Storm Water Pollution Prevention Plan

Rockydale – Staunton Quarry
251 National Avenue
Staunton, Virginia 24401

Prepared for:
Appomattox Lime Company
A Subsidiary of
Rockydale Quarries Corporation
2343 Highland Farm Road, NW
Roanoke, Virginia 24017

Prepared By:
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February 2018

Ward Environmental Services PLLC

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INTRODUCTION

The Virginia Department of Environmental Quality (DEQ) has issued the facility a Virginia Pollutant Discharge Elimination System (VPDES) General Permit for Discharges of Storm Water Associated with Nonmetallic Mineral Mining to the Appomattox Lime Company, a subsidiary of Rockydale Quarries Corporation, which owns and operates the Rockydale - Staunton Quarry located at 251 National Road in Staunton, Virginia. This facility was issued General Permit No. VAG840030, which became effective July 1, 2014 and expires June 30, 2019.

As a requirement of the General Permit, Rockydale - Staunton Quarry must develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The purpose of the plan is to identify potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility, and to describe the best management practices (BMPs) developed and implemented to minimize storm water pollution.

The format of this SWPPP is in general conformance with the requirements of the State Water Control Board's Final Regulation, 9VAC25-151, adopted December 17, 2013.

The overall purpose of the SWPPP is to address contaminates that can adversely affect water characteristics. A copy of the SWPPP is maintained on-site at the facility. The SWPPP is available for inspection during normal public business hours, 7:00 a.m. to 4:00 p.m. Monday through Friday, except for holidays, at this location.

OWNER CERTIFICATION

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate 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 fines and imprisonment for known violations."

Signature	CFO / Sec / Treas. Title
Joseph W. Altizer II Printed	2/28/18 Date

MANAGEMENT REVIEW AND APPROVAL

This SWPPP is fully approved by the management of the Appomattox Lime Company, a subsidiary of Rockydale Quarries Corporation, and the Rockydale - Staunton Quarry. The necessary resources have been committed to implement the SWPPP as described.

K H Holt — 2/28/18

Keith Holt
Environmental, Health & Safety Coordinator
Rockydale Quarries Corporation

Date

Jason Vandermark — 2-28-18

Jason Vandermark
General Manager
Rockydale - Staunton Quarry

Date

DIRECTIONS TO THE FACILITY

Appomattox Lime Company [Subsidiary of]
Rockydale - Staunton Quarry
251 National Avenue
Staunton, Virginia 24401
(540) 886-2111

To facility from Intersate 81 at Staunton Exit No. 222:

1. Take U.S. Route 250 west.
2. Take right onto North Frontier Drive.
3. Take left onto State Route 714 (National Avenue).
4. Turn right into the entrance of the Rockydale - Staunton Quarry.

FACILITY INFORMATION

Owner: Rockydale Quarries Corporation

Owner Address: 2343 Highland Farm Road, NW
Roanoke, Virginia 24017

Operator: Appomattox Lime Company

Name of Facility: Rockydale – Staunton Quarry

SIC Code: 1422 (Crushed and Broken Limestone)

Mailing and Site Address: 251 National Avenue
Staunton, Virginia 24401

Pollution Prevention Team:

Pollution Prevention Coordinator: Jason Vandermark
Position: General Manager
Contact Number: (540) 886-2111

Responsibilities: Implementation of the SWPPP. Coordination with SWPPP team member(s) and assign tasks to supervisors. Performs inspections, cleans up spills, and implements O&M erosion and sediment control programs

Team Member: Sam Burks
Position: Foreman
Contact Number: (540) 886-2111
Team Member: Keith Holt
Position: Environmental, Health & Safety Coordinator
Contact Number: (540) 597-5017

Responsibilities: Management of the VPDES General Permit and incorporates changes into SWPPP as necessary. Ensures the SWPPP and storm water monitoring requirements are up to date, annual training is performed, and communicates with the executive level of the company.

The SWPPP is maintained in the Environmental, Health & Safety Coordinator's Office and is also available for onsite inspection during normal working hours in the General Manager's Office. Please contact the Pollution Prevention Team, which includes the General Manager (Jason Vandermark), Foreman (Sam Burks), and the Environmental, Health & Safety Coordinator (Keith Holt).

1.0 GENERAL REQUIREMENTS FOR AN SWPPP

1.1 Facility Description and Layout

The Rockydale - Staunton Quarry is located at 251 National Avenue within the Staunton, Virginia city limits. The facility is a multi-bench, nonmetallic mine manufacturing a variety of crushed stone products including construction grade aggregates, erosion control materials, and specialty products such as AG Lime. The main process area include overburden removal, drilling/blasting, loading/hauling, crushing, conveying, screening, shipping/receiving, maintenance, and stockpiling storage areas.

Figure 1, General Location Map, shows the graphical location and access routes to the facility. The facility is currently owned and operated by the Appomattox Lime Company, a subsidiary of Rockydale Quarries Corporation. Coordinates for the facility are 38°08'47"N, 79°02'30"W at an altitude of 1,270 feet above mean sea level. The Rockydale - Staunton Quarry property consists of approximately 168 acres with the active mining pit encompassing approximately 12.5 acres. Less than one percent of the ground surface at the facility is covered with impervious structures.

The local topography is characterized by rolling hills and narrow drainage valleys. The storm water drainage pathway for potential pollutant areas at the facility is shown on **Figure 2,** the Facility Site Plan. Surface water runoff from the facility flows to Lewis Creek, which flows through the permitted mining area from south to north.

1.2 Potential Source of Storm Water Pollution

The Rockydale - Staunton Quarry's potential pollutant storage is entirely outdoor and includes a multiple aboveground storage tanks (ASTs) and product storage areas (stockpiles). There are no underground storage tanks located at the facility. SWPPP planning requires the development of a list of significant materials that were exposed to storm water during the past three years and/or are currently exposed. Exposure includes any lack of complete shelter from rainfall contact even if the materials are stored within a pile, drum, tank, etc. *Significant materials* as defined in 40CFR Part 122.26(b)(12) are substances related to industrial activities such as process chemicals, raw materials, petroleum products, paints, solvents, pesticides, fertilizers, and associated waste products.

Figure 2 shows the layout of the facility, including the location of all potential pollutant areas. **Table 1** on the following page lists the outdoor potential sources of storm water pollution and corresponding BMP.

