VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

FINAL DECISION AND RESPONSE TO COMMENTS

Virginia Department of Transportation
Elko Facility
Sandston, Virginia

EPA ID NO. VAD0980918189

January 2021

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 Virginia Department of Transportation Elko Facility (Facility) located at 6200 Elko Tract Road in Sandston, Virginia.

On December 17, 2020, 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.

Public Comment Period

On December 17, 2020, DEQ published the public notice for the SB in the Richmond Times Dispatch newspaper and announced a thirty (30)-day public comment period in which it requested comments from the public on the remedy proposed in the SB. A copy of the public notice and the SB was also placed on DEQ's webpage. The public comment period ended on January 19, 2021.

Response to Comments

On December 16, 2020, DEQ received a comment by email on its proposed remedy for the Facility from the Virginia Department of Health who had received an advanced copy of the proposed remedy from the Facility.

The comment and response is attached. The comment did not require a change to the proposed remedy or path forward at the site. Consequently, DEQ's Final Remedy did not change from the remedy proposed in the SB.

Final Remedy

The Final Remedy, the components of which are explained in detail in the SB will be implemented through a Remedy Consent Order between VDOT and DEQ. The Remedy includes the following components: 1) targeted excavation and removal of contaminated soil; 2) natural attenuation monitoring of contaminants in groundwater in accordance with an approved Corrective Measures Implementation Work Plan; and 3) implementation and maintenance of compliance with land use controls in the form of institutional and engineering controls.

Declaration

Based on the Administrative Record compiled for Corrective Action at the VDOT Elko 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.

1/20/2021

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

Enclosure: Comment Received
Statement of Basis, December 19, 2020

COMMENTS RECEIVED

Commonwealth of Virginia

Mason, Tara <tara.mason@deq.virginia.gov>

Comments on SB for VDOT Elko facility 6200 Elko Tract Rd Henrico VA

Mason, Tara <tara.mason@deq.virginia.gov> Tue, Jan 19, 2021 at 3:00 PM
To: "Callahan, Mike" <mike.callahan@vdh.virginia.gov>

Good morning Mr. Callahan,

Following up on your comment regarding the Health Department records for the well located at the VDOT Elko property, our records reveal that in the Phase I Site Characterization Report submitted on April 5, 2010 indicated the on-site well is used for limited laboratory testing, but not for drinking or other potable uses, therefore withdrawal is minimal.

As you indicated, this on-site well is installed in a deep aquifer and is screened from 280 to 300 feet below ground surface. During the site investigation completed in December 2009, a sample was collected from this well and COCs were not detected. Also, based on the plume configuration, extraction from this well does not appear to have had any influence on the plume. VDOT determined at this phase in the investigation that these factors did not indicate any exposure risk associated with this well and no further action was required.

Thank you for reaching out regarding the records on file.

Thanks!

Tara Mason
RCRA Corrective Action Team Lead
Office of Remediation Programs
Virginia Department of Environmental Quality
1111 East Main Street, Suite 1400
Richmond VA 23219
tara.mason@deq.virginia.gov
Phone:804-698-4218

PLEASE NOTE: Effective March 16, in response to COVID-19, most DEQ staff are working at alternative work locations. DEQ offices are open as usual and we will do our best to serve you as best we can during this time. Thank you for your understanding and patience.

On Wed, Dec 16, 2020 at 2:20 PM Callahan, Mike <mike.callahan@vdh.virginia.gov> wrote:

> Hi Tara,
> I just received the SB for this facility/project and have compared it to our records. In 1997 a class IV non-potable water supply well was installed on the backside of this property very close to the plume. Fortunately this well was supposedly constructed to Class IIIB standards so it should be pretty well protected from any contamination in the shallow aquifer. I didn't see this well mentioned in the SB. I'm curious if DEQ is aware of this well and was it sampled just to be positive that no contamination is working it's way down into the deep aquifer? We don't have any record that it was ever abandoned so I assume it's still there. I've attached some documents that detail the well for your reference.
> Thanks.
> Mike
>
> *Mike Callahan*
> *OSEMA# 1940-001212*
> *OSSMC Operator# 1942-001490*
> *Environmental Health Supervisor*
> *Henrico Health District*
> *804-501-4530*

VDOT Elko FDRTC
January 2021

STATEMENT OF BASIS

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

STATEMENT OF BASIS

Virginia Department of Transportation Elko Facility
Sandston, Virginia

EPA ID NO. VAD980918189

December 2020

Table of Contents

ATTACHMENTS

1.0 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 VDOT Elko facility located at 6200 Elko Tract Road, Sandston, Virginia (the Facility). DEQ's proposed decision generally consists of the following components: 1) targeted excavation and removal of contaminated soil; 2) conduct natural attenuation monitoring of contaminants in groundwater in accordance with an approved Corrective Measures Implementation Work Plan; and 3) implement and maintain compliance with land use controls in the form of institutional and engineering controls. 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 9, Public Participation, for information on how you may review the AR.

