



APPENDIX – S

SPILL PREVENTION AND RESPONSE

PLAN

I-64 Hampton Roads Bridge-Tunnel Expansion Project
Hampton Roads Connector Partners
240 Corporate Blvd. 4th floor
Norfolk, VA 23502

Hampton-Norfolk, Virginia
August 30, 2019

THIS PAGE INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS

Tables iv

S.	Spill Prevention and Response Plan	1
S.1	Purpose, Updates and Project Description.....	1
S.1.1	Plan Purpose	1
S.1.2	Plan Updates	1
S.1.3	Project Description.....	1
S.2	SPRP Plan Elements.....	4
S.2.1	Responsible Personnel.....	4
S.2.2	Spill Reporting	5
S.3	Regulatory Reporting Requirements.....	8
S.4	Project and Site Information.....	9
S.4.1	Down-the-Hole (DTH) Hammer Pile Driving.....	9
S.4.2	GRound Stabilization/Jet Grouting Process	9
S.4.3	Slurry Wall Construction Process.....	10
S.4.4	Site Location and Boundaries	11
S.4.5	Potential Spill Sources	11
S.4.6	Pre-Existing Contamination.....	13
S.5	Spill Prevention and Response	14
S.5.1	Inspection and Maintenance	15
S.5.2	Spill Prevention.....	18
S.5.3	Best Management Practices for Spill Containment.....	19
S.5.4	Spill Response.....	20
S.5.5	Spill Report Form(s).....	23
S.5.6	Plan Approval	24

ATTACHMENTS

Attachment S-1: Spill or Incident Report Form

TABLES

Table S-1: Response Personnel.....	4
Table S-2: Project-Specific Federal, State, and Local Agencies to be Notified in the Event of a Spill.....	7
Table S-3: Nearby Waterways ¹ and Sensitive Areas	11
Table S-4: Construction Product and other Hazardous Materials Brought or Generated On-Site	12
Table S-5: Spill Prevention Inspection Schedule	16
Table S-6: Inspection Frequencies for Equipment and Site Security	18
Table S-7: Spill Response Kit Contents and Locations.....	18

FIGURES

Figure S-1: HRBT Segment Map.....3
Figure S-2: Spill Reporting / Response Flow Diagram.....6
Figure S-3: Flow Chart showing process for Reporting Spills, Releases or Encounters8
Figure S-4: Schematic of Slurry Wall Construction.....10

THIS PAGE INTENTIONALLY LEFT BLANK

S. SPILL PREVENTION AND RESPONSE PLAN

S.1 PURPOSE, UPDATES AND PROJECT DESCRIPTION

S.1.1 PLAN PURPOSE

The purpose of this Spill Prevention and Response (SPRP) is to protect human health and the environment from spills and releases of construction generated materials. For the purposes of this SPRP waste, is defined as construction materials and products, and other potential hazardous substances used, stored, or a by-product of on-site construction processes. This plan is for guidance for prevention of spills of materials or by-products of construction and provides response information.

The SPRP addresses conditions from the construction activities of down-the-hole hammer pile driving, jet grouting, slurry wall construction, bridge trestle construction, general civil construction for on land highway segments and excavation dewatering activities. This plan is applicable for parts of response for any spills of construction generated materials. This plan does not specifically address petroleum products as these are covered in the regulations §311 Clean Water Act, the Oil Pollution Prevention regulation that requires facilities to develop and maintain a Spill Prevention, Control, and Countermeasure (SPCC) plan. This plan is meant to provide guidance for spill prevention and response for maintaining construction products and by-products for construction processes. The SPCC plan is in the Construction General Permit, as part of the permit package covering on site construction, erosion and sediment control as well as stormwater pollution prevention. A copy will be on site during construction.

S.1.2 PLAN UPDATES

HRCP will update this SPRP throughout the Project so that the written plan reflects actual site conditions and practices. At a minimum, HRCP will review and update the SPRP annually. HRCP shall fully implement this SPRP, as accepted and updated.

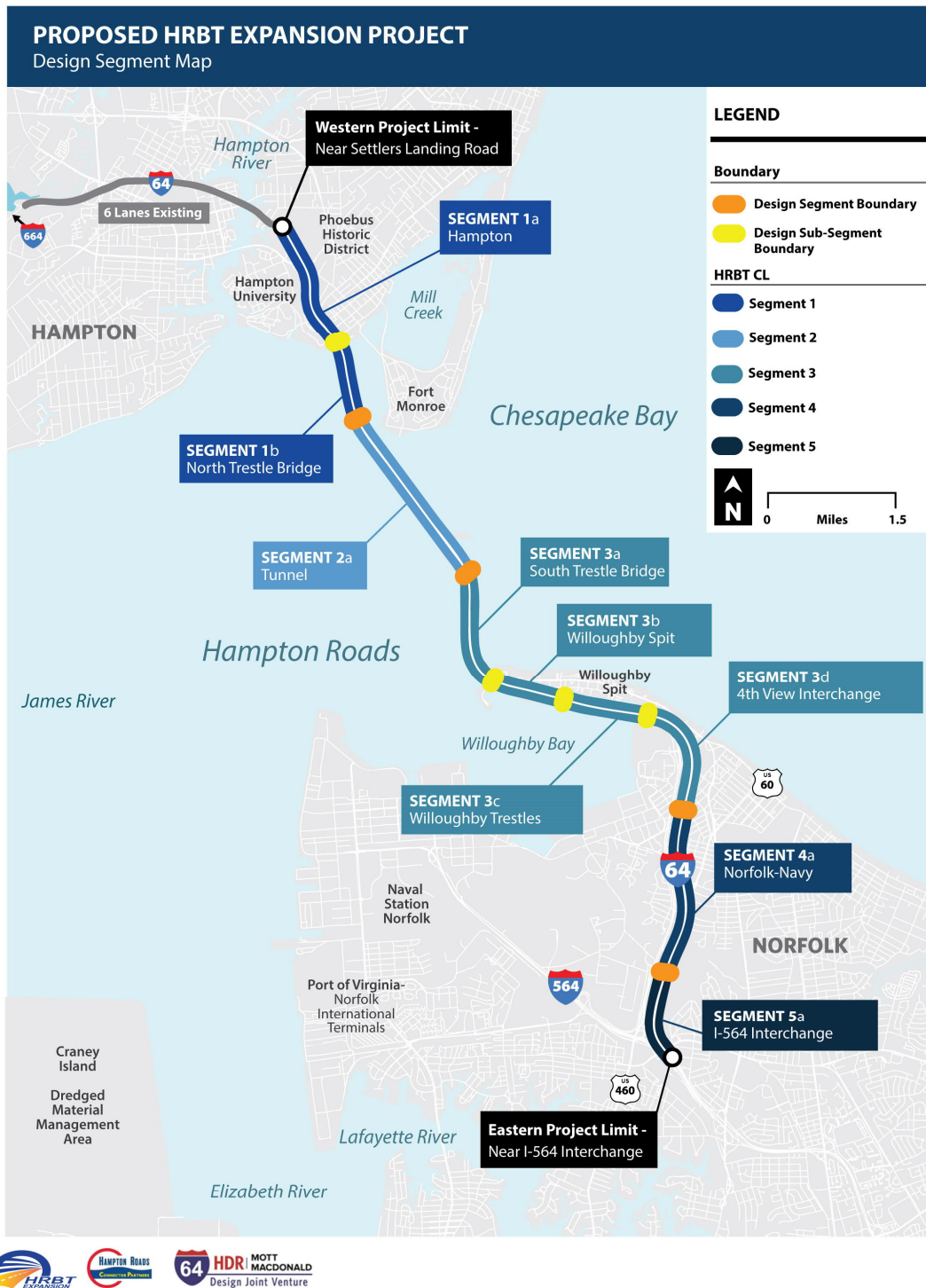
No on-site Project construction activities may commence until VDOT has reviewed and accepted this SPRP.

