

DOE/Thomas Jefferson National

Accelerator Facility

**THE
DOE/JEFFERSON LAB
STORMWATER POLLUTION PREVENTION PLAN
FOR THE APPLICABLE PROJECTS
UNDERWAY OR STARTING AFTER JUNE 30, 2009**

May 2009

U.S. Department of Energy's



**THE DOE/JEFFERSON LAB
STORM WATER POLLUTION PREVENTION PLAN
FOR THE APPLICABLE PROJECTS TO BE UNDERWAY OR STARTING AFTER
JUNE 30, 2009**

ISSUANCE AND APPROVAL

The DOE/Jefferson Lab Storm Water Pollution Prevention Plan (May 2009), is effective upon approval and issuance.


Submitted by:



Linda Even,
EMS Committee Chair

5/28/09

Date




Debra Brand,
Facilities Environmental Engineer

5/27/09

Date

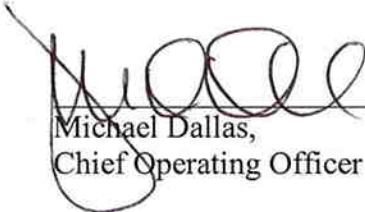
Approved by the following:



Hugh Montgomery,
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Date



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Date



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John R. Sprouse,
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27 May 09

Date

Certifications by the Director of Jefferson Lab and the Thomas Jefferson Site Office Manager are included in Section 6.0.

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KEY SWPPP TERMS

DCR – Virginia Department of Conservation and Recreation
VSMP – Virginia Storm Water Management Program
VPDES – Virginia Pollutant Discharge Elimination System
E&SC – Erosion and Sediment Control
RLD – Responsible Land Disturber
CN – Curve Number
SOTR – Subcontracting Officer's Technical Representative
SWPPP – Storm Water Pollution Prevention Plan

Document History:

Revision:	Reason for revision or update:	Superseded document
0	Initial Issue dated 12/17/2003	N/A
0.1	Update dated 2/6/2004	Rev. 0
1.0	Update to address General Permit DCR01 June, 2007	Rev. 0.1
2.0	Update to address General Permit VAR10, to be effective July 1, 2009	Revision 1.0 remains active until June 30, 2009

This Plan has been prepared in support of the DOE/Jefferson Lab VSMP General Permit No. VAR10, General Permit for Discharges of Storm Water from Construction Activities. This working draft will be updated as the details for each project are incorporated into the respective appendices in accordance with the specifications outlined in Section II C of VSMP General Permit No. VAR10.

THE DOE/JEFFERSON LAB STORM WATER POLLUTION PREVENTION PLAN FOR THE APPLICABLE PROJECTS TO BE UNDERWAY OR STARTING AFTER JUNE 30, 2009

This Storm Water Pollution Prevention Plan (SWPPP), prepared in accordance with VSMP General Permit No. VAR10, covers the projects identified in the 10-Year Site Plan (2007 or later) and others scheduled to be constructed in 2009 or beyond that fall under VAR10 applicability. These projects include: (1) the Hall D Complex, (2) Central Material Storage Area/South Connector Road, (3) Experimental Staging Facility (Design/Build), (4) TEDF (Technology and Engineering Development Facility), and (5) Site Road and Parking Improvements.

Note: It is possible that additional projects affecting one or more acres and various smaller projects could become applicable under VAR10. If this occurs, this plan will be updated accordingly, and may just include adding the appropriate appendix to this Plan.

SWPPP OVERVIEW

1.0 Preparation and Compliance

Thomas Jefferson National Accelerator Facility (TJNAF or Jefferson Lab) and the Department of Energy (DOE) will comply with the terms and schedule of this Plan on the initiation of any construction activity associated with the Hall D Complex project already underway or other identified project that will have begun after June 30, 2009.

This Plan has been prepared in support of the DOE/Jefferson Lab VSMP General Permit No. VAR10 General Permit for Discharges of Storm Water from Construction Activities. This working draft will be updated as the details for each project are incorporated as appendices, in accordance with the specifications outlined in Section II C of the Permit.

2.0 Signature Responsibility

Certification of this revised Plan by the DOE Thomas Jefferson Site Manager and the Jefferson Lab Director is included in Section 6.0. Upon completion and certification of this updated Plan, which will continue to serve as a working draft, notice of such is to be provided to the Virginia Department of Conservation and Recreation (DCR) who will issue coverage under the new General Permit VAR10 –

http://www.dcr.virginia.gov/soil_and_water/documents/vsmpgenpermvar10.pdf

*[Upon issuance, the Jefferson Lab permit will be found on
http://www.jlab.org/div_dept/dir_off/oa/secure/permits.html.]*

3.0 Project Documentation

3.1 Hall D Complex

- 3.1.1 DOE/EA-1534, “Environmental Assessment Proposed Upgrade and Operation of the CEBAF and FEL Accelerators and Construction and Use of Buildings Associated with the 2005 Ten-Year Site Plan at the Thomas Jefferson National Accelerator Facility, Newport News, VA, January 2007
- 3.1.2 DOE/EA-1534, Finding of No Significant Impact (FONSI), January 2007

