STORMWATER POLLUTION PREVENTION PLAN
FOR
Main Heat Plant Facility

Date: November 12, 2018
MS4 Permit Number: VAR040073

Prepared by:

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CERTIFICATION

I certify 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.

Authorized By: Peter Kowalzik **Title:** Heat Plant Manager

Signature: [signature] **Date:** 11/12/18

1.0 INTRODUCTION

1.1 Purpose

University of Virginia (UVA) is subject to a General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4). This permit requires that the University of Virginia (UVA) identify high-priority locations requiring Stormwater Pollution Prevention Plans (SWPPP). These plans are designed to minimize or prevent pollutant discharge from daily operations such as road, street, and parking lot maintenance, equipment maintenance, and the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers.

UVA has developed this SWPPP to incorporate the requirements of the MS4. UVA must identify all municipal high-priority facilities which may include:

1. Composting facilities;
2. Equipment storage and maintenance facilities;
3. Materials storage yards;
4. Pesticide storage facilities;
5. Public works yards;
6. Recycling facilities;
7. Salt storage facilities;
8. Solid waste handling and transfer facilities; and
9. Vehicle storage and maintenance yards.

The primary goals of the SWPPP will be to:

1. Identify potential sources of pollutants that affect stormwater discharges from this facility;
2. Describe the practices that will be implemented to prevent or control the release of pollutants in stormwater discharges; and
3. Create an implementation schedule to ensure that the practices described in this SWPPP are in fact implemented and to evaluate the plan's effectiveness in reducing the pollutant levels in stormwater discharges.

1.2 SWPPP Content

This SWPPP includes the following:

1. A site description that includes a site map identifying all outfalls, direction of flows, existing source controls, and receiving water bodies;
2. A discussion and checklist of potential pollutants and pollutant sources;
3. A discussion of all potential nonstormwater discharges;
4. Written procedures designed to reduce and prevent pollutant discharge;

5. A description of the applicable training as required;
6. Procedures to conduct an annual comprehensive site compliance evaluation;
7. An inspection and maintenance schedule for site specific source controls. The date of each inspection and associated findings and follow-up shall be logged in each SWPPP;
8. The contents of each SWPPP shall be evaluated and modified as necessary to accurately reflect any discharge, release, or spill from the high priority facility which has been reported. For each such discharge, release, or spill, the SWPPP must include the following information: date of incident; material discharged, released, or spilled; and quantity discharged, released or spilled; and
9. A copy of the SWPPP shall be kept at the plant and shall be kept updated and utilized as part of staff training.

2.0 STORMWATER POLLUTION PREVENTION TEAM

The high-priority facility's pollution prevention team, headed by the team leader Pete Kowalzik, will be responsible for developing, implementing, maintaining, revising and ensuring compliance with the SWPPP. Table 1 provides the facility's pollution prevention team members, their title, and contact information.

Table 1: Stormwater Pollution Prevention Team

Team Member	Title	Contact Information
Pete Kowalzik	Heat Plant Manager	434-924-7850
Bill Fortino	Heat Plant Senior Shift Supervisor	434-982-5388
[Multiple]	Heat Plant Shift Supervisor	434-924-3059
Kristin Carter	Environmental Programs Manager	434-982-5034
Brittany Olenslager	Environmental Compliance Specialist	434-982-4901

The team will meet to evaluate and discuss the status of storm water control efforts and address any deficiencies or additional requirements in the SWPPP. Specific responsibilities for the team include:

1. Aid with developing and maintaining the SWPPP;
2. Update significant material list;
3. Review potential spill sources;
4. Update the SWPPP as necessary;
5. Review environmental incidents;
6. Continue and improve SWPPP training for facility personnel;
7. Review new construction and changes in activities and procedures; and
8. Evaluate the overall effectiveness of the SWPPP.

As part of the stormwater team, Environmental Resources (ER) in Facilities Management will review, inspect, and assure that installation and regular maintenance of all stormwater controls are performed so that stormwater pollutants are minimized.

3.0 FACILITY INFORMATION

3.1 Facility Location

Facility Name:	UVA Main Heating Plant
Facility Address:	1321 Lee St, Charlottesville, VA 22903
Facility Acreage:	1.46 acre
University's Primary SIC Code:	8221
Watershed this facility drains to:	Meadow Creek ☐
	Moore's Creek ☒

3.2 Facility Description

The total area of the site is approximately 1.46 acres. This area is virtually all impervious, consisting of pavement, processing equipment and buildings. The primary building has a footprint of 13,500 square feet. The heat plant boilers are located inside of this building, along with administrative offices, a control room, and other process equipment necessary to produce heat. Directly east of the primary building is an area with a footprint of 6,650 square feet where air pollution control and ash handling activities take place. These structures are open to precipitation and drain to the stormwater system. Further east is the Coal Unloading Facility, which has a footprint of 5,500 square feet. Four coal silos and a material storage building are located on the north side of the building. See Figures 1 and 2.

