Commonwealth of Virginia

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Director
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March 31, 2022

Mr. Michael Liberati
Corteva Environmental Remediation
974 Centre Road, Building 735
Wilmington, DE 19805

VIA ELECTONIC MAIL

Re: North Park Technical Execution Plan
Floodplain Excavation Addendum
Former DuPont Waynesboro Site AOC 4
Waynesboro, Virginia
EPA ID# VAD003114832

Dear Mr. Liberati:

This letter acknowledges the receipt and review of the *North Park Technical Execution Plan Floodplain Excavation Addendum* dated December 2020, submitted to the Virginia Department of Environmental Quality, Office of Remediation Programs (VDEQ) by AECOM on behalf of Corteva Agriscience. The addendum addresses changes that were made to satisfy the City of Waynesboro's desire to preserve two large trees in the area of excavation. Verbal approval of the addendum was granted verbally January 2021 and this letter confirms that verbal approval.

If you have any questions, you may contact me at 540-209-3663 or by email at William.jordan@deq.virginia.gov.

Sincerely,

W. Calvin Jordan
Corrective Action Project Manager
Office of Remediation Programs

cc: DuPont Waynesboro Correspondence File
Josh Collins, AECOM
Graham Simmerman, VRO VDEQ
Jacqueline Morrison, US EPA

North Park Technical Execution Plan Floodplain Excavation Addendum

Former DuPont Waynesboro Site
Area of Concern (AOC) 4
Waynesboro, Virginia

Submitted on behalf of:
E.I. DuPont de Nemours and Company, a wholly-owned subsidiary of Corteva Agriscience™

Submitted by:
AECOM
625 West Ridge Pike
Suite E-100
Conshohocken, PA 19428

Project Number: 60594242
Date: December 2020

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1.0 Introduction

AECOM has prepared this Addendum to the North Park Bank Management Areas (BMAs) -Technical Execution Plan (TEP; AECOM 2020) on behalf of E.I. DuPont de Nemours and Company, a wholly-owned subsidiary of Corteva Agriscience (Corteva) to present the rationale and technical implementation details for a focused floodplain soil excavation within North Park in the City of Waynesboro, Virginia. Previous investigations documented the presence of localized elevated mercury (Hg) concentrations in floodplain soils at North Park (URS, 2014). The Human Health Risk Assessment for Area of Concern 4 (AOC 4) identified potentially complete exposure pathways and Hazard Indices that exceeded site-specific screening criteria for floodplain park area users in North Park (URS, 2014); these areas were recommended for further evaluation during the Corrective Measures Study (CMS). Additional floodplain soil investigations were conducted concurrently with the design and implementation of the North Park BMA remedial actions so as to conduct any additional remedial actions within the park in a single mobilization to minimize disruption within the park.

1.1 TEP Scope

This section summarizes the scope of this TEP on a section-by-section basis. Section 1.2 of this TEP describes the purpose and objectives of the Addendum to the North Park BMA TEP.

Section 2.0 summarizes the pre-design sampling activities (Section 2.1) and data analysis (Section 2.2) conducted to support the proposed floodplain excavation at North Park.

Section 3.0 summarizes the results and data evaluation for the floodplain soils.

Section 4.0 describes the remedial action being implemented, including site preparation and erosion control (Section 4.1), clearing and grubbing (Section 4.2) remedial measures (Section 4.3), and waste management (Section 4.4).

Section 5.0 lists the references cited in this plan.

Appendix A contains the construction drawings. Appendix B contains the relevant analytical data.

1.2 Purpose and Objectives

The purpose of this TEP is to describe the approach for implementing remedial actions to reduce potential exposure to elevated Hg concentrations in floodplain soil. The objectives of the Phase 1 interim measures are as follows:

- Reduce exposure to surficial soils with elevated Hg concentrations through removal and disposal of surficial (0-6”) soils within the footprint of the excavation.
- Establish institutional controls to reduce the likelihood of exposure to elevated Hg concentrations in soils left in place.

2.0 Pre-Design Soil Sampling Laboratory Analysis

2.1 Pre-design Soil Sampling

Pre-design soil sampling was conducted at targeted locations to better characterize the extent of total mercury (THg) in floodplain soils within North Park as described in the North Park Bank Management Areas 2019 Pre-design Investigation – Soil Sampling Plan (AECOM, 2019). Sample locations were selected to further refine the vertical and horizontal extent of elevated Hg concentrations identified in previous investigations (URS, 2014), and to close data gaps along the top of bank berm. Step-out delineation sampling was conducted over several mobilizations between March 2019 and March 2020. A total of 125 locations were sampled as part of the pre-design sampling efforts.

2.2 Sample Collection

Soil boring locations were located in the field using a global positioning system (GPS) capable of sub-meter accuracy (i.e., Trimble Geo xH 6000). Consistent with previous floodplain soil sampling conducted in AOC 4, vertical sampling was performed from the surface to a depth of 2.5 feet in 6-inch intervals (i.e., 0-0.5, 0.5-1.0, 1.0-1.5, 1.5-2.0, and 2.0-2.5-feet), at each location. Stones and other debris greater than 2” were removed. A minimum of 500 grams (g) of soil was collected from each 6-inch depth interval. Samples were stored in uniquely labeled, one-liter, plastic containers, and packed and shipped to the laboratory on wet ice for further processing and analysis. Laboratory Procedures

2.3 Sample Preparation and Analysis

Following sample collection and shipment, soil samples were prepared for analysis at the Eurofins/Lancaster Labs. Surficial soil samples (i.e. 0 to 0.5-feet interval) were analyzed as discrete soil intervals. Soils from the 0.5-2.5 feet intervals were homogenized using the cone and quartering methods as per laboratory standard operating procedures.

After homogenization, samples were analyzed for THg using EPA Method SW 846 7471A and moisture content (Method SM20 2540G-1997) was determined for the 0-0.5 feet interval, and for a composite from the 0.5-2.5-feet; with each sample interval sample having equal weight contribution to the composite.

3.0 Results and Data Evaluation

Floodplain soil data were evaluated using the approved Surficial Soils Evaluation Framework (AECOM, 2018). Samples within the North Park floodplain were grouped into three human health exposure sub-areas as shown in Figure 1. Exposure point concentrations (EPC; 95% UCL_{Mean}) were calculated for each exposure sub-area using ProUCL 5.1. Representative EPCs were compared to the approved, site-specific screening values in the Surficial Soils Evaluation Framework (See Table 1; AECOM, 2018). Appendix B provides complete analytical data included in the calculation of exposure point concentrations.

Soil THg concentrations within the floodplain exposure sub-areas being evaluated ranged from 0.04 mg/kg to 291mg/kg; Table 2 provides summary statistics and EPC for each sub-area. Representative EPCs within the Northern Perimeter (67.27 mg/kg) and Playground (8.32 mg/kg) sub-areas were below the site-specific Floodplain Park Area User screening level (73 mg/kg); the Southern Perimeter EPC (107.7 mg/kg) exceeded the screening level. The Floodplain Park Area screening level of 73 mg/kg is protective of child (0 to 6 years old) and adult recreational users that spend 84 days per year for 26 years at the park coming into direct contact (i.e., incidental ingestion, dermal contact, and inhalation of windblown dust) with the floodplain soil.

A floodplain soil excavation was proposed to the City of Waynesboro (landowner) to address elevated THg concentrations in soil within the Southern Perimeter. The proposed soil excavation included excavation and disposal of THg impacted soil to a depth of 2.5 feet below the ground surface as shown in Figure 2. The proposed excavation would have resulted in a post-excavation EPC of 25.2 mg/kg. The City of Waynesboro rejected the proposed soil excavation plan in favor of a plan that would preserve mature trees within the footprint of the proposed excavation. At the City's request, a revised excavation was designed which included the excavation of impacted soil to a depth of 0.5 feet, outside of a tree protection buffer (Figure 2). No excavation activities were performed within the tree protection buffer with the exception of an isolated area that was removed using an air knife to address a THg concentration greater than 200 mg/kg in the 0-0.5 feet interval at location NP-117. The City of Waynesboro plans to allow the area within the tree protection buffer to become vegetated with taller vegetation and/or wildflowers to discourage park users from recreating (i.e., coming into direct contact with soil) within the non-excavated area. Updated EPC concentrations for the revised South Perimeter excavation area were calculated for the surficial (0-0.5 feet; 16.79 mg/kg) and deep (0.5-2.5 feet; 181.6 mg/kg). Institutional controls limiting excavation activities within the Southern Perimeter excavation area will be included with the Uniform Environmental Covenants Act (UECA) for North Park, which will also include the Bank Management Areas.