3.2 Central Material Storage Area/South Connector Road

- 3.2.1 DOE/EA-0257, “Environmental Assessment Continuous Electron Beam Accelerator Facility, January 1987
- 3.2.2 DOE/EA-0257, FONSI, January 1987
- 3.2.3 DOE/EA-1384, “Environmental Assessment Proposed Improvements at the Thomas Jefferson National Accelerator Facility, Newport News, Virginia, June 2002
- 3.2.4 DOE/EA-1384, FONSI, July 2002
- 3.2.5 DOE/EA-1534, “Environmental Assessment Proposed Upgrade and Operation of the CEBAF and FEL Accelerators and Construction and Use of Buildings Associated with the 2005 Ten-Year Site Plan at the Thomas Jefferson National Accelerator Facility, Newport News, VA January 2007
- 3.2.6 DOE/EA-1534, FONSI, January 2007

3.3 Experimental Staging Facility

- 3.3.1 DOE/EA-0257, “Environmental Assessment Continuous Electron Beam Accelerator Facility, January 1987
- 3.3.2 DOE/EA-0257, FONSI, January 1987
- 3.3.3 DOE/EA-1384, “Environmental Assessment Proposed Improvements at the Thomas Jefferson National Accelerator Facility, Newport News, Virginia, June 2002
- 3.3.4 DOE/EA-1384, FONSI, July 2002

- 3.3.5 DOE/EA-1534, "Environmental Assessment Proposed Upgrade and Operation of the CEBAF and FEL Accelerators and Construction and Use of Buildings Associated with the 2005 Ten-Year Site Plan at the Thomas Jefferson National Accelerator Facility, Newport News, VA January 2007
 - 3.3.6 DOE/EA-1534, FONSI, January 2007
- 3.4 Technology and Engineering Development Facility (TEDF)
- 3.4.1 NEPA Analysis (Being Prepared) shows coverage under DOE/EA-0257, DOE/EA-1384, and DOE EA-1534.
 - 3.4.2 No new FONSI necessary.
- 3.5 Site Road and Parking Improvements
- 3.5.1 DOE/EA-1384, "Environmental Assessment Proposed Improvements at the Thomas Jefferson National Accelerator Facility, Newport News, Virginia, June 2002
 - 3.5.2 DOE/EA-1384, FONSI, July 2002
 - 3.5.3 DOE/EA-1534, "Environmental Assessment Proposed Upgrade and Operation of the CEBAF and FEL Accelerators and Construction and Use of Buildings Associated with the 2005 Ten-Year Site Plan at the Thomas Jefferson National Accelerator Facility, Newport News, VA January 2007
 - 3.5.4 DOE/EA-1534, FONSI, January 2007
- 3.6 All Projects
- 3.6.1 Virginia Storm Water Management Program (VSMP) General Permit Registration Statement was submitted in 2007 upon approval of Revision 1.0 of this Plan.
 - 3.6.2 Permit No. DCR01, VSMP General Permit, effective July 1, 2004 to June 30, 2009. (Effective with submission of the registration statement in 3.6.1.)
 - 3.6.3 VSMP General Permit Registration Statement to be submitted in 2009 upon approval of Revision 2.0 of this Plan.
 - 3.6.4 VSMP General Permit No. VAR10, effective July 1, 2009 through June 30, 2014. (Effective with submission of the registration statement in 3.6.3)
 - 3.6.5 Correspondence from the U.S. Army Corps of Engineers dated July 3, 2003 verifying that there were no wetlands at any of the sites included in this SWPPP. The TEDF project is near a wetland, but will not affect it.
 - 3.6.6 REMSA, Inc., "Wetland Delineation and Threatened and Endangered Species Survey", August 2001.
 - 3.6.7 Jefferson Lab ES&H Manual Chapter 6710-T3, Storm Water Management Program and associated appendices serve as the site Municipal Separate

Storm Sewer System (MS4) Program. The program includes the soil erosion and sediment control (E&SC) procedures valid during construction activities. These E&SC procedures currently included in the Jefferson Lab ES&H Manual will hereinafter be referred to as the Procedure.

- 3.6.8 Reference to the Virginia Erosion and Sediment Control Handbook in the Procedure.
- 3.6.9 Jefferson Lab Spill Prevention, Control, and Countermeasure Plan, August 2004. [Being reviewed, to be updated in 2009.]

4.0 The Jefferson Lab Site

Jefferson Lab is located in central Newport News, Virginia. This institution performs physics research for the DOE and is situated in the city's Jefferson Center for Research and Technology.

The DOE portion of the Jefferson Lab site of about 170 acres is located in the middle of a highly developed commercial/industrial area. Newport News is bounded on the east by York County and the city of Hampton, on the north by James City County and the city of Williamsburg; and, on the south by the Hampton Roads waterway.

Jefferson Avenue serves as the west site boundary. The city's ARC building and Hogan Drive border the DOE site on the north. SCOT Road, city and SURA property, and Canon Boulevard border the site on the northeast and east. The south boundary adjoins city property that partly serves as a local storm water collection area.