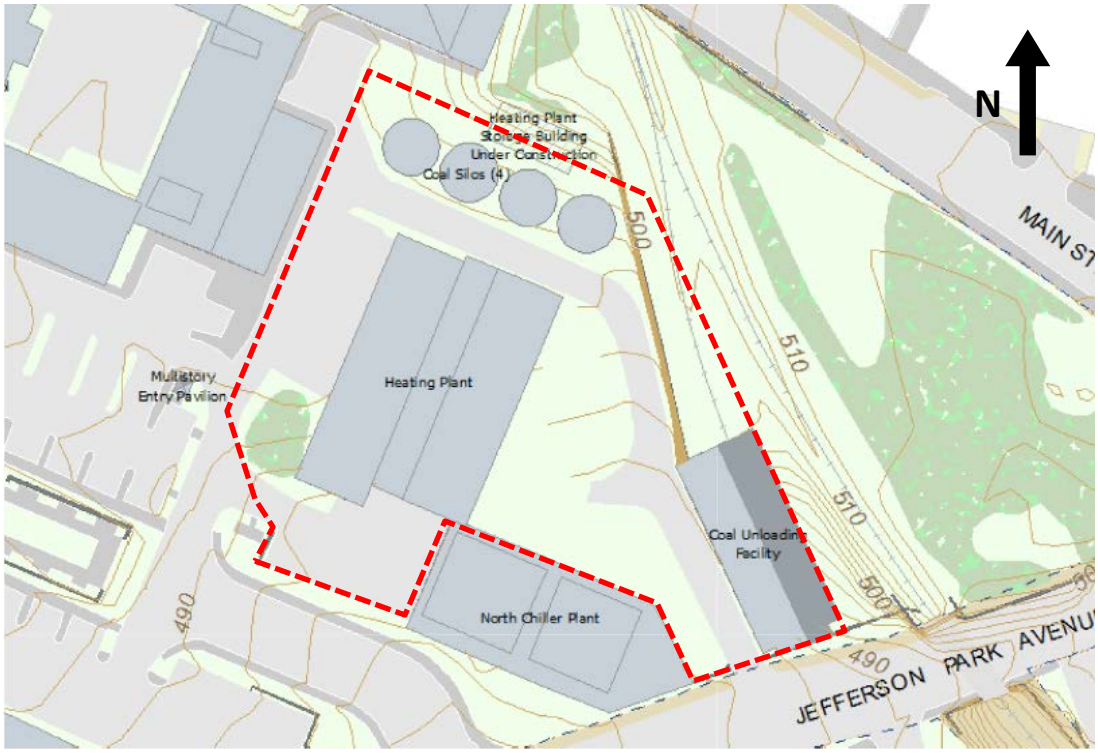


Figure 1: Facility Topographic Location Map

Figure 2: Aerial Photograph of Site and Vicinity

3.3 Facility Activities

The University of Virginia operates the MHP to generate steam and medium temperature hot water. These products are distributed through an underground utility pipe network to supply buildings on grounds. Heat is generated through the combustion of natural gas, ultra-low-sulfur diesel (ULSD) fuel, and coal. Natural gas is directly piped to the plant by the City of Charlottesville. ULSD is delivered by truck and stored in five underground storage tanks (USTs) on-site. Coal is delivered primarily by railcar. Railcar unloading occurs in a closed building with coal conveyed to four storage silos prior to conveyance into the main plant building for burning. Each coal boiler is equipped with a spray dry absorber (SDA) and baghouse for air pollution control. Lime is stored in a silo prior to being mixed into a slurry for injection into the SDAs for acid gas removal. Particulates generated during coal combustion and the salts formed in the SDAs are removed in the fabric filters; this fly ash is conveyed and stored in a silo. Bottom ash (the unburned material in the coal) is conveyed to a silo. Ash is unloaded by truck for proper disposal or recycling. This facility operates and remains staffed at all times.

The Main Heat Plant is directly adjacent to the North Chiller Plant. All chiller plant activities take place indoors and are not at risk of impacting stormwater.

3.4 Facility Stormwater Drainage System

Surface runoff from the site generally flows from north to south until intercepted by catch basins and drop inlets as indicated in Figure 3. The University's MS4 connects to the City of Charlottesville's MS4 at points 4 and 5. The City's MS4 discharges stormwater to a tributary of Moores Creek, which is considered impaired by the Virginia Department of Environmental Quality (DEQ).

Most runoff that may potentially carry contaminants flows to the trench drain at point 1 and/or ultimately flows to the catch basin at point 2, where water is intercepted by an inflatable bladder. This water is contained here for observation or testing before allowing the water to pass on to the rest of the storm sewer system.