4.0 Remedial Action

The following sections describe the remedial actions to address elevated THg concentrations in floodplain soil within the Southern Perimeter sub-area. Design Specifications referenced are included in the North Park BMA TEP (AECOM; 2020) and are not included in this document.

4.1 Clearing and Grubbing

Following site preparation activities and installation of temporary erosion and sediment controls, clearing and grubbing of ground cover and select shrubs and trees within the work area was conducted. Larger, healthy trees that provide habitat and scenic value within the park were protected by the Contractor during construction to the extent possible. Trees that were preserved are identified on Drawing C-101. Additional details on selective clearing and grubbing are provided in Specification Section 31 12 00 – Selective Clearing.

All debris generated during clearing and grubbing operations was disposed of in accordance with AECOM's Waste Management Plan, and in accordance with Specification Section 02 60 00 – Contaminated Site Material Removal.

Two large trees located within the floodplain protection zone were protected by establishing a tree protection zone, where no vehicles or excavation is allowed (with the exception of a spot excavation using soft dig methods) within a 30' buffer around the trees, and a tree root advisory zone extending from 30' to 70'/76' where excavation was overseen by an arborist to protect the roots as much as possible.

4.2 Excavation

Mercury impacted soil within the Southern Perimeter excavation area was removed to a depth of 0.5 feet as shown on Drawing C-201 – Excavation Plan. Floodplain soil outside of the tree protection buffer was mechanically excavated. As the excavation approached the edge of the tree protection buffer, all excavation activities were conducted under the direction of a certified arborist who directed the contractor to stop mechanical excavation if critical root structures were encountered. Isolated hot-spot removal within the tree protection buffer was performed with hand tools and/or an air knife under direct supervision of the certified arborist. Excavated soil was loaded directly into dump trucks and hauled directly to the disposal facility.

Excavated materials were pre-characterized prior to disposal. Refer to Section 4.4 for additional details on waste management procedures. Post-excavation samples were not collected as existing composite soil sample data collected during the pre-design investigation are available.

4.2.1 Backfilling

A demarcation layer (e.g. snow fence or similar) was placed on the surface of the excavation area as part of the institutional controls for the site. Following placement of the demarcation layer, planting substrate was placed to blend with the existing grade throughout the excavation area. Additional details on backfill and topsoil material are provided in Specification Section 31 23 00 – Earthwork and Fill.

Backfill was placed using mechanical methods. Additional details on backfill and planting substrate material are provided in Specification Section 31 23 00 - Earthwork and Fill.

Common borrow materials were imported from the Former DuPont Jones Hollow Property located on Delphine Avenue in Waynesboro. For planting substrate material, the Jones Hollow Property material was amended so that the composition is an appropriate substrate for planned plant species. Additional details on backfill and topsoil material are provided in Specification Section 31 23 00 – Earthwork.

4.3 Restoration

After backfilling, surfaces were restored with turf grass and wildflower seed mixes as specified by the City of Waynesboro to provide the desired vegetative cover within the park. Native seed and/or turf grass was hand-broadcasted over exposed topsoil. Additional details on seeding and replanting are provided on Drawing C-501 – Restoration Plan and Drawing D-301 – Planting Details and in Specification Section 32 90 00 – Planting and Habitat Restoration.

4.4 Waste Management

The Southern Perimeter soil excavation was conducted in accordance with the *Site-Wide Waste Management Plan for Interim Measures Design and Implementation* (AECOM, 2019). Pre-characterization of soil to be excavated was conducted in accordance with the Waste Management Plan and Specification Section 02 60 00 – Contaminated Site Material Removal.

5.0 References

AECOM 2020. *100% Technical Execution Plan – North Park Bank Management Areas.* February 2020

AECOM 2019. *North Park Bank Management Areas 2019 Pre-Design Investigation – Soil Sampling Plan.* March 2019.

AECOM. 2019. *Site-Wide Waste Management Plan for Interim Measures Design and Implementation. South River Area of Concern 4 – Phase 1 Interim Measures*. Revised: October 2019.

URS. 2014. Human Health Risk Assessment Report. Former DuPont Waynesboro Site - Area of Concern 4, Waynesboro, Virginia. September 2014.

Tables

Table 1
Human Health Screening Levels for Mercury in Floodplain Soil
North Park Technical Execution Plan - Floodplain Excavation Addendum
Former DuPont Waynesboro Site AOC-4
Waynesboro, Virginia

Current/Future Potential Land Use	Receptor	Media	Screening Level (mg THg/kg)	Source	Exposure Frequency
Residential	Resident (Adult/Child)	Floodplain Soil	17	VADEQ Screening Level for HHRA	350 days/year
Hay/Pasture	Farmer (Adult/Child)	Floodplain Soil	17	VADEQ Screening Level for HHRA	350 days/year
Park	Floodplain Area Park User (Adult/Child)	Floodplain Soil	73	*Site-Specific*	84 days/year
-	South River (Adult/Child)	Bank Soil	108	*Site-Specific*	48 days/year
-	South River Hunter (Angler)	Bank Soil	820	*Site-Specific*	28 days/yr
Forested	Floodplain Area Hunter	Floodplain Soil	2300	*Site-Specific*	28 days/yr

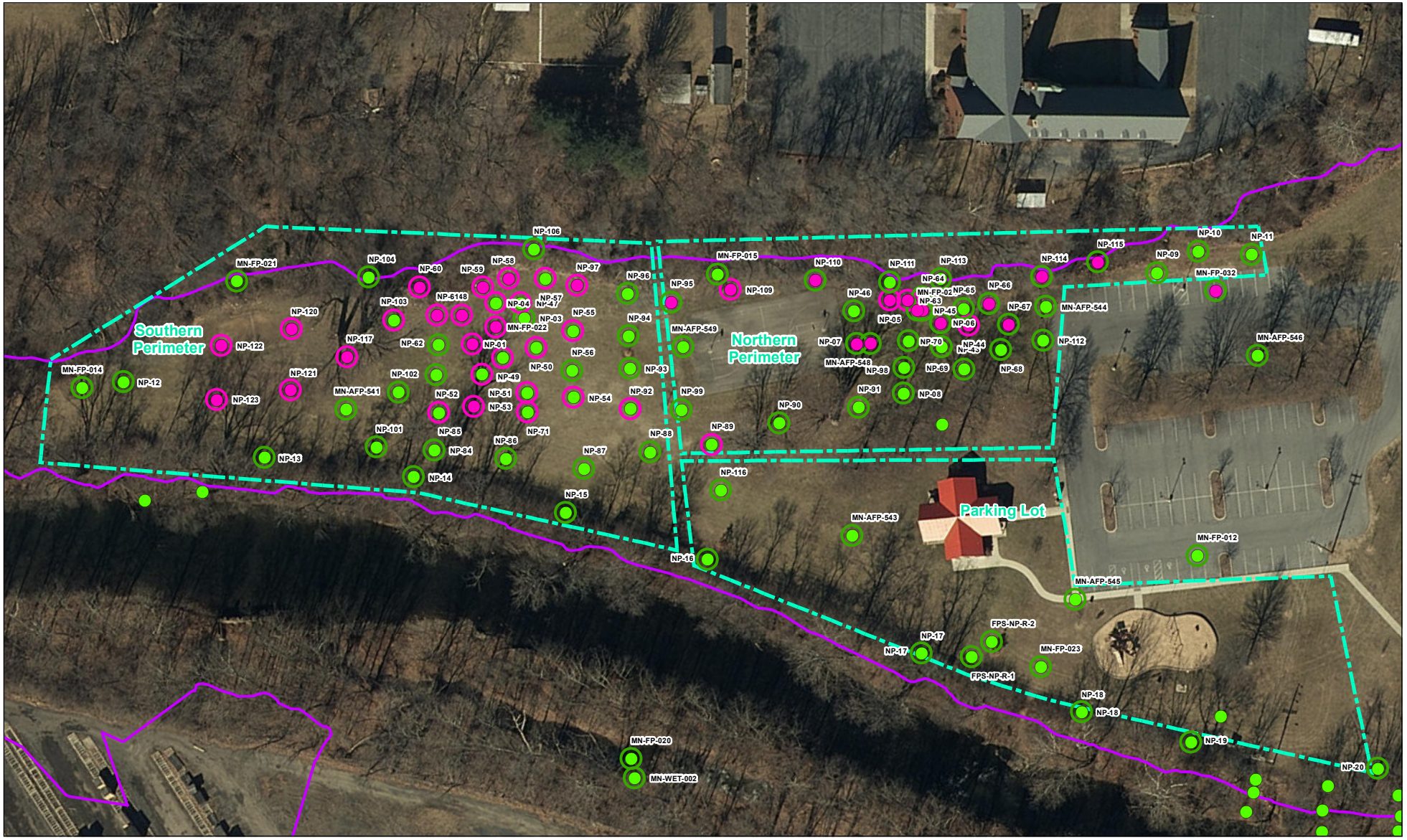
Notes:
THg - Total mercury, assumes mercury is present as mercuric chloride
MeHg is not a COPC for human health
Site-specific exposure assumptions and pathways (ingestion, dermal, inhalation) consistent with those used in the HHRA
Screening value based on a hazard quotient (HQ) of 1
mg THg/kg - milligrams of total mercury per kilogram soil