Table 1 Outdoor Potential Sources of Storm Water Pollution Rockydale - Staunton Quarry		
Potential Pollutant Area	**Contents**	**BMP(s)**
Maintenance Building	500-Gallon Single-Wall Mobil Fleet SAE 15W-40 Oil	• Steel Secondary Containment Dikes for Single-Wall ASTs • Good Housekeeping • Periodic Visual Inspections • Visual Monitoring During Filling • Spill Kits • Overhead Cover to Limit Exposure to Precipitation
	500-Gallon Single-Wall Steel AST Mobiltrans HD-30 Oil	
	500-Gallon Single-Wall Steel AST Mobiltrans HD-10W Oil	
	55-Gallon Steel Drums Miscellaneous Oils	• HDPE Spill Pallets • Good Housekeeping • Periodic Visual Inspections • Spill Kits • Steel Secondary Containment Dikes for Single-Wall ASTs • Good Housekeeping • Visual Monitoring During Filling • Overhead Cover to Limit Exposure to Precipitation
Maintenance Building	500-Gallon Double-Walled Steel AST P-68 Compressor Oil	
	275-Gallon Single-Wall AST Used Oil	
	275-Gallon Single-Wall AST Used Oil	
Maintenance Building	10,000-Gallon Double-Walled Steel AST Off Road Diesel Fuel	• Good Housekeeping • Periodic Visual Inspections • Spill Kits • Integrated Steel Double Walled AST • Visual Monitoring During Fueling
Processing Areas	Equipment Lube Reservoirs	• Good Housekeeping • Periodic Visual Inspections • Spill Kits • Rock Filter Berms • Sediment Traps • Dust Control Methods • Reduce Vehicle Speed
	Aggregates Stockpiles	
	Haul and Access Roads	
	Soil Erosion	

1.3 Discharge Prevention Measures

Aboveground Storage Tanks

General facility containment from refueling releases and piping releases is provided by active containment measures, good housekeeping, and periodic inspections. These measures include following the safe-filling and pumping procedures, having spill kits immediately accessible, and training individuals to stop releases before they reach the nearest outfall. Spill response procedures, notification requirements and AST specifications are detailed in the facility's Spill Prevention, Control, and Countermeasure (SPCC) Plan.

Handling and Storage of Aggregate Materials

Although minimal, handling and storage of crushed aggregate has the potential to contribute particulate pollutants to storm water through contact with the materials. Additionally, there is a potential for storm water contamination through incidental leaks and spills from the mobile material handling equipment. Transport of materials over haul roads also has the potential to contribute pollutants to storm water. Off-site discharge of impacted storm water will be minimized through the use of sediment and erosion controls and preventive maintenance of the facility's equipment.

Processing Equipment and Maintenance

Processing equipment will be inspected daily prior to start up to assure no unusual conditions exist, and is to be maintained in accordance with the manufacturer's and/or the facility's recommended preventive maintenance procedures. Personnel are to be present and alert, and proper procedures are to be employed during fueling activities. Observed leaks are to be immediately controlled with drip pans and absorbents and the cause of release is to be promptly corrected. To minimize the potential for exposure, fueling areas are subject to inspection, good housekeeping, and SPCC practices.

Bulk Fluid Loading and Unloading

Bulk fluid loading and unloading (fuel, lubes, and hydraulic tanks) will be performed at the site of the storage tank, or at the location of the mobile equipment. Personnel are to be present and alert, and proper procedures are to be employed during fueling activities. Observed leaks are to be immediately controlled with drip pans and absorbents and the cause of release is to be promptly corrected. To minimize the potential for exposure, fueling areas are subject to inspection, good housekeeping, and SPCC practices.

Traffic on Unpaved Surfaces

Trucks delivering and shipping materials, and mobile processing equipment operating on unpaved surfaces (access and haul roads) have the potential to contribute particulate matter to storm water. To minimize this potential, the main access roads at the facility will be subject to a dust control method, as a water spraying during dry months as well as the enforcement of reduced speed while within the facility.

The area of the active pit and haul roads are prone to erosion. Daily visual inspections of this areas are performed to ensure the integrity of the erosion and sediment controls. If areas of erosion are noted, immediate repair of the controls will be performed. Disturbed areas which are not scheduled for earthmoving activities will be protected in accordance with the *Division of Mines, Minerals, and Energy (DMME) Mineral Mining Operator's Guide.*

Solid Waste Handling and Disposal

Solid wastes are permitted by the DMME to be disposed of onsite.

Wastewater Handling and Disposal

Wastewater is not generated at this facility. No municipal storm systems are located on the property.

1.4 Countermeasures and Response

Small Spills
Small spills will be contained and cleaned up by facility personnel using spill response equipment and materials. The infrastructure is in place to provide facility personnel training on the use and proper disposal of spill equipment, which is located throughout the facility.

Large Spills
In the event of a "reportable oil spill or discharge," the following procedures should be initiated:

1. Survey the area carefully before proceeding, to prevent endangering yourself or your fellow employees.
2. If possible, stop the leak or spill at the source and turn off any ignition switches to nearby vehicles and/or equipment.
3. Ensure the spill has been adequately contained by secondary containment or diversionary structures. Verify that the manhole valve is closed and has contained the spill.
4. Notify the General Manager who will notify the spill response contractor, the local fire department, and federal, state and local organizations as appropriate.
5. Deploy absorbent materials downstream from the spill to block all migration pathways to the storm water conveyance channels that eventually discharge into Lewis Creek, which are the nearest body of navigable water.
6. Oil should be collected and prevented from flowing or being carried off-site.

Spill Clean-Up
After the source of the spill has been stopped, and the released product is contained, clean- up of the impacted areas should begin. Quick clean-up of a released substance substantially reduces the potential for the product to migrate downward through the soil or migrate off site.

Free product should be pumped into a tank truck and properly recycled or disposed. Contaminated soils should be excavated and placed in drums or roll-off containers depending on the quantity of product spilled. After excavation has been completed to the satisfaction of supervisory personnel at the facility, the remaining soils should be sampled to ensure that all impacted soils were removed. Soils placed in drums and roll-off containers should also be sampled to determine the proper method of disposal. The Virginia Department of Environmental Quality (DEQ) guidelines should be followed for characterization and disposal of all excavated soils.

In the event oil or chemical products from a spill at the site reach a navigable body of water, the facility should contact the local emergency response group and an appropriate cleanup contractor. The DEQ should be consulted, as necessary, during clean-up operations to ensure that cleanup actions taken by facility personnel satisfy DEQ requirements.

