to the Order occurred in 1998, 2009, 2010, 2011, and 2016. In addition, in order to meet obligations of the Corrective Action program, WPI entered into a Facility Lead Agreement (FLA) with EPA in August 2002. WPI has since performed environmental investigations, monitoring, and interim measures site-wide.

III. SUMMARY OF ENVIRONMENTAL INVESTIGATIONS AND CLEANUP ACTIVITIES

A combined RCRA Facility Assessment (RFA) and a RCRA Facility Investigation (RFI) Work Plan (J. Mitsak & Associates, 2002a) identified thirteen SWMUs and three AOCs at the Facility. A Facility layout map is included as Figure 2 showing the location of each SWMU and AOC, and a monitoring well location map is included as Figure 3. The following table lists each SWMU and AOC.

Identification	SWMU and AOC Description
SWMU 1	Closed Surface Impoundment
SWMU 2	Closed Spray Evaporation Pond
SWMU 3	Former Spray Lagoon
SWMU 4	Immobilized Cell Bioreactor
SWMU 5	Current Drip Pad
SWMU 6	Current Creosote Wastewater Mgmt. System Container Storage Facility
SWMU 7	Hazardous Waste Drum Accumulation Area
SWMU 8	Wastewater Surge Tank
SWMU 9	Former Wood Preserving Cylinder
SWMU 10	Former Tank Farm
SWMU 11	Hazardous Waste Drum Accumulation Area
SWMU 12	Wood-Fired Boiler
SWMU 13	Boiler Ash Staging Area
AOC 1	Former Drip Pad
AOC 2	Old Treating Plant Area
AOC 3	Outdoor Treated Wood Storage Areas

Based on operating history, records, and inspections, DEQ determined that no further investigation or action was necessary at SWMUs 4, 5, 6, 7, and 8 in order to meet the goals of the Corrective Action program. RCRA closure (as landfills) had been completed for SWMUs 1 and 2, and groundwater monitoring and corrective measures at those SWMUs were and continue to be addressed as part of post-closure care via the Enforcement Order. As a result, the following SWMUs/AOCs were identified by DEQ for further evaluation during the RFI:

- SWMU 3 – Former Spray Lagoon
- SWMU 9 – Former Wood Preserving Cylinder (addressed with AOCs 1 and 2)
- SWMU 10 – Former Tank Farm

- SWMU 11 – Hazardous Waste Drum Accumulation Area
- SWMU 12 – Wood-Fired Boiler
- SWMU 13 – Boiler Ash Staging Area
- AOC 1 – Former Drip Pad
- AOC 2 – Old Treating Plant Area, including SWMU 9
- AOC 3 – Outdoor Treated Wood Storage Areas

A summary of the Facility's environmental investigations and cleanup history follows.

A. RCRA Closure and Post-Closure Activities

The Facility filed for RCRA Interim Status in 1981 for SWMU 1 (closed surface impoundment) and SWMU 2 (closed spray evaporation pond), both of which were then in operation. At that time, an interim status groundwater monitoring program was implemented. In 1983, a statistical evaluation of the groundwater analytical data indicated a statistically significant difference in indicator parameters (pH, Total Organic Carbon, Total Organic Halogens, and specific conductance) downgradient of the units. In September 1984, a Phase I Groundwater Quality Assessment Program (GWQAP) was initiated at the Facility to address the groundwater quality degradation shown in well M-3. In January 1985, WPI concluded that Groundwater Protection Standards (GPSs) for site related contaminants had been exceeded at the point of compliance. Site related contaminants include semi-volatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), chromium, and arsenic. Phase II GWQAP was initiated in July 1985 to determine the lateral and vertical extent of the contaminant plume associated with units. The final phase of the GWQAP was completed in March 1994.

SWMU 1 was constructed concurrent with the Facility's construction and SWMU 2 was constructed in 1981. Both were used until 1984 to treat wastewater from the wood preserving operations. The wastewater treatment operations in the surface impoundment and evaporation pond generated listed hazardous waste (waste code K001). In 1984, concurrent with continued groundwater monitoring, all K001 sludge, visibly contaminated liner, and visibly contaminated soils were removed from the surface impoundment and evaporation pond and shipped off-site for proper disposal. Subsequently, an engineered cover was constructed at each unit. On November 17, 1987, DEQ approved the Closure and Post-Closure Plans submitted by WPI. The surface impoundment and evaporation pond were certified closed on September 19, 1988 and post-closure care was implemented at both units including compliance groundwater monitoring and corrective measures.