Table 2
Total Mercury Concentrations in Soil
North Park Technical Execution Plan - Floodplain Excavation Addendum
Former DuPont Waynesboro Site AOC-4
Waynesboro, Virginia

Pre-Existing Conditions[1]					
Sub-Area	**Number of Samples**	**THg Max (mg/kg)**	**THg UCL (mg/kg)**	**Floodplain Park Area User Screening Level (mg/kg)**	**UCL Notes**
Southern Perimeter	98	291	**107.7**	73	95% Chebyshev (Mean, Sd) UCL
Northern Perimeter	83	216	67.27	73	95% Approximate Gamma UCL
Playground	18	22.4	8.324	73	95% Adjusted Gamma UCL
Initial Proposed Post-Excavation Conditions[2]					
Sub-Area	**Number of Samples**	**THg Max (mg/kg)**	**THg UCL (mg/kg)**	**Floodplain Park Area User Screening Level (mg/kg)**	**UCL Notes**
Southern Perimeter	45	81	25.2	73	95% Chebyshev (Mean, Sd) UCL
Revised Surficial Soil Excavation - Existing Conditions[3]					
Sub-Area	**Number of Samples**	**THg Max (mg/kg)**	**THg UCL (mg/kg)**	**Floodplain Park Area User Screening Level (mg/kg)**	**UCL Notes**
Southern Perimeter Surficial (0'-0.5')	49	241	65.77	73	95% Adjusted Gamma UCL
Southern Perimierter Deep (0.5'-2.5')	49	291	**181.6**	73	95% Chebyshev (Mean, Sd) UCL
Revised Surficial Soil Excavation - Post-Excavation Conditions[3]					
Sub-Area	**Number of Samples**	**THg Max (mg/kg)**	**THg UCL (mg/kg)**	**Floodplain Park Area User Screening Level (mg/kg)**	**UCL Notes**
Southern Perimeter Surficial (0'-0.5')	23	59.6	16.79	73	95% Adjusted Gamma UCL
Southern Perimierter Deep (0.5'-2.5')	49	291	**181.6**	73	95% Chebyshev (Mean, Sd) UCL

Notes:
1 - Existing conditions
2 - Initial proposed 2-foot deep excavation
3 - Revised surficial soil excavation (0'-0.5')
THg - Total Mercury
mg/kg - milligram per kilogram
UCL - Upper Confidence Level

Figures

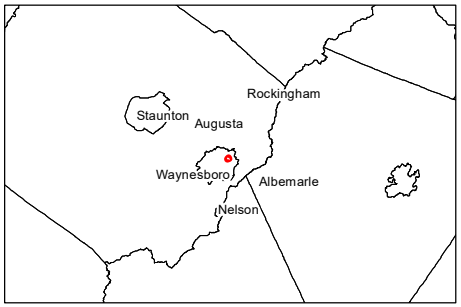


Legend

- Surficial (0'-0.5') - THg < 73 mg/kg
- Surficial (0'-0.5') - THg > 73 mg/kg
- Deep (0.5'-2.5') - THg < 73 mg/kg
- Deep (0.5'-2.5') - THg > 73 mg/kg
- Revised Human Health Sub-Areas
- 62-Year Floodplain

Reference:
NAD 1983 StatePlane Virginia North
Projection: Transverse Mercator
Linear Unit: Foot US

0 50 100 200 Feet



AECOM

Figure 1
Total Mercury Concentrations in Soil
North Park TEP - Floodplain Excavation Addendum

Former DuPont Waynesboro Site
Waynesboro, Virginia

Prepared by: CDW/BSF	Checked by: JC
Job: 60594242	Date: 12/21/2020

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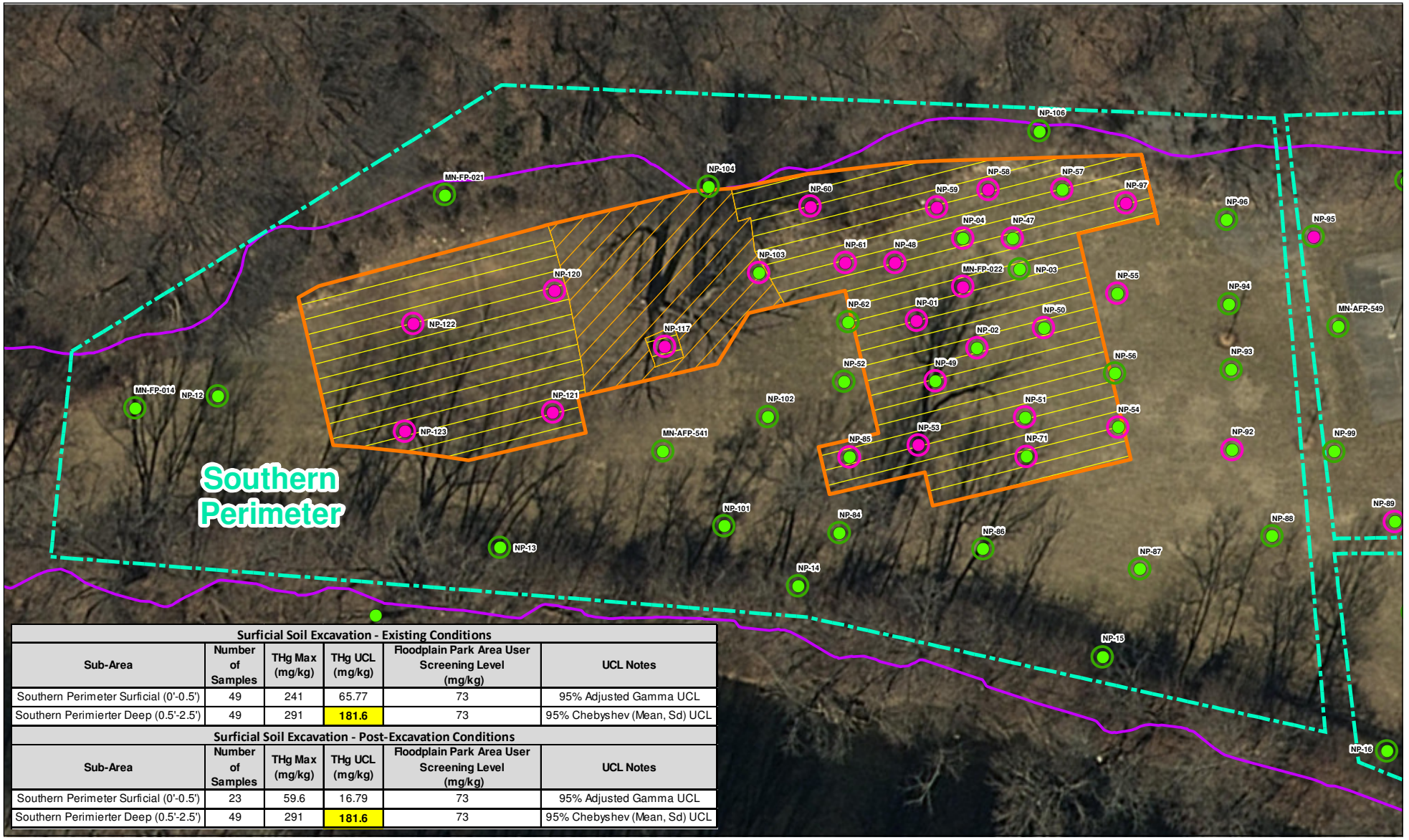