2.0 FACILITY BACKGROUND

The VDOT Elko Materials Lab is situated on +/-16 acre tract near Sandston, Henrico County, Virginia (Figure 1). The Elko Lab has been operating since 1980 and conducts tests on materials used in the construction and maintenance of the Commonwealth's roads. The VDOT Materials Laboratory remains an operational facility. Adjacent properties are zoned M-2 (general industrial) and include private owners fronting Technology Boulevard and Henrico County right-of-way/public utility easement associated with Technology Boulevard. Groundwater at the site flows predominantly to the west-southwest and is encountered approximately 10 to 12 feet below grade. Groundwater is not used onsite for drinking water. Public water is available in the area.

During the initial three years of operation, wastewater generated in several labs was conveyed to an engineered holding unit, south of the building in the direction of Technology Boulevard.

The floor of the circular concrete unit was lined with a heavy plastic membrane installed approximately 7.5 feet below grade. The liner was placed over an 8-inch thick layer of engineered sand and gravel which is referred herein as the sub-liner horizon (SL). A grid of four-inch diameter perforated horizontal plastic drain pipes are arranged in a grid pattern beneath the SL membrane. This underdrain system was previously connected to an external sub-grade drain line projecting from the base of the unit approximately 300 feet to the southwest on the south side of Technology Boulevard, but in 2010, the drain pipe system was disconnected and sealed-off.

In July 1983, at the direction of the former Virginia Department of Health-Bureau of Hazardous Waste Management, VDOT removed hazardous waste from the unit and began to manage its hazardous waste in containers following the satellite accumulation and quantity-appropriate waste generator status rules. However, VDOT never received official Closure from DEQ under the Hazardous Waste Regulations and thus, became subject to Corrective Action.

3.0 SUMMARY OF ENVIRONMENTAL HISTORY

3.1 Environmental Investigation

During a RCRA Facility Assessment conducted in April 2008, eight Solid Waste Management Units (SWMUs) were identified. However only one SWMU required further evaluation.

Table 1: SWMU Identification Table

Identification	SWMU Name
SWMU #1	**Surface Impoundment**
SWMU #2	**Less than 180-Day Hazardous Waste Accumulation Area – HWMU**
SWMU #3	**Former 20,000 Gallon UST**
SWMU #4	**Current 10,000 Gallon UST**
SWMU #5	**Laboratory Satellite Accumulation Areas**
SWMU #6	**Parts Washer**
SWMU #7	**Septic Tank Pump Station and Force Main**
SWMU #8	**Dumpsters**

In October 2008, VDOT signed a Facility Lead Agreement (FLA) with EPA Region 3 to conduct corrective actions at the former waste management unit (surface impoundment) identified as SWMU #1. The location of SWMU #1 is shown in the attached Figure 2.

Site Characterization activities began in July 2009 and included soil, groundwater, and membrane interface probe (MIP) borings.

3.1.1 Soil

During the 2009 investigation, there were no Constituents of Concern (COC) detected in soil above residential screening levels. Concentrations of four volatile organic compounds (VOCs): 1,1,1-trichloroethane (1,1,1-TCA), 1,1-dichloroethane (1,1-DCA), 1,1-dichlorethene (1,1-DCE), and benzene were detected at concentrations above the screening levels for protection of groundwater.

A total of 85 soil samples collected in and around SWMU #1 from 2014 to 2017 showed that none of the results for the COCs exceeded any Regional Screening Levels for soil.

Concentrations in groundwater and subsequent MIP evaluations suggest that there are isolated pockets of high VOC concentrations in subsurface clays beneath the water table in and around SWMU#1 that are serving as a continuous source of migration of contaminants to groundwater.

3.1.2 Groundwater

Installation of temporary and permanent groundwater monitoring wells in initial investigations revealed a groundwater plume originating from the unit had migrated offsite. Besides the four compounds mentioned above, the following COCs were also detected in groundwater above the EPA Maximum Contaminant Level (MCL) promulgated for drinking water or risk-based screening level for tapwater (RSL) where no MCL is available: carbon tetrachloride, 1,2-dichloroethane, 1,4-dioxane, 1,1,2-trichloroethane, tetrachloroethene, trichloroethene and vinyl chloride.

During the June to December 2011 time-period, additional assessment activities were conducted to evaluate the presence of free product immediately beneath the former unit. The detected constituents appeared to be related to industrial solvents released from the onsite former waste management unit. Additional monitoring and extraction wells were installed to facilitate the recovery.

The primary migration pathway for dissolved VOCs is via groundwater flow. Groundwater at the site flows predominantly to the west-southwest. The mapped direction of groundwater flow conforms well to the distribution of VOCs in groundwater. VOCs have been detected in groundwater nearly 400 feet downgradient of SWMU #1. Based on groundwater contours, the plume appears to be relatively narrowly confined beneath and along the perimeter of Technology Boulevard. The groundwater impacts appear to be limited to shallow groundwater.

3.1.3 Surface Water

In January 2019, two surface water samples were collected from intermittent drainage areas onsite. One sample collected near an inlet of a storm drain pipe running underneath Technology Boulevard contained detected concentrations of two VOCs (1,1,1-TCA and 1,1-DCA) slightly above the laboratory reporting limit. There are no published criteria for aquatic and human health in surface waters in Virginia Administration Code 9VAC25-260-140 for these constituents. The water in this area was stagnant at the time of sampling and it was concluded that the surface water pathway is incomplete for site-related COCs.