S.1.3 PROJECT DESCRIPTION

The Hampton Roads Bridge Tunnel Expansion Project (“Project”) will widen I-64 for approximately 9.9 miles along I-64 from Settlers Landing Road in Hampton, Virginia to the I-64/I-564 interchange in Norfolk, Virginia. The Project will create an eight-lane facility with six consistent use lanes. The expanded facility will include four general purpose lanes, two new HOT lanes, and two new drivable (hard-running) shoulders to be used as HOT lanes during peak usage

The Project will include full replacement of the North and South Trestle Bridges, two new parallel tunnels constructed using a Tunnel Boring Machine (TBM), expansion of the existing portal islands, widening of the Willoughby Bay Trestle Bridges, Bay Avenue Trestle Bridges, and Oastes Creek Trestle Bridges. Also, upland portions of I-64 will be widened to accommodate the additional lanes, the Mallory Street Bridge will be replaced, and the I-64 overpass bridges will be improved. Figure S-1 depicts the project limits.

Figure S-1: HRBT Segment Map



S.2 SPRP PLAN ELEMENTS

S.2.1 RESPONSIBLE PERSONNEL

Figure S-1 identifies responsible personnel for implementing and updating the SPRP, and for responding to spills and provides their contact information. If spill response Subcontractor(s) will be used for spill response (as described in Section S.5.3, Spill Response, below), the Subcontractor(s) company name(s) and contact information are also included in Figure S-1

Table S-1: Response Personnel

Responsibility	Name and Title	Contact Information
Implementing and Updating SPRP (primary contact person)	John P. Cassidy Project EH&S Director	Company: HRCP Office Phone: Cell Phone: 949-514-7146
Implementing and Updating SPRP (secondary contact person)	TBD	Company: HRCP Office Phone: Cell Phone:
On-Site Spill Responder	John P. Cassidy Project EH&S Director	Company: HRCP Office Phone: Cell Phone: 949-514-7146
Spill Response Subcontractor (delete this line if not applicable; add lines if more than one Subcontractor will be used)	TBD	Company: Office Phone: Cell Phone:

S.2.2 SPILL REPORTING

In the event of a spill, HRCP shall follow the flow diagram of reporting a spill (Figure S-2) to inform the VDOT Project Engineer and shall notify the Federal, State, and Local Agencies listed in and **Error! Reference source not found.** and Figure S-3. Spill residuals and disposals will be conducted in accordance with the MMP.