Corrective measures at the units began in 1986 by installing a groundwater extraction system with extraction wells located downgradient of SWMUs 1 and 2. The extracted groundwater was reused by the Facility as make-up water in their process. In addition, WPI enhanced the extraction system's effectiveness at SWMU 1 by implementing *in-situ* biodegradation, which consisted of air sparging, nutrient addition, and injection of a soy-based co-metabolite within the boundaries of the unit. The *in-situ* biodegradation activities took place from 2008 to 2015 and resulted in a significant decrease in the concentrations of the site related contaminants at SWMU 1. In 2004, extraction wells at SWMU 2 were shut down to evaluate potential concentration rebound. None was observed therefore extraction at SWMU 2 was discontinued and low level concentrations of contaminants remaining above GPS were allowed to naturally attenuate. In 2014, the extraction system was shut down to evaluate potential concentration rebound at SWMU 1. In 2015, groundwater analytical data subsequent to system

shut down indicated no concentration rebound and supported discontinuation of the system. In order to address low level concentrations of contaminants at SWMU 1 still present in groundwater above GPS, the Facility developed a “*Remedial Design for In-Situ Soil Stabilization, SWMU 1*” (J. Mitsak & Associates, 2015b), which was approved by DEQ on November 23, 2015. *In-situ* soil stabilization (ISS) activities at SWMU 1 were completed on June 2016 and included soil stabilization extending into the groundwater table. Additional details for the ISS activities are provided below in Section B.3.

B. Corrective Action Program Activities

Pursuant to the RCRA Corrective Action program, WPI performed multiple RCRA Corrective Action activities at the Facility. The following is a summary of these activities. Additional details for these activities are provided in the documents contained in the AR.

1. RCRA Facility Assessment/RCRA Facility Investigation

WPI submitted a SWMU identification letter on March 17, 1986 identifying five SWMUs at the Facility. This notification was revised on May 20, 1998 to remove two units not considered SWMUs under RCRA and to include three additional SWMUs, for a total of six (6) SWMUs. Subsequently in June 2002, WPI finalized a combined RCRA Facility Assessment (RFA) and RFI Work Plan (J. Mitsak & Associates, 2002a). The RFA identified a total of 13 SWMUs and three AOCs. The RFI Work Plan addressed all SWMUs and AOCs except for SWMU 1 and SWMU 2, which continued to be addressed separately as part of post-closure care under the Order. The RFA/RFI Work Plan was approved by DEQ in a letter dated November 18, 2002.

Groundwater, soil, and sediment quality characterization was conducted in accordance with the approved RFI Work Plan and was complete by December 2002. An RFI Report, including a quantitative risk assessment, was prepared and submitted to DEQ in June 2003 (J. Mitsak & Associates, 2003a). Results of the risk assessment indicated that active remediation was not necessary for protection of human health and the environment under current or future industrial land use scenarios, but that limited interim measures/remedial activities would be beneficial for the purpose of long term site management. In addition, results indicated that no further action was necessary for SWMU 11, SWMU 12, and SWMU 13.

2. Initial Interim Measures Implementation

Based on results of the RFI, the Facility implemented a number of Interim Measures (IMs). The IMs were implemented primarily within AOCs 1 and 2 and included: gravity injection of a chemical reductant (calcium polysulfide) in order to geochemically transform hexavalent chromium in soil and groundwater to the less toxic and generally immobile trivalent chromium species; installation and operation of air sparge wells to enhance biodegradation of organic constituents in groundwater; injection of a soy-based co-metabolite in the air sparge wells to further enhance biodegradation of organic constituents in groundwater; and associated groundwater monitoring. In addition, the IMs included excavation/off-site disposal (hot spot removal) of soil containing site related contaminants above the EPA industrial Regional Screening Levels (RSLs) for direct contact at SWMU 3, SWMU 10, and AOC 3. Additional details are described in the documents contained in the Administrative Record.