Surficial Soil Excavation - Existing Conditions

Sub-Area	Number of Samples	THg Max (mg/kg)	THg UCL (mg/kg)	Floodplain Park Area User Screening Level (mg/kg)	UCL Notes
Southern Perimeter Surficial (0'-0.5')	49	241	65.77	73	95% Adjusted Gamma UCL
Southern Perimierter Deep (0.5'-2.5')	49	291	**181.6**	73	95% Chebyshev (Mean, Sd) UCL

Surficial Soil Excavation - Post-Excavation Conditions

Sub-Area	Number of Samples	THg Max (mg/kg)	THg UCL (mg/kg)	Floodplain Park Area User Screening Level (mg/kg)	UCL Notes
Southern Perimeter Surficial (0'-0.5')	23	59.6	16.79	73	95% Adjusted Gamma UCL
Southern Perimierter Deep (0.5'-2.5')	49	291	**181.6**	73	95% Chebyshev (Mean, Sd) UCL

Legend

- Surficial (0'-0.5') - THg < 73 mg/kg
- Surficial (0'-0.5') - THg > 73 mg/kg
- Deep (0.5'-2.5') - THg < 73 mg/kg
- Deep (0.5'-2.5') - THg > 73 mg/kg
- Floodplain Land Use Restriction Area
- Tree Preservation Area (No Excavation)
- Surficial Soil Excavation (0-0.5')
- Revised Human Health Sub-Areas
- 62-Year Floodplain

Reference:
NAD 1983 StatePlane Virginia North
Projection: Transverse Mercator
Linear Unit: Foot US

0 25 50 100 Feet

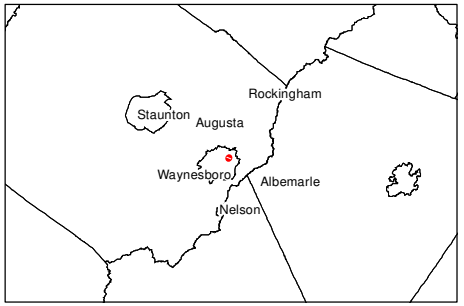

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Figure 2
Southern Perimeter Floodplain Soil Excavation
North Park TEP - Floodplain Excavation Addendum

Former DuPont Waynesboro Site
Waynesboro, Virginia

Prepared by: CDW/BSF	Checked by: JC
Job: 60594242	Date: 12/21/2020

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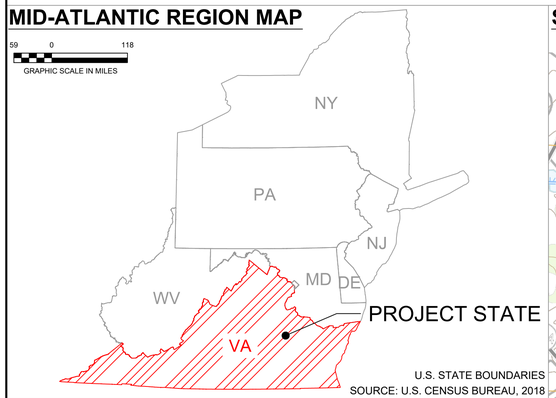
Appendices

Appendix A – Design Drawings

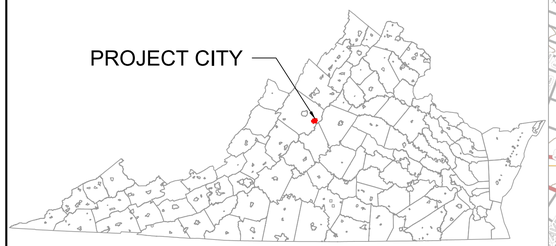
NORTH PARK BMAS
SOUTH RIVER, LEFT BANK,
RRMS 0.86 TO 1.05 AND 1.15 TO 1.27
AREA OF CONCERN 4 - INTERIM REMEDIAL MEASURES
FORMER DUPONT WAYNESBORO SITE
WAYNESBORO, VIRGINIA
100% DESIGN - ISSUED FOR CONSTRUCTION DRAWING SET