3.2 Interim Measure Studies and Technology Evaluations

Interim Measures (IM) remediation efforts were initially focused on groundwater impacts in two discrete hydrogeologic units beneath the unit 1) the upper artificial aquifer horizon and 2) the underlying natural water table aquifer. The IM testing confirmed free-phase or DNAPL was trapped beneath the unit in the porous sub-liner materials. The facility conducted free product recovery followed by extraction of impacted groundwater and vapors using dual phase extraction. Subsequently, both in-situ and ex-situ chemical oxidation technologies were implemented. Further aquifer testing was also conducted on the deeper horizon. It was determined there were no known human or environmental downgradient receptors, though further work remained in assessing all potential risks and technologies.

In 2012, IM remediation efforts continued to principally focus on mass removal within the sub-liner area using dual phase extraction. Both in-situ and ex-situ chemical oxidation technologies as well as additional enhancement efforts using surfactants were implemented within the sub-horizon per the approved IM Plan.

In 2014, VDOT completed additional IM activities which included excavation of 352 tons of solvent impacted soil from a hot spot within the SWMU, removal of additional contaminant mass (vapor phase) through dual phase extraction, and pumped an additional 120,000 gallons of impacted groundwater. From 2014 to 2019, VDOT has conducted post-removal groundwater monitoring.

The results indicate that although in-situ and removal actions have collectively lowered or stabilized groundwater VOC levels, some rebound of pre-removal concentrations has been observed, particularly in the source area. Some transient VOC concentration spikes have also been observed at the distal end of the plume. Overall distribution and trends in VOC concentrations appear to reflect an emerging pattern of overall stability. While seasonal fluctuations between wet and dry periods affect near-term concentrations, the longer term trends suggest that the source area within the unit as well as the immediate down-gradient plume are approaching post-removal equilibrium and that any further reduction in levels of key constituents below MCLs within a reasonable timeframe will require further intervention.

An evaluation of Monitored Natural Attenuation (MNA) revealed that natural attenuation is occurring at the site although apparently at a higher rate in the source area than in the downgradient plume. Natural attenuation consists not only of biological and chemical processes such as reductive dechlorination, but also includes physical processes such as dilution and dispersion. Where natural attenuation is occurring, the VOC plume appears to be in equilibrium with contaminant mass flux from the SWMU and is therefore

stable. Simple screening-level fate-and-transport modeling using BIOCHLOR suggests that natural attenuation alone is not capable of achieving groundwater quality standards (MCLs or RSLs) off-site within a reasonable 30-year timeframe. Conceptual fate-and-transport modeling suggests that remedial endpoints could be achieved off-site within 30 years only after a substantial source reduction (95 to 99%) is obtained. Therefore, additional aggressive remediation is proposed.

3.3 Groundwater and Current Environmental Conditions

The results of the 2019 IM suggest that VOCs in groundwater on and offsite remain above risk-based levels and maximum contaminant levels (MCLs). Recent cleanup efforts have focused on removing free product and high concentration residuals from the waste unit subliner horizon. Impacts in the underlying water table aquifer extend from 10 to 25 feet below grade. A plume of impacted groundwater extends down-gradient from the unit off-site towards the southwest for a distance of at least 330 feet. The offsite area above this impacted groundwater is occupied by a four-lane public roadway and right of way with no occupied buildings. There is no indication the constituents have moved into deeper aquifers including that from which VDOT withdraws water for selective non-potable testing at its lab facilities. No off-site groundwater supplies appear threatened. The nearest residence is 2,000 feet up gradient and the nearest down gradient residence is 4,200 feet away. The following table shows maximum concentrations of COCs detected in groundwater monitoring wells located onsite and offsite in January 2019.

Table 2: COCs Detected Above Maximum Contaminant Level (MCLs)

Constituent	MCL (µg/L)	Jan. 2019 Maximum Concentration Onsite (µg/L)	Jan. 2019 Maximum Concentration Offsite (µg/L)
Benzene	5.0	199	8.24
Carbon Tetrachloride	5.0	20.7	<MCL
1,1-Dichloroethane (1,1-DCA)	2.8*	1,280	46.6
1,2-Dichloroethane (1,2-DCA)	5.0	11	<MCL
1,1-Dichloroethene (1,1-DCE)	7.0	12,400	786
1,4-Dioxane	0.46*	75.6	39.5
1,1,1-Trichloroethane (1,1,1-TCA)	200.0	51,100	358
1,1,2-Trichloroethane (1,1,2-TCA)	5.0	7.29	<MCL
Tetrachloroethene	5.0	60.7	<MCL
Trichloroethylene (TCE)	5.0	172	10.7
Vinyl Chloride	2.0	4.13	<MCL

NA – Not Available

*EPA Tapwater Regional Screening Level (RSL) as constituent does not have a MCL

4.0 CORRECTIVE ACTION OBJECTIVES

4.1 Soil

Although concentrations in soil samples collected to date are below risk-based screening levels, detected concentrations in groundwater suggest that elevated concentrations of VOCs remain in subsurface soils. DEQ has determined that targeted excavation to eliminate further migration to groundwater and controlling exposure to hazardous constituents remaining in place by requiring compliance with and maintenance of engineering and institutional controls is protective of human health and the environment. The controls will limit the Facility to non-residential uses and require compliance with a Materials Management Plan approved by DEQ. The requirement for land use restrictions will be imposed by a Uniform Environmental Covenants Act (UECA) covenant.