PROJECT INFORMATION

5.0 Overviews

5.1 Site Descriptions

5.1.1 Hall D Complex

Nature and Sequence of Activity:

The Hall D complex project consists of the construction of new above ground and underground buildings and structures for experiments using the Glue X detector. New construction includes:

- The Hall D experiment area
- Counting House and other Hall D support areas including service buildings, a cryogenics plant, and a CEBAF tunnel extension
- Necessary roads, sidewalks, retaining walls, and utilities to support the complex

The site is located at the north east end of the existing accelerator enclosure. The construction of the complex will disturb around 13.9 acres.

The necessary utilities will include power, domestic water, LCW (low conductivity water), and chilled water.

Specific sequencing of activities are provided in Appendix A, which includes subcontractor's EPP.

Disturbance:

The construction of the facility will take place under three phases of work and will affect around 10 acres of land at any given time near the east and north site boundaries.

Neighboring properties, the SURA Residence Facility (except for the easement property) and the school bus station that is operated by the City of Newport News, will not be disturbed.

Potential Pollution Sources and Storage Areas:

As this complex will be located in an undeveloped area, but will tie in to an industrial area, the pollution potential from other sources is limited. There may be limited stormwater from roof drains at nearby buildings, but there are no industrial sources, such as from cooling towers in the vicinity. No herbicides and fertilizers from current maintenance actions are used in this area that could affect storm water quality.

Sources of potential pollution from the construction activity itself include the use and storage of fuels or oil associated with subcontractor vehicles. There will be no other storage of chemicals necessary for this project. Any chemical toilets used at the jobsite will be positioned in designated areas and will be maintained to eliminate potential impacts. The holding tanks to service temporary construction trailers will be maintained along with the other toilets. There will also be normal air conditioning condensate from the construction trailers. Construction dewatering will occur. Effluent groundwater, meeting surface water quality standards, will be discharged into the East retention pond under VPDES Permit No. VA0089320. If other factors that need controls become evident in the course of the job, the controls will be implemented promptly. Noted changes will be incorporated into the subcontractor's EPP.

Specific measures to minimize impacts are identified in Appendix A, which includes the project EPP.

Soil will be temporarily stockpiled for use near the completion of this project.

Name of Receiving Waters and Ultimate Receiving Waters:

Note that there are no wetlands in this area. No parts of this project site cross the 100 year floodplain of Brick Kiln Creek, though it is in Flood Zone C.

Small tributary channels and ditches meander through the site from the northwest to the east and southeast that follow the general contour of the land. There are no 'natural' streambeds. All water courses are man-made. These channels flow to a larger tributary that flows under Canon Boulevard. The water flows through a double culvert at Canon, and then east and south to Brick Kiln Creek. It is about 0.8 miles from the east pond exit to Brick Kiln Creek.

Site Maps:

The site maps, which include all permit-required information such as contours and clearing limits, are provided in Appendix A.

Refer to Appendix A for the subcontract-specific Environmental Protection Plan for this project.

5.1.2 Central Material Storage Area/South Connector Road

Nature and Sequence of Activity:

One major activity involves the construction of about a 5 acre material storage area. Utilities include site lighting of the area. There shall be two-lane traffic from Hadron Drive to the storage area.

The second activity involved the construction of a new roadway ~500 LF and parking spaces for ~ 10 cars. The new roadway shall include two - 12' travel lanes from Lawrence Road to the CEBAF Traffic Circle.

The proposed action is the setup, including placement of erosion and sediment control measures for the entire area to be disturbed (~ 5.5 acres), tree and brush clearing and grubbing, excavation for the South Connector Road and Central Material Storage Area, stockpiling and disposal of earth, parking lot and road paving, gravel at storage area and grading and seeding of any disturbed areas.

Disturbance:

The construction of the facility will affect around 5.5 acres of land near the center of the site.

Potential Pollution Sources and Storage Areas:

The storage area complex will be located in an undeveloped area, but the South Connector Road is tied to existing development. The pollution potential from other sources is limited. There may be limited stormwater from roadways and roof drains at nearby buildings, but there are no industrial sources such as from cooling towers in the vicinity. Herbicides and pesticides will be used around the existing building for the South Connector Road project. No herbicides and fertilizers from current maintenance actions are used in the location of the storage area.

Sources of potential pollution from the construction activity itself include the use and storage of fuels or oil associated with subcontractor vehicles. There will be no other storage of chemicals necessary for this project. Any chemical toilets used at the jobsite will be positioned in designated areas and will be maintained to eliminate potential impacts. The holding tanks to service temporary construction trailers will be maintained along with the other toilets. There will also be normal air conditioning condensate from the construction trailers. If other factors that need controls become evident in the course of the job, the controls will be implemented promptly. Noted changes will be incorporated into the subcontractor's project specific SWPPP.

Specific measures to minimize impacts will be identified in Appendix B, the job-specific SWPPP that is to include the project specific SWPPP.

Name of Receiving Waters and Ultimate Receiving Waters:

Note that there are no wetlands in this area. No parts of this project site cross the 100 year floodplain of Brick Kiln Creek, though it is in Flood Zone C.