MID-ATLANTIC REGION MAP



U.S. STATE BOUNDARIES
SOURCE: U.S. CENSUS BUREAU, 2018

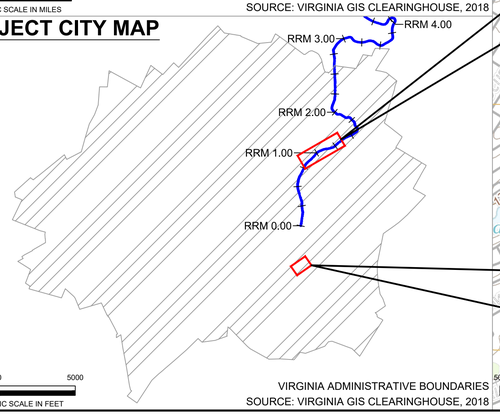
PROJECT STATE MAP



33 0 66
GRAPHIC SCALE IN MILES

VIRGINIA ADMINISTRATIVE BOUNDARIES
SOURCE: VIRGINIA GIS CLEARINGHOUSE, 2018

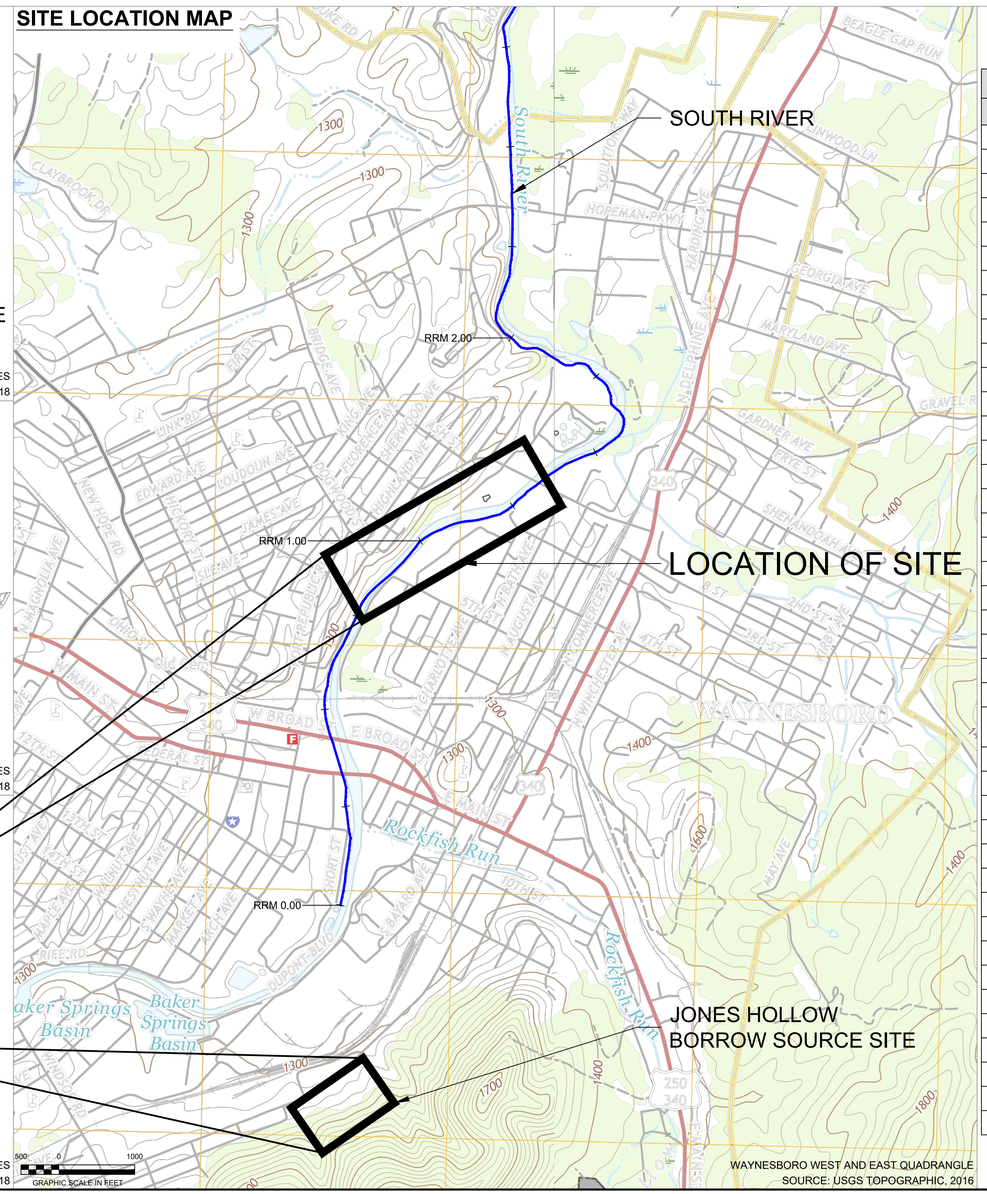
PROJECT CITY MAP



2500 0 5000
GRAPHIC SCALE IN FEET

VIRGINIA ADMINISTRATIVE BOUNDARIES
SOURCE: VIRGINIA GIS CLEARINGHOUSE, 2018

SITE LOCATION MAP



500 0 1000
GRAPHIC SCALE IN FEET

WAYNESBORO WEST AND EAST QUADRANGLE
SOURCE: USGS TOPOGRAPHIC, 2016

DRAWING INDEX

SHEET	SHEET TITLE	REV	DATE
T-101	TITLE SHEET	1	08-11-2020
G-101	LEGEND, KEY, AND GENERAL NOTES	0	02-20-2020
V-101	EXISTING SITE LAYOUT	0	02-20-2020
V-102	EXISTING CONDITIONS PLAN	0	02-20-2020
V-103	EXISTING CONDITIONS PLAN	0	02-20-2020
C-101	SITE PREP AND EROSION CONTROL PLAN	1	08-11-2020
C-102	SITE PREP AND EROSION CONTROL PLAN	0	02-20-2020
C-201	EXCAVATION PLAN	1	08-11-2020
C-202	EXCAVATION PLAN	0	02-20-2020
C-301	FINAL GRADING PLAN	0	02-20-2020
C-302	FINAL GRADING PLAN	0	02-20-2020
C-401	RESTORATION PLAN	1	08-11-2020
C-402	RESTORATION PLAN	0	02-20-2020
C-501	PLANTING PLAN	0	02-20-2020
C-502	PLANTING PLAN	0	02-20-2020
X-101	UPSTREAM EXCAVATION CROSS SECTIONS	0	02-20-2020
X-102	DOWNSTREAM EXCAVATION AND SUBGRADE GRADING CROSS SECTIONS	0	02-20-2020
X-103	STABILIZATION AND RESTORATION CROSS SECTIONS	0	02-20-2020
X-104	STABILIZATION AND RESTORATION CROSS SECTIONS	0	02-20-2020
X-105	STABILIZATION AND RESTORATION CROSS SECTIONS	0	02-20-2020
D-101	SITE PREP AND EROSION CONTROL DETAILS	0	02-20-2020
D-102	SITE PREP AND EROSION CONTROL DETAILS	0	02-20-2020
D-103	SITE PREP AND EROSION CONTROL DETAILS	0	02-20-2020
D-104	SITE PREP AND EROSION CONTROL NOTES	0	02-20-2020
D-105	SITE PREP AND EROSION CONTROL NOTES	0	02-20-2020
D-201	RESTORATION DETAILS	0	02-20-2020
D-202	RESTORATION DETAILS	0	02-20-2020
D-203	RESTORATION DETAILS	0	02-20-2020
D-301	PLANTING DETAILS	0	02-20-2020

AECOM

PROJECT

NORTH PARK BMAS
SOUTH RIVER, LEFT BANK,
RRMS 0.86 to 1.05 AND 1.15 TO 1.27
AREA OF CONCERN 4 - IRM
FORMER DUPONT WAYNESBORO SITE
WAYNESBORO, VA

CLIENT

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REGISTRATION

COMMONWEALTH OF VIRGINIA
CAMERON C DIXON
Lic. No. 0402058685
08/11/2020
PROFESSIONAL ENGINEER

ISSUE/REVISION

1	08-11-2020	FLOODPLAIN EXCAVATION
0	02-20-2020	100% DESIGN
I/R	DATE	DESCRIPTION

KEY PLAN

PROJECT NUMBER

60594242

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-101

Project Management Initials: Designer:____ Checked:____ Approved:____ ANSI D 22" x 34"

Last saved by: DIXONC (2020-08-11) Last Plotted: ----
Filename: C:\ONEDRIVE\AECOM\DIRECTORY\SOUTH RIVER AOC 4 - DOCUMENTS\GENERAL\900_CAD_GIS\910 CAD\20 SHEETS\IFC\NP\TITLE SHEET.DWG

6 D-101 SAFETY STAND

2 D-101 TEMPORARY CONSTRUCTION FENCE

INSTALL TEMPORARY SIGNAGE TO IDENTIFY CONSTRUCTION SITE AHEAD, PATH CLOSED, AND RESTRICTED ACCESS ONLY.

4 D-101 TEMPORARY CONSTRUCTION ACCESS ROAD

TEMPORARY 6" TRASH PUMP. INTAKE WATER FROM WITHIN COFFERDAM AND DISCHARGE TO WATER FILTER BAG. INSTALL IN A STABLE, UPLAND AREA.