4.2 Groundwater

DEQ has determined that the Corrective Action Objectives for Facility groundwater are: 1) to restore the groundwater to drinking water standards, namely Maximum Contaminant Levels (MCLs) or Tap-Water Regional Screening Levels (RSLs) for constituents that do not have an MCL for COCs listed in the table below; 2) until such time as drinking water is restored, to control exposure to the hazardous constituents remaining in the groundwater by requiring implementation of institutional controls restricting groundwater use; and 3) to require the use of vapor mitigation in or beneath any newly constructed totally enclosed structures designed for occupation within 100 feet of the footprint of the contaminated groundwater plume, unless it is demonstrated to DEQ that vapor mitigation is not necessary to protect human health. The requirement for land use restrictions will be imposed by a Uniform Environmental Covenants Act (UECA) covenant.

Table 3: Remedial Cleanup Goals

Contaminant of Concern	Remedial Goal (ug/L)	Basis
Benzene	5	MCL
Carbon Tetrachloride	5	MCL
1,1-Dichloroethane (1,1-DCA)	2.8*	Tap Water RSL
1,2-Dichloroethane (1,2-DCA)	5.0	MCL
1,1-Dichloroethene (1,1-DCE)	7.0	MCL
1,4-Dioxane	0.46*	Tap Water RSL
1,1,1-Trichlorothane (1,1,1-TCA)	200.0	MCL
1,1,2-Trichlorothane (1,1,2-TCA)	5.0	MCL
Tetrachloroethene	5.0	MCL
Trichloroethylene (TCE)	5.0	MCL
Vinyl Chloride	2.0	MCL

ug/L = micrograms per liter

*The Facility may elect to establish site-specific risk-based concentrations in accordance with established procedures, and utilize the site-specific risk-based concentrations as the remedial goal upon approval by DEQ for constituents where no MCL is available.

Contaminated groundwater has migrated offsite. Public water is supplied to the area and it is unlikely that a water supply well would be proposed in the off-site plume area, as most of the plume is beneath Technology Boulevard and adjacent rights of-way and utility easements. DEQ's Corrective Action Objective for offsite exposure is to eliminate potential exposure through notifications made through VDOT's proposed Community Relations Plan.

5.0 SUMMARY OF PROPOSED REMEDY

Under this proposed remedy, DEQ is requiring the following actions which be implemented through negotiation of a Remedy Consent Order (RCO) between VDOT and DEQ. In addition, land use restrictions will be implemented through 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.

5.1 Soil

1) Targeted excavation of a 4,664 square foot remediation area to a depth of 22 to 25 feet below ground surface (bgs) within SWMU#1 (remediation area depicted in attached Figure 3);
2) To ensure that potential exposures to hazardous constituents in soil and groundwater encountered during construction or other intrusive activities are minimized, the Facility shall prepare and adhere to a Materials Management Plan that has been approved by DEQ.
3) Implement land use restrictions described in 5.3.

5.2 Groundwater

The groundwater remedy will be implemented through institutional controls described in Section 5.3 and through compliance with a DEQ-approved Operations and Maintenance Plan which will include:

1) a site-wide long term groundwater monitoring program that will demonstrate long term stability and/or attenuation of site related contaminants in groundwater (monitor until concentrations of hazardous constituents achieve remedial goals or demonstrate a generally stable or decreasing trend);
2) a Community Relations Plan that includes notifications to various Henrico County Departments:
    a. The Facility will submit off-site plume information to the Henrico Health Department to support enforcement of the Private Well Regulations notice. Per Virginia's Private Well Regulations 12VAC 5-630-380, the notice will describe the nature and extent of contaminated groundwater located on and downgradient of the VDOT property. A map will also be provided, and updated every five (5) years. A copy of the notice to the Henrico Health Department and each update will be provided to DEQ.
    b. The Facility will submit a routine notice to other Henrico Departments with roadway/utility responsibilities within the area of the contaminated groundwater plume such as Public Works or Public Utilities that will describe the nature and extent of contaminated groundwater downgradient of VDOT property and be updated every (5) years. A copy of the notice and each update will be provided to DEQ.