1.5 Spill Response Equipment

Spill response kits are maintained at the Maintenance Shop and near the ASTs. The facility will contact WEL or Environmental Options, 911, the Virginia Department of Environmental Quality

(or the Virginia Department of Emergency Management) and the National Response Center, as necessary, to provide resources and manpower to respond to major releases that cannot be safely controlled and cleaned-up using on-site equipment.

Spill response equipment and supplies consisting of, but not limited to 10-foot absorbent booms and 60-pack bundles of absorbent pads, and related labels, bags and ties, hand tools and or other spill response equipment necessary to protect the storm water drop inlets will be readily accessible during petroleumtransfer operations.

1.6 Pollution Prevention Team

The Rockydale - Staunton Quarry has identified a Pollution Prevention Team (PPT) that is responsible for the implementation of the SWPPP. The PPT for the facility will be responsible for overseeing storm water pollution prevention activities. The SWPPP identifies points of contact and individuals that have a role in the facility's spill response.

Responsibilities of the Team
The team is the driving force behind the future development, implementation, maintenance and revision of the SWPPP. The team will perform annual evaluations to measure the effectiveness of the SWPPP. To ensure effectiveness, the team will document changes to facilities operations and determine if changes need to be made within the SWPPP. The General Manager is designated as the Pollution Prevention Coordinator. These responsibilities of the Pollution Prevention Coordinator include but are not limited to the following:

- Overall responsibility for SWPPP implementation;
- Signs documents and submits to the DEQ;
- Approves SWPPP modifications and updates;
- Coordinates preparation, review and approval of the SWPPP;
- Prepares cost estimates of implementation of plan for BMPs;
- Maintains updated records of spills;
- Conducts or contracts annual inspection and certification of dry weather discharges from outfalls;
- Conducts or contracts periodic inspections;
- Updates the Standard Operating Procedures;
- Coordinates the management and disposal of hazardous materials; and
- Develops appropriate training program.

Team members are selected by the Pollution Prevention Coordinator. Their responsibilities include but are not limited to the following:

- Responsible for the implementation of the SWPPP;
- Attend annual Storm Water Pollution Prevention training;
- Ensure personnel receive annual training;
- Review the SWPPP annually; and
- Notify Team Leader of any significant changes.

PPT Team Activation
To activate the PPT, the Pollution Prevention Coordinator will notify all team members of their duties and responsibilities. The team members will be trained and able to perform all assigned duties.

PPT Members include:

- Jason Vandermark – General Manager (Pollution Prevention Coordinator)
- Keith Holt – Environmental, Health & Safety Coordinator (Member)
- Sam Burks – Foreman (Member)

1.7 Contact List and Phone Numbers

The Facility Information page in the front of this document provide a complete list of contacts and their phone numbers for use in the event of a spill.

2.0 POLLUTANT DISCHARGE DETECTION

2.1 Potential Equipment Failure

Potential causes of spillage at the facility include:

- Leaking outer wall or secondary containment structure of container;
- Overfill of containers; or
- Leak during fuel transfer operations.

2.2 Direction of Flow

Drainage patterns for the facility are indicated on **Figure 2**. Surface water runoff from the facility flows to Lewis Creek, which flows through the permitted mining area from southwest to northeast. Storm water runoff from the active quarry pit, aggregate storage piles, processing areas, and Maintenance Shop flow into a sediment pond via Outfall #001, which discharges into Lewis Creek.

2.3 Baseline Best Management Practices (BMPs) Identification

Best Management Practices (BMPs) are measures used to prevent or reduce the potential for pollution from any type of activity. BMPs are a broad class of measures and include processes, procedures, schedules of activities, prohibitions on practices, and other management practices to prevent or reduce the potential for pollution of storm water runoff. The baseline BMPs that will be implemented are described below.

- Preventive Maintenance;
- Periodic Inspections;
- Sediment and Erosion Control;
- Management of Runoff;
- Good Housekeeping; and
- Employee Training.

2.3.1 Preventive Maintenance

Preventive maintenance involves the regular inspection and testing of equipment and the storm water management system. These inspections will identify conditions such as cracks or slow leaks, or other conditions which could cause breakdowns or failures resulting in the potential discharge of pollutants to storm drains and/or surface waters. The preventive maintenance program at the facility will include the following:

- Maintaining an inventory of each facility/system/equipment that, upon failure, could result in leaks or spills of potential pollutants
- Conducting periodic inspections of equipment that could results in leaks or spills to be documented in a checklist report listing each facility/system/equipment inspected and any deficiencies noted

2.3.2 Quarterly Facility Inspections

Routine inspections of the facility will be performed on a quarterly basis to ensure that all SWPPP elements are in place and working properly as well satisfying the facility's preventative maintenance routine inspections discussed above. These inspections are performed by a member of the PPT. Areas that will be inspected include:

- Equipment and facilities;
- Material storage piles; and
- Material handling areas (loading and unloading areas).

The routine facility inspections will also include general visual observations of the storm water drainage systems. A list of storm water drainage system observations to be made during the inspection as follows:

1. Inspection of grassed swales and ditches for garbage, debris, or eroded areas. Remove garbage and debris as necessary. Seed exposed areas as necessary.
2. Inspection of the concrete culvert discharge point for garbage, debris, vegetation, and/or eroded areas. Remove garbage, debris, and vegetation as necessary.

Inspection records will note when inspections were done, who conducted the inspection, what areas were inspected, what problems were found, steps taken to correct any problems and who has been notified. Records of the Quarterly Facility Inspection will be maintained in **Appendix A**.

2.3.3 Sediment and Erosion Control

The property will be inspected for general drainage discharge patterns that may be affecting erosion over time and for the buildup of sediment in the facility's storm water conveyance system.

2.3.4 Management of Runoff

Traditional management practices used to reduce pollutants in storm water runoff include:

- Maintaining grass and vegetative buffers surrounding facility;
- Maintaining erosion and sediment control devices; and
- Spill management methods and materials as covered by the facility SPCC Plan.

At this facility, runoff is managed principally via pipes, ditches, culverts and open outfalls that discharge into Lewis Creek. These conveyances will be inspected quarterly and after major storm events to ensure proper operation.