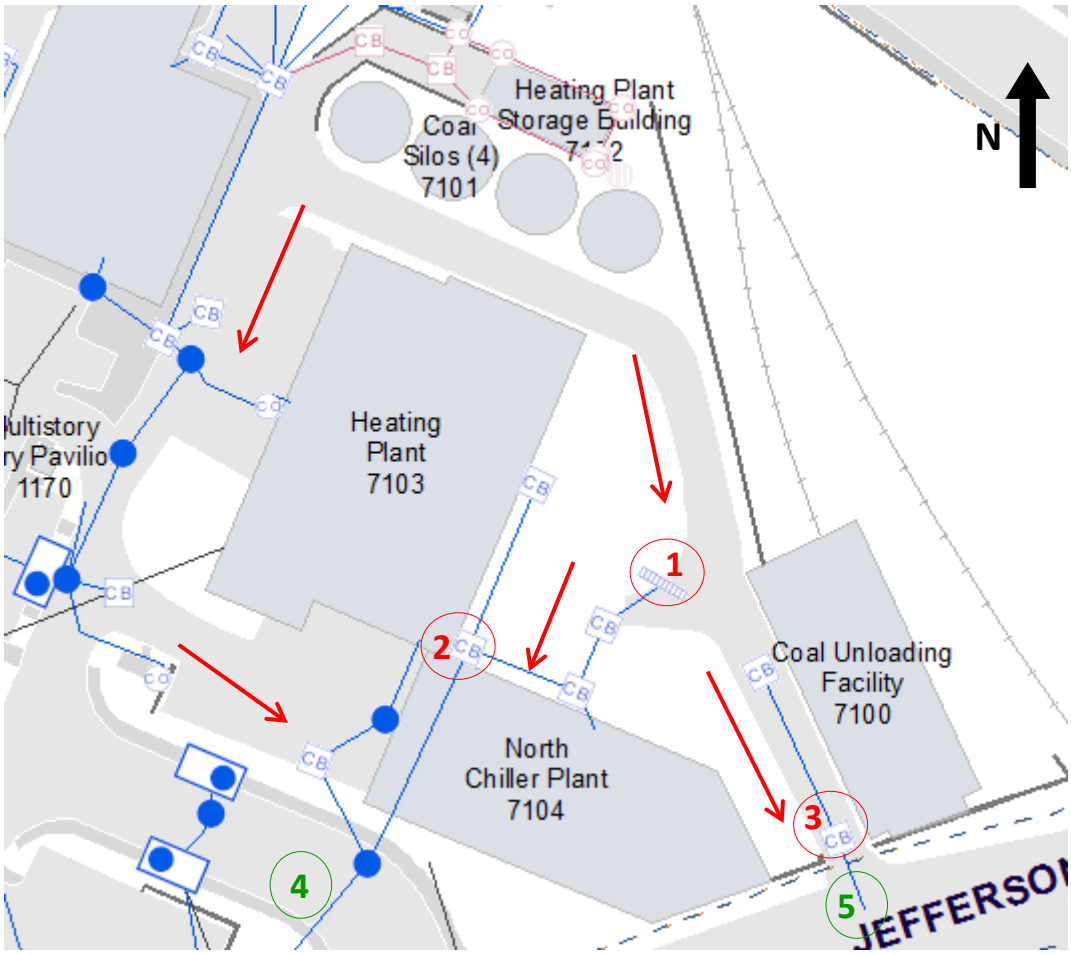


Figure 3: Facility Stormwater Drainage System;
(General Flow of Stormwater marked with Red Arrows)

3.5 Surrounding Land Use

The University of Virginia Main Heating Plant (MHP) is located in a highly developed area, near the intersection of Main Street and Jefferson Park Avenue. Directly north of the Heating Plant is a busy commercial strip of restaurants and businesses, known as “the Corner”. To the east of the plant lies a segment of CSX Railroad tracks and beyond this is a small park. Adjacent to the heat plant to the south is the North Chiller Plant. Further south across Jefferson Park Avenue are buildings associated with the UVA Hospital. More hospital buildings and the Medical School building lie to the west of the Heating Plant. This area experiences a lot of vehicle and pedestrian traffic as people access the hospital and commercial facilities nearby.

4.0 IDENTIFICATION OF POTENTIAL STORMWATER CONTAMINANTS

This section identifies significant materials located at the high-priority facility that may potentially contaminate stormwater and identifies potential areas for stormwater contamination. Potential non-stormwater sources are also described.

4.1 Potential Pollutants and Pollutant Sources

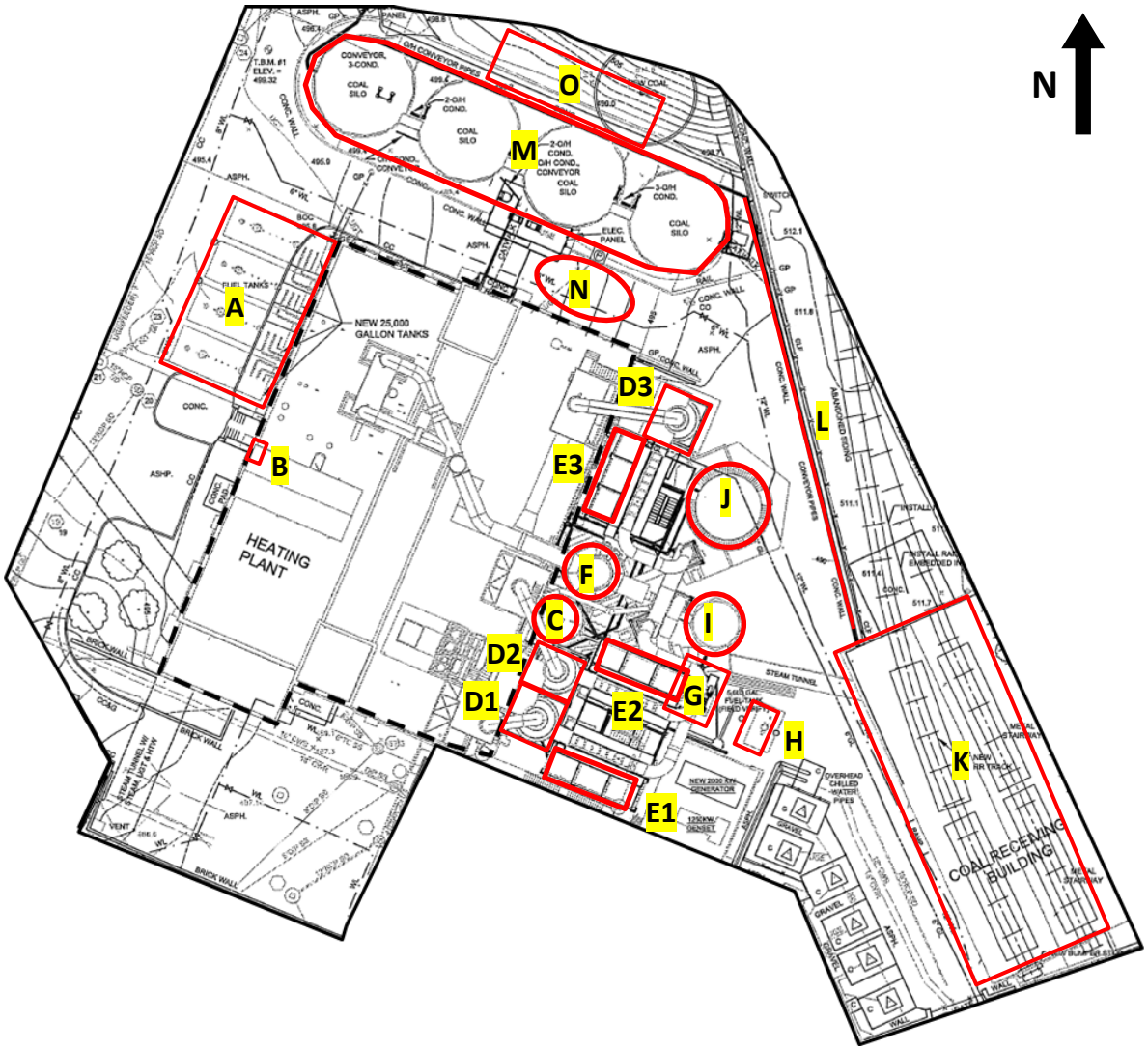
Materials used by the facility that have the potential to be pollutants are listed in Table 2. This table includes the material description, the source of the potential pollutant, and its location.