3. Additional Interim Corrective Measures

From 2012 to 2014, a Corrective Measures Study (CMS) was conducted to address areas

within AOCs 1 and 2 where site related contaminants remained in soil and groundwater. Because the contaminants remaining were both organic (PAHs) and inorganic (arsenic and chromium), WPI completed additional activities and collected additional data to support and determine potential remedial actions. As part of the CMS process, a comparative analysis was completed and included an evaluation of feasibility based on: 1) short-term effectiveness, 2) long-term effectiveness, 3) reduction of toxicity, mobility, or volume, 4) implementability, 5) community acceptance, and 6) cost. It was determined based on the comparative analysis that the most feasible remedial action that would meet corrective action objectives was a combination of *in-situ* soil stabilization (ISS) of the source area (soil at AOC 2), continuation of the ongoing interim measures *in-situ* groundwater treatment described above in the downgradient area at AOC 1, and land use controls in the form of institutional and engineering controls.

The ISS approach mixes soil in place with a Portland cement-based formulation to permanently reduce the potential for migration of constituents in three ways: 1) it significantly reduces the permeability of the treated soil, resulting in preferential groundwater flow around the stabilized mass and minimizing groundwater infiltration of precipitation through the stabilized mass; 2) it immobilizes constituents in the stabilized mass via chemical fixation; and 3) the mixing/blending action during implementation eliminates the presence of free product pockets in the stabilized zone.

Because site related contaminants had not migrated offsite and were contained within a relatively small area, the Facility, with DEQ concurrence, implemented the proposed corrective measures as an interim measure. Subsequently, the Facility developed the “*Interim Corrective Measures Design, AOC 1 and AOC 2*” (J. Mitsak & Associates, 2015a), which was approved by DEQ on May 1, 2015. In accordance with design specifications ISS activities began September 2015 with site preparation. Site preparation activities included demolition of the old treating plant building and partial removal of the roof structure overhanging the ISS work area. During the planning phase of ISS at AOC 2, the Facility proposed to expand the ISS area to include SWMU 1 and developed a “*Remedial Design for In-Situ Soil Stabilization, SWMU 1*” (J. Mitsak & Associates, 2015b), which was approved on November 23, 2015 and concurrent with the start of ISS activities at AOC 2. Upon completion of ISS activities, a final report detailing the ISS activities was submitted in April 2016 (J. Mitsak & Associates, 2016). This report was approved by DEQ on June 13, 2016.

Interim corrective measures for groundwater remediation were initiated at AOC 1 in December 2015 via the injection of 2700 gallons of ferrous sulfide (FeS) into 60 injection points at locations adjacent to the ISS area. Following the event, groundwater was monitored for approximately 1 year. The results indicated that the in situ treatment was effective in reducing concentrations in groundwater. Subsequently, as a measure to ensure that no concentration rebound occurs a final in situ injection event was performed in June 2017. Approximately 3,900 gallons of FeS was injected in 65 locations within and adjacent to AOC 1. Groundwater will continue to be monitored to demonstrate ongoing attenuation of the site related contaminants in accordance with the approved groundwater monitoring plan.

C. Current Conditions

As a result of the interim measures performed to date, soils within SWMU 1 and AOC 2 have been stabilized successfully, covered with clean fill, and vegetation has been established. In addition, hot spots containing elevated levels of site related contaminants have been removed from SWMU 3, SWMU 10 and AOC 3 and it has been demonstrated that soils across the

remainder of the site meet human health risk based standards for current and future industrial use of the property.

In situ treatment of groundwater described above has demonstrated that concentrations of site related contaminants associated with AOCs 1 and 2 have been reduced and groundwater monitoring has demonstrated that they are attenuating. Groundwater monitoring will continue to be performed at the Facility in efforts to continue demonstrating effectiveness of the treatment and attenuation. In addition, groundwater monitoring wells not currently used for water level measurements or monitoring have been abandoned in accordance with DEQ policy.

IV. CORRECTIVE ACTION OBJECTIVES

A. Soils

DEQ 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. Therefore, DEQ’s Corrective Action Objective for Facility soils is to control exposure to the hazardous constituents remaining in soils by requiring compliance with and maintenance of land use restrictions at the Facility. In addition, an agency approved Materials Management Plan will be required for any soil excavation and disturbance on the property within areas known to have contaminants left in soil. The requirement for a Materials Management Plan and the land use restrictions will be imposed by the Facility’s forthcoming covenant, which will be compliant with UECA.

B. 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. In addition, DEQ has determined that groundwater protection standards listed in the Enforcement Order for Post Closure Care specific to SWMUs 1 and 2, some of which are based on site specific background, are also protective of human health and the environment. DEQ’s Corrective Action Objectives for Facility groundwater are the following:

1. To control exposure to the hazardous constituents in the groundwater by requiring the compliance with and maintenance of a groundwater use restriction at the Facility as long as drinking water standards and/or groundwater protection standards are exceeded. This restriction will be imposed by the Facility’s forthcoming covenant, which will be compliant with UECA.
2. To monitor groundwater at the designated monitoring well(s) to demonstrate attenuation or stability of concentrations of the following hazardous constituents in groundwater until standards are met.