5.3 Institutional Controls

The Facility is required to implement and maintain compliance with land use restrictions and institutional controls. Institutional controls will be imposed by a UECA covenant, and include the following:

a. The restricted part of the Property (shown in Figure 4) 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 restricted part of the Property (shown in Figure 4) shall not be used for any purposes except for environmental monitoring and testing, or other use outside the plume as approved by the Agency as long as drinking water standards are exceeded. Any new groundwater wells installed at the Property must be approved by the Agency;

c. Excavation and disturbance into areas of known contaminated soil or groundwater in and around SWMU #1 shall be performed in accordance only with a DEQ approved Materials Management Plan.
d. 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.
e. Vapor intrusion mitigation measures shall be installed in any newly constructed totally enclosed building(s) designed for occupation within 100 feet of the footprint of groundwater having site-related VOCs identified above protective levels, unless it is demonstrated to DEQ that vapor mitigation is not necessary to protect human health. The method of assessment will be based on current DEQ and/or EPA risk assessment guidance. Vapor intrusion mitigation measures may be waived with DEQ approval based upon a demonstration that mitigation measures are not necessary for protection of human health.

Compliance with and effectiveness of the proposed remedies and engineering and institutional controls at the Facility shall be evaluated and included in groundwater monitoring and corrective measures implementation reports. The Facility shall report to the Department whether the engineering and institutional controls are being observed. Additionally VDOT will provide the DEQ and EPA with a metes and bounds survey mapping the extent of land use restrictions within the property boundary.

6.0 EVALUATION OF DEQ'S PROPOSED DECISION

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.

- Protect Human Health and the Environment
- Achieve Media Cleanup Objectives
- Remediating the Source of Releases

Corrective measures alternatives that will treat source material and/or reduce COPC concentrations in groundwater to acceptable levels were evaluated in the CMS dated August 28, 2019. Fate and transport modeling was performed and it was determined that a significant reduction of source strength (on the order of 95-99%) magnitude reduction for some VOCs) is required to attain drinking water standards off-site within 30 years. VDOT evaluated three remediation strategies against the threshold criteria above: targeted excavation, thermal treatment, and soil mixing in/in-situ chemical oxidation.

Due to the apparent residence of source material in clayey soils beneath the water table, the range of corrective measures that could be successful was severely restricted. Targeted excavated was determined to meet all threshold criteria and performs well on the following RCRA balancing criteria as well:

- Long term effectiveness
- Reduction of Toxicity, Mobility, or Volume of the Hazardous Constituents
- Short-Term Effectiveness
- Implementability
- Cost
- Community Acceptance
- Federal Agency Acceptance

Targeted excavation, along with groundwater use restrictions, land use restrictions, and long-term monitoring, is considered a Final proposed remedy for the site.

7.0 IMPLEMENTATION

DEQ proposes to implement the remedy through a Remedy Consent Order negotiated between DEQ and VDOT. Therefore, DEQ does not anticipate any regulatory constraints in implementing its remedy. 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.

8.0 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 October 21, 2013.

9.0 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.

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 Ms. Tara Mason at the address listed below.

Virginia Department of Environmental Quality
1111 East Main St., Suite 1400
P.O. Box 1105
Richmond, VA 23219
Contact: Tara Mason
Phone: (804) 698-4218
Fax: (804) 698-4234
Email: tara.mason@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.

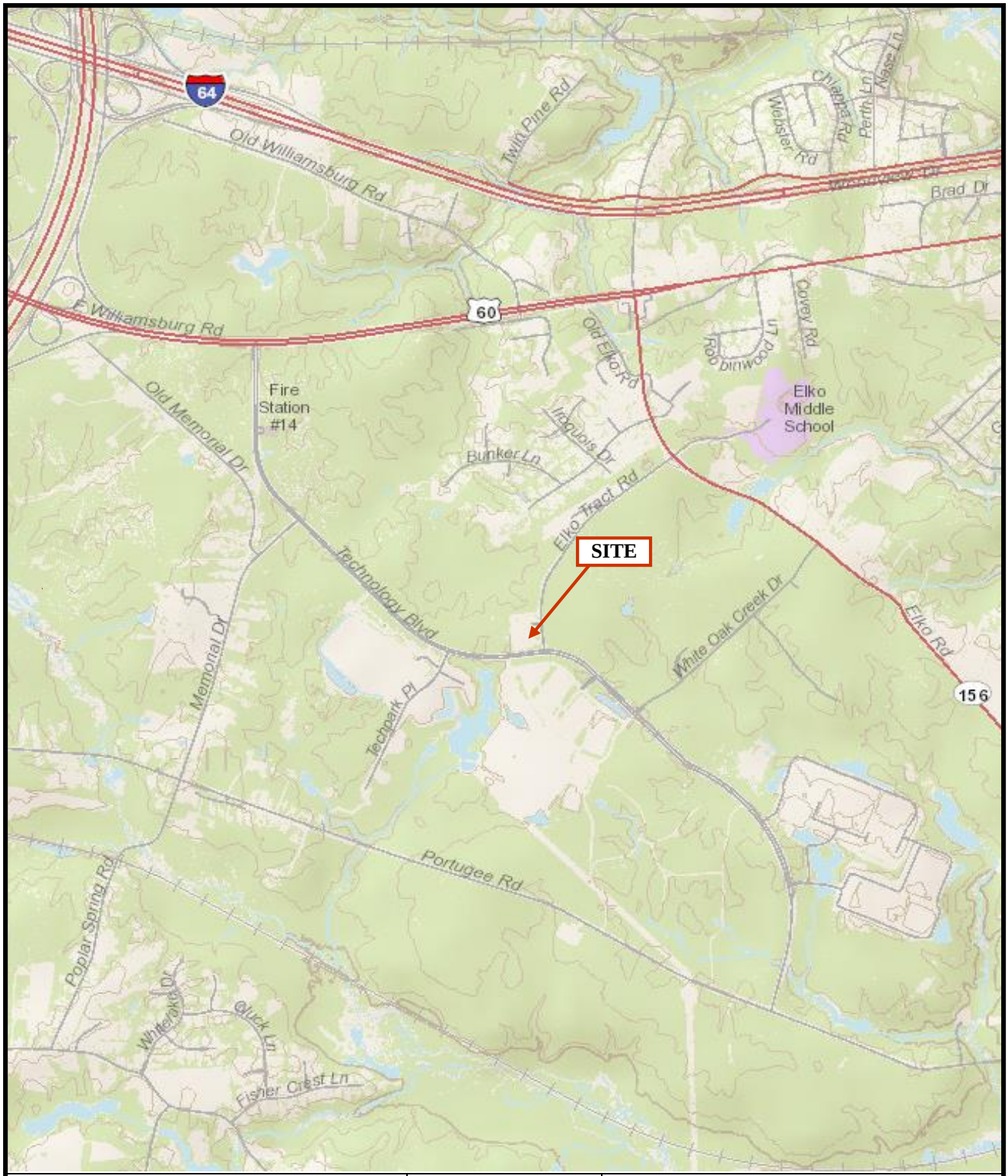
Administrative Record – Index of Documents for Statement of Basis