Small tributary channels and ditches meander through the site from the northwest to the east and southeast that follow the general contour of the land. There are no 'natural' streambeds. All water courses are man-made. These channels flow to a larger tributary that flows under Canon Boulevard. The water from the South Connect Road project flows through the central retention pond. The water from the Central Material Storage Area will be handled by a separate stormwater control measure. The pond and the new stormwater control measure discharge to a tributary channel and eventually through a double culvert at Canon, and then east and south to Brick Kiln Creek. The water flows through a double culvert at Canon, and then east and south to Brick Kiln Creek. Water travels about 3,500 LF from the central pond outfall to the double culvert at Canon Boulevard

Site Maps:

The site maps, which include all permit-required information such as contours and clearing limits, will be provided in Appendix B.

5.1.3 Experimental Staging Facility

Nature and Sequence of Activity:

Project consists of the design and construction of a single story pre-engineered metal building with slab on grade, structural steel framing and pre-finished exposed fastener metal roofing and siding. Site improvements include modification to existing storm water channels, extension of roadways and bituminous paving for automobiles with truck access.

Disturbance:

The construction of the facility will affect around 1.0 acres of land at any given time near the center of the accelerator site.

Potential Pollution Sources and Storage Areas:

The building will be located in a previously cleared area with some tree removal required for the relocated security fence. The pollution potential from other sources is limited. A stormwater channel between the accelerator and the new building will limit pollution potential. No herbicides and fertilizers from current maintenance actions are used in the location of the storage area.

Sources of potential pollution from the construction activity itself include the use and storage of fuels or oil associated with subcontractor vehicles. There will be no other storage of chemicals necessary for this project. Any chemical toilets used at the jobsite will be positioned in designated areas and will be maintained to eliminate potential impacts. The holding tanks to service temporary construction trailers will be maintained along with the other toilets. There will also be normal air conditioning condensate from the construction trailers. If other factors that need controls become evident in the course of the job, the controls will be implemented promptly. Noted changes will be incorporated into the subcontractor's project specific SWPPP.

Specific measures to minimize impacts will be identified in Appendix C, the job-specific SWPPP that is to include the project specific SWPPP.

Name of Receiving Waters and Ultimate Receiving Waters:

Note that there are no wetlands in this area. No parts of this project site cross the 100 year floodplain of Brick Kiln Creek, though it is in Flood Zone C.

Small tributary channels and ditches meander through the site from the northwest to the east and southeast that follow the general contour of the land. There are no 'natural' streambeds. All water courses are man-made. Following the Hall D complex project, the channel flow for this project is expected to enter the central retention pond outfall ditch. The water flows through a double culvert at Canon, and then east and south to Brick Kiln Creek. Water travels about 3,500 LF from the central pond outfall to the double culvert at Canon Boulevard

Site Maps:

The site maps, which include all permit-required information such as contours and clearing limits, will be provided in Appendix C.

5.1.4 TEDF (Technology and Engineering Development Facility)

Nature and Sequence of Activity:

This project consists of three parts. The first is a 70,000 to 90,000 square foot building will be constructed to the west of the Test Lab, adjacent to and east of SURA Road. Additional nearby areas will be used for parking facilities. The area designated for the new building is comprised of property that has been previously developed and primarily on previously disturbed land.

The second is renovation of the existing Test Lab building, demolition of selected structures and setup of interim and some permanent work areas to allow operations to continue renovated. No earthwork activities.

The third is addition of approximately 30,000 – 35,000 square feet to the Test Lab building, including the construction and use of several small ancillary buildings to serve as chemical processing, chemical storage, and hazardous waste accumulation areas.

Disturbance:

The construction of the facility will affect mostly previously developed and disturbed land. The acreage to be disturbed will be provided in the subcontractor's project specific SWPPP. Design has yet to be completed.

Potential Pollution Sources and Storage Areas:

The building will be located in a previously cleared area with some tree removal required for the relocated security fence. The pollution potential from other sources is limited. A ditch between the accelerator and the new building and the waters passage through the central retention pond will limit pollution potential. No herbicides and fertilizers from current maintenance actions are used in the location of the storage area.

Sources of potential pollution from the construction activity itself include the use and storage of fuels or oil associated with subcontractor vehicles. There will be no other storage of chemicals necessary for this project. Any chemical toilets used at the jobsite will be positioned in designated areas and will be maintained to eliminate potential impacts. The holding tanks to service temporary construction trailers will be maintained along with the other toilets. There will also be normal air conditioning condensate from the construction trailers. If other factors that need controls become evident in the course of the job, the controls will be implemented promptly. Noted changes will be incorporated into the subcontractor's project specific SWPPP.

Specific measures to minimize impacts will be identified in Appendix D, the job-specific SWPPP that is to include the project specific SWPPP.

Name of Receiving Waters and Ultimate Receiving Waters:

Note that there are no wetlands in this area. No parts of this project site cross the 100 year floodplain of Brick Kiln Creek, though it is in Flood Zone C.