2.3.5 Good Housekeeping

Good housekeeping is the maintenance of a clean and orderly work environment that contributes to overall facility pollution control efforts. Occupational Safety and Health Administration (OSHA) includes housekeeping regulations in 29 CFR 1910, Sections 22(a), 141, and 176(c) that

apply to industry, in general, and not specifically for toxic substances control. The principal elements in good housekeeping include proper storage of oil, prompt removal of spillage, floor maintenance, and unobstructed pathways and walkways. Housekeeping at this facility also includes all outside areas that are visually inspected for cleanliness by facility personnel.

Poor housekeeping can result in more waste being generated than necessary and an increased potential for storm water contamination. Poor housekeeping can also lead to accidents that might cause spills of significant materials. The following will be completed as part of Good Housekeeping procedures:

- Conducting a formal inspection for housekeeping procedures and maintaining a log of such inspections (Quarterly Housekeeping and Facility Inspection Checklists are maintained in **Appendix A**);
- Conducting an annual inventory of chemical substances currently used, stored or produced onsite;
- Maintaining a current file of Safety Data Sheets (SDS) for chemical products used onsite; and
- Labeling of chemical containers in each building per OSHA, EPA, DOT or other applicable regulations.

2.3.6 Employee Training

Employee training is essential to effective implementation of the SWPPP. The purpose of a training program is to teach personnel at all levels of responsibility for the components and goals SWPPP. Effective training can include a variety of techniques to enhance participation and learning including:

- Lectures and visual aids;
- Written handouts;
- Video and slide presentations;
- Mock spill drills; and/or
- Employee handbooks.

Employee training must be provided for all employees who handle petroleum products, work in areas where industrial materials or activities are exposed to storm water, and who are responsible for implementing activities identified in the SWPPP.

Training documentation (sign-in sheets) are provided in **Appendix B** and is maintained in the General Manager's office.

2.4 Annual Comprehensive Site Compliance Evaluation

At least once per year, PPT members must conduct site compliance evaluations, which are comprehensive inspections. The team members involved should be familiar with facility operations and SWPPP goals. The compliance evaluations include:

- Reviewing the SWPPP and listing items, which are part of material handling and storage areas, covered by the plan.
- Reviewing facility operations to determine if new areas or modifications to plant operations have occurred that should be incorporated into the SWPPP.
- Inspecting storm water drainage areas for evidence of pollutants entering the drainage system.
- Evaluating the effectiveness of storm water pollution prevention measures to reduce pollutant loadings and whether additional measures are needed.
- Observe structural measures, sediment controls and other BMPs to ensure proper operation.
- Inspect equipment needed to implement the plan, such as spill response equipment.
- Revising the SWPPP as necessary within two weeks if it is determined that potential pollutant sources and pollution prevention control measures are not adequate.
- Implementing necessary changes in a timely manner but in no case more than twelve weeks after the evaluation.

The Annual Site Compliance Evaluation (ASCE) report form summarizing the evaluation, personnel making the evaluation, the date of the evaluation, major observations related to the implementation of the VPDES General Permit, and actions taken is presented in **Appendix A**. The ASCE shall identify incidents of non-compliance, if any. Where a report does not identify any incidents of non-compliance, the ASCE shall contain a certification that the facility is in compliance with the SWPPP and related VPDES General Permit. The report shall be signed by the General Manager.

3.0 STORM WATER MONITORING PROGRAM

3.1 General Information

VDEQ has issued the Rockydale Quarries Corporation a VPDES General Permit for Storm Water Discharge Associated with Industrial Activity (VAG840030) to operate the Rockydale - Staunton Quarry. A copy of the permit is presented in **Appendix C**.

3.2 Storm Water Drainage/Outfall

Drainage patterns for the facility are indicated on **Figure 2**. Surface water runoff from the facility flows to Lewis Creek, which flows through the permitted mining area from southwest to northeast. Storm water runoff from the active quarry pit, aggregate storage piles, processing areas, and Maintenance Shop flow into a sediment pond via Outfall #001, which discharges into Lewis Creek.

3.3 Mining Industry Specific Conditions

The VPDES General Permit does requires the Rockydale - Staunton Quarry to conduct analytical monitoring of their storm water discharge associated with the mining industry. The facility is also required to conduct quarterly visual examinations of their storm water discharges for pollutants to determine the presence of unauthorized discharges.

3.4 Quarterly Visual Monitoring

Outfall #001 must be visually checked four times per year at least once during each of the following intervals:

1. January 1 through March 31
2. April 1 through June 30
3. July 1 through September 30
4. October 1 through December 31

Samples shall be collected within the first 30 minutes, but not to exceed an hour, from a storm event that results in an actual discharge from the site (defined as a "measurable storm event"), which occurs at least 72-hours from the previously measurable storm event. The 72-hour requirement can be waived if previous precipitation events did not result in a discharge from the designated outfall. If it is not practicable to take the sample during the first 30 minutes, the sample may be taken during the first three hours of discharge provided that the permittee explains with the DMR why a grab sample during the first 30 minutes was impracticable.

Forms for recording the inspections are contained in **Appendix C**. Table 70-4 of the General Permit explains which reports are required to be submitted to the VDEQ. In the case of Quarterly Visual Monitoring, the reports DO NOT need to be submitted unless requested, but all reports must be maintained in the SWPPP.

3.5 Storm Water Monitoring Requirements

Rockydale - Staunton Quarry will conduct effluent monitoring of each of storm water discharge associated with nonmetallic mineral mining. Monitoring must be performed from July 2014 through June 2019 during the following frequencies:

- Outfall #001 – 1/3 Months (Quarterly)

Rockydale - Staunton Quarry will monitor by laboratory analyses the following parameters with their corresponding limitation:

Limitation for All Outfalls			
Effluent Monitoring Parameter	**Permit Limitation**	**DMR Limitation**	**Units**
Flow	No Limits	No Limits	MGD
pH	6.5 Min/9.5 Max	6.5 Min/9.5 Max	SU
Total Suspended Solids (TSS)	30 Avg/60 Max	30 Avg/60 Max	Mg/l

For each storm event sampled, the following storm parameters will be recorded and reported:

- Date, exact place, and time of sampling;
- The individual(s) who performed the sampling;
- Duration of storm event (in hours);
- Total precipitation received during storm event;
- Time duration since last measurable storm event (greater than 0.1 inch rainfall); and
- Estimate of total runoff volume (in gallons).