HIGH VISIBILITY SNOW FENCE AROUND OLD FOUNDATION

HIGH VISIBILITY TEMPORARY TRAFFIC BARRIER ALONG BANK EDGE

3 D-101 STRAW WATTLE

3 D-101 STRAW WATTLE

9 D-102 PUMPED WATER FILTER BAG DISCHARGE LOCATION (SEE NOTE 2 ON DRAWING C-102)

USE SECONDARY COFFERDAM SECTION TO DISPERSE CURRENT DURING COFFERDAM INSTALLATION AND REMEDIATION CONSTRUCTION

7 D-102 SANDBAG COFFERDAM MAY BE INSTALLED IN PHASES

8 D-102 TURBIDITY CURTAIN SHALL BE INSTALLED WITH COFFERDAM

SOUTH RIVER FLOW

7 D-102 SANDBAG COFFERDAM MAY BE INSTALLED IN PHASES

8 D-102 TURBIDITY CURTAIN SHALL BE INSTALLED WITH COFFERDAM

UPSTREAM BMA

FLAG EXISTING VOLLEYBALL COURT POSTS WITH VISIBILITY MARKS WITHIN THE LINE OF SIGHT OF EQUIPMENT OPERATORS

1 ADDED FLOODPLAIN SOILS EXCAVATION

TREE PROTECTION ZONE NO VEHICLES OR EXCAVATION

4 D-101 TEMPORARY CONSTRUCTION ACCESS ROAD LEAVE IN PLACE FOR FUTURE GREENWAY

6 D-101 SAFETY STAND

FILL REQUIRED TO CROSS CONSTRUCTION ACCESS ROAD OVER BERM

VOLLEYBALL COURT

TEMPORARY SOIL STOCKPILING AND MATERIAL STAGING AREA

12 D-103 MATERIAL STOCKPILE

REMOVE AND STORE BASKETBALL BACKBOARDS AND POSTS

PROTECT LIGHT POLE WITH HIGH VISIBILITY SNOW FENCE

3 D-101 STRAW WATTLE

ASPHALT BASKETBALL COURT

5 D-101 CATCH BASIN INLET PROTECTION

4 D-101 TEMPORARY CONSTRUCTION ACCESS ROAD TO BE RESTORED AFTER REMEDIATION

3 D-101 STRAW WATTLE

2 D-101 TEMPORARY CONSTRUCTION FENCE

TEMPORARY 6" TRASH PUMP. INTAKE WATER FROM WITHIN COFFERDAM AND DISCHARGE TO WATER FILTER BAG. INSTALL IN A STABLE, UPLAND AREA.

9 D-102 PUMPED WATER FILTER BAG DISCHARGE LOCATION (SEE NOTE 2 ON DRAWING C-102)

SOUTH RIVER FLOW

UPSTREAM BMA

SITE PREPARATION AND EROSION CONTROL NOTES:

1. SEE NOTES ON C-102.

AECOM

PROJECT

NORTH PARK BMAS

SOUTH RIVER, LEFT BANK,
RRMS 0.86 to 1.05 AND 1.15 TO 1.27
AREA OF CONCERN 4 - IRM
FORMER DUPONT WAYNESBORO SITE
WAYNESBORO, VA

CLIENT

CORTEVA AGRISCIENCE
974 CENTRE ROAD
CHESTNUT RUN PLAZA 735
WILMINGTON, DE 19805
www.corteva.com

CONSULTANT

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625 WEST RIDGE PIKE, SUITE E-100
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610.832.3500 tel 610.832.3501 fax
www.aecom.com

20 0 40
GRAPHIC SCALE IN FEET

REGISTRATION

COMMONWEALTH OF VIRGINIA
CAMERON C DIXON
Lic. No. 0402058685
08/11/2020
PROFESSIONAL ENGINEER

ISSUE/REVISION

1	08-11-2020	FLOODPLAIN EXCAVATION
0	02-20-2020	100% DESIGN
I/R	DATE	DESCRIPTION

KEY PLAN

PROJECT NUMBER

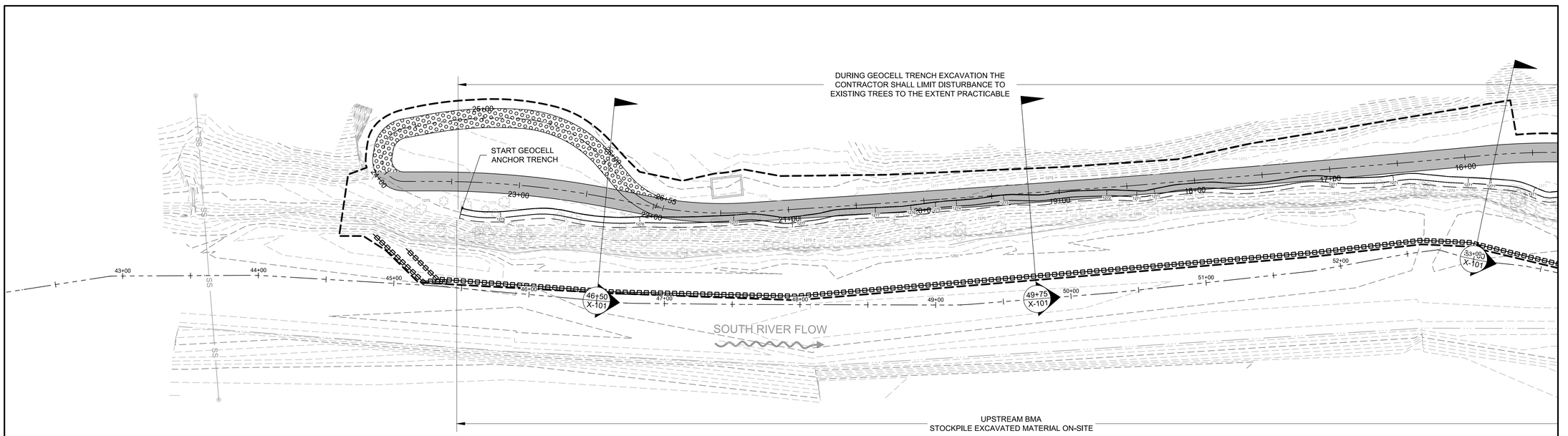
60594242

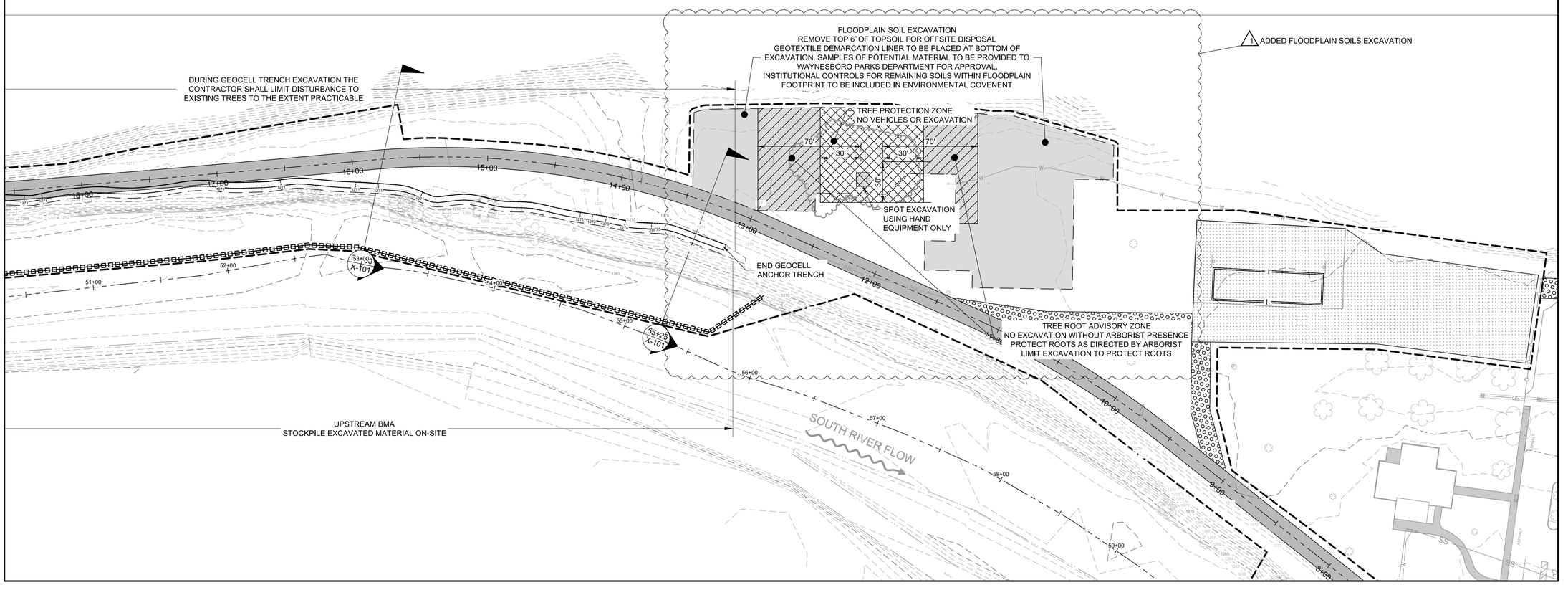
SHEET TITLE

SITE PREPARATION AND EROSION CONTROL PLAN

SHEET NUMBER

C-101





AECOM

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KEY PLAN

PROJECT NUMBER

60594242

SHEET TITLE

EXCAVATION PLAN

SHEET NUMBER

C-201

REMOVE TRUCK TURN AROUND. TOPSOIL AND SEED OVER DISTRUBED AREA

CONSTRUCTION ACCESS ROAD LEFT IN PLACE FOR USE AS FUTURE GREENWAY. ASPHALT PAVING TO BE PERFORMED BY OTHERS

1 D-201 LAUNCHABLE RIPRAP STONE TOE

PLACE AND COMPACT 6" MINIMUM OF DENSE GRADED AGGREGATE OVER DISTURBED PORTIONS OF CONSTRUCTION ACCESS ROAD TO BE LEFT IN PLACE