Small tributary channels and ditches meander through the site from the northwest to the east and southeast that follow the general contour of the land. There are no 'natural' streambeds. All water courses are man-made. These channels flow to a larger tributary that flows under Canon Boulevard. The water flows through a double culvert at Canon, and then east and south to Brick Kiln Creek. Water travels about 3,500 LF from the central pond outfall to the double culvert at Canon Boulevard.

Site Maps:

The site maps, which include all permit-required information such as contours and clearing limits, will be provided in Appendix D.

5.1.5 Site Road and Parking Improvements

Nature and Sequence of Activity:

This project includes design and construction of a new main entrance roadway onto the accelerator site (1350 LF). The new roadway will relocate Rattley Road and widen Hadron Drive. Rattley Road and Hadron Drive are to be designed to allow for Rattley Road to line up evenly with the widened Hadron Drive. The width of Rattley Drive will need to vary to match Hadron Drive. Hadron Drive shall be widened to the fullest extent possible. Approximately 170 additional parking spaces will be provided. If construction funds allow, the project will also include for a new roadway, North Connector Road Extension ~600 LF.

Disturbance:

The construction of the facility will affect mostly previously developed and disturbed land. The acreage to be disturbed will be provided in the subcontractor's project specific SWPPP. Design has yet to be completed.

Potential Pollution Sources and Storage Areas:

The roadwork and parking areas will be located in mostly previously cleared areas with some tree removal required, including for possible realignment of the central retention pond. The pollution potential from other sources besides from the paved areas is limited. The storm water channels along the road and the central retention pond will limit pollution potential. No herbicides and fertilizers from current maintenance actions are used in the location of the road and parking area.

Sources of potential pollution from the construction activity itself include the use and storage of fuels or oil associated with subcontractor vehicles. There will be no other storage of chemicals necessary for this project. Any chemical toilets used at the jobsite will be positioned in designated areas and will be maintained to eliminate potential impacts. The holding tanks to service temporary construction trailers will be maintained along with the other toilets. There will also be normal air conditioning condensate from the construction trailers. If other factors that need controls become evident in the course of the job, the controls will be implemented promptly. Noted changes will be incorporated into the subcontractor's project specific SWPPP.

Specific measures to minimize impacts will be identified in Appendix E, the job-specific SWPPP that is to include the project specific SWPPP.

Name of Receiving Waters and Ultimate Receiving Waters:

Note that there are no wetlands in this area. No parts of this project site cross the 100 year floodplain of Brick Kiln Creek, though it is in Flood Zone C.

Small tributary channels and ditches meander through the site from the northwest to the east and southeast that follow the general contour of the land. There are no 'natural' streambeds. All water courses are man-made. These channels flows in this area flow to the central retention pond and to a larger tributary that flows under Canon Boulevard. The water flows through a double culvert at Canon, and then east and south to Brick Kiln Creek. Water travels about 3,500 LF from the central pond outfall to the double culvert at Canon Boulevard.

Site Maps:

The site maps, which include all permit-required information such as contours and clearing limits, will be provided in Appendix E.

5.1.6 Various Small Projects

Nature and Sequence of Activity:

These activities could involve one or more miscellaneous projects that may be under construction by various subcontractors.

- If the work disturbs one acre or more, a new appendix and associated project specific SWPPP will be included under this permit. The project specific SWPPP includes E&SC plan requirements.
- All projects that disturb between 10,000 SF and one acre will have an approved E&SC Plan.

For all projects - after the work has been completed and subcontractors left the site, Facilities Management and Logistics will ensure permit-required inspections are performed until the disturbed areas are fully stabilized.

Disturbance:

To be determined.

Potential Pollution Sources and Storage Areas:

To be determined.

Name of Receiving Waters and Ultimate Receiving Waters:

To be determined.

Site Maps:

The site maps, which include all permit-required information such as contours and clearing limits, will be provided in other future appendices.

5.2 Project Planning Organization

The Facilities Environmental Engineer or designated alternate is authorized to approve the project specific SWPPP and E&SC Plans.

The work for the construction projects identified in 5.1 is being arranged so that it can be performed in a logical schedule sequence to facilitate the individual project start and completion dates.

The construction elements for each project are to be scheduled in a logical sequence as well as by facility function or type of construction work involved. The specific project schedules will be provided in the project's appendix. This

construction scenario, as provided in the appendices, will be similar to the ultimate scope of the actual subcontract packages and the sequence of work may vary from reality. Funding constraints, procurement strategies, required design periods or changing requirements of the technical parameters of each of the projects will all influence the ultimate design and construction packages and the work sequence. Any other construction projects affecting one or more acres and/or requiring a work breakdown system will be incorporated into this SWPPP at a later date.

5.3 General Project Scope

The construction projects are described in Section 5.1. Note that some projects may involve more than one subcontractor.

Only the Kiln Creek drainage basin will be disturbed by construction activity under these projects. The on-site drainage channels flow to either the central retention pond before the flow leaves the DOE and SURA properties and flow continues eastward through the Canon property and Route 64 until it reaches Brick Kiln Creek (about 0.7 miles beyond Canon Boulevard).