Figure S-2: Spill Reporting / Response Flow Diagram

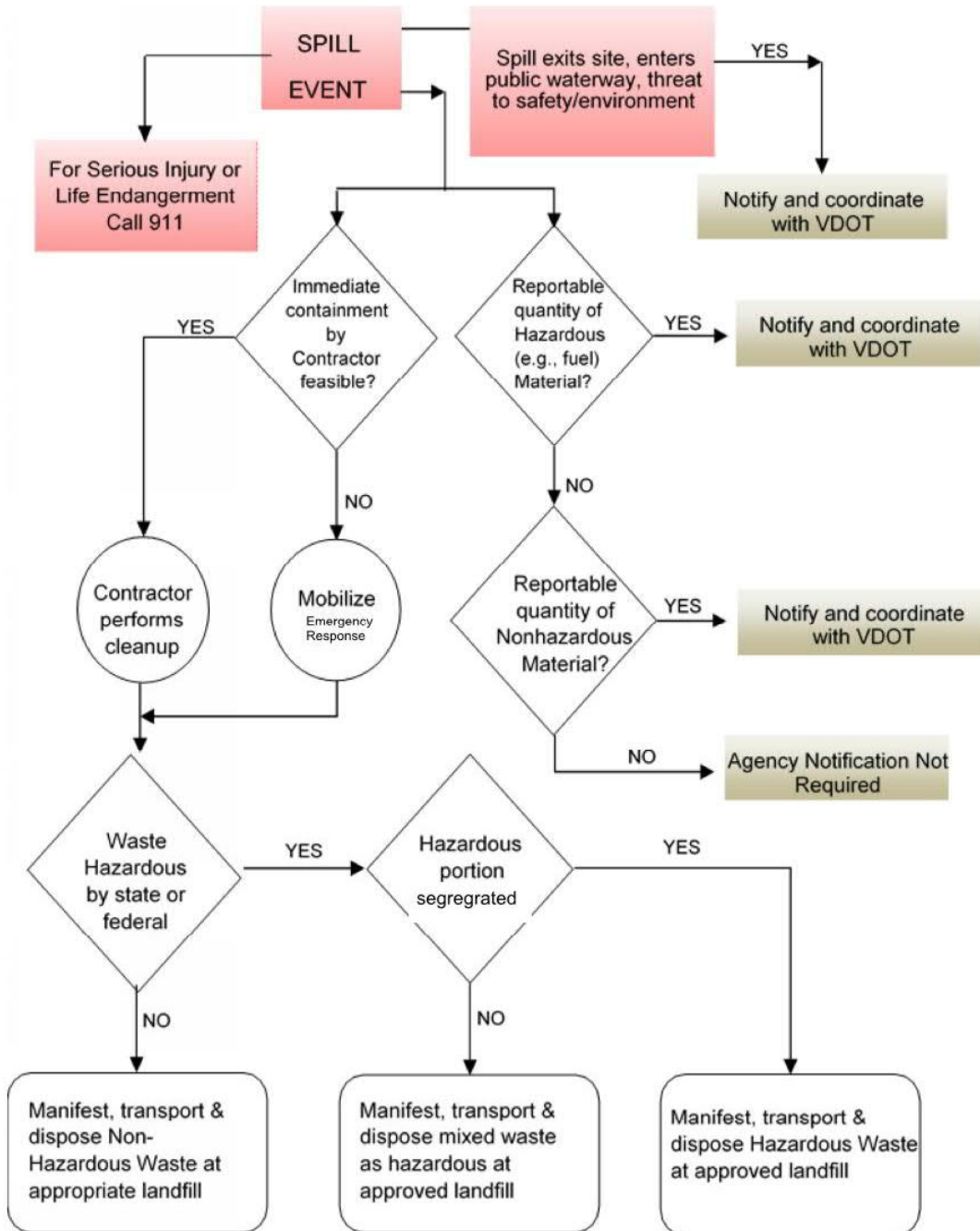


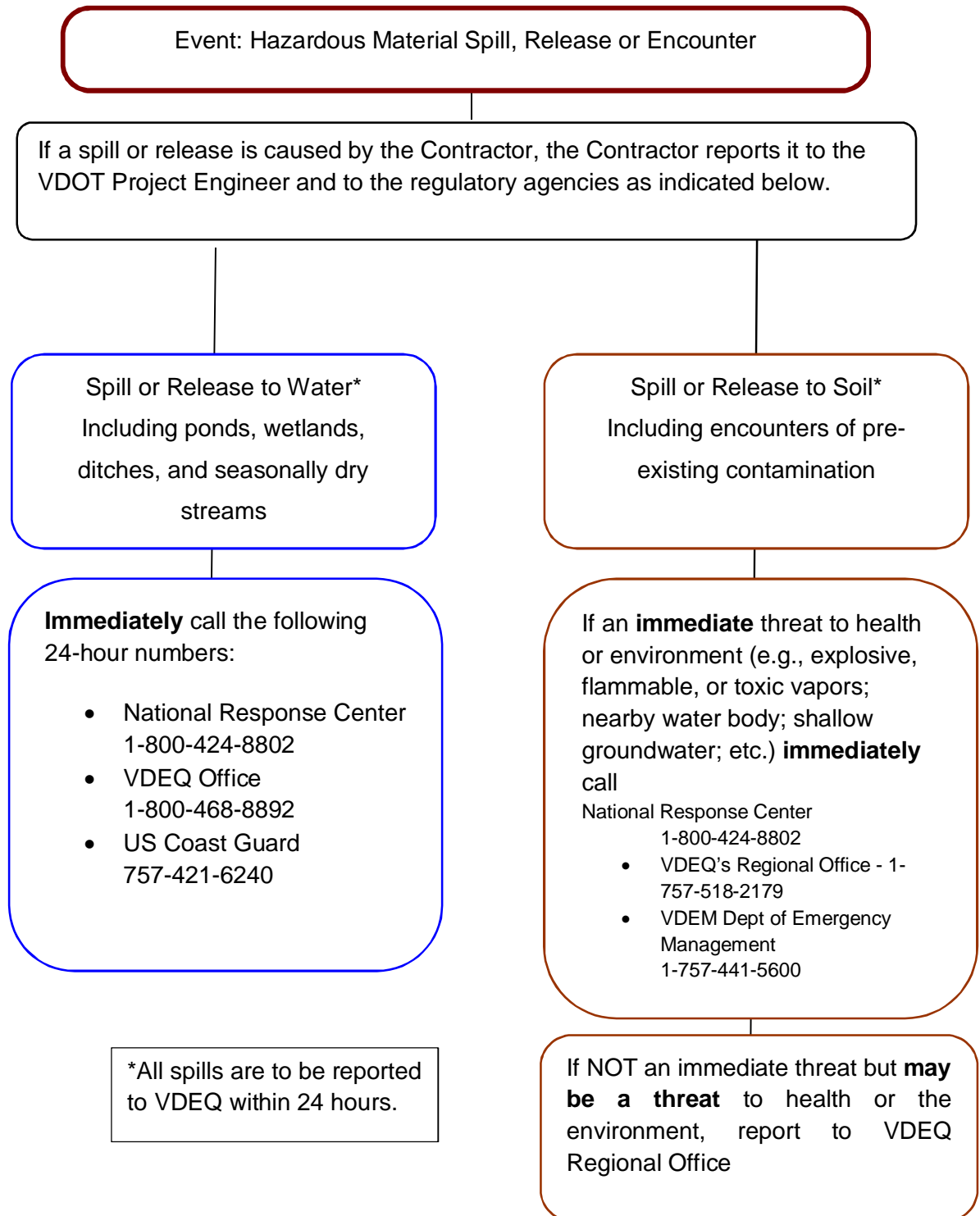
Table S-2: Project-Specific Federal, State, and Local Agencies to be Notified in the Event of a Spill

Agency Name	Agency Notification Telephone Number	When Agency Shall be Notified	Agency Region
Virginia Department of Environmental Quality	(757) 518-2000 (757) 518-2009 (fax)	Spill or release to soil that is an immediate threat to human health or the environment or a spill or release to water.	Tidewater Regional Office 757-581-2000
National Response Center	1-800-424-8802	Spill or release to water	Not applicable
VDEQ, Tidewater Regional Office, Pollution Response Coordinator	(757) 518-2179	Spill or release to soil that is an immediate threat to human health or the environment or a spill or release to water	Virginia Tidewater region
U.S. Coast Guard, Communications Command	(757) 421-6240	Spill or release to water	
Virginia Department of Emergency Management (VDEM)	(757) 441-5600	Spill or release to soil that is an immediate threat to human health or the environment or a spill or release to water	VDEM Region 5

S.3 REGULATORY REPORTING REQUIREMENTS

Regulatory reporting requirements are presented in Figure S-3 below.