Samples shall be collected within the first 30 minutes, but not to exceed an hour, from a storm event that results in an actual discharge from the site (defined as a "measurable storm event"), which occurs at least 72-hours from the previously measurable storm event. The 72-hour requirement can be waived if previous precipitation events did not result in a discharge from the designated outfall. If it is not practicable to take the sample during the first 30 minutes, the sample may be taken during the first three hours of discharge provided that the permittee explains with the DMR why a grab sample during the first 30 minutes was impracticable.

If corrective actions are required to address a deficiency in the handling of storm water runoff, this SWPPP must be updated to indicate the reason for the corrective action, and the action taken. Part 1.B Special Conditions of the General Permit references specific discharges which are permissible under the General Permit. This section also references activities which are prohibited.

3.5.1 Flow Measurement

The Rockydale - Staunton Quarry measures flow using a sized container (i.e. 5-gallon bucket) and a timer. The units of measurement must be calculated and reported as million gallons per day (MGD).

3.5.2 pH Measurement

The field measurement of pH will be performed using the method of analysis prescribed in the 21st Edition of Standard Methods – 4500-H*B-2000. The following guidelines must be followed:

- Verify the pH thermistor annually against a certified reference thermometer over a range of temperatures that bracket the expected range of measurement;
- Calibrate the pH meter using three buffers (pH of 4, 7, and 10) at the same temperature on each day of use;
- Maintain a stock of pH buffer solutions within manufacturer expiration date and batteries sufficient to operate the meter available at all times for pH analysis.
- Conduct a successful completed initial demonstration of capability (IDC) of the pH meter that will be used for pH analysis by each analyst that analyzes pH for VDPES monitoring. 4 replicates of a secondary source standard (for example testing 4 samples of a different pH 7 buffer than the one used to calibrate the meter). Completed IDC forms shall be kept on file;
- Analyze the sample within 15 minutes of collection; and
- Clearly document the specific pH sample analysis time, the meter calibration time, and the analyst initials. Sampling information will be kept in **Appendix C**.

3.6 Sampling Waiver

When Rockydale - Staunton Quarry is unable to collect a sample within a specific period due to adverse climatic conditions, Rockydale - Staunton Quarry shall collect a substitute sample from a separate qualifying event in the next period and submit this data along with the data for the routine sampling in that period.

3.7 Reporting Monitoring Results

Rockydale - Staunton Quarry is required to submit effluent monitoring results to the DEQ. One signed Discharge Monitoring Report (DMR) form must be completed and submitted to the DEQ Valley Regional Office located in Harrisonburg, VA. The DMR forms will be submitted to the DEQ no later than the 10th day of April, July, October, and January. Copies of the completed DMR forms submitted to the DEQ will be maintained on-site with the Plan in **Appendix C**.

Should analytical results exceed the limitations for pH and/or TSS, the facility may sample the outfall(s) again after investigating, mitigating, and documenting the probable cause. Should this occur, the average and maximum analytical results for TSS must be shown on the DMR along with the number of exceedances. Similarly, the minimum and maximum analytical results for pH must be shown on the DMR along with the number of exceedances.

3.8 Reports of Noncompliance

Rockydale - Staunton Quarry will report to the DEQ any noncompliance that may adversely affect state waters or many endanger public health.

3.9 Non-Storm Water Discharges

For non-storm water discharges not authorized by General Permit VAG840030, the Rockydale - Stauton Quarry performs or subcontracts monitoring of its discharges annually during a dry period of no rainfall. Conditions indicative of a non-storm water discharge such as color, floating or suspended material, a petroleum sheen, foam, etc., suggesting that the source of the standing water was surface or ground water have not been observed during the inspections.

The Rockydale - Staunton Quarry will continue to perform or subcontract the inspections to ensure compliance with the non-storm water discharge requirement on an annual basis. A "Non-Storm Water Discharge Assessment and Certification" form, included in **Appendix A**, will be completed to document this activity.