Drainage:

For Watershed Area #1, the watershed area for the South Connector Road, TEDF, and the Site Road and Parking Improvements projects will flow to the central retention pond. Central Retention Pond Design Basis: Hold 25 year storm with a 100-year emergency spillway. The water quality and quantity requirements for the Central Material Storage Area project and the Experimental Staging Facility are yet to be determined. The water flows from the central retention pond outfall ditch towards the outfall at Canon Boulevard. The water from the project flows from the pond outfall ditch and eventually through a double culvert at Canon, and then east and south to Brick Kiln Creek. Water travels about 3,500 LF from the central pond outfall to the double culvert at Canon Boulevard. There will be no unaccounted for adverse effects on downstream areas beyond DOE property as the central retention pond, other specific project control devices, and/or ditches on site will handle all additional area storm flow.

For Watershed Area #2, (western accelerator site areas) minor to moderate changes from grassed areas to paved areas will occur. A future pond to serve Watershed Area #2 will account for adverse effects on the downstream areas beyond DOE property.

Erosion and Sediment Control: The design shall conform to the Virginia Erosion and Sediment Control Handbook, as noted in subcontract specifications for each project.

5.4 Project Timetable for Soil Disturbing Activities

Tree clearing for Hall D commenced in May 2009. Land disturbance permit from the City of Newport News for work on SURA property was obtained on May 11, 2009.

There are no constraints on facility operations, including with any accelerator operations that have not been taken into account, with these projects. Note that the construction work will be completed in a sequence which corresponds to the accelerator use and existing occupant needs.

The current list is a preliminary construction work sequence.

Project No./ Name	Activity	Estimated Start Date	Projected Finish Date
Hall D Complex	Land Transfer	8/06	6/07
	Tree Clearing	5/09	5/09
	Sitework	5/09	9/11
Central Material Storage Area/South Connector Road	Sitework	8/09	4/10
Experimental Staging Facility	Sitework	12/09	4/10
TEDF	Sitework	3/11	3/13
Site Road and Parking Improvements	Sitework	10/09	6/10
Others as identified	TBD	TBD	TBD

As the various work packages are designed and readied for construction, erosion and sediment control structure and stabilization area interfaces with previous or current projects will include taking into account the terms and conditions of this permit.

As per Section II B 4, a sign or notice shall be posted conspicuously near the main entrance of the construction site for projects over 1 acre. The sign shall provide a copy of the permit coverage letter (with registration number), where to get access to a copy of the SWPPP, and a contact if there is a request to view the Plan.

A site map showing approximate locations of the projects listed above is included at the end of this document.

5.5 Project Site Surface Disturbance

The total affected area for the projects identified in Section 5.1 will be determined following final design of the projects.

5.6 Existing Data Describing Soils Or Quality Of Discharge

Site geologic and hydrogeologic conditions were investigated and reported by Malcolm Pirnie in a 1995 Hydrogeologic Review. An area soil map is available from the city and was used to perform a storm water drainage study in 2002 by CEGG Associates LC. A storm water study was completed by EE&T in June 2006.

5.7 Project Maps

- Area USGS Map
- Site topographic map highlighting the projects subject to this General Permit
- CEGG Drainage area map
- EE&T Drainage Area Map
- Area Soil map

Overall site maps indicating monitoring wells are available in the Lab's EH&S Manual. Any site near wetlands will reference such wetland in the project specific appendix.

As each work package is developed, detailed drainage plans, actual limits of disturbance, erosion and sediment control and stabilization methods and locations, and storm water discharge locations will be produced and incorporated into this Plan or in the appropriate appendix.

GENERAL REQUIREMENTS

5.8 Storm Water Controls

Refer to the basic principles defined in the Procedure. These items will be addressed for each project, and can be included in the drawings and specifications and/or in the subcontractor's project specific SWPPP, if required, which will include the job-specific E&SC Plan.

5.8.1 Water Quality Protection

Jefferson Lab will select, install, implement, and maintain control measures at the construction site that minimize pollutants in the discharge as necessary to meet applicable water quality standards. If there is

evidence indicating that the stormwater discharges authorized by the VAR10 permit are causing, have the reasonable potential to cause, or are contributing to an excursion above an applicable water quality standard, or are causing downstream pollution (as defined in Section I of the Permit), the permit issuing authority may take appropriate enforcement action, may require Jefferson Lab to include and implement appropriate controls in the SWPPP to correct the problem, and/or may require Jefferson Lab to obtain an individual permit in accordance with Virginia Regulation 4VAC50-60-410 B 3.

5.8.2 Erosion and Sediment Controls

Stabilization practices. Specific stabilization practices will be developed for each of the jobs as the construction drawings are prepared. The practices that will be incorporated are those specified in the Virginia Erosion and Sediment Control Handbook and in the Procedure.

Structural practices. Specific structural practices will be developed for each of the jobs as the construction drawings are prepared. The practices that will be incorporated are those presented in the Virginia Erosion and Sediment Control Handbook and in the Procedure.

5.8.3 Stormwater management

This SWPPP is to ensure compliance with the requirements of 4VAC50-60-1180 through 4VAC50-60-1190 of the Virginia Stormwater Management Regulations including, but not limited to, water quality and quantity requirements.