Constituents and Standards

Constituent	Standard (µg/l)	Source
Benzo(a)anthracene	0.029	RSL
Benzo(a)pyrene	0.2	MCL
Benzo(b)fluoranthene	0.029	RSL
Benzo(k)fluoranthene	0.29	RSL
Chrysene	2.9	RSL

Dibenzo(a,h)anthracene	0.0029	RSL
Indeno(1,2,3-cd)pyrene	0.029	RSL
2-Methylnaphthalene	27	RSL
Naphthalene	0.14	RSL
Pentachlorophenol	1	MCL
Phenol	4,500	RSL
Pyrene	87	RSL
Arsenic (total)	10	MCL
Chromium (total)	100	MCL
Copper (total)	1,300	MCL

V. SUMMARY OF PROPOSED REMEDY

A. Summary

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

1. Continue the groundwater monitoring program in accordance with the approved plan to confirm attenuation or stabilization of hazardous constituents.
2. Impose and maintain compliance with land use restrictions including institutional and engineering controls. These will be imposed by the Facility’s forthcoming covenant which will be compliant with UECA. Institutional controls include:
 - a. The property shall not be used for residential purposes or for children’s (under the age of 16) daycare facilities, schools, or playground purposes and senior care facilities.
 - b. Groundwater beneath the property shall not be used for any purposes except for environmental monitoring and testing, or for non-contact industrial use as may be approved by the agency. Any new groundwater wells installed on the Property must be approved by the agency.
 - c. Prohibit disturbance of and maintain soil covers over AOC 1 and SWMU 1 and the engineered cover over SWMU 2.
 - d. Excavation and disturbance within areas known to have contaminants left in place on the property shall be conducted in accordance with an agency approved Materials Management Plan.
 - e. Future modifications at the property 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.
 - f. No removal, disturbance, or alteration shall occur to any facet or component of the final remedy installed at the property without agency approval.

B. Implementation

DEQ proposes to implement the remedy through an environmental covenant pursuant to the Uniform Environmental Covenants Act, VA Code § 10.1-1238, et seq. Therefore, DEQ does not anticipate any regulatory constraints in implementing its remedy. In addition, a groundwater monitoring plan is already in place and the Facility will continue remedy implementation in

accordance with that plan. A Materials Management Plan is required only at times when disturbance or excavation occurs within areas known to have contaminants left in place.

C. Reporting Requirements

Compliance with and effectiveness of the proposed remedy at the Facility shall be evaluated and included in groundwater monitoring and corrective measures implementation reports. These reports will be submitted to DEQ in accordance with the schedule included in the monitoring plan.

VI. ENVIRONMENTAL INDICATORS

Under the Government Performance and Results Act, EPA set national objectives to measure progress toward meeting the nation's major environmental goals. For Corrective Action, EPA evaluates two key environmental indicators for each facility: 1) current human exposures under control and 2) migration of contaminated groundwater under control. The Facility met these indicators on September 16, 2003 and September 27, 2004, respectively.

VII. FINANCIAL ASSURANCE

The Facility is already providing financial assurance for continued groundwater monitoring and maintenance of the soil and engineered covers and other facets of the final remedy including ongoing post closure care of SWMUs 1 and 2 as required by the Facility's Order. Updated cost estimates for DEQ's final decision are required and will be the basis for financial responsibility of the implementation and operation and maintenance of the final remedy.

VIII. 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 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. Brett Fisher at (804) 698-4219 or brett.fisher@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, fax, e-mail, or phone to Mr. Brett Fisher at the address listed below.

Virginia Department of Environmental Quality
629 East Main Street
P.O. Box 1105
Richmond, VA 23219
Contact: Brett Fisher
Phone: (804) 698-4219
Fax: (804) 698-4234
Email: brett.fisher@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.