FIGURES

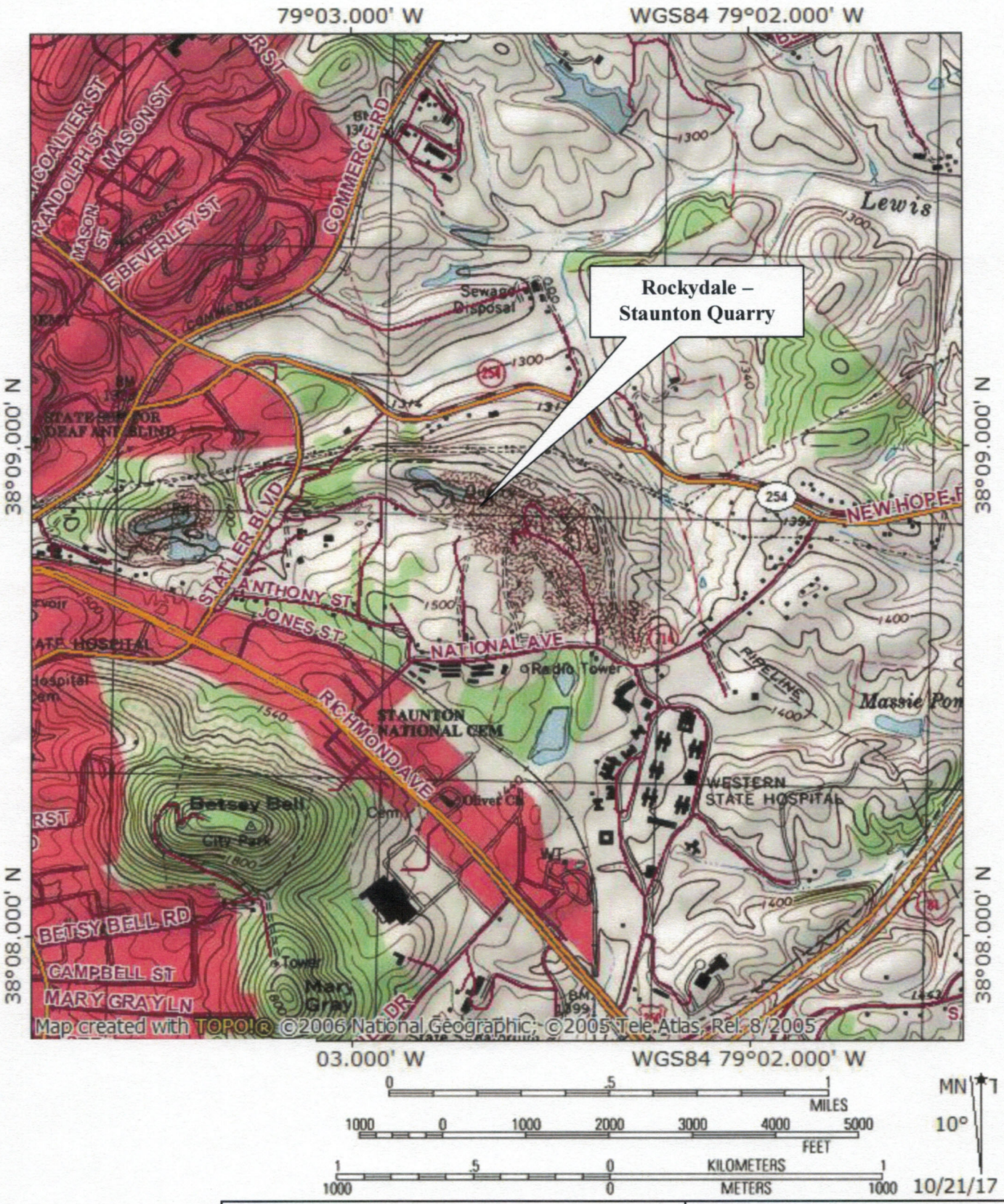

FIGURE 1				Rockydale – Staunton Quarry 251 National Avenue Staunton, Virginia
Site Location and Topography Map				
Date: *February 2018*		WES Project No.: *17-029*		
Drawn by: *RAW*	Checked by: *RAW*	Reviewed by: *RAW*	Approved by: *RAW*	Ward Environmental Services 10077 Amelia Manor Court Mechanicsville, Virginia
Scale: *As Shown*		File name: *Figure 1 Site Location Map*		

Source: USGS Quad, Staunton, Virginia, 1998, TOPO! National Geographic Holdings WWW.TOPO.COM

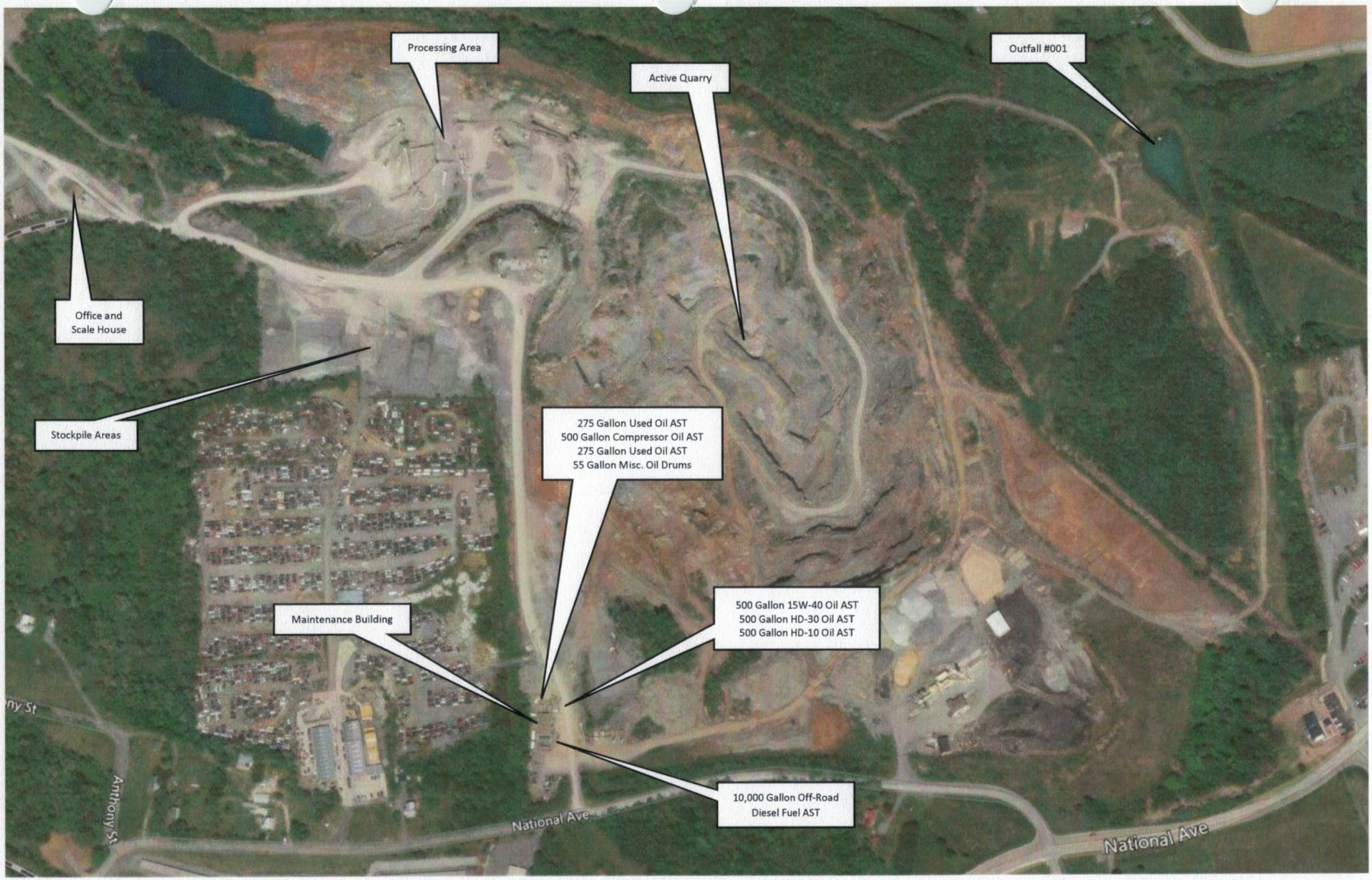

FIGURE 2 – FACILITY SITE PLAN
ROCKYDALE – STAUNTON QUARRY
STAUNTON, VIRGINIA

February 2018

Ward Environmental Services PLLC

APPENDIX A

ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION
QUARTERLY HOUSEKEEPING AND FACILITY INSPECTION CHECKLISTS
NON-STORM WATER DISCHARGE ASSESSMENT AND CERTIFICATION

ROCKYDALE - STAUNTON QUARRY
ANNUAL SITE COMPLIANCE EVALUATION (VAG840030)