All control measures will be properly selected, installed, and maintained in accordance with manufacturer specifications and good engineering practices. Such measures must be designed and installed in accordance with applicable local, state, and federal requirements and any necessary permits must be obtained.

Measures that will be installed during the course of each job that will remain in place to manage stormwater flows will be detailed in the Plan under the appropriate job heading or appendix. Alternatives that were considered for each job will also be described, if applicable.

The overall stormwater management plan, through the course of each of these projects, will be to minimize or reduce the passage of pollutants into the local water courses.

The functioning drainage characteristics during the sequence of construction will be of equal or improved quality when compared to the original site conditions.

5.8.4 Other controls

No solid materials shall be discharged to waters of the State.

Compliance will be made with all codes and regulations noted in the contract specifications and the terms of the subject General Permit.

5.8.5 Jefferson Lab Stormwater Pollution Prevention Plan

The management practices and controls defined in this plan are all taken from State regulations and documents. No other local documents or plans apply to work activities on this project.

In lieu of requiring approval from a locality, the Facilities Management & Logistics environmental engineer has the approving authority for permit-related subcontractor plans.

5.9 Maintenance

General maintenance responsibility of erosion and sediment control measures shall be assigned within construction documents and will comply with any applicable permit terms and conditions.

Anticipated storm events: If site inspections (described below) identify control measures that are not operating effectively, maintenance shall be performed before the next anticipated storm event, or as soon as practicable to maintain the continued effectiveness of stormwater controls. If existing control measures need to be modified or if additional control measures are necessary for any reason, implementation shall be completed before the next anticipated storm event. If implementation before the next anticipated storm event is impracticable, the situation shall be documented and alternative control measures shall be implemented as soon as practicable.

Responsibility: The Subcontractor shall maintain all erosion and sediment control measures in a functional condition through completion of the work. Any area not stabilized at subcontract completion that was not the responsibility of the Subcontractor will be maintained by the Jefferson Lab Facilities Management and Logistics Department.

Maintenance Plan: The project's Stormwater Pollution Prevent Plan will be developed for all projects disturbing over 1 acre. The project specific SWPPP will be approved by the Facilities Environmental Engineer, the Lab's

Environmental Engineer, or designated alternate prior to land disturbance. A portion of the plan will cover maintenance of E&SC measures during the course of the project. Items include:

- Identify all of the areas/measures that will be inspected and maintained.
- Describe the procedure to follow if additional repair is required; e.g., who will be responsible or who to call.

5.10 Inspections

General inspection responsibility of erosion and sediment control measures shall be assigned within construction documents and will comply with any applicable permit terms and conditions. Inspections by qualified personnel must be conducted of all areas of the site disturbed by construction activity, and areas used for storage of materials that are exposed to stormwater. "Qualified personnel" means a licensed professional engineer, responsible land disturber (RLD), or other person who holds a certificate of competence from the board in the area of project inspection or combined administrator.

Subcontractor (or Facilities and Logistics if applicable) responsibility: Refer to Maintenance above. Inspections shall be conducted (i) at least every seven calendar days; or (ii) at least once every 14 calendar days and within 48 hours following any runoff producing storm event. The inspections shall be documented. The Subcontractor shall maintain a field notebook of the inspections and submit a copy of the log to the SOTR within 48 hours of the inspection through completion of the work. Where areas have been finally or temporarily stabilized or runoff is unlikely due to winter conditions (e.g., the site is covered with snow or ice, or frozen ground exists) such inspections shall be conducted at least once every month and after each rainfall. The field notebook held by the subcontractor shall be turned over to the SOTR at project completion.

Inspection Report Requirements:

- (1) The location(s) of discharges of sediment or other pollutants from the site;
- (2) Location(s) of control measures that need to be maintained;
- (3) Location(s) of control measures that failed to operate as designed or proved inadequate for a particular location;
- (4) Location(s) where additional control measures are needed that did not exist at the time of inspection;
- (5) Corrective action required including any changes to the SWPPP that are necessary and implementation dates;
- (6) An estimate of the amount of rainfall at the construction site (in inches) from the runoff producing storm event requiring the inspection, or if inspecting on a seven-day schedule, the amount of rainfall (in inches) since the previous inspection; and

(7) Weather information and a description of any discharges occurring at the time of inspection.

Jefferson Lab responsibility and quality assurance: Excavation, fill, stabilization, and installation of erosion and sediment control devices shall be subject to inspection by the “qualified personnel” as identified in paragraph 5.10. He/she shall carry out the general inspection of the measures to verify compliance of work with the subcontract drawings and specifications and to ensure the achievement of the intents and purposes of the devices.

5.11 Non-Stormwater Discharges

Job-related discharges will be identified for each specific job and addressed in construction documents to meet any Agency requirements. These could include the following. Refer to the respective appendix for more items.

- Use of water for dust control at gravel roads.
- Irrigation of seeds or plants to ensure survival and soil stabilization.

The project-specific SWPPP shall identify and ensure the implementation of appropriate pollution prevention measures for the non-stormwater components of the discharge.