VDOT Elko Site
EPA ID No. VAD980918189
Sandston, Virginia
Administrative Record
Index of Documents for Statement of Basis – December 2020

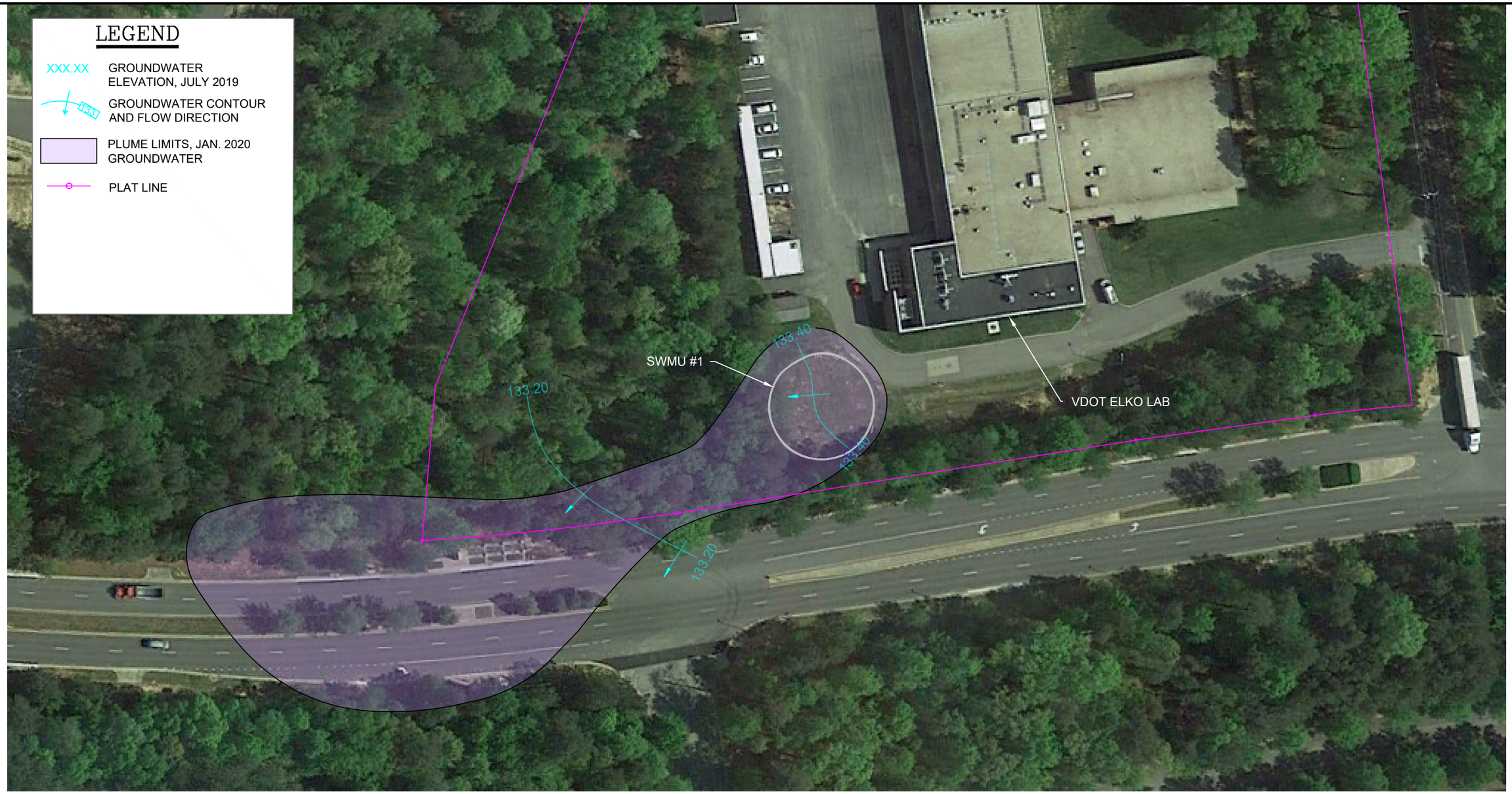
This index includes documents that the Virginia Department of Environmental Quality (DEQ) relied upon to develop and propose the final remedy selection determination described in the Statement of Basis. These documents were prepared for the VDOT Elko facility and are listed chronologically by document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