DATE:
EVALUATORS:

REVIEW OF SWPPP & SWP:

REVIEW OF FACILIT OPERATIONS (TO INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING):

Industrial materials, residue or trash that may have or could come into contact with stormwater. Leaks or spills that have occurred within the past three years. Off-site tracking of industrial or waste materials or sediment where vehicles enter or exit the site. Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas. Review of training performed, inspections completed, maintenance performed, quarterly visual examinations, and effective operation of BMPs

INSPECTION OF POLLUTANT SOURCES AND STORMWATER OUTFALLS (TO INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING):

Evidence of, or the potential for, pollutants entering the drainage system
Evidence of pollutants discharging to surface waters at all facility outfalls, and the condition of and around the outfall

EVALUATION OF BMP EFFECTIVENSS:

ANNUAL OUTFALL EVALUATION FOR UNAUTHORIZED DISCHARGES

SUMMARY:

EVLUATORS SIGNATURES:

I certify under penalty of law that the preceding document and all attachments were prepared under my direction or supervision 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 directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true and 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.

Signature	Print Name	Title	Date
Signature	Print Name	Title	Date

ROCKYDALE - STAUNTON QUARRY
STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
QUARTERLY HOUSEKEEPING AND FACILITY INSPECTION CHECKLIST

QUARTER:
DATE:
AREA INSPECTED: MATERIAL STORAGE AREAS
INSPECTOR:

1. APPEARANCE OF SURROUNDING AREAS:

2. CONDITION OF EROSION CONTROLS (IF PRESENT):

3. EVIDENCE OF NEW EROSION OR DETERIORATION:

CHECK CONDITION OF ANY STORM WATER CONVEYANCE STRUCTURES (CULVERTS, PIPES, RIPRAP):

*LIST ANY SPECIFIC PROBLEMS NOTED DURING THE INSPECTION AND ACTION

ROCKYDALE - STAUNTON QUARRY
STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
QUARTERLY HOUSEKEEPING AND FACILITY INSPECTION CHECKLIST

QUARTER:
DATE:
AREA INSPECTED: MAINTENANCE SHOP
INSPECTOR:

1. APPEARANCE OF AREA (CLEAN, ORDERLY):

2. CHECK FOR ADEQUATE SPACE IN WORK AREAS TO MINIMIZE SPILLS:

3. CHECK AREAS WHERE ANY CHEMICALS (INCLUDING FUEL, LUBES, AND OIL) ARE STORED FOR CONTAINER INTEGRITY AND CONDITION OF AREA WHERE STORED (I.E, FLOOR, SHELVES, COUNTERTOP):

4. ENSURE WALKWAY IS CLEAR AND THAT MATERIALS ARE READILY ACCESSIBLE:

*LIST ANY SPECIFIC PROBLEMS NOTED DURING THE INSPECTION AND ACTION TAKEN TO CORRECT BEFORE NEXT INSPECTION:

ROCKYDALE - STAUNTON QUARRY
STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
QUARTERLY HOUSEKEEPING AND FACILITY INSPECTION CHECKLIST

QUARTER:
DATE:
AREA INSPECTED: ABOVEGROUND STORAGE TANKS
INSPECTOR:

1. CONDITION OF TANK:

2. CONDITION OF TRANSFER PIPING:

3. CONDITION OF CONTAINMENT PAD:

4. INVENTORY O.K. ON SPILL KIT SUPPLIES:

*LIST ANY SPECIFIC PROBLEMS NOTED DURING THE INSPECTION AND ACTION TAKEN TO CORRECT BEFORE NEXT INSPECTION:

NON-STORM WATER DISCHARGE
ASSESSMENT AND CERTIFICATION

Date of Test or Evaluation	Outfall Directly Observed During the Test (identify as indicated on the site map)	Method Used to Test or Evaluate Discharge	Describe Results from Test for the Presence of Non-Storm Water Discharge	Identify Potential Significant Sources	Name of Person Who Conducted the Test or Evaluation

CERTIFICATION

I, _____, (responsible corporate official), certify under penalty of law that this document and all attachments were prepared under my direction or supervision with a system designed to assure that qualified personnel properly gather and evaluate 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.

A. Name & Official Title (type or print)	B. Area Code and Telephone No.
C. Signature	D. Date Signed

APPENDIX B

TRAINING DOCUMENTATION

ROCKYDALE - STAUNTON QUARRY
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
ANNUAL STAFF TRAINING/PLAN REVIEW

DATE:

TRAINER:

ATTENDEES: (SWPPP Team Members; AWWTP Personnel)

SUBJECT: Annual review of the SWPPP to information AWWTP staff of their responsibilities as well as the goals of the Plan. Training addressed each component of the Plan, including how, why, and when tasks are to be implements. Session also defined the elements of the SPCC Plan, staff responsibilities, and how to initiate implementation.

TRAINING MATERIALS:
1. SWPPP WRITTEN PROGRAM
2. CHECKLISTS AND FORMS
2, SWPPP TRAINING SESSSION RECAP NOTES

APPENDIX C

VPDES GENERAL PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY (VAG840030)

DISCHARGE MONITORING REPORT (DMR) FORMS

QUARTERLY RAINFALL TRACKING

QUARTERLY VISUAL OUTFALL MONITORING FORMS

PERMITTED FACILITY
Rockydale - Stanton Quarry
2343 Highland Farm Road, NW, Roanoke VA 24017
Permit Number: VAG840030
No Discharge: ☐

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NONMETALLIC MINERAL MINING
DISCHARGE MONITORING REPORT (DMR)

	MONITORING PERIOD						
	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

RETURN TO
Department of Environmental Quality
Valley Regional Office
4411 Early Road, P.O. Box 3000, Harrisonburg VA 22801
(540) 574-7800
NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM AND RETURNING IT.