TO TS PS MU B/M EG

UPSTREAM RIPRAP TRANSITION FROM EXISTING GRADE TO FINAL GRADE - BLEND RIPRAP INTO EXISTING GRADE ON UPSTREAM END

46+50 X-103

49+75 X-103

53+00 X-103

SOUTH RIVER FLOW

CONSTRUCTION ACCESS ROAD LEFT IN PLACE FOR USE AS FUTURE GREENWAY. ASPHALT PAVING TO BE PERFORMED BY OTHERS.

1 D-202 LAUNCHABLE RIPRAP STONE TOE

PS TS TO EG B/M MU

TOPSOIL AND SEED DISTURBED AREAS ADJACENT FUTURE GREENWAY

PLACE AND COMPACT 6" MINIMUM OF DENSE GRADED AGGREGATE OVER DISTURBED PORTIONS OF CONSTRUCTION ACCESS ROAD TO BE LEFT IN PLACE

GEOTEXTILE DEMARCATION LINER TO BE PLACED AT BOTTOM OF EXCAVATION. SAMPLES OF POTENTIAL MATERIAL TO BE PROVIDED TO WAYNESBORO PARKS DEPARTMENT FOR APPROVAL. TOPSOIL AND SEED OVER DISTURBED AREAS CREATED FROM FLOODPLAIN EXCAVATION.

1 ADDED FLOODPLAIN SOILS EXCAVATION RESTORATION

1 REVISED NOTE

RESTORATION ACTIVITIES ASSOCIATED WITH THE STAGING AREA AND BASKETBALL COURT SHALL BE CONDUCTED FOLLOWING COMPLETION OF REMEDIAL CONSTRUCTION.

7 D-202 PAVED ASPHALT SURFACE (PROPOSED BASKETBALL COURT)

TOPSOIL AND MULCH WITHIN BUFFER AROUND THE PROPOSED BASKETBALL COURT

DEMOLISH EXISTING BASKETBALL COURT. REMOVE STAGING AREA MATERIAL. TOPSOIL AND SEED OVER DISTURBED AREAS OUTSIDE OF THE PROPOSED BASKETBALL COURT.

TOPSOIL AND SEED OVER DISTURBED AREAS CREATED FROM TEMPORARY CONSTRUCTION ACCESS ROADS TO AND FROM STAGING AREA

PROPOSED BASKETBALL COURT 56' X 100' MIN PAVEMENT AREA

CONTRACTOR WILL STRIP A MINIMUM OF 3" OF GRASS/TOPSOIL PRIOR TO COMPACTING SUBGRADE FOR BASKETBALL COURT PAVEMENT. SUBGRADE MATERIAL WHICH CANNOT BE COMPACTED WILL BE REMOVED AND REPLACED WITH DENSE GRADE AGGREGATE. BUFFER AREA WILL BE GRADED SMOOTH WITH TOP OF ASPHALT AND SURROUNDING EXISTING GRADE. BASKETBALL COURT PAVING TO BE INSTALLED BY CONTRACTOR. STRIPING AND POST/HOOP INSTALLATION TO BE PERFORMED BY THE CITY

1 REVISED NOTE

10 D-203 BOULDER CLUSTER (3)

TRANSITION GRADING FROM FINAL GRADE TO EXISTING GRADE

SOUTH RIVER FLOW

55+25 X-103

58+75 X-104

GRAPHIC SCALE IN FEET 20 0 40

AECOM

PROJECT

NORTH PARK BMAS

SOUTH RIVER, LEFT BANK,
RRMS 0.86 to 1.05 AND 1.15 TO 1.27
AREA OF CONCERN 4 - IRM
FORMER DUPONT WAYNESBORO SITE
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PROFESSIONAL ENGINEER

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I/R	DATE	DESCRIPTION
1	08-11-2020	FLOODPLAIN EXCAVATION
0	02-20-2020	100% DESIGN

KEY PLAN

PROJECT NUMBER

60594242

SHEET TITLE

RESTORATION PLAN

SHEET NUMBER

C-401

Appendix B – Analytical Data

Appendix B
Analytical Data
North Park Technical Execution Plan - Floodplain Excavation Addendum
Former DuPont Waynesboro Site AOC-4
Waynesboro, Virginia

Sample ID	THg (mg/kg)
Parking Lot	
WSR-S-FPS-NP-R-1(0-0.5)	0.80
WSR-S-FPS-NP-R-2(0-0.5)	22.4
WSR-S-FPS-NP-R-3(0-0.5)	13.4
WSR-S-MN-FP-23(0.0-0.5)	1.33
WSR-S-MN-AFP-543(0.0-0.5)	5.95
WSR-S-MN-AFP-545(0.0-0.5)	0.29
WSR-S-FPS-NP-R-1(1-1.5)	0.40
WSR-S-FPS-NP-R-2(1-1.5)	5.90
WSR-S-MN-FP-23-COMP	2.71
WSR-S-MN-AFP-543-COMP	14.1
WSR-S-MN-AFP-545-COMP	0.04
SS0319-NP-16-(0.0-0.5)	0.37
SS0319-NP-17-(0.0-0.5)	0.62
SS0319-NP-17-(0.0-0.5)-D	1.44
SC0319-NP-16-COMP	0.22
SC0319-NP-17-COMP	1.36
SC0919-NP-116-COMP	0.80
SS0919-NP-116-(0.0-0.5)	1.76
Northern Perimeter	
SS0319-NP-05-(0.0-0.5)	119
SS0319-NP-06-(0.0-0.5)	145
SS0319-NP-07-(0.0-0.5)	92.8
SS0319-NP-08-(0.0-0.5)	0.06
SS0319-NP-09-(0.0-0.5)	40.3
SS0319-NP-10-(0.0-0.5)	36.2
SS0819-NP-109-(0.0-0.5)	216
SS0319-NP-11-(0.0-0.5)	11.8
SS0819-NP-110-(0.0-0.5)	151
SS0819-NP-111-(0.0-0.5)	44.6
SS0819-NP-112-(0.0-0.5)	3.87
SS0819-NP-113-(0.0-0.5)	72.8
SS0819-NP-114-(0.0-0.5)	118
SS0619-NP-43-(0.0-0.5)	34.1
SS0619-NP-44-(0.0-0.5)	207
SS0619-NP-45-(0.0-0.5)	159
SS0619-NP-46-(0.0-0.5)	56.5
SS0819-NP-63-(0.0-0.5)	189
SS0819-NP-64-(0.0-0.5)	135
SS0819-NP-65-(0.0-0.5)	39.4
SS0819-NP-66-(0.0-0.5)	105
SS0819-NP-67-(0.0-0.5)	162
SS0819-NP-68-(0.0-0.5)	0.86
SS0819-NP-69-(0.0-0.5)	0.68
SS0819-NP-70-(0.0-0.5)	64.4
SS0819-NP-89-(0.0-0.5)	25.4
SS0819-NP-90-(0.0-0.5)	21.1
SS0819-NP-91-(0.0-0.5)	13.7
SS0819-NP-95-(0.0-0.5)	88
SS0819-NP-98-(0.0-0.5)	0.44
SS0819-NP-99-(0.0-0.5)	4.52
WSR-S-MN-FP-15(0.0-0.5)	3.01
WSR-S-MN-FP-24(0.0-0.5)	185
WSR-S-MN-AFP-542(0.0-0.5)	19.7
WSR-S-MN-AFP-544(0.0-0.5)	46.6
WSR-S-MN-AFP-548(0.0-0.5)	82.2
WSR-S-MN-AFP-549(0.0-0.5)	12.4
SC0319-NP-05-COMP	87.9
SC0319-NP-06-COMP	46.5
SC0319-NP-07-COMP	20.2
SC0319-NP-08-COMP	0.31
SC0319-NP-09-COMP	8.37
SC0319-NP-10-COMP	11.6
SC0819-NP-109-COMP	141
SC0319-NP-11-COMP	5.78
SC0819-NP-110-COMP	40.4
SC0819-NP-111-COMP	38.3
SC0819-NP-112-COMP	12.1
SC0819-NP-113-COMP	49.2
SC0819-NP-114-COMP	73
SC0619-NP-43-COMP	11.8
SC0619-NP-44-COMP	114
SC0619-NP-45-COMP	30.3
SC0619-NP-46-COMP	28.4
SC0819-NP-63-COMP	153
SC0819-NP-64-COMP	61.3
SC0819-NP-65-COMP	14.4
SC0819-NP-66-COMP	41.7
SC0819-NP-67-COMP	67.5
SC0819-NP-68-COMP	1.99
SC0819-NP-69-COMP	3.94
SC0819-NP-70-COMP	11.8
SC0819-NP-89-COMP	94.6
SC0819-NP-90-COMP	9.83
SC0819-NP-91-COMP	2.84
SC0819-NP-95-COMP	51.1
SC0819-NP-98-COMP	2.6
SC0819-NP-99-COMP	30.3
WSR-S-MN-FP-15-COMP	11.7
WSR-S-MN-FP-24-COMP	21.3
WSR-S-MN-AFP-544-COMP	10.7
WSR-S-MN-AFP-548-COMP	17.5
WSR-S-MN-AFP-549-COMP	63.1
SS0919-NP-115-(0.0-0.5)	76.9
SC0919-NP-115-COMP	38.5
SC0320-BB-01-COMP	50.3
SS0320-BB-01-(0.0-0.5)	6.11
SS0320-BB-02-(0.0-0.5)	0.0445
SS0320-BB-02-COMP	0.714
SS0320-BB-03-(0.0-0.5)	83
SS0320-BB-03-COMP	36.8
SS0320-BB-04-(0.0-0.5)	8.79
SS0320-BB-04-COMP	1.05