3) October 28, 2008, Letter of Commitment, Facility Lead Corrective Action Agreement (FLA), Commonwealth of Virginia, Department of Transportation.
4) December 24, 2008, RCRA Site Visit Report FINAL, Virginia Department of Transportation 6200 Elko Tract Road, United States Environmental Protection Agency, Region III Corrective Action Program.
5) April 5, 2010, Phase I Site Characterization Report, Virginia Department of Transportation Elko Materials Laboratory 6200 Elko Tract Road, Marshall Miller & Associates.
6) May 10, 2010, Phase I Site Characterization Addendum, Virginia Department of Transportation Elko Materials Laboratory 6200 Elko Tract Road, Marshall Miller & Associates.
7) June 22, 2012, Interim Action Progress Report, Virginia Department of Transportation Elko Materials Laboratory 6200 Elko Tract Road, Marshall Miller & Associates.
8) July 26, 2012, Sub-liner Horizon Surfactant Washing, Virginia Department of Transportation Elko Materials Laboratory 6200 Elko Tract Road, Marshall Miller & Associates.
9) October 4, 2013, Email Transmitting September 20, 2013 Utility Vault Risk Assessment Update, VDOT-Elko Materials Lab - Cardno MMA.
10) December 21, 2013, Documentation of Environmental Indicator Determination Current Human Health Exposures Under Control, United States Environmental Protection Agency.
11) December 21, 2013, Documentation of Environmental Indicator Determination Migration of Contaminated Groundwater Under Control, United States Environmental Protection Agency.
12) March 24, 2014, Interim Measures Amendment, Virginia Department of Transportation Elko Materials Laboratory 6200 Elko Tract Road, Cardno MMA.
13) April 24, 2014, Interim Measures Revised Amendment, Virginia Department of Transportation Elko Materials Laboratory 6200 Elko Tract Road, Cardno MMA.
14) March 13, 2015, Interim Measure Progress Report, Virginia Department of Transportation, Elko Materials Laboratory, Cardno.
15) March 17, 2015, Interim Measure Progress Report, Virginia Department of Transportation, Elko Materials Laboratory, Cardno.
16) April 18, 2017, Interim Measure Progress Report, Virginia Department of Transportation, Elko Materials Laboratory, Cardno.
17) May 7, 2018, Interim Measure Progress Report, Virginia Department of Transportation, Elko Materials Laboratory, SWMU 01, KCI Technologies.
18) August 25, 2019, Interim Measures Progress Report and Corrective Measures Study, Elko Materials Laboratory, SWMU 01, 6200 Elko Tract Road, Sandston VA, KCI.

FIGURES



Elko Materials Laboratory 6000 Elko Tract Road Henrico County, Virginia	NORTH NTS (Site boundaries are approximate.)	**Figure 1** Site Location Map



NOTES:
1. AERIAL MAP GENERATED BY GOOGLE EARTH FROM MARCH 10, 2020.
2. PLUME DEFINED BY RESULTS EXCEEDING EPA MAXIMUM CONTAMINANT LEVELS (MCL) OR (IF NO MCL EXISTS) THE EPA REGIONAL SCREENING LEVELS (RSL).

0 1 2
75 0 75
SCALE: 1" = 75'

-N-

DATE: APRIL 2020	VDOT ELKO MATERIALS LABORATORY PLUME LIMITS > MCLs/RSLs	FIGURE 2
SCALE: AS SHOWN		
DRAWN BY:		
CHECKED BY:		

Apr 15, 2020 - 1:56pm User: michelle.wolfe
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NOTES:
1. AERIAL MAP GENERATED BY GOOGLE EARTH FROM MARCH 10, 2020.
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0 1 2
25 0 25
SCALE: 1" = 25'

DATE: APRIL 2020	VDOT ELKO MATERIALS LABORATORY PROPOSED REMEDIATION EXCAVATION	FIGURE 3
SCALE: AS SHOWN		
DRAWN BY:		
CHECKED BY:		

Apr 15, 2020 - 1:37pm User: michelle.wolfe
M:\2015\12159091.C43\Drawings\Statement of Basis Figure - SMALLER SCALE.dwg