Figure S-3: Flow Chart showing process for Reporting Spills, Releases or Encounters



S.4 PROJECT AND SITE INFORMATION

As part of the tunnel construction process this SPRP addresses the tunnel construction processes that include the pile driving via down-the-hole (DTH) hammer, ground stabilization via jet grouting, slurry wall construction and excavation dewatering for the portals (North Island and South Island) of the two tunnels and excavation water from the excavation of the Tunnel Boring Machine (TBM) launch pits and portals.

S.4.1 DOWN-THE-HOLE (DTH) HAMMER PILE DRIVING

Steel pipe piles are required for construction of several project components. When piles are required adjacent to the portal islands, large armor stone will be encountered. The DTH hammer is a specialty pile driving hammer that uses an impact auger to drill through the rock. Once the outer casing of the DTH hammer has penetrated the armor stone, the DTH hammer is replaced by a traditional impact hammer to drive the remainder of the pile to the proper depth. During the auguring process, a small amount of vegetable oil and foaming agent is added to the soil/water slurry to allow the drill cuttings to flow out of the casing to a collection point on the island. This return material is treated on the island.

S.4.2 GROUND STABILIZATION/JET GROUTING PROCESS

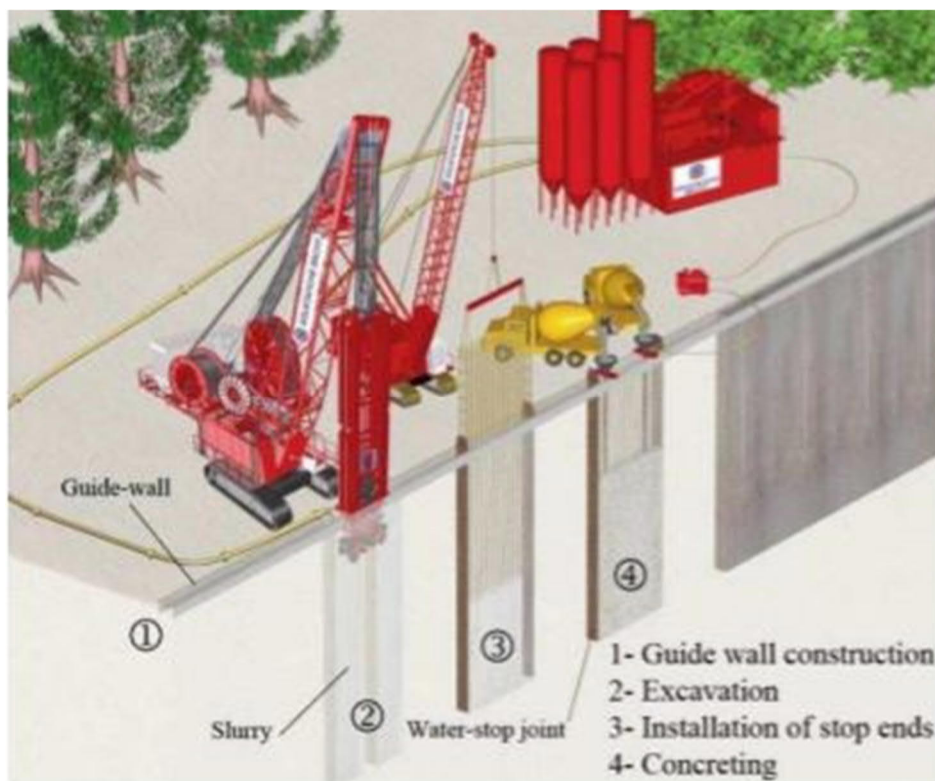
Ground stabilization is required at the tunnel entry/exit portals. At the north end of the South Island, ground stabilization jet grouting will be accomplished from a temporary trestle constructed for this purpose. The jet string for ground stabilization passes through a casing that is embedded into the river bed to a depth of 20 feet preventing the jet grout from discharging into the river. The 20-foot depth is used to achieve the correct sealing required while also providing the ability to safely remove the casing once the jet grout column is complete. This depth is based on experience and best industry practices. If the casing is installed deeper than 20 feet into the river bottom, it increases the risk of not being able to remove the casing after the jet grouting process is completed.

S.4.3 SLURRY WALL CONSTRUCTION PROCESS

As part of the construction of the tunnel entrances, slurry walls are to be constructed to stabilize the surrounding area of the tunnel approach structure. An initial guide wall is constructed, then each segment of slurry wall is excavated, and bentonite slurry is tremied into the void space to maintain excavation opening and keep the side walls from collapsing. This process is illustrated as a cartoon in Figure S-4. Water-stop joints are installed between segments, and each segment is then filled with concrete which is heavier than bentonite. The bentonite slurry displaced in this process is captured and subsequently treated for separation of solids necessary via de-siltation and de-sanding either by mechanical means or using decanting techniques. The excess water is monitored for pH and adjusted prior to discharge via the approved VPDES permit.

The installation of slurry walls paralleling the entrance/egress pathways stabilizes the entrance/egress areas where the tunnel slopes downward and below ground level.

Figure S-4: Schematic of Slurry Wall Construction



S.4.4 SITE LOCATION AND BOUNDARIES

The site limits are depicted on Figure S-1. This section of the SPRP is focused on the water crossing area between Hampton and Norfolk Virginia. Detail focus is on the tunnel portal islands; North Island, and South Island.

The stormwater drainage pathways from the island are directed off the Islands via crowning are detailed in Table S-3. Most drainage occurs across pavement to the edge, and then discharges through the rip rap surrounding the island. The tunnel portal islands, North Island and South Island are surrounded by the lower James River/Chesapeake Bay. Both islands are artificial and surrounded with armor rip rap.