5.12 Additional Requirements for Stormwater Discharge from Industrial Activities Other than Construction

Jefferson Lab will evaluate any non-construction activities and define precautions or restrictions as applicable.

5.13 Monitoring

Monitoring is not required under the VSMP General Permit No. VAR10; however, should monitoring become necessary, Jefferson Lab will comply with the requirements of Permit Section III, subsections A, B, and C, as appropriate.

There are currently no requirements for monitoring for Total Maximum Daily Loads for Brick Kiln Creek (majority of all stormwater flow) or Deep Creek (Discharge to Jefferson Avenue from our site) based on our MS4 permit. TMDL monitoring is expected to be evaluated for monitoring in 2010.

Both Brick Kiln Creek and Deep Creek are impaired waters for the segments noted on Department of Environmental Quality fact sheets. The impairment causes for Brick Kiln Creek are Fecal Coliform & Enterococci and Dissolved Oxygen, and Deep Creek is Fecal Coliform.

5.14 Contractor and Subcontractor Responsibility

The DOE has overall responsibility to comply with VSMP General Permit conditions. The contractor, Jefferson Science Associates, LLC (JSA) implements permit requirements on behalf of the DOE. Subcontractors executing projects identified in Section 5.1 are responsible for implementing the permit terms specific to their project.

5.15 General Permit for Discharges of Stormwater from Construction Activities: Authorization to Discharge under the Virginia Stormwater Management Program (VSMP) and the Virginia Stormwater Management Act

Jefferson Lab complies with all applicable conditions outlined in the VSMP General Permit No. VAR10. Refer to this permit for Discharge Authorization and Special Conditions (Section I), Stormwater Pollution Prevention Plan (Section II), and Conditions Applicable to all VSMP Permits (Section III) that are not specifically covered/addressed herein. These include but are not limited to:

- Duty to provide information
- Compliance schedule reports
- Unauthorized discharges and reports thereof
- Reports of unusual or extraordinary discharges
- Reports of noncompliance
- Notice of planned changes
- Maintaining an updated sitewide SWPPP and/or applicable subcontractor's SWPPP so that it would be updated accordingly if an inspection identifies non-effective control measures.

6.0 Subcontractor and DOE/Jefferson Lab Certifications

Contractor and Subcontractors will be identified in the project specific appendices.

Certification that Jefferson Lab and the Department of Energy Site Office agree to comply with permit terms is provided on the following page.


Subcontractor (and applicable sub-subcontractor) certification, which could also be Jefferson Lab's Facilities Management and Logistics Division, is documented in the project specific appendix. The addendum shows the transfer of authority from the Department of Energy to the responsible parties for each project.


[Refer to Appendices A through E for the other projects noted. Refer to Appendix F (and beyond) that will be added as needed for miscellaneous projects.]

DOE/JEFFERSON LAB CERTIFICATIONS

I certify under penalty of law that I have read and understand this document and that this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

This is as cited in Section III, Part K.4 of VSMP General Permit No. VAR10.

Department of Energy Thomas Jefferson National Accelerator Facility Site Office 12000 Jefferson Avenue, Suite 14 Newport News, VA 23606 (757) 269-7140	
	James A. Turi Date
	Manager, Thomas Jefferson Site Office

Thomas Jefferson National Accelerator Facility 12000 Jefferson Avenue, Suite 15 Newport News, VA 23606 (757) 269-7552	
	Hugh Montgomery Date
	Jefferson Lab Director

Note: Subcontractor or Facilities Management and Logistics Certifications will be provided in the respective appendix to this Plan.

Signatory authorization follows on next page.

SIGNATORY AUTHORIZATION

INDUSTRY NAME: Thomas Jefferson National Accelerator Facility
INDUSTRY LOCATION: 12000 Jefferson Avenue, Newport News, VA 23606
PERMIT NUMBER: VAR10

The individuals in the following positions, or their designated alternates, are authorized as having the responsibility to sign on my behalf the field reports and logs, related to the above permit for the construction projects included in the permit registration statement.

AUTHORIZED POSITIONS:

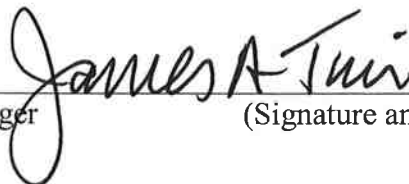
1. Jefferson Lab's Subcontracting Officer's Technical Representative/Project Manager, or designated alternate
2. Subcontractor's Project Superintendent, or designated alternate
3. Jefferson Laboratory Facilities Management & Logistics Director or designated alternate
4. The Facilities Environmental Engineer or designated alternate is authorized to approve the project specific SWPPP and/or Erosion & Sediment Control Plan.

APPROVAL AUTHORITY

[Section III, K1 and K2]

The person signing this approval must either be a principal executive officer or ranking elected official. For purposes of this part, a principal executive officer of a public agency includes: (i) the chief executive officer of the agency or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

Name: James A. Turi
Title: DOE Thomas Jefferson Site Manager

 5/20/09
(Signature and Date)

**JEFFERSON LAB
SITE PLAN FOR SWPPP
2009**