LEGEND

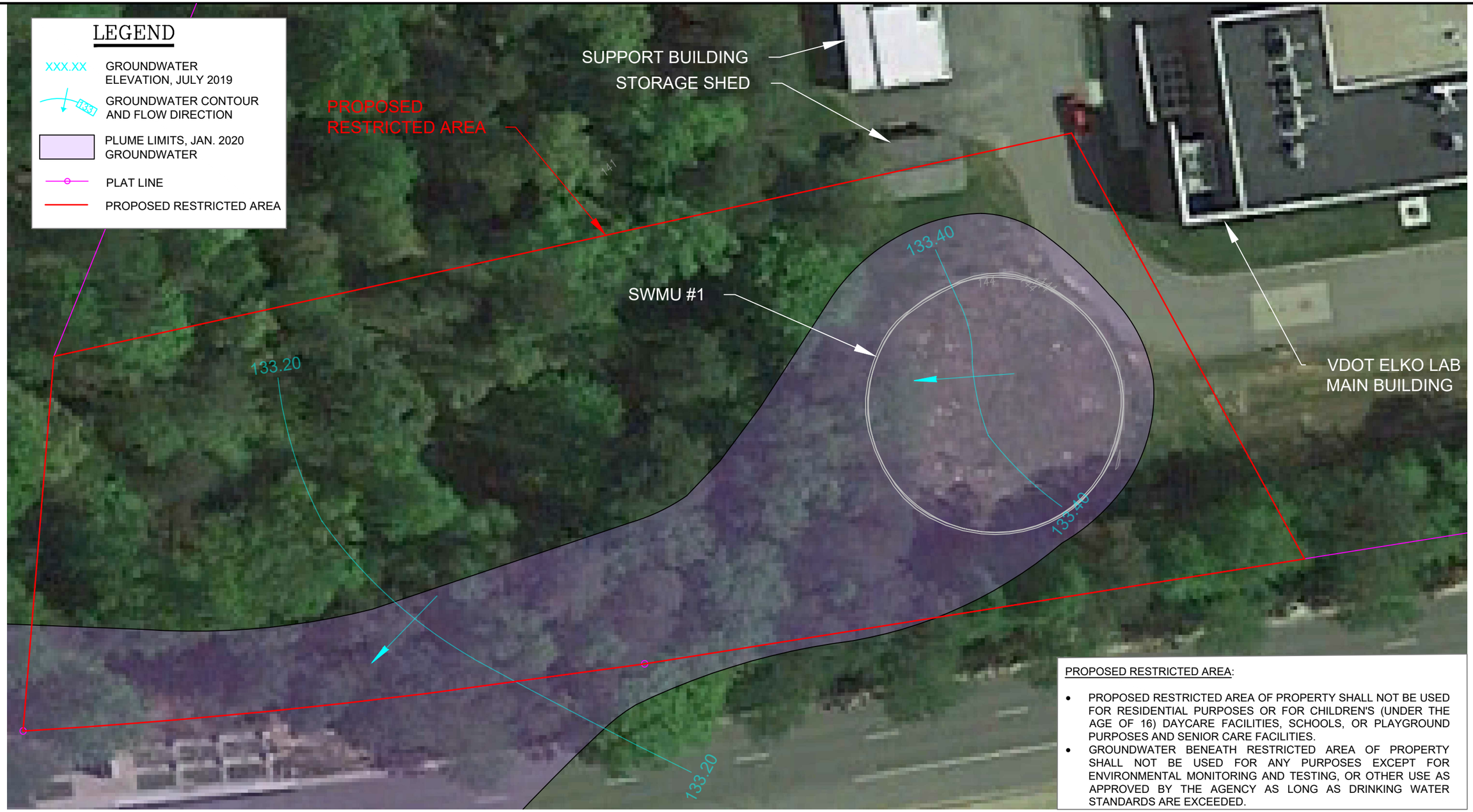
XXX.XX — GROUNDWATER ELEVATION, JULY 2019

133 — GROUNDWATER CONTOUR AND FLOW DIRECTION

PLUME LIMITS, JAN. 2020 GROUNDWATER

PLAT LINE

PROPOSED RESTRICTED AREA



PROPOSED RESTRICTED AREA:

- PROPOSED RESTRICTED AREA OF 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.
- GROUNDWATER BENEATH RESTRICTED AREA OF PROPERTY SHALL NOT BE USED FOR ANY PURPOSES EXCEPT FOR ENVIRONMENTAL MONITORING AND TESTING, OR OTHER USE AS APPROVED BY THE AGENCY AS LONG AS DRINKING WATER STANDARDS ARE EXCEEDED.

N

NOTES:
1. AERIAL MAP GENERATED BY GOOGLE EARTH FROM MARCH 10, 2020.
2. PLUME DEFINED BY RESULTS EXCEEDING EPA MAXIMUM CONTAMINANT LEVELS (MCL) OR (IF NO MCL EXISTS) THE EPA REGIONAL SCREENING LEVELS (RSL).

0 1 2
30 0 30
SCALE: 1" = 30'

DATE: APRIL 2020	VDOT ELKO MATERIALS LABORATORY PROPOSED RESTRICTED AREA	FIGURE 4
SCALE: AS SHOWN		
DRAWN BY:		
CHECKED BY:		

Apr 20, 2020 – 3:53pm User: michelle.wolfe
M:\2015\12159091.C43\Drawings\Statement of Basis Figure 4.dwg