Table S-3: Nearby Waterways¹ and Sensitive Areas

Waterway ¹ or Sensitive Area	Distance from Project Component to Waterbody	Direction of Flow from Project	Runoff Drainage Pathway from Site
James River	North/South/Willoughby Spit /Trestle Waterway is immediately below elevated trestle structure.	Downhill towards the northeast and southwest off the crown of the roadway.	Down gradient from centerline of trestle roadway – storm water discharges to James River.
James River	South Island and North Island Approximately 200 feet from Centerline of Island is greatest flow path.	East and West off Island	Down gradient from the centerline of the Islands towards the James River.

Notes:

¹ Waterways include streams, creeks, sloughs, rivers, James River, etc.

S.4.5 POTENTIAL SPILL SOURCES

A description of each potential construction products, construction materials, and hazardous materials brought or generated on-site is set forth in Table S-4: This includes materials used for operating, constructing, maintaining, and cleaning equipment.

Table S-4: Construction Product and other Hazardous Materials Brought or Generated On-Site

Hazardous Material Name	Intended Use of Material	Est. Max. Amount of Material On-Site at Any One Time	Material Staging, Use, and Storage Location(s) & Material Storage and Secondary Containment Practices and Structures	Distance of Material Staging, Use and Storage Locations from Nearby Waterways and Sensitive Areas
Bentonite Slurry	TBM Operations, cuttings removal	Separation and Treatment Plant (S&TP) full with operating slurry up to 1,000,000 gallons	On Island at the (S&TP) within mixing tanks, and closed vessels and pipes.	Within 200 ft
Bentonite Slurry	Slurry wall construction Jet grouting	20,000-60,000 Gallons	On both islands jet grout / slurry wall material mixing/preparation tanks secondary containment area(s)	0-200 ft
Contact water/Excavation Dewater – contact with Cementitious material	Nuisance water in closed excavation area either by precipitation or intrusion of groundwater onto / in and on newly installed concrete structures	100- 500 Gallons	Nuisance water temporary within closed excavations or newly constructed sealed TBM launch pits/tri cell area, secondary containment directed to water treatment plan	200 ft
Lime	As an additive to the slurry to assist in the precipitation of suspended solid in slurry mix prior to the filter press	Varies as needed stored in dry bulk with containment	Storage at the STP, for treatment of water/solids mix prior to filter press works to assist the precipitation of solids onto the filter press media. Stored in dry area within the STP, within vessel	Within 200 feet
Sulfuric Acid	As an additive to neutralize water to decrease pH	300 gallons	Storage at STP for use in the pH adjustment of process water. Stored within secondary	Within 200 feet

			containment structure/ pallet, or other	
Cement Grout	Jet Grouting	Varies as needed	On site batch plant, steel mixing tanks, secondary containment area	
Down the Hole Hammer (DTH) Additives	Lubrication and removal of DTH/ residual cuttings	<50 gallons as needed	Maintain secondary containment, provide for protected storage.	Within 200 feet
Sanitary fluids, chemicals	Portable Toilets	<100 gallons	In portable toilets/ frequent service by vendor/ provider	Within 200 feet
Hydraulic fluids/ operational fluids contained within TBM	Tunnel Boring/construction	Varies as needed	In hydraulic system of TBM. Replacement/refreshment fluids stored in dry secured area with secondary containment.	Within 200 feet

S.4.6 PRE-EXISTING CONTAMINATION

There are no known or reported underground or above ground fuel storage tanks along the alignment of I-64 from Hampton across the James River to Norfolk at Willoughby Spit. Adjacent to the landing of the South Trestle at Willoughby Spit there are two reported ship wrecks which may be encountered in clearance dredging for the landing of the trestle at that location.

Other pre-existing contamination conditions that are known across the alignment from Hampton to Norfolk at Willoughby Spit include analysis from subgrade borings and borings of sediments below the James River bottom (Cardno 2018 and Mott MacDonald Baseline Characterization Environmental Sample Analytical Results memorandum August 2019).

Data from the Cardno Report (Hampton Road Bridge-Tunnel Expansion, Preliminary Sediment Study (Cardno 2018) indicated concentrations above detection limits for arsenic, cadmium, nickel, copper, pesticides, polychlorinated biphenyls PCBs, and in one location, total petroleum hydrocarbons (TPH).

Historically the sediments have contained varying concentrations of chromium, cadmium, cobalt, iron, arsenic and calcium. From limited sediment sampling conducted April 24 – May 13, 2019 metals were also detected at levels in exceedance of Effects Range-Median (ERM) ecological screening criteria, the Residential Soil Screening Level (RSSL) and the Groundwater Soil Screening Level criteria.

- Baseline Characterization Environmental Sampling was conducted for the South Island Entrance portal portion of the I-64 Hampton Roads Bridge Tunnel (HRBT) Project on

April 24 through May 13, 2019. Details and specific locations are highlighted in text and figures in Memorandum Baseline Characterization Environmental Sample Analytical Results (August 2019). Environmental sampling was conducted concurrent with geotechnical investigation activities. In summary during the April – May 2019 sampling event at the South Island sediments were found to contain,

- Above Effects Range-Median (ERM) ecological screening level for calcium
- Residential Soil Screening Level (RSSL) for chromium, and
- Groundwater Soil Screening Level (GWSSL) for cobalt, manganese, and iron.
- Fill elutriate samples contained exceedances of Surface Water Criteria for iron
- Weanack Clean Fill Criteria for manganese, and zinc.
- Exceedances of the Virginia Criteria for Surface Water for PCBs (specifically Congeners PCB 18, & PCB 184), copper, and iron; and the Weanack Clean Fill Criteria for manganese.
- There were no exceedances of TCLP Criteria for the fill samples.

Native soil samples collected greater than 25 ft below grade were found to:

- exceed the ERM ecological screening level for calcium
- the GWSSL, the ISSL, and the RSSL for arsenic
- Threshold Effect Level (TEL) ecological screening level and the Ecological Soil Screening Level (ESSL) for cadmium
- GWSSL, ISSL, and RSSL for chromium; the GWSSL and RSSL for cobalt
- GWSSL and RSSL for iron
- ESSL for magnesium
- GWSSL, the RSSL, and the ESSL for manganese
- TEL for nickel
- ESSL for Vanadium
- ESSL for zinc
- ESSL and TEL for PCBs

Soil, sediment, and water baseline characterization sampling was conducted in order to evaluate reuse and disposal options for materials anticipated to be encountered/excavated during construction activities relating to the HRBT Project. The reuse and disposal options being evaluated for the HRBT Project include the utilization of soils and sediment for tunnel construction (as ballast) and/or island expansion (inclusive of in-water placement) or beach replenishment, the disposal of excess soils and sediment at Port Tobacco at Weanack, Dominion Recycling and/or other upland disposal facilities, and the treatment and disposal of water generated during construction activities.