Outfall Num: 001 **Reporting Frequency: Quarter** Run Date: Aug 10, 2017

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
001 FLOW	REPORTD				*********	*********	*********				
	REQRMNT	NL	NL	MGD	*********	*********	*********			1/3M	EST
002 pH	REPORTD	*********	*********			*********					
	REQRMNT	*********	*********		6.5	*********	9.5	SU		1/3M	GRAB
004 TSS	REPORTD	*********	*********		*********						
	REQRMNT	*********	*********		*********	30	60	MG/L		1/3M	GRAB

Additional Permit Requirements (Outfall 001):
Comments:

PERMITTED FACILITY

Rockydale - S[illegible]n Quarry

2343 Highland Farm Road, NW, Roanoke VA 24017

Permit Number: VAG840030

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF E[illegible]RONMENTAL QUALITY
NONMETALLIC MINERAL MINING
DISCHARGE MONITORING REPORT (DMR)

RETURN TO

Department of Environmental Quality

Valley Regional Office

4411 Early Road, P.O. Box 3000, Harrisonburg VA 22801

(540) 574-7800

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM AND RETURNING IT.

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE 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.

BYPASS AND OVERFLOWS		
TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)

OPERATOR IN RESPONSIBLE CHARGE			DATE		
TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

This report is required by your VPDES permit and by law. (See, e.g., the Code of Virginia of 1950 §62.1-44.5 and 9 VAC 25-31-50.) Failure to report or failure to report truthfully can result in civil penalties of $32,500 per vio[illegible], per day and felony prosecutions which can carry a 15 year term.

DISCHARGE MONITORING REPORT (DMR) - GENERAL INSTRUCTIONS

1. Complete this form in permanent ink or indelible pencil.
2. Be sure to enter the dates for the first and last day of the period covered by the report on the form in the space marked "Monitoring Period".
3. For those parameters where the REQUIREMENT spaces have a benchmark or limitation, provide data in the REPORTED spaces in accordance with your permit.
4. Enter maximum, minimum, and/or average concentrations and units in the "reported" spaces in the columns marked "Quality or Concentration".
5. For all parameters enter the number of samples which do not comply with the maximum and/or minimum permit requirements in the "reported" space in the column marked "No. Ex." (Number of Exceedances). If none, enter "0". Do NOT include monthly average violations in this field. Include any maximum violations in this field.
6. You are required to sample (at a minimum) according to the Sample Frequencies and Sample Types specified in your perm. If you sample more often than the Sample Frequency specified in your permit than all data must be used when completing the DMR.
7. Enter the actual frequency of analysis for each parameter (number of times per day, week, month, etc.) in the "reported" space in the column marked "Frequency of Analysis".
8. Enter the actual type of sample (Grab, 8HC, 24HC, etc) collected for each parameter in the "reported" space in the column marked "Sample Type.
9. Enter additional required data or comments in the space marked "additional permit requirements or comments". If additional required data or comments are appended to the DMR, reference appended correspondence in this field.
10. Storm Event Information * (i.e., a "measurable storm event" is a storm event that results in an actual discharge from the site, providing the interval from the preceding measurable storm event is at least 72 hours): a. Enter the number of days and hours from the preceding "measurable storm event" * Storm event information not applicable to discharges from a storm water management structure.
11. The principal executive officer then reviews the form and must sign in the space provided and provide a telephone number where he/she can be reached. The final page of the DMR must have an original signature.
12. Send the completed form(s) with original signatures to your Department of Environmental Quality Regional Office on or before the 10th of April, July, October and January for quarterly monitoring and on or before the 10th of January for annual monitoring.
13. You are required to retain a copy of the report for your records.
14. Where violations of permit requirements are reported, attach a brief explanation in accordance with the permit requirements describing causes and corrective actions taken. Reference each separate violation by date.
15. If you have any questions, contact the Department of Environmental Quality Regional Office listed on the DMR.

QUARTERLY RAINFALL TRACKING

Facility Name:	Rockydale - Staunton Quarry	VPDES Permit #:	VAG840030

Calendar Year:	1st Qtr:	2nd Qtr:	3rd Qtr:	4th Qtr:

Quarterly stormwater outfall checks completed?:	
(If still pending, note why samples weren't obtained/conditions not met for rain event) *Separate inspection/sampling forms must be completed	

Note when SPCC AST Inspections are performed (Required at greater than or equal to 1" rain event)

*Separate inspection/sampling forms must be completed

Date of Rain Event	Rain Event Amount of Precipitation	Stormwater Outfall Sampling/Inspections	SPCC Diesel AST Sampling Inspections
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
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28			

QUARTERLY VISUAL OUTFALL MONITORING

OUTFALL #	001

Facility Name:	Rockydale - Staunton Quarry	VPDES Permit #:	VAG840030

Calendar Year:	1st Qtr:	2nd Qtr:	3rd Qtr:	4th Qtr:

Name of Individual conducting Visual Monitoring:

Monitoring Date/Time (use am/pm or 24-hr time): *(Must be during daylight hours)*

A. **Qualifying Runoff Event** met (i.e. storm event greater than 0.1 inches and at least 72 hours from the last qualifying runoff event, daylight hours, and within 30 minutes of first runoff? ☐ Yes ☐ No

Amount on Rainfall: Inches

Describe the storm event (e.g. light rain, heavy rain, snow/ice melt):

B. Was there **no qualifying storm event** resulting in runoff during this quarter? ☐ **Yes***

**If YES, attach documentation (i.e. on site rainfall records) and sign the Certification State below.*

Note: For the questions below include probable sources/causes of stormwater pollution observed.

1. Color	☐ None	☐ Light Tan	☐ Light Brown	☐ Brown	☐ Other (describe)
2. Odor	☐ None	☐ Earthy	☐ Gas/Oil	☐ Chemical	☐ Other (describe)
3. Clarity	☐ Clear	☐ Almost Clear	☐ Cloudy	☐ Very Cloudy	☐ Other (describe)

4. Were **Floating Solids** present? If so, describe (e.g. bark leaves, grass, trash/litter, other)

5. Were **Settled Solids** present (i.e. solids that settle within 30-60 minutes of sampling)? If so, describe (e.g. thin layer on bottom of quart glass container, 50% of quart glass container after 30 minutes and 25% of quart glass container after 60 minutes)

6. Were **Suspended Solids** present (i.e. solids that do not settle within 30-60 minutes)? ☐ Yes ☐ No

7. Was any **Foam** present (if so, describe color, amount/extent)? ☐ Yes ☐ No

8. Was an **Oil Sheen** present (if, so describe consistency, color, amount/ extent)? ☐ Yes ☐ No

9. Were any other **Indicators** of stormwater pollution observed (if so, describe)? ☐ Yes ☐ No

I certify under penalty of law that the preceding document and all attachments were prepared under my direction or supervision 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 directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true and 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.

Signature	Print Name	Title	Date