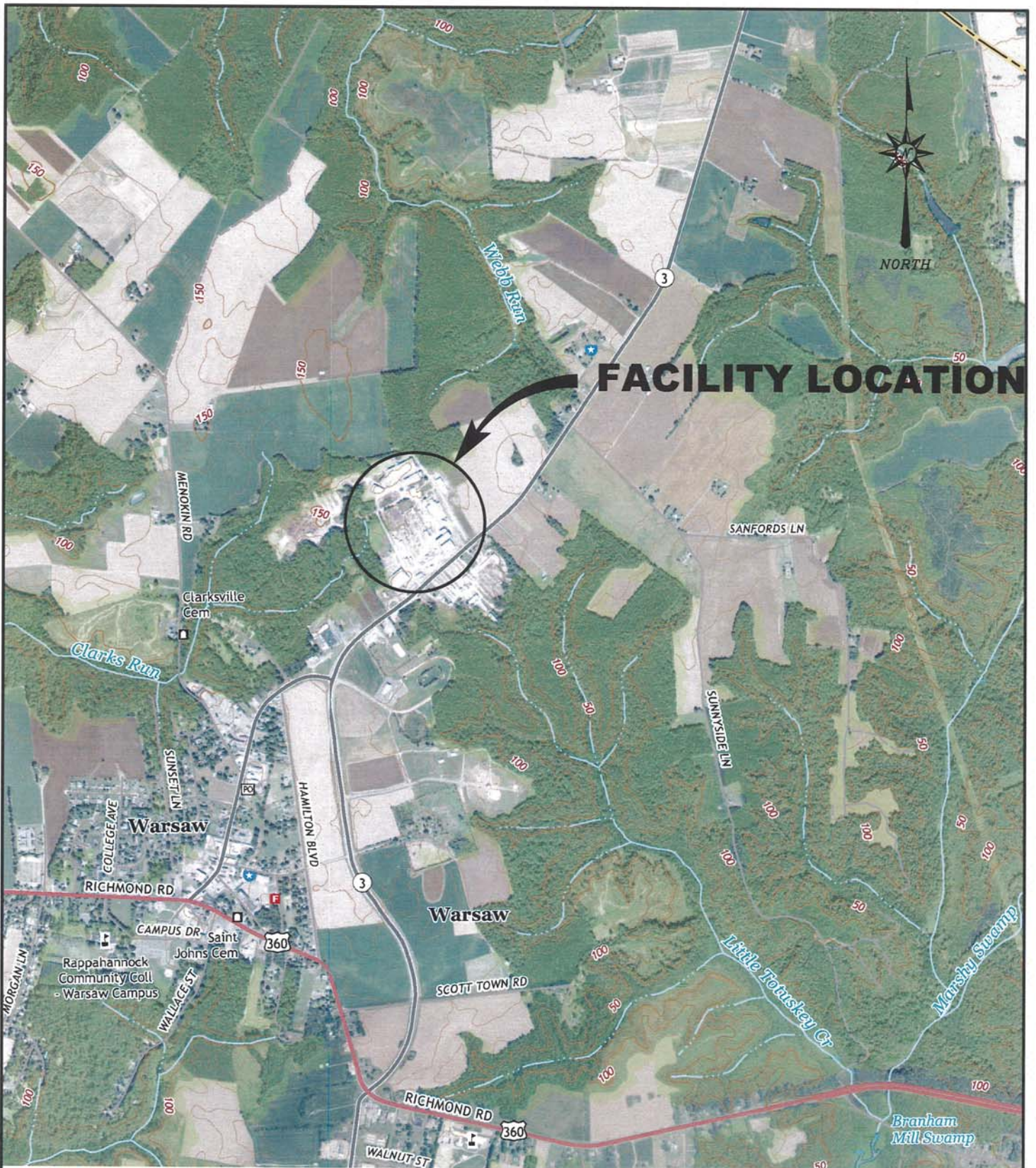
Date:

6/20/17

A handwritten signature in black ink, appearing to read 'Chris Evans', written over a horizontal line.

Chris Evans, Director
Office of Remediation Programs
Virginia Department of Environmental Quality

FIGURES



FACILITY LOCATION



MITSAK & ASSOCIATES, P.C.