S.5 SPILL PREVENTION AND RESPONSE

The SPRP includes the application of Best Management Practice (BMPs) for spill prevention that will be implemented at areas where construction activities occur (work sites) and includes the items below. A copy of SPRP will be maintained in the field offices located at South Island,

North Island and Established Construction Staging Areas the SPRP will be updated as work conditions change.

- New worker orientation training will be required for site employees and subcontractors. Orientation will include training on project environmental goals and environmental protection. Training will be documented in an Orientation Training Log.
- Cluttered conditions in storage areas will not be allowed.
- Dikes and berms to provide secondary containment around liquid containers; retention capacity of secondary containment areas will be at least 100% of the total volume of containers within the area.
- Drums will be stored on spill containment pallets and placed under cover.
- Frequent inspections of secondary containment areas will be made and prompt removal of liquid wastes such as overspill or rainwater will be removed from those areas.
- Frequent scheduled inspections and record keeping will be undertaken as summarized in Table S-5 and Table S-6.
- Hazardous waste storage areas shall be fenced and locked, covered and sheltered from weather, surrounded by a perimeter berm, and placed on asphalt or concrete pads.
- Free space for material handling equipment such as forklifts, cranes, etc. will be provided in order to operate in laydown and storage areas.
- Regular scheduled maintenance of construction equipment to minimize leaks, hydraulic hose breaks, etc.
- Proper chemical handling, waste management, spill response training and refresher discussions will be incorporated as an element of the weekly safety meeting.
- Storm water runoff and erosion and sediment control measures will be implemented in accordance with the approved SWPPP.
- Small quantity containers will be stored inside steel storage units.
- Spotters will be used backing construction equipment or trucks on site
- Worker training in basic spill prevention and response techniques will be included in new employee orientation and with Periodic refreshers and “tailgate” sessions.

S.5.1 INSPECTION AND MAINTENANCE

Particular attention will be made to inspection and maintenance of equipment containing, tunnel boring slurry fluids, jet grout fluids, slurry wall fluids, hydraulic fluids, lubricating oils and coolants. Care will be taken to ensure that oil and coolant drain plugs, and hydraulic line threaded connections are properly tightened in accordance with manufacturer’s recommendations. Slurry handling equipment, conveyance piping, connections, pumps and ancillary equipment will be inspected regularly. Inspections of equipment seals will be done as part of the routine maintenance protocol. Mechanics and equipment operators shall be alert for unusual or excessive leakage on drip pans beneath stationary equipment. Equipment found to be leaking will not be allowed to operate until repaired. Used equipment fluids shall be

collected, contained and disposed of in accordance with applicable rules, regulations and Best Management Practices. A list of items that will be inspected and the general frequency of inspection are provided in Table S-5:

Table S-5: Spill Prevention Inspection Schedule

Item	Inspection Type	Responsibility	Frequency	Recordkeeping
Sulfuric Acid	Visual	Contractor	Each work shift	Contractor daily log
Batch Plant conveyance piping integrity	Visual	Contractor	Weekly	Contractor daily log
Bentonite slurry conveyance piping integrity	Visual	Contractor	Weekly	Contractor daily log
Condition of perimeter fence/gates	Visual	Contractor	Weekly	Contractor daily log
Construction equipment drips, spills	Visual	Contractor	Weekly	Contractor daily log
Contractor daily log	Review	Contractor	Weekly	Contractor daily log
Drum secondary containment pallets	Visual, dipstick	Contractor	Weekly	Contractor daily log
External fuel tank integrity	Visual	Contractor	Daily	Contractor daily log
Flocculant	Visual	Contractor	Weekly	Contractor daily log
General site inspection for evidence of spills	Visual	Contractor	Each work shift	Contractor daily log
Hydraulic hose connections	Visual	Contractor	Operating - daily	Contractor daily log
Internal fuel tank integrity (space between double walls)	Dipstick	Contractor	weekly	Contractor daily log

Item	Inspection Type	Responsibility	Frequency	Recordkeeping
Interior of enclosed storage units containing liquid containers	Visual	Contractor	Weekly	Contractor daily log
Individual liquid container integrity	Visual	Contractor	Weekly	Contractor daily log
Lubricating oil drums	Visual	Contractor	Weekly	Contractor daily log
Perimeter site berms	Visual	Contractor	Daily	Contractor daily log
Slurry mixing tanks slab and perimeter berm integrity	Visual	Contractor	Daily	Contractor daily log
Soil conditioner mixing tanks, slab/berm integrity	Visual	Contractor	Daily	Contractor daily log
Used oil drums	Visual	Contractor	Weekly	Contractor daily log
Vehicle drips, spills	Visual	Contractor	Each work shift	Contractor daily log

Table S-6 identifies inspection frequencies for equipment and site security. Also see the Spill Prevention Control and Countermeasures Plan SPCC for other operational inspection activities.

Table S-6: Inspection Frequencies for Equipment and Site Security

Item	Type of Maintenance	Responsibility	Frequency	Recordkeeping
Construction equipment	Routine	Contractor	Manufacturer specification	Contractor daily log
Construction equipment	Unscheduled repairs	Contractor	As needed	Contractor daily log
Security	Repair holes in fence, gate latches, replace padlocks, etc.	Contractor	As needed	Contractor daily log
Small drips/leaks	Routine cleanup	Contractor	As needed	Contractor daily log

The information presented here is for reference purposes and is intended to be used in conjunction with the SPCC and in accordance with applicable federal and state codes and regulations.

S.5.2 SPILL PREVENTION

Spill response kit contents and locations are described in Table S-7:. Appropriately stocked spill response kits shall be maintained near hazardous materials and equipment and shall be immediately accessible to Project personnel.