Table 2. Potential Pollutants and Sources

Material/Pollutant	Pollutant Source	Location of Pollutant	Potential Risk and Mitigation
Coal	Temporary stockpile	Access road south of storage silos	Low risk – storage outside is rare
Coal dust	Railroad delivery; fugitive dust emissions	Coal unloading facility; storage silos	Low risk – doors must be closed on the unloading building and the conveyance system is fully enclosed.
Bottom ash	Ash loading; fugitive dust emissions	Ash loading area below bottom ash silo	High risk – loaded frequently, outdoors
Fly ash	Ash loading; fugitive dust emissions	Ash loading area below fly ash silo, under SDAs and baghouses	High risk – loaded frequently, outdoors
Pebble Quicklime	Delivery vehicle	Lime Silo	Low risk – outdoor transfer, truck pumps quicklime up to silo via pressure, silo filter is inspected during use
Lime slurry	Spill, leaky equipment	Lime mixing tank, around slurry transfer lines	High risk – storage and handling equipment drains to storm sewers
Lime grit	Spill	Storage shed and dumpsters	High risk – continuous use during coal fire operations, covered operation but overflows will contaminate stormwater

Material/Pollutant	Pollutant Source	Location of Pollutant	Potential Risk and Mitigation
Process water contaminated with lime	Spill	Process water tank and associated transfer lines	Medium risk – covered tank with high level sensor and alarm
Diesel fuel	Delivery vehicles, spill, leaking tank	Underground tanks	Medium risk – infrequent deliveries, fuel stored underground, tanks monitored continuously
Process chemicals, housekeeping supplies, oil/grease for equipment maintenance	Delivery vehicle	Doorways into plant buildings	Low risk – materials stored indoors
Equipment and vehicles	Leak	North and east sides of the main building	Medium risk –Vehicles kept in good repair and receive routine maintenance to minimize risk of leaks.
Designated ash/process waste dumpsters and hoppers	Leak	Throughout the property, near ash and lime silos	Medium risk – some hoppers and dumpsters are not covered/located in areas protected from rainfall, area drains to storm sewers

Spills or fugitive dust from storage and handling of coal and ash can contribute to elevated concentrations in stormwater of total suspended solids (TSS), a pollutant associated with impairments in the Rivanna River and Chesapeake Bay. Runoff that contacts lime products will become basic (high pH), which is harmful to aquatic life in the creeks downstream of the MHP. Figure 4 identifies the location of all activities and materials that are exposed to precipitation or surface runoff and may impact stormwater quality.



A. Four 25,000-gallon tanks of ULSD Fuel
B. Fuel tank monitor
C. Lime storage silo and process water tank
D1. Spray Dry Absorber (Boiler 1R)
D2. Spray Dry Absorber (Boiler 2R)
D3. Spray Dry Absorber (Boiler 5)
E1. Baghouse (Boiler 1R)
E2. Baghouse (Boiler 2R)
E3. Baghouse (Boiler 5)
F. Main stack
G. Lime grits storage shed with grit dumpster
H. One 5,000-gallon tank of ULSD Fuel
I. Bottom ash silo
J. Fly ash silo
K. Coal Receiving Building
L. Coal conveyor
M. Four coal silos
N. Temporary stockpile location (emergency use only)
O. Storage building with spill response kit

Figure 4: Locations at MHP that are Relevant to Stormwater Quality

4.2 Potential Nonstormwater Discharges

Table 3 below, identifies all nonstormwater discharges as authorized in the general permit that are or will be commingled with stormwater discharges from the high priority facility, including any applicable support activity. Authorized nonstormwater discharges include:

Table 3. Potential Nonstormwater Discharges

Nonstormwater Discharges that could be Commingled with Stormwater Discharges at this Facility	Anticipated?
1. Discharges from firefighting activities	Yes ☐ No ☒
2. Fire hydrant flushing	Yes ☐ No ☒
3. Water used to wash vehicles or equipment where soaps, solvents, or detergents have not been used and the wash water has been filtered, settled, or similarly treated prior to discharge	Yes ☐ No ☒
4. Water used to control dust that has been filtered, settled, or similarly treated prior to discharge	Yes ☐ No ☒
5. Potable water sources, including uncontaminated waterline flushing	Yes ☐ No ☒
6. Routine external building wash down where soaps, solvents or detergents have not been used and the wash water has been filtered, settled, or similarly treated prior to discharge	Yes ☐ No ☒
7. Pavement wash water where spills or leaks of toxic or hazardous materials have not occurred (or where all spilled material has been removed prior to washing); where soaps, solvents, or detergents have not been used and where the wash water has been filtered, settled, or similarly treated prior to discharge	Yes ☒ No ☐
8. Uncontaminated air conditioning or compressor condensate	Yes ☒ No ☐
9. Uncontaminated ground water or spring water	Yes ☐ No ☒
10. Foundation or footing drains where flows are not contaminated with process materials such as solvents	Yes ☒ No ☐