ENVIRONMENTAL MANAGEMENT CONSULTANTS

808 HATHERLEIGH ROAD
BALTIMORE, MARYLAND 21212
CONSULTJOHN@ATT.NET
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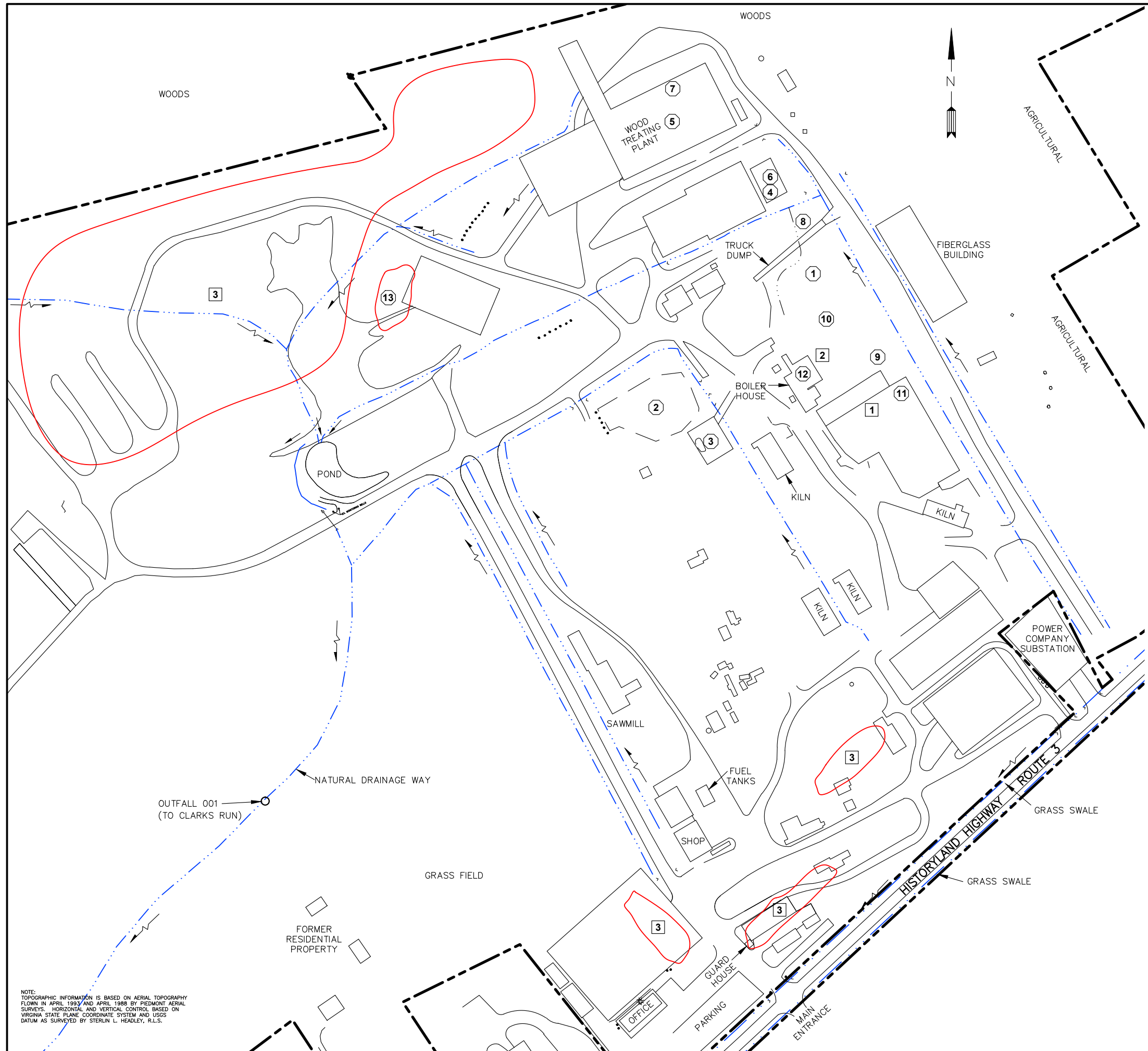
FACILITY LOCATION MAP

CLIENT:	WOOD PRESERVERS, INC.	PM:
LOCATION:	WARSAW, VIRGINIA	PE:
DESIGNED:	DETAILED:	PROJECT NO.:
		WPI 12280 RCRA
		FIGURE:
		1

REFERENCE:
USGS 7.5-MIN TOPOGRAPHIC QUADRANGLES
TAPPAHANNOCK, VA, AND HAYNESVILLE, VA,
BOTH DATED 2016.