Table S-7: Spill Response Kit Contents and Locations

Type of Spill Kit	Spill Kit Contents	Spill Kit Location(s)
Vehicle kit, drum kit, conex kit)	Air horn to get attention of those working nearby, personal protective equipment (PPE, such as safety glasses, gloves, coveralls, boot covers), spill pads, absorbent, booms, catch basin covers, anti-static shovels, garbage bags, plastic sheeting, overpack or disposal drum, complete copy of SPRP.	Adjacent to in-water work, on Islands, within 1,000' of active construction areas, next to Porta-johns, on large equipment, outside main job trailer, in staging areas Conex, on both North and South Islands.

S.5.2.1 SECURITY MEASURES FOR POTENTIAL SPILL SOURCES.

Site Security: Project work sites will be fenced and gated all times when construction work is in progress. During project working hours when gates are open for vehicular access, site security

will be provided by HRCF personnel. During periods outside working hours or when the site is inactive, gates will be secured and locked.

S.5.2.2 METHODS USED TO PREVENT STORMWATER FROM CONTACTING POTENTIAL POLLUTANTS.

Materials are to be stored in closed containers. Bulk chemical and biological substances are to be stored in double walled secondary containment vessels. Other bulk material is to be stored inside of protected structure (building), container (conex) or on elevated pallet to minimize contact with potential stormwater run-off. Stormwater run-off should be along structured conveyances (ditch, or bermed area). Avoid placing any material blocking any obvious run-off pathways.

There will be designated areas for fueling, loading, unloading equipment and materials. These designated areas will be located to minimization exposure to stormwater run-off. Secondary containment, drip pans, spill kits will be located in these areas.

Excavated material, spoils, and TBM separation solids will be stockpiled in secondary containment areas using berms or sandbagging to prevent run-on and run off exposure from stormwater. If possible, covered storage overhead protection will be provided. If a stockpile is exposed to the elements for an extended period of time, it will be provided with coverage and secondary containment of any stormwater that may fall onto the stockpile, or within the stockpile containment area. Because of the limited space available, the amount of time a stockpile is exposed will be minimized and spoils will be removed as soon as practical.

S.5.3 BEST MANAGEMENT PRACTICES FOR SPILL CONTAINMENT

General BMPs for the SPRP that shall be implemented at work sites include:

- Worker training in basic spill containment techniques during new employee orientation. Periodic refresher discussions will be included in the weekly safety “tailgate” sessions and monthly all hands meeting.
- Emergency contacts posted prominently at each work location
- Copy of this plan at each work location
- Maintain the following spill response equipment and materials at work locations with risk of spills:
 - Oil-absorbent booms, pads or bulk materials
 - Drip pans, absorbent booms and or pads will be used
 - Oil-skimming system for use in tanks
 - Chemical resistant gloves
 - Plastic garbage bags to collect the used materials
 - Conspicuous spill containment kits will be inspected weekly to ensure that supplies are fully stocked
- Frequent inspections of integrity of secondary containment structures

- Frequent maintenance of spill containment devices, e.g. berms
- Use of drip pans, absorbent materials, etc. to mitigate and clean up vehicle or equipment drips and leaks before they accumulate and mix with stormwater
- Secondary containment structures shall be in accordance with, where secondary containment means placing tanks or containers within an impervious structure capable of containing 110% of the volume contained in the largest tank within the containment structure.
- Any more stringent secondary containment requirements (including for double-walled tanks) required by a 401 Permit, Special Provision or other Permit/Contract requirement for work in or over water. Attach a copy of the 401 Permit, Special Provision or another Permit/Contract document indicating the more stringent requirement.
- If supplies used required more stringent secondary containment (including double-walled tanks) by the International Fire Code (IFC) or local fire marshal, a copy of the IFC official documentation shall be attached to the SPRP

S.5.4 SPILL RESPONSE

The following text outlines the response procedures that contractors on the Project shall follow for scenarios indicating that if hazardous materials are encountered or spilled to soil or water (including stormwater) during construction. HRCP shall do everything possible first to prevent spills, and if they do occur, contain them with absorbent materials, dykes, ditches to control and contain spills until they can be cleaned up. The SRPP procedures include a description of the actions that HRCP shall take to address each task as well as the specific on-site, spill response equipment that shall be used to perform each task.

A flowchart showing spill response activities is provided in Figure S-2. In the event of any oil or product discharges into public water, or onto land with a potential for entry into public waters, immediately notify the following entities:

HRCP Project Representative, John Cassidy (947) 517-7146

VDOT Project Representative TBD

VDEQ, Tidewater Regional Office, Pollution Response Coordinator (757) 518-2179

U.S. Coast Guard, Communications Command (757) 421-6240

For spills of federal reportable quantities of oil or chemical discharges to the environment, as determined by the HRCP Environmental Manager, in conformance with the requirements in 40 CFR parts 110, 117, and 302, and the project SPCCP will notify:

National Response Center (operated by U.S. Coast Guard) (800) 424-8802

In case of a spill, the HRCP shall act immediately to control the spill. If HRCP personnel cannot control and clean up the spill immediately themselves, site personnel will call the emergency response contractor using their 24-hr emergency response number.

TBD Emergency Response Contractor

In situations where there is a reasonable potential for, or occurrence of a medical emergency, major injury, fatality, spill, fire or explosion, HRCP shall contact the emergency number.

S.5.4.1 SPILL RESPONSE EQUIPMENT AND MATERIALS

The following materials will be maintained at each work site and restocked as necessary to ensure an adequate and continuous supply:

- Gloves for use when performing the work, and plastic bags to collect the used material
- Heavy equipment – front end loader, backhoe, crane for use in mobilizing equipment and creating barriers
- Oil absorbent booms: four each, five feet long
- Oil absorbent pads or bulk material, adequate for coverage of 200 square feet of surface area
- Oil absorbent material, such as kitty litter or sawdust for material spills on land

S.5.4.2 EMERGENCY RESPONSE PROCEDURES

In case of a spill, the HRCP shall act immediately to control the spill. If HRCP personnel cannot control and clean up the spill immediately themselves, site personnel will call the 24-hr emergency response numbers noted in Table S-2 (National Emergency Hotline - 1-800-424-8802).