Appendix B
Analytical Data
North Park Technical Execution Plan - Floodplain Excavation Addendum
Former DuPont Waynesboro Site AOC-4
Waynesboro, Virginia

Sample ID	THg (mg/kg)
Southern Perimeter	
WSR-S-MN-AFP-541(0.0-0.5)	5.12
WSR-S-MN-AFP-541-COMP	1.17
WSR-S-MN-FP-14(0.0-0.5)	0.57
WSR-S-MN-FP-14-COMP	0.32
WSR-S-MN-FP-21(0.0-0.5)	1.33
WSR-S-MN-FP-21-COMP	0.18
WSR-S-MN-FP-22-COMP	282
WSR-S-MN-FP-22(0.0-0.5)	85.7
SC0319-NP-01-COMP	89.4
SS0319-NP-01-(0.0-0.5)	89.3
SC0319-NP-02-COMP	231
SS0319-NP-02-(0.0-0.5)	58.9
SC0319-NP-03-COMP	30.0
SS0319-NP-03-(0.0-0.5)	20.6
SC0319-NP-04-COMP	143
SS0319-NP-04-(0.0-0.5)	64.5
SS0819-NP-101-(0.0-0.5)	10.0
SC0819-NP-101-COMP	4.35
SS0819-NP-102-(0.0-0.5)	3.08
SC0819-NP-102-COMP	1.08
SC0819-NP-103-COMP	108
SS0819-NP-103-(0.0-0.5)	59.6
SS0819-NP-104-(0.0-0.5)	36.1
SC0819-NP-104-COMP	6.12
SS0819-NP-106-(0.0-0.5)	17.5
SC0819-NP-106-COMP	6.18
SC0919-NP-117-COMP	233
SS0919-NP-117-(0.0-0.5)	204
SS0319-NP-12-(0.0-0.5)	2.10
SC0319-NP-12-COMP	0.96
SC1119-NP-120-COMP	258
SS1119-NP-120-(0.0-0.5)	85.8
SC1119-NP-121-COMP	96.7
SS1119-NP-121-(0.0-0.5)	96.1
SC1119-NP-122-COMP	291
SS1119-NP-122-(0.0-0.5)	94.3
SC1119-NP-123-COMP	156
SS1119-NP-123-(0.0-0.5)	79.8
SS0319-NP-13-(0.0-0.5)	0.80
SC0319-NP-13-COMP	0.33
SS0319-NP-14-(0.0-0.5)	1.47
SC0319-NP-14-COMP	0.23
SS0319-NP-15-(0.0-0.5)	0.79
SC0319-NP-15-COMP	0.26
SC0619-NP-47-COMP	143
SS0619-NP-47-(0.0-0.5)	25.90
SC0619-NP-48-COMP	234
SS0619-NP-48-(0.0-0.5)	174
SC0619-NP-49-COMP	162
SS0619-NP-49-(0.0-0.5)	57.1
SC0619-NP-50-COMP	209
SS0619-NP-50-(0.0-0.5)	12.80
SC0619-NP-51-COMP	288
SS0619-NP-51-(0.0-0.5)	11.5
SC0819-NP-52-COMP	2.98
SS0819-NP-52-(0.0-0.5)	1.95
SC0819-NP-53-COMP	96.2
SS0819-NP-53-(0.0-0.5)	79.5
SC0819-NP-54-COMP	96.1
SS0819-NP-54-(0.0-0.5)	9.01
SC0819-NP-55-COMP	77.6
SS0819-NP-55-(0.0-0.5)	10.9
SC0819-NP-56-COMP	71.0
SS0819-NP-56-(0.0-0.5)	5.87
SC0819-NP-57-COMP	101
SS0819-NP-57-(0.0-0.5)	73.0
SC0819-NP-58-COMP	180.0
SS0819-NP-58-(0.0-0.5)	95.5
SC0819-NP-59-COMP	206
SS0819-NP-59-(0.0-0.5)	103
SS0819-NP-60-(0.0-0.5)	241
SC0819-NP-60-COMP	238
SC0819-NP-61-COMP	144
SS0819-NP-61-(0.0-0.5)	121
SS0819-NP-62-(0.0-0.5)	7.6
SC0819-NP-62-COMP	2.81
SC0819-NP-71-COMP	134
SS0819-NP-71-(0.0-0.5)	9.11
SS0819-NP-84-(0.0-0.5)	7.14
SC0819-NP-84-COMP	2.71
SC0819-NP-85-COMP	91.1
SS0819-NP-85-(0.0-0.5)	48.4
SC0819-NP-86-COMP	7.09
SS0819-NP-86-(0.0-0.5)	6.97
SS0819-NP-87-(0.0-0.5)	5.87
SC0819-NP-87-COMP	4.57
SC0819-NP-88-COMP	31.0
SS0819-NP-88-(0.0-0.5)	18.8
SC0819-NP-92-COMP	81.0
SS0819-NP-92-(0.0-0.5)	11.5
SS0819-NP-93-(0.0-0.5)	8.95
SC0819-NP-93-COMP	7.45
SC0819-NP-94-COMP	33.60
SS0819-NP-94-(0.0-0.5)	0.21
SC0819-NP-96-COMP	38.7
SS0819-NP-96-(0.0-0.5)	15.8
SC0819-NP-97-COMP	150
SS0819-NP-97-(0.0-0.5)	102