DRAWING DATE:	DRAWING NO:
10/05/2016	12280A042



SWMUs - Status March 2017

- ① **CLOSED SURFACE IMPOUNDMENT:** *Corrective measures being implemented, institutional controls.* Notes: Closed as landfill in 1988. *In-situ* soil stabilization completed in this area in 2016. Groundwater monitoring ongoing.
- ② **CLOSED SPRAY EVAPORATION POND:** *No further remedial action, institutional controls.* Notes: Closed as landfill in 1988. Groundwater extraction/treatment discontinued in 2004, and groundwater monitoring discontinued in 2010.
- ③ **FORMER SPRAY LAGOON:** *No further remedial action, institutional controls to be implemented.* Notes: Discrete soil removal completed in 2011.
- ④ **IMMOBILIZED CELL BIOREACTOR:** *No further remedial action.* Notes: Decommissioned when creosote use at the facility was discontinued. No remedial action was necessary. Equipment is inoperative/idle.
- ⑤ **CURRENT DRIP PAD:** *No further remedial action.* Notes: No remedial action was necessary.
- ⑥ **CURRENT CREOSOTE WASTEWATER MGMT SYSTEM:** *No further remedial action.* Notes: Decommissioned when creosote use at the facility was discontinued. No remedial action was necessary. Equipment is inoperative/idle.
- ⑦ **HAZARDOUS WASTE DRUM ACCUMULATION AREA:** *No further remedial action.* Notes: No remedial action was necessary.
- ⑧ **WASTEWATER SURGE TANK:** *No further remedial action.* Notes: Removed from facility and scrapped. No remedial action was necessary.
- ⑨ **FORMER WOOD PRESERVING CYLINDER:** *No further remedial action.* Notes: Removed from facility and scrapped. No remedial action was necessary.
- ⑩ **FORMER TANK FARM:** *No further remedial action, institutional controls to be implemented.* Notes: Discrete soil removal performed in 2011. Area was incorporated into *in-situ* soil stabilization project completed in 2015/2016.
- ⑪ **HAZARDOUS WASTE DRUM ACCUMULATION AREA:** *No further remedial action.* Notes: No remedial action was necessary.
- ⑫ **CURRENT WOOD-FIRED BOILER:** *No further remedial action.* Notes: No remedial action was necessary.
- ⑬ **BOILER ASH STAGING AREA:** *No further remedial action.* Notes: No remedial action was necessary. Area no longer used.

AOCs - Status March 2017

- ① **FORMER DRIP PAD:** *Corrective measures being implemented, institutional controls to be implemented.* Notes: Groundwater remediation and groundwater monitoring ongoing.
- ② **OLD TREATING PLANT AREA:** *Corrective measures being implemented, institutional controls to be implemented.* Notes: *In-situ* soil stabilization was completed in this area in 2015/2016. Groundwater monitoring ongoing.
- ③ **OUTDOOR TREATED WOOD STORAGE AREAS:** *No further remedial action, institutional controls to be implemented.* Notes: Discrete soil removal completed in 2011.