Response Contractor (**TBD**) and a phone number

The Response Contractor dispatcher takes basic information, including name of caller, company or organization, telephone number and general spill description. The dispatcher then immediately contacts the duty supervisor. The supervisor then immediately calls HRCP to determine the following:

- Exact location of the spill and direction of release
- Name and phone number of site contact and/or Responsible Party
- Material spilled
- Quantity spilled
- How the material spilled
- Fire, explosion, or chemical reaction dangers
- Injuries, fatalities, or crime scene status

- Onsite assets, equipment and utilities that are available for use
- Incident command system activation status

The Supervisor then dispatches appropriate equipment and personnel, including:

- Underground spill response trailer outfitted with sand bags, underflow pipe, confined space
- entry gear (4-gas meters, tripod, winch, harness, 5-minute egress bottles) and Personal Protective Equipment
- Vacuum trucks
- Gear trucks with sand bags, steam cleaners
- Boom trailer with 2000 feet of boom
- Front End Loaders
- Roll off Bins
- Sorbents

The Supervisor arrives within 30 minutes, and upon arrival, the following steps are taken:

1. The Supervisor performs initial site evaluation and hazard assessment, including air monitoring.
2. First response personnel arrive within 30 to 45 minutes with vacuum trucks and gear trucks carrying sand bags and pressure washers.
3. Work sites are established at the generating station, impacted areas, storm drains, and receiving water, including hot zones, traffic exclusion areas and personnel decontamination stations. A Supervisor is assigned to each area and a site safety meeting is held at each work zone.
4. The Project Manager and designated Site Health and Safety Officer will review the project site safety plan.

The following work area actions can be carried out concurrently:

1. HRCP will respond immediately using the onsite spill kits to construct sand bag dams in the affected areas to exclude further potential pollutants from entering storm drains.
2. Upon arrival to the project spill location, the emergency response firm will mobilize and recover freestanding spillage with a vacuum truck. The affected areas will be steam cleaned and disinfected to collection points built with sand bags. Standing water will be recovered with vacuum trucks.
3. If storm drains are accessible under OSHA regulations, and if entry is possible, the cleaning method will be underground steaming with a steam cleaner to a collection point created with a sandbag dam at the next accessible manhole location. Operation requires blowers and constant air monitoring. If storm drains are not accessible by personnel, cleaning will be accomplished with a self-propelled line jetting vacuum extractor (Vactor) with a 1-inch rotating head to collection point dam.

4. Using a vacuum truck, any freestanding waste will be recovered. Saturated surfaces will be steam cleaned and any equipment will be hand wiped with disinfectants.
5. Stage roll-off bins and/or temporary storage tanks will be provided at each work site and segregate waste streams will be developed in accordance with VDEQ requirements until quantification of recovered product is completed:
6. Emergency response contractor will provide treatment and/or disposal options to HRCP and arrange as directed.
7. During the project, Emergency Response Contractor (TBD) will have the HRCP and VDOT onsite representatives review and approve detailed work reports, including personnel hours, equipment utilized, and materials expended on a daily basis. As the weight tickets and disposal charges are received by Emergency response contractor, an invoice will be prepared and submitted with appropriate backup documents. The Emergency response contractor will provide data demonstrating that contaminants of concern have been removed and the work site is safe to resume work activities.

If HRCP will use a Subcontractor for spill response, provide contact information for the Subcontractor in Table S-1 and, in the appropriate table below, identify when the subcontractor shall be used and the actions that HRCP shall take at the site while waiting for the Subcontractor to respond

S.5.5 SPILL REPORT FORM(S)

A copy of the spill report form that HRCP shall use in the event of a release or spill is attached as Attachment S-1.

S.5.6 PLAN APPROVAL

This SPRP is supported by the executives, project manager and the superintendents of HRCP having the authority to commit the necessary resources, including labor, equipment, and materials, to expeditiously control and remove any harmful quantity of fuel, petroleum product or hazardous materials spilled or released to the waters or land of the Commonwealth of Virginia.

Executive Signature
HRCP

Date	Name
	Title
	HRCP

Project Manager Signature
HRCP

Date	Name
	Title
	HRCP

Superintendent Signature
HRCP

Date	Name
	Title
	HRCP

SPRP Acknowledgement Form (to be signed by Project personnel)

This is to certify that I have read this Project SPRP and understand its contents. I have attended a Project orientation meeting discussing the elements of this SPRP and the safety and health hazards associated with SPRP operations to be performed at this Project. Failure to comply with the requirements contained in this SPRP may result in my removal from the Project.

PRINT NAME

SIGNATURE

DATE

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

ATTACHMENT S-1: SPILL OR INCIDENT REPORT FORM

Instructions: Complete for any type of petroleum product or hazardous materials/waste spill or incident. Provide a copy of this report to management.

1. VDOT Personnel Involved in Spill Reporting:

Project Office: Name, Title, and Phone Number:

Regional Environmental Office: Name, Title, and Phone Number:

2. Contractor:

Name and Title of Person Responsible for Spill Response:

Phone Number:

3. General Spill Information:

Common Name of Spilled Substance:

Quantity Spilled (Estimate):

Describe Concentration of Material (Estimate):

Date of Spill: ____/____/____

Time Spill Started: ____ AM ____ PM

Time Spill Ended: ____ AM ____ PM

4. Spill Location and Conditions:

Project Title:

Street Address and/or Milepost, City:

Weather Conditions:

If Spill to Water, Name of Water Body (if ditch or culvert, identify the water body that the structure discharges to):

Identify the Discharge Point:

Estimate the Depth and Width of the Water Body:

Estimate Flow Rate (i.e., slow, moderate, or fast):

Describe Environmental Damage (i.e., fish kill?):

5. Actions Taken:

To Contain Spill or Impact of Incident:

To Cleanup Spill or Recover from Incident:

To Remove Cleanup Material:

To Document Disposal:

To Prevent Reoccurrence:

5. Reporting the Spill:

Spills to water: Immediately call the National Response Center (1-800-424-8802, and the appropriate DEQ Regional Office 757-518-2000. VDEQ Regional Response Coordinator 757-518-2179.

Spills to soil that may be an immediate threat to health or the environment (i.e., explosive, flammable, toxic vapors, shallow groundwater, nearby creek, etc.): Call the appropriate DEQ Regional Office immediately. If not immediately threatening but may be a threat to human health or the environment, report to Ecology within 90 days.

List agencies contacted; include names, dates, and phone numbers for people you spoke with:

7. Person Responsible for Managing Termination/Closure of Incident or Spill:

Name and Phone:

Address and Fax:

8. Additional Notes/Information (if necessary):