Nonstormwater Discharges that could be Commingled with Stormwater Discharges at this Facility	Anticipated?
11. Uncontaminated excavation dewatering, including dewatering of trenches and excavations that have been filtered, settled, or similarly treated prior to discharge	Yes ☐ No ☒
12. Landscape irrigation	Yes ☐ No ☒

5.0 POLLUTION PREVENTION/GOOD HOUSEKEEPING PRACTICES

Each UVA facility that has been identified as a municipal high-priority location must develop and implement written procedures to minimize or prevent pollutant discharge from daily operations, equipment maintenance, and the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers. These procedures will be included as part of the employee training.

5.1 Universal Municipal Operations

UVA has developed procedures to reduce and prevent pollutant discharge on the site where potential contaminates may be washed into stormwater channels, sewer systems, or ground water. These procedures are intended to cover the following areas:

- Prevent illicit discharges
- Ensure the proper disposal of waste materials, including landscape wastes
- Prevent the discharge of municipal vehicle wash water into the MS4 without authorization under a separate VPDES permit
- Prevent the discharge of wastewater into the MS4 without authorization under a separate VPDES permit
- Require implementation of best management practices when discharging water from utility construction and maintenance activities
- Minimize the pollutants in stormwater runoff from bulk storage areas (e.g., salt storage, topsoil, and sand stockpiles) using best management practices
- Prevent pollutant discharge into the MS4 from leaking municipal automobiles and equipment
- Ensure that the application of materials, including fertilizers and pesticides, is conducted in accordance with the manufacturer's recommendations, nutrient management plans, and standard operating procedures.

Standard Operating Procedures (SOPs) have been developed for UVA to reduce and prevent pollutant discharges where potential contaminants could be washed into the storm sewer system. The following SOPs have been written that are pertinent to MHP operations and maintenance activities:

- Exterior Surfaces and Building Washing
- Used Oil Disposal
- Vehicle and Equipment Maintenance
- Waste Management

The full text of these SOPs can be found in Appendix F and electronic versions are available online: https://www.fm.virginia.edu/depts/operations/environmental/procedures.html.

The MHP does not have a specific Virginia Pollutant Discharge Elimination Permit. However, it is covered under UVA's facility-wide DEQ issued MS4 Stormwater Discharge Permit. The only discharges into the MS4 from the plant are stormwater runoff and potential nonstormwater discharges listed in Table 3. The following activities are not conducted at the MHP: municipal vehicle washing, wastewater discharges into the MS4, utility construction, and fertilizer/pesticide application.

5.2 Site-Specific Operations

In addition to the universally applicable SOPs mentioned in the previous section, site-specific SOPs and protocols have been established for daily operations at the MHP that are designed to minimize pollutant discharge to the storm sewer system. A general discussion of the SOPs is found below with the full text available in Appendix E.

5.2.1 Diesel Handling

ULSD is delivered by truck and stored on-site in five underground storage tanks (USTs) and piped underground to the boilers or emergency generators as needed.

The USTs will be maintained in good working order as required by the State and Federal Regulations governing petroleum underground storage tanks and UVA's Spill Prevention, Control and Countermeasures (SPCC) Plan. Spill and overfill devices will be checked monthly to ensure that they are operational. The spill device will be checked to ensure that it is free of fuel, water, and debris. If it is not, it will be cleaned out. Fuel will be drained into the tank and water or debris will be removed for proper disposal. The Veeder Root leak detection system will be maintained and monitored for proper operation.

5.2.2 Coal Handling

Coal is delivered primarily by railcar but can also be delivered or removed from the site by truck during emergencies. Railcar unloading occurs in a closed building with coal stored in one of four storage silos or bunkers, each equipped with cartridge filters for particulate control. Coal is moved around the plant using completely enclosed conveyance systems. These controls are all required by air permit and are inspected on a weekly basis.

During rare occasions when the plant has a temporary coal stockpile, the pile is kept just moist enough to minimize dust emissions. It is removed from the site as quickly as feasible.

5.2.3 Pebble Quicklime Handling

Pebble quicklime is delivered by truck and pumped in a closed pipe to the top of the lime silo. Particulate emissions from filling the silo are controlled by a fabric filter, which is inspected during quicklime unloading operations. A Quicklime Truck Unloading SOP has been developed to establish best management practices for this activity. A copy is available in Appendix E.

5.2.4 Lime Slurry Handling

Pebble quicklime is mixed with water to make a slurry that is used in the SDAs to treat boiler emissions. Slaking and slurry storage operations are housed within the lime silo shell. Slurry is recirculated through pipes and hoses between the storage tank and the SDA penthouses for injection.

At the end of the coal burning season and occasionally during it, the lime slurry system is rinsed. This rinse water and any wash water used to clean the lime silo and SDA penthouses is stored in the process water tank. Due to its high pH, this wastewater cannot be discharged to the sanitary sewer. Instead, it is used for dust control during ash unloading operations, hauled directly to the Moores Creek Advanced Water Resource Recovery Facility or disposed by a private contractor.

On rare occasion, a hose or connection has failed resulting in a lime slurry spill. Some of the steps taken to prevent or minimize the impacts of lime spills include:

- Scheduled replacement of lime slurry suction and penthouse hoses on an annual basis;
- Sealing of SDA penthouse floor openings; and
- Monitoring and alarms within the system, such as level sensors in the lime silo sump and process water tank, to promptly identify and respond to slurry handling problems.