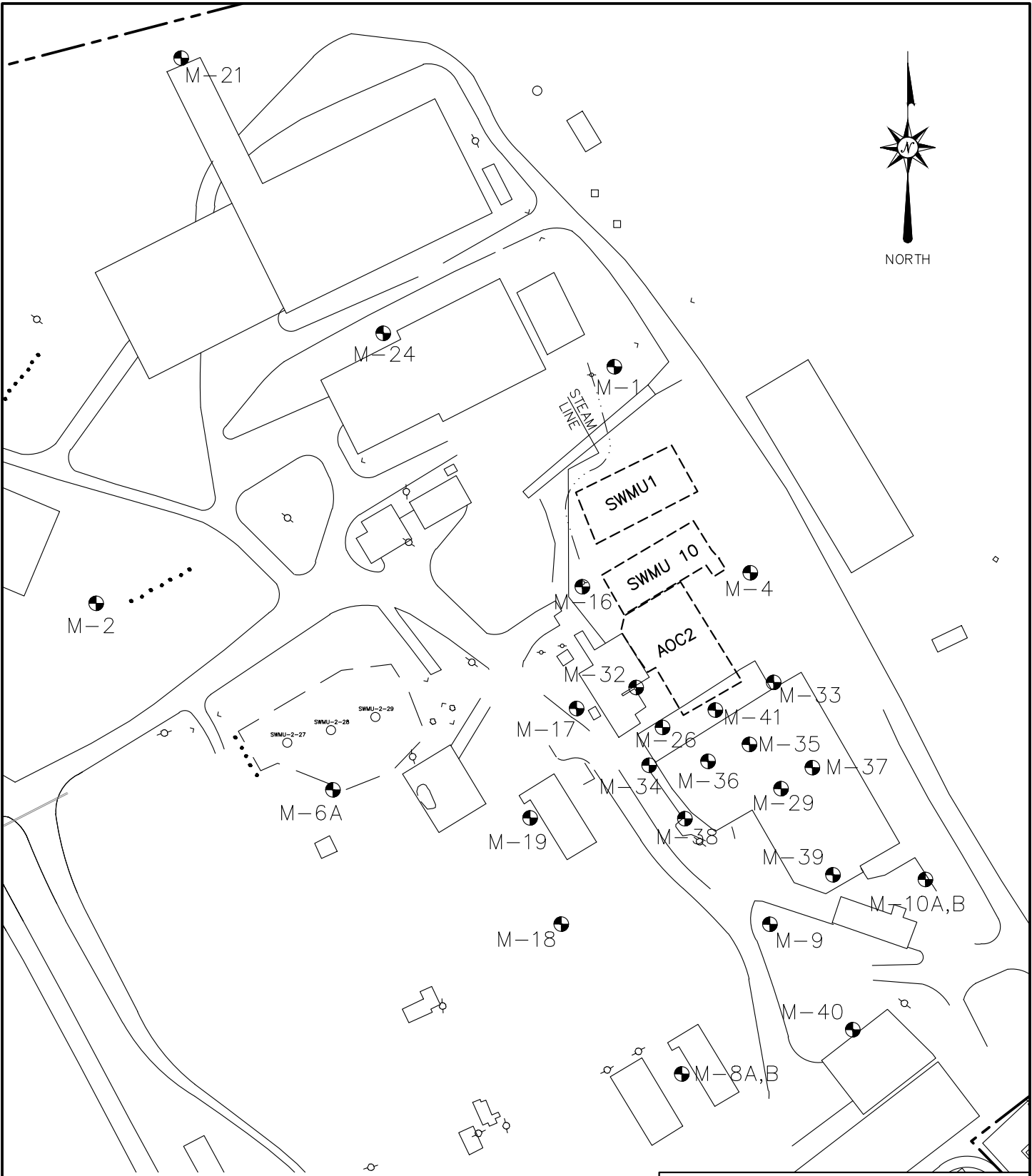


NOTE: TOPOGRAPHIC INFORMATION IS BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 1993 AND APRIL 1988 BY PIEDMONT AERIAL SURVEYS. HORIZONTAL AND VERTICAL CONTROL BASED ON VIRGINIA STATE PLANE COORDINATE SYSTEM AND USGS DATUM AS SURVEYED BY STERLIN L. HEADLEY, R.L.S.

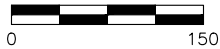
		MITSAK & ASSOCIATES, P.C. ENVIRONMENTAL MANAGEMENT CONSULTANTS		808 HATHERLEIGH ROAD BALTIMORE, MARYLAND 21212 CONSULTJOHN@ATT.NET (410) 337-5010 (410) 337-5011 FAX
REV. NO.	DRAWING DATE:	DRAWING NO.:		
-	03/02/2017	12280B009		
FACILITY LAYOUT / SWMU AND AOC LOCATIONS				
CLIENT:		WOOD PRESERVERS, INC.		PM:
LOCATION:		WARSAW, VIRGINIA		PE:
CHECKED:	APPROVED:	PROJECT NO.:	FIGURE:	
-	-	WPI.12280.RCRA	2	



NORTH



SCALE - FEET



LEGEND

- LEGAL BOUNDARIES (APPROXIMATE)
- - - - REMEDIATED AREAS (SWMU1, SWMU 10, AOC2)
- MONITORING WELL

NOTE:
 TOPOGRAPHIC INFORMATION IS BASED ON AERIAL TOPOGRAPHY
 FLOWN IN APRIL 1993 AND APRIL 1988 BY PIEDMONT AERIAL
 SURVEYS. HORIZONTAL AND VERTICAL CONTROL BASED ON
 VIRGINIA STATE PLANE COORDINATE SYSTEM AND USGS
 DATUM AS SURVEYED BY STERLIN L. HEADLEY, R.L.S.

DRAWING DATE: 03/02/2017 DRAWING NO: 12280A043

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	MONITORING WELL LOCATIONS		

CLIENT:		WOOD PRESERVERS, INC.		PM:
LOCATION:		WARSAW, VIRGINIA		PE:
DESIGNED:	DETAILED:	PROJECT NO.:	FIGURE:	
		WPI 12280 RCRA	3	