5.2.5 Lime Grits Handling

During the slaking process, a byproduct of unreacted limestone, referred to as lime grits, is generated. Grits are screened out of the slurry and transferred from the lime silo by covered screw conveyor to a dumpster where they are dewatered. The collected water is pumped back to the grit screen and slurry tank in the lime silo. Grits are disposed with the fly ash, which is hauled away about three to five times a week during coal fire operations. The secondary containment chamber is emptied at the end of the coal burning season.

The lime grits dumpster is housed in a storage shed equipped with secondary containment. The shed door is kept closed to keep out precipitation except when open for unloading operations. Regular inspection of the lime grits handling process is conducted as part of the daily rounds of inspection.

5.2.6 Ash Unloading Operations

Bottom ash is the non-combustible material in the coal that remains after passing through the boiler. Particulates generated during coal combustion and the salts formed in the SDAs are removed in the fabric filters and are referred to as fly ash. Ash is moved in completely enclosed conveyance systems to silos equipped with cartridge filters for particulate control. The cartridge filters are required by air permit and are inspected on a weekly basis. While there is a silo designated separately for fly ash and bottom ash, both silos can accept either type of ash.

MHP staff follow the Flyash Silo Unloading Process and Bottom Ash Silo Unloading Process SOPs; copies are provided in Appendix E. Ash is wetted with liquids from the process water tank and/or City water as it is unloaded into trucks to minimize fugitive dust emissions. Any material on the ground should be swept and vacuumed up and disposed of in the ash truck. Fly ash is currently used as landfill beneficial cover, and bottom ash is used for making cement.

5.2.7 Wet Facility Washing

The pavement under and around the MHP air pollution controls systems, lime silos, and ash silos is infrequently power washed to remove residual spilled materials or settled fugitive dust that could otherwise wash off during rain events. This washing operation is typically performed in the spring after coal fire operations are done for the winter. MHP staff follow UVA's Exterior Surfaces and Building Washing and MHP Storm Drain Procedure SOPs to ensure wash water does not contaminate local waterways; copies of the SOPs are provided in Appendix E. An inflatable bladder inserted into a storm pipe at the MHP contains the wash water and any spilled materials on-site for evaluation and proper disposal. If the water caught by the inflatable bladder has high pH, it is pumped to the process water tank.

5.2.8 Other Material Handling – Dumpsters

There is one municipal waste dumpster that is located off site that is covered with a flip-up top and is regularly emptied by a trash collection truck. Other small dumpsters and hoppers are located throughout the site for collection of waste products, such as wet ash from the SDAs. These dumpsters/hoppers should be:

- stored inside the building,
- stored in outdoor areas protected from rainfall (e.g., under the air pollution control equipment), or
- covered by a tarp when not in active use.

Receptacles containing ash are emptied into the trucks used to unload the silos.

5.2.9 Other Material Handling - Forklifts

Forklifts are checked before every use by certified forklift operators. Part of their inspection includes observation for any mechanical problems that may be apparent. At this time, if the operator notices any leaks, the equipment would be taken out of service until repairs are completed.

Most process chemicals and equipment, including those listed in Table 2, are stored inside the Main Heat Plant building so they are not exposed to stormwater.

5.2.10 Fleet Vehicle Maintenance

Fleet vehicles assigned to the Heat Plant division receive routine preventative maintenance at UVA's Parking and Transportation (P&T) Department, which has its own SWPPP and an Industrial Stormwater Discharge Permit. All vehicle maintenance and washing occurs at P&T.

6.0 SPILL PREVENTION AND RESPONSE

Spill response typically involves liquids such as hazardous chemicals (e.g., lime) or petroleum fuels; however, the various high-priority facilities at UVA may be responsible for other materials such as salt, fertilizers, or ash.

6.1 Spills of Solid Materials

Any ash that spills on the ground during silo unloading operations should be swept and/or vacuumed up and disposed of in the ash truck. If quicklime or fly ash spill underneath the SDAs

or baghouses, it should be swept up and stored in the SDA hopper until it can be disposed when the fly ash silo is unloaded.

6.2 Spills of Liquid Materials

Spill response procedures documented in UVA's SPCC Plan shall be followed in the event of a spill. These procedures are described below.

As soon as a spill is discovered, the initial action should be to protect personal safety and prevent the pollutant from entering nearby drainage ditches or storm water drop inlets. The person observing the spill should take immediate action to prevent further spillage and to confine the spilled material. The general instructions to contain a spill are:

- Observe all applicable safety considerations.
- If possible to do safely, stop the release. This includes shutting appropriate valves, securing pumps, and attempting to plug or cover punctures or gashes in pipes. It may be impossible to stop the spill if the situation creates a high degree of personal danger to the immediate responders.
- Notify a supervisor, UVA Environmental Health and Safety (EHS), and Environmental Resources (ER) at FM.
- Warn other employees and onsite personnel of the spill by voice or using equipment such as two-way radios or telephones, if available.
- Contain the spill. Use absorbent materials, dirt, sand, or other relatively impervious material to dam up the spill and prevent further flow of the material from the spill area. Spill response materials can be found in the storage building north of the coal silos, shown as structure N in Figure 4.
- Should spillage reach the drainage ditches or storm water drop inlets, use available means to minimize amount of substance flowing into the ditch or drain and contain the substance at the discharge point.
    - For oil or other floating materials, use hay, straw, or any boom arrangement to confine the spillage.
    - For soluble materials, use chemical absorbent, makeshift dams, or other means of confinement to prevent waterway contamination or the spread of further contamination.
- The person discovering the spill should not undertake burning or chemical treatment of the spill.
- Remain at the scene until EHS or ER arrive on-site.

6.3 Storm Drain Bag

Stormwater runoff may potentially carry contaminants such as ash and lime into the storm sewer. An inflatable bladder or storm drain bag is inserted into the pipe exiting the catch basin shown as point 2 in Figure 3. When properly inflated, the storm drain bag will keep spills or contaminated runoff from leaving the heat plant site. An SOP regarding proper use of the storm drain bag is provided in Appendix E.

6.4 Spill Response Kit

A spill response kit is provided in a plastic salvage drum located in the storage building north of the coal silos, shown as structure N in Figure 4. This kit contains spill control materials such as:

- Grey pads – absorb all liquids
- White pads – absorb petroleum-based liquids
- Vermiculite/kitty litter
- Small shovel
- Small broom
- Spill booms
- Latex Gloves

Contact FM Environmental Resources to re-stock supplies.

6.5 Emergency Notification

For any petroleum or hazardous chemical discharge, release, or spill the discoverer must notify his supervisor, UVA EHS, and Environmental Resources as soon as possible after completing initial spill-containment actions. Should the discoverer of the discharge, release, or spill be unable to stop and/or contain the spill, he should immediately notify EHS and Environmental Resources as shown in Table 4. After regular business hours, use EHS's responder on-call number cell phone. Service desk calls will forward to Systems Control after hours for notifying response personnel.

Table 4. Internal Notification

Title	Normal Business Hours	After Hours
Environmental Health and Safety	(434) 982-4911	(434) 982-4685
FM Service Desk (They'll contact Environmental Resources)	(434) 924-1777	(434) 924-1777

Information to provide includes:

- Location of spillage
- Type of material
- Estimated quantity and extent of spillage
- A brief description of measures that have been taken to confine the spilled material and prevent further spillage

For each discharge, release, or spill, the departmental SWPPP Team Leader will enter the following information on the Significant Spills and Leaks Report Form in Appendix D.

7.0 EMPLOYEE TRAINING

Environmental Resources (ER) will develop an annual employee training program to educate employees about the requirements of the SWPPP. This education program will include background on the components and goals of the SWPPP. Topics may include the recognition and reporting of illicit discharges, good housekeeping and pollution prevention practices, proper material handling, disposal and control of waste, container filling and transfer, and proper storage, washing, and inspection procedures. Training is not required for those topics that do not apply to the location. Additionally, all employees will be required to review the SWPPP and associated SOPs on an annual basis. A biannual in-person refresher training class will be provided by ER staff for key personnel. An employee sign-in sheet for the training class can be found in Appendix A of this document. The MHP uses a separate tracking system to document SWPPP and SOP review. The training program will be reviewed biannually by ER to determine its effectiveness and to make any necessary changes to the program.

Documentation on each training event will include the date, the number of employees attending the training, and the objective, and must be kept for a period of three years after each training event.

8.0 FACILITY INSPECTIONS AND PREVENTATIVE MAINTENANCE PLAN

8.1 Routine Inspections

Facility Personnel will conduct the following routine inspections:

- Routine inspections of the storm drain bag and lime silo fabric filter in accordance with applicable SOPs;
- Weekly silo, bunker, and baghouse filter and fugitive dust inspections in accordance with

the MHP's air permit; and

- Monthly and annual UST inspections in accordance with UVA's SPCC Plan.

Filter, fugitive dust and tank inspection results are maintained with air permit records in the Heat Plant Manager's office and/or on the network.

8.2 Annual Inspections

An Annual Comprehensive Site Compliance Evaluation, using the Checklist found in Appendix B, will be completed approximately one year following the implementation of this SWPPP and annually thereafter. A member of the FM Environmental Resources team will perform this inspection. The evaluation shall include areas where pollutants could have come into contact with stormwater, areas where leaks or spills occurred from equipment in the past three years, off site tracking of pollutants where vehicles enter and exit the site, the tracking or blowing of materials, evidence of or the potential for pollutants entering the drainage system, evidence of pollutants discharging to surface waters at facility outfalls, and a review of training, routine inspections completed, maintenance performed, and effective operation of BMPs. The inspector will determine if the BMPs are being properly maintained and are effective in reducing stormwater contamination. During the evaluation, the outfalls will also be evaluated for the presence of unauthorized stormwater discharges. Any noncompliance issues observed will be documented in the report. If the facility is found to be compliant, the signed report will state that no issues were found.

8.3 Preventative Maintenance

Site specific source controls are required to be inspected and maintained on a routine basis. An inspection and maintenance schedule for these controls is listed below.

- The sedimentation chamber below the train drench (Point 1 in Figure 3) will be cleaned by a vacuum truck every two months during coal operations which translates to once each December, February and April. The sediment will be disposed of properly.
- The facility performs other preventive maintenance activities that are tracked through AiM, such as the annual replacement of lime slurry hoses and the weekly cleaning of ash pug mills.

8.4 Changes to Site Operations

During the annual comprehensive site compliance evaluation, the inspectors will also determine if site operations have changed since development of this SWPPP. If operational changes have been made, the SWPPP Team will determine if those changes will impact stormwater quality and develop new BMPs to address the change. All operational changes and new BMPs will be recorded in this SWPPP in Appendix E. Revisions to the plan will occur within thirty days after the

inspection that identifies the need for revisions.

9.0 NOTICE OF PLANNED CHANGES

If the facility expands, experiences any significant production increases or process modifications, or changes any significant material handling or storage practices which could impact stormwater, the SWPPP will be amended appropriately. The amended SWPPP will have a description of the new activities that contribute to the increased pollutant loading and planned source control activities. The SWPPP will also be amended if the state or federal compliance inspection officer determines that it is ineffective in controlling stormwater pollutants discharged to waters.

Notice of the planned changes to the Department of Environmental Quality is only required when any alteration or addition to a building, structure, facility or installation may result in a significant change to the nature or increase the quantity of pollutants discharged, or the changes may result in noncompliance with state permit requirements.

10.0 RECORD RETENTION REQUIREMENTS

Records described in the SWPPP must be retained on site for 3 years beyond the date of the report or monitoring record and shall be made available to the state or federal compliance inspection officer upon request. Additionally, employee training records, monitoring reports, and compliance evaluations shall also be maintained.

Appendix A

Employee Sign-In Sheet
Initial and Refresher Training

UNIVERSITY *of* VIRGINIA

575 Alderman Road • P.O. Box 400726 • Charlottesville, VA 22904-4726
TELEPHONE 434-982-4901 • FAX 434-982-4915

Environmental Resources • Operations Department • FACILITIES MANAGEMENT

Training Topic (Circle): Environmental Awareness, SPCC, UST Operator, Stormwater PP

Trainer: _____ Date: _____ Time: _____

Location: _____

Employee Sign-In Sheet Initial and Refresher Training (Page 1)

Last Name	First Name	Computing ID	Department

Employee Sign-In Sheet Initial and Refresher Training (Page 2)

Last Name	First Name	Computing ID	Department

Appendix B

Annual Comprehensive Site Compliance Evaluation Checklist

UNIVERSITY *of* VIRGINIA

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Annual Comprehensive Site Compliance Evaluation Checklist (Page 1)

Date		
Area Inspected	**Main Heat Plant**	
Inspector's Name and Title		
Have any discharges occurred since the last inspection?		
Activity		**Corrective Actions and Dates**
1. Parking areas free of signs of spills or leakage from vehicles or equipment.	Yes ☐ No ☐ NA ☐	
2. Site is free of trash or debris.	Yes ☐ No ☐ NA ☐	
3. Areas surrounding the silos, SDAs and baghouses are tidy and free of spills.	Yes ☐ No ☐ NA ☐	
4. Lime grits dumpster is properly positioned on the secondary containment system	Yes ☐ No ☐ NA ☐	
5. Dumpsters and hoppers are properly covered, if not in active use, or placed under cover to protect from rainwater.	Yes ☐ No ☐ NA ☐	
6. Dumpsters and hoppers are free of visible leaks.	Yes ☐ No ☐ NA ☐	
7. Areas surrounding the five UST fill ports are free of any signs of a diesel spill.	Yes ☐ No ☐ NA ☐	

Annual Comprehensive Site Compliance Evaluation Checklist (Page 2)

Activity		Corrective Actions and Dates
8. Storm water inlets and drains in good condition (i.e. check for damages, blockage, etc.).	Yes ☐ No ☐ NA ☐	
9. Inflatable bladder is operational and free of tears or damage	Yes ☐ No ☐ NA ☐	
10. Non-stormwater discharges (e.g. wash water) properly controlled.	Yes ☐ No ☐ NA ☐	
11. Materials that are potential stormwater contaminants are stored inside or under cover.	Yes ☐ No ☐ NA ☐	
12. Materials are contained properly to prevent tracking and blowing.	Yes ☐ No ☐ NA ☐	
13. No evidence of, or potential for, pollutants entering the drainage system.	Yes ☐ No ☐ NA ☐	
14. No obvious reoccurrence likely in areas where leaks or spills have occurred within the past 3 years.	Yes ☐ No ☐ NA ☐	
15. Any changes in drainage area conditions or site operations since the last inspection?	Yes ☐ No ☐ NA ☐	
16. Do BMPs appear effective and adequate?	Yes ☐ No ☐	
17. Completed review of training records, inspections completed, etc.	Yes ☐ No ☐	
Describe any incidents of non-compliance not described above and corrective actions taken:		

Signature of Inspector_____ **Date:** _____

Appendix C

Log of Changes and Updates to SWPPP

UNIVERSITY *of* VIRGINIA

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Log of Changes and Updates to SWPPP for the Main Heat Plant

Date	Section and Description	Changes Reviewed By:
11/2018	**Updated SWPPP team members in Section 2.0, and phone numbers for spill response reporting in Section 6.5.**	**Kristin Carter**
11/2018	**Revised training and inspection schedules in Sections 7.0 and 8.1 to be consistent with the MS4 Permit effective 11/01/18.**	**Kristin Carter**

Log of Changes and Updates to SWPPP for the Main Heat Plant

Date	Section and Description	Changes Reviewed By:

Appendix D

Significant Spills and Leaks Report Log

UNIVERSITY *of* VIRGINIA

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Environmental Resources • Energy & Utilities Department • FACILITIES MANAGEMENT

Significant Spills and Leaks for MHP SWPPP

Date of Incident	Material Discharged	Quantity Discharged	Location of Discharge	Reporting Personnel

Significant Spills and Leaks for
MHP SWPPP

Date of Incident	Material Discharged	Quantity Discharged	Location of Discharge	Reporting Personnel

Appendix E

Standard Operating Procedures for the Main Heat Plant

Main Heat Plant Standard Operating Procedures:

1. Bottom Ash Silo Unloading Process
2. Fly Ash Silo Unloading Process
3. Weekly Fugitive Dust inspection SOP
4. Lime Unloading Process
5. MHP Storm Drain Procedure
6. Used Oil Disposal
7. Exterior Surfaces and Building Washing
8. Vehicle and Equipment Maintenance
9. Waste Management

The most recent versions of these SOPs are available either on the FM network at:

G:\Heat Plant Admin\Operating Procedures\

or on the Environmental Resources website at:

https://www.fm.virginia.edu/depts/operations/environmental/